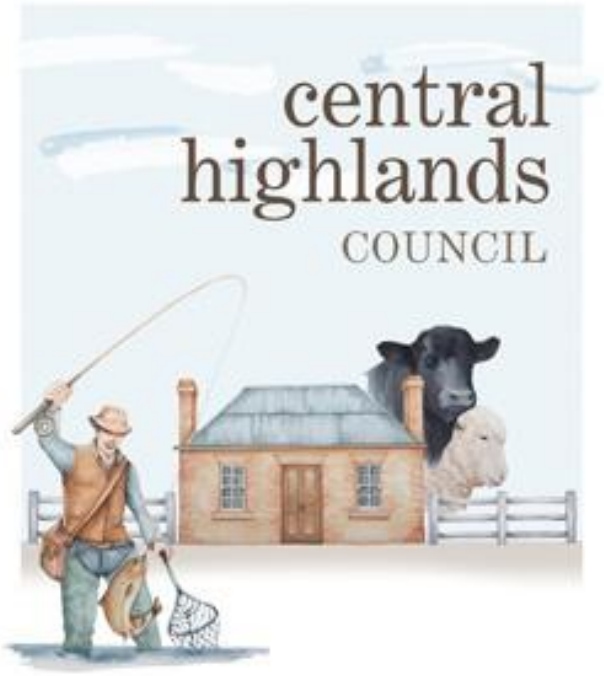


Agenda Attachments

15 July 2025

Ordinary Council Meeting

Hamilton Council Chambers

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Council Meeting Minutes

17th June 2025

Bothwell Council Chambers

Notice of Meeting of Council – Tuesday 17th June 2025

To Councillors,

In accordance with the Local Government (Meeting Procedures) Regulations 2015, Notice is hereby given, that an Ordinary Meeting of Central Highlands Council is scheduled to be held in the Council Chamber, **Bothwell** on **Tuesday 17th June 2025,** commencing at **9.00am** with the business of the meeting to be in accordance with the following agenda paper.

In accordance with the Local Government (Meeting Procedures) Regulations 2015 Part 2, Division 1, a notice of the meeting was published on the Council website on 1 August 2024.

General Manager's Certification

PURSUANT to Section 65 (1) of the Local Government Act 1993, I hereby certify, with respect to the advice, information and/or recommendation provided for the guidance of Council in this Agenda, that:

A. such advice, information and/or recommendation has been given by a person who has the qualifications or experience necessary to give such advice; and

B. where any advice is given by a person who does not have the required qualifications or experience, that person has obtained and taken into account the advice from an appropriately qualified or experienced person.

Section 65(2) forbids Council from deciding any matter which requires the advice of a qualified person without considering that advice.

Dated at Hamilton this **12th** day of **June 2025**.



Stephen Mackey
Acting General Manager

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AUDIO RECORDING DISCLAIMER

As per *Regulation 33 (2) (a) of the Local Government (Meeting Procedures) Regulations 2015*, audio recordings of meetings will be made available to Councillors, staff and members of the wider community including Government Agencies at no charge and will be made available on Council's website as soon as practicable after each Council Meeting. Unlike Parliament, Council meetings are not subject to parliamentary privilege, and both Council and the individual may be liable for comments that may be regarded as offensive, derogatory and/or defamatory.

The Mayor advises the meeting and members of the public that Council Meetings, not including Closed Sessions, are audio recorded and published on Council's Website in accordance with Council's Policy 2017-50.

The Mayor also advises, that members of the public are not permitted to make audio recordings of Council Meetings without prior approval being granted.

ACKNOWLEDGEMENT OF COUNTRY

I acknowledge and pay respect to the Tasmanian Aboriginal Community as the traditional and original owners and continuing custodians of this land on which we gather today and acknowledge and pay respect to Elders, past, present and emerging.

CONDUCT OF COUNCIL MEETING

Central Highlands Council takes safety seriously. We have a duty to ensure that we provide a safe workplace for our Employees, Councillors, Contractors and members of the public while present at Council's workplaces.

These premises form part of the Council's workplace, and it is expected that everyone who attends Council meetings will behave in a polite and respectful manner. People should refrain from using offensive or derogatory language or comments and not be aggressive, threatening or speak in a hostile manner.

1. PRESENT

Mayor L Triffitt; Deputy Mayor J Allwright; Cr A Archer (attended the meeting at 10.02 a.m); Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller

1.1 IN ATTENDANCE

Mr Stephen Mackey (Acting General Manager), Zeeshan Tauqeer (Accountant) and Mrs Katrina Brazendale (Minute Secretary).

1.2 APOLOGIES

Cr A Bailey

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2. CONSIDERATION OF SUPPLEMENTARY ITEMS TO THE AGENDA

RESOLUTION 01/06.2025/C

Moved: Deputy Mayor J Allwright **Seconded:** Cr D Meacheam

THAT *the Council resolve by absolute majority to deal with any supplementary items not appearing on the agenda, as reported by the General Manager in accordance with the Local Government (Meeting Procedures) Regulations 2015.*

In accordance with the requirements of Part 2 Regulation 8 (6) of the *Local Government (Meeting Procedures) Regulations 2015*, the Council by absolute majority may decide to deal with a matter that is not on the agenda if, where the General Manager has reported either:

a) The reason it was not possible to include the matter on the agenda;
b) That the matter is urgent; or
c) That advice of a qualified person has been obtained and taken into account in providing advice to Council under Section 65 of the *Local Government Act 1993*.

Item 18.1 Notice of Motion – Cr J Hall
Item 18.2 Fees and Charges 2025/2026
Item 18.3 HATCH Report – Cr Y Miller

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

3. DECLARATION OF PECUNIARY INTEREST AND CONFLICT OF INTEREST BY COUNCILLORS AND STAFF

PURPOSE
In accordance with the requirements of Part 2 Regulation 8 of the Local Government (Meeting Procedures) Regulations 2015, the chairperson of a meeting is to request Councillors to indicate whether they have, or are likely to have, a pecuniary interest or conflict of interest in any item on the Agenda.

Stephen Mackey – Item 4.2 CLOSED Session Personnel Matter – General Manager Update
Stephen Mackey – Item 4.3 CLOSED Session Recruitment Options – General Manager

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4. MINUTES

4.1 CONFIRMATION OF DRAFT ORDINARY COUNCIL MEETING MINUTES – 20 MAY 2025

RESOLUTION 02/06.2025/C

Moved: Cr Y Miller **Seconded:** Cr J Honner

THAT the Draft Minutes of the Ordinary Meeting of Council held on Tuesday 20 May 2025 be confirmed.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

Attachment – Draft Minutes

PURPOSE
The purpose of the report is to confirm the Council Minutes of the previous month. Copies of the minutes have been previously circulated to Councillors prior to the meeting.

4.2 RECEIVAL OF DRAFT AUDIT PANEL MEETING MINUTES – 10 JUNE 2025 AND 12 JUNE 2025

RESOLUTION 03/06.2025/C

Moved: Deputy Mayor J Allwright **Seconded:** Cr D Meacheam

THAT the Draft Minutes of the Audit Panel Meeting of Council held on Tuesday 10 June 2025 and Thursday 12 June 2025 be received.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

Attachment – Draft Minutes

PURPOSE
The purpose of the report is to receive the Audit Panel Minutes. Copies of the minutes have been previously circulated to Councillors prior to the meeting.

5. NOTIFICATION OF COUNCIL WORKSHOP(S) HELD

Nil

5.1 FUTURE WORKSHOP(S)

PURPOSE
The purpose of the report is for Councillors to note the Council Workshop date(s).

TBC

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6. PUBLIC QUESTION TIME

In accordance with the *Local Government (Meeting Procedures) Regulations 2015,* the Council conducts a Public Question Time Forum to enable members of the public to ask question on Council related matters.

A period of 15 minutes, if required, will be set aside at the beginning of each Ordinary Council Meeting to conduct Public Question Time. If a response to a question cannot be provided at the meeting a written response will be provided as soon as practicable.

A member of the public may give written notice to the General Manager, 7 days before a meeting of a question to be put to the Meeting.

The Chairman may invite any member of the public present at a meeting to ask questions, without notice, relating to activities of the Council, subject to the provisions of Clause 2 below.

1. Once Question Time commences the Chairman will determine the order in which questions are heard.

2. Questions may relate to any business of the Council capable of being discussed in the open portion of the meeting, and which is not listed as an item for consideration on the Agenda for the Council Meeting.

3. Members of the public proposing a question are required to be present at the Council Meeting at which their question is to be read. Where a person submits a question for Public Question Time but fails to attend the meeting, the question will be treated as general correspondence and a written response will be provided at the earliest opportunity.

4. A person asking a question, when called upon by the Chairman is requested to:
    - Stand,
    - State their name and address,
    - Read out their question.

5. The Chairman retains the right to accept or decline questions and to determine if the question is to be answered at the meeting by the appropriate Councillor or employee or written down and taken on notice. The decision to take the question on notice may also be taken by the Councillor or employee to whom the question is directed. Questions taken on notice will be answered at a later meeting.

6. The Chairman may rule a question inappropriate, and thus inadmissible if in his or her opinion it has already been asked, is unclear, irrelevant, insulting, improper or relates to any matter which would normally be discussed in the closed portion of the meeting as defined in the *Local Government (Meeting Procedures) Regulations 2015*.

7. Public Question Time forum will be limited to a maximum of 15 minutes in duration and will be declared closed following the expiration of the allocated time period, or where all valid questions have been dealt with, whichever is the sooner.

8. Each question is to be asked by the proponent who will be allowed a maximum of three minutes in which to put the question.

9. The Chairman will **not allow** any discussion or debate on either the question or the response.

10. Where a person proposes more than one question at any one forum, and there are a number of persons wishing to lodge questions, the Chairman may take the questions in such order so as to hear as many members of the public as practical during the time allocated.

11. The minutes of the Council Meeting will contain a summary of each question asked by members of the public and the response given.

12. Public Statements (as opposed to questions) **will not** be accepted for the reason that statements could be considered a form of participation.

Pertaining to any Planning Authority agenda item within this agenda, Council will do so in accordance with Council's Policy 2017-49.

Both the Public Question Time Procedure above and Council's Policy 2017-49 'Public Comment on Planning Agenda Items' will be available for the public to view at the meeting.

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7. PETITIONS / DEPUTATIONS / PRESENTATIONS

7.1 PETITIONS

Nil

7.2 DEPUTATIONS

10.00 a.m. Inspector Luke Horne – Tasmania Police

7.3 PRESENTATIONS

Nil

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8. NOTICE OF MOTIONS

PURPOSE
Under Regulation 16 of the Local Government (Meeting Procedures) Regulations 2015 relating to Motions on Notice. It states the following:

(5) A Councillor may give to the general manager, at least 7 days before a meeting, give written notice of a motion, together with supporting information and reasons, to be included on the agenda of that meeting.

8.1 NOTICE OF MOTION – CR Y MILLER

RESOLUTION 04/06.2025/C

Moved: Cr Y Miller **Seconded**: Cr D Meacheam

THAT in future, not-for-profit organisations not be exempt from full rates charges, but reduced rates may be considered on a case by case basis. Registered charitable organisations will be ordinarily granted rates remission upon application.

CARRIED 4/3

For the Motion
Deputy Mayor J Allwright, Cr R Cassidy; Cr J Honner; and Cr Y Miller.
Against the Motion
Cr J Hall, Cr D Meacheam and Mayor L Triffitt

NOTICE OF MOTION

Under Division 2 – Motions, Section 16 (5) of the Local Government (Meeting Procedures) Regulations 2015, a Councillor may give to the General Manager, at least 7 days before a meeting, written notice of a motion, together with supporting information and reasons, to be included on the agenda of that meeting.

Date of Meeting:	17th June
Councillor Name:	Yvonne Miller
Proposed Motion:	That in future, not-for-profit organisations not be exempt from full rates charges but reduced rates might considered on a case by case basis. Registered charitable organisations will be ordinarily granted rates remission upon application.
Background Details:	As a council with a small financial reserves we cannot afford to lose money.
Signature:	Yvonne Miller
Date:	20/5/25

Graham Rogers (Manager DES) and Louisa Brown (Contract Planner) attended the meeting at 9.10 a.m.

9. COUNCIL ACTING AS A PLANNING AUTHORITY PURSUANT TO THE LAND USE PLANNING AND APPROVALS ACT 1993 AND COUNCIL'S STATUTORY LAND USE PLANNING SCHEME

9.1 DEVELOPMENT APPLICATION (DA 2025/12) FOR TWO (2) LOT SUBDIVISION AT LOT 1 VICTORIA VALLEY ROAD, DEE (CT 236776/1) SUBMITTED BY D G POTTER SURVEYOR OBO H TRIFFETT (OWNER)

RESOLUTION 05/06.2025/C

Moved: Cr Deputy Mayor J Allwright **Seconded**: Cr J Honner

THAT, in accordance with the provisions of the *Tasmanian Planning Scheme – Central Highlands* and section 57 of the *Land Use Planning & Approvals Act 1993*, Council APPROVE the Development Application (DA 2025/12) for two (2) Lot Subdivision at Lot 1 Victoria Valley Road, Dee (CT 236776/1)

CONDITIONS

General

1. The subdivision and associated works must be carried out substantially in accordance with the application for planning approval, endorsed drawings and conditions of this permit and must not be altered or extended without the further written consent of Council.

2. This permit shall not take effect and must not be acted on until 15 days after the date on which notice of the granting of the permit is served to the applicant or the representor, whichever is later, in accordance with section 53 of the *Land Use Planning and Approvals Act 1993*.

Bushfire

3. The development and works must be carried out in accordance with the Bushfire Hazard Report, prepared by BushfireWise and dated April 2025.

4. Prior to Council sealing the final plan of survey for any stage, the developer must provide certification from a suitably qualified person that all works required by the approved Bushfire Hazard Management Plan has been complied with.

Agreements

5. Agreements made pursuant to Part 5 of the Land Use Planning and Approvals Act 1993 must be prepared by the applicant on a blank instrument form to the satisfaction of the Council and registered with the Recorder of Titles. The subdivider must meet all costs associated with the preparation and registration of the Part 5 Agreement.

Easements

6. Easements must be created over all drains, pipelines, wayleaves and services in accordance with the requirements of the Council's Manager Environment and Development Services. The cost of locating and creating the easements shall be at the subdivider's full cost.

Covenants

7. Covenants or other similar restrictive controls that conflict with any provisions or seek to prohibit any use provided within the planning scheme must not be included or otherwise imposed on the titles to the lots created by this permit, either by transfer, inclusion of such covenants in a Schedule of Easements or registration of any instrument creating such covenants with the Recorder of Titles, unless such covenants or controls are expressly authorised by the terms of this permit or the consent in writing of the Council's Manager Environment and Development Services.

Final plan

8. A final approved plan of survey and schedule of easements as necessary, together with two (2) copies, must be submitted to Council for sealing for each stage. The final approved plan of survey must be substantially the same as the endorsed plan of subdivision and must be prepared in accordance with the requirements of the Recorder of Titles.

9. A fee of $237.00, or as otherwise determined in accordance with Council's adopted fee schedule, must be paid to Council for the sealing of the final approved plan of survey for each stage.

10. All conditions of this permit, including either the completion of all works and maintenance or payment of security in accordance with this permit, must be satisfied before the Council seals the final plan of survey for each stage. It is the subdivider's responsibility to notify Council in writing that the conditions of the permit have been satisfied and to arrange any required inspections.

11. The subdivider must pay any Titles Office lodgment fees direct to the Recorder of Titles.

Services

12. Property services must be contained wholly within each lots served or an easement to the satisfaction of the Council's Manager Environment and Development Services or responsible authority.

13. The Subdivider must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the proposed subdivision works. Any work required is to be specified or undertaken by the authority concerned.

Access to Victoria Valley Road

14. A separate vehicular access must be provided to each lot. Vehicular accesses must located and constructed in accordance with the standards shown on standard drawings TSD-R03 Rural Roads Typical Property Access, TSD-R04 Rural Roads Typical Driveway Profile and TSD-RF01 Guide To Intersection And Domestic Access Sight Distance Requirements prepared by the IPWE Aust. (Tasmania Division), or as otherwise required by this permit, and to the satisfaction of Council's Manager Infrastructure Works.

Advice*: No works on or affecting any Council road reservation is to be commenced until Central Highlands Council has issued a WORKS IN ROAD RESERVATION PERMIT. Application for the issue of the necessary works permit is to be made to the Council's Manager of Infrastructure Works prior to the proposed date of commencement of any works.*

Landscaping

15. No vegetation other than that necessary for the construction of the associated access and any services is to be cleared without the prior approval of Council's General Manager.

Construction amenity

16. The development must only be carried out between the following hours unless otherwise approved by the Council's General Manager

Monday to Friday	7:00 AM to 6:00 PM
Saturday	8:00 AM to 6:00 PM
Sunday and State-wide public holidays	10:00 AM to 6:00 PM

17. All works associated with the development of the land must be carried out in such a manner so as not to unreasonably cause injury to, or unreasonably prejudice or affect the amenity, function and safety of any adjoining or adjacent land, and of any person therein or in the vicinity thereof, by reason of -
    (a) emission from activities or equipment related to the use or development, including noise and vibration, which can be detected by a person at the boundary with another property; and/or
    (b) transport of materials, goods or commodities to or from the land; and/or
    (c) appearance of any building, works or materials.

18. Any accumulation of vegetation, building debris or other unwanted material must be disposed of by removal from the land in an approved manner. No burning of such materials on-site will be permitted unless approved in writing by the Council's General Manager.

19. Public roadways or footpaths must not be used for the storage of any construction materials or wastes, for the loading/unloading of any vehicle or equipment; or for the carrying out of any work, process or tasks associated with the subdivision during the construction period.

THE FOLLOWING ADVICE APPLIES TO THIS PERMIT: -

A. This permit does not imply that any other approval required under any other legislation has been granted.

B. This permit does not take effect until all other approvals required for the use or development to which the permit relates have been granted.

C. This planning approval shall lapse at the expiration of two (2) years from the date of the commencement of planning approval unless the development for which the approval was given has been substantially commenced or extension of time has been granted. Where a planning approval for a development has lapsed, an application for renewal of a planning approval for that development may be treated as a new application.

D. Land on adjacent properties are Timber Production Zone Land (PTPZL) and will be subject to noise and heavy vehicle movements outside of business hours. It should also be noted that as Timber Production land, once harvested, the visual amenity of the area will change.

E. The issue of this permit does not ensure compliance with the provisions of the Threatened Species Protection Act 1995 or the Environmental Protection and Biodiversity Protection Act 1999 (Commonwealth). The applicant may be liable to complaints in relation to any non-compliance with these Acts and may be required to apply to the Threatened Species Unit of the Department of Tourism, Arts and the Environment or the Commonwealth Minister for a permit.

CARRIED

For the Motion

Mayor L Triffitt, Deputy Mayor J Allwright; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Louisa Brown, (Senior Planning Officer)

APPROVED BY Graham Rogers, (Manger of Development & Environmental Services)

Attachments - Development Application Documents and Representation

Discretions - Subdivision

PROPOSAL

Council is in receipt of an application for a planning permit for a two (2) lot Subdivision at Lot 1 Victoria Valley Road, Dee CT236776/1.

The proposal seeks that the existing lot of 86.03ha be subdivisded into two (2) lots as illustrated on the plan of subdivision.

It is propsoed that;

Lot 1 - area of 40ha, access via a new vehicular access off Victoria Valley Road built to LGAT Rural Roads Typical Property Access standard, frontage 150m plus.

Lot 2 (Balance Lot)- area of 46ha, access via a new vehicular access off Victoria Valley Road built to LGAT Rural Roads Typical Property Access standard, frontage 1km plus.

The documents provided with the Development Application include the following:

- Completed Development Application Form;
- Certificate of Title documents;

- Proposed Plan of Subdivision prepared by D.G.J Potter dated 20/02/25: and
- Bushfire Hazard Report, prepared by BushfireWise Development Planning, dated April 2025.

The property falls within the Rural Zone, Bushfire Prone Area Code and the Natural Assets Code of the Tasmanian Planning Scheme – Central Highlands.

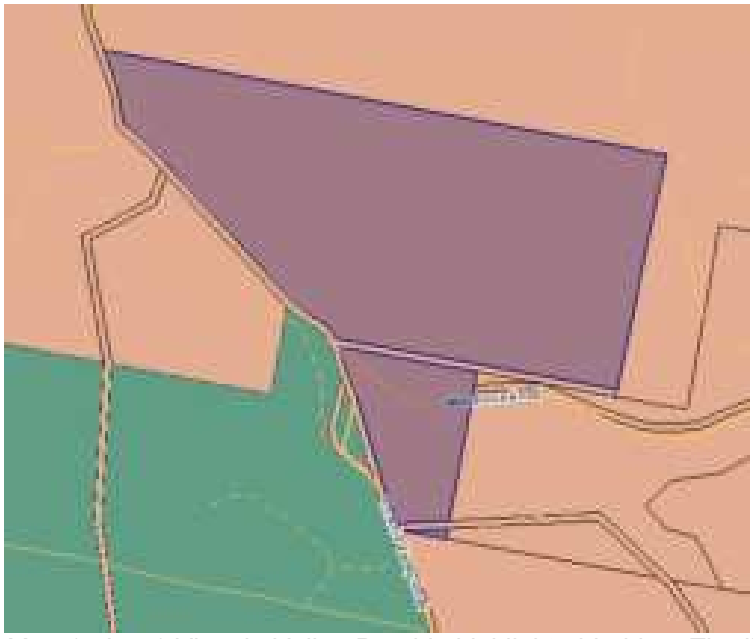
The Development Application was advertised for 14 days, during this time one (1) representation was made.

This report to Council will assess the proposal against the relevant provisions of the Land Use Planning and Approvals Act 1993 (the Act) and the Tasmanian Planning Scheme – Central Highlands (The Scheme). It is recommended that Council grant a Planning Permit for the development application subject to conditions.

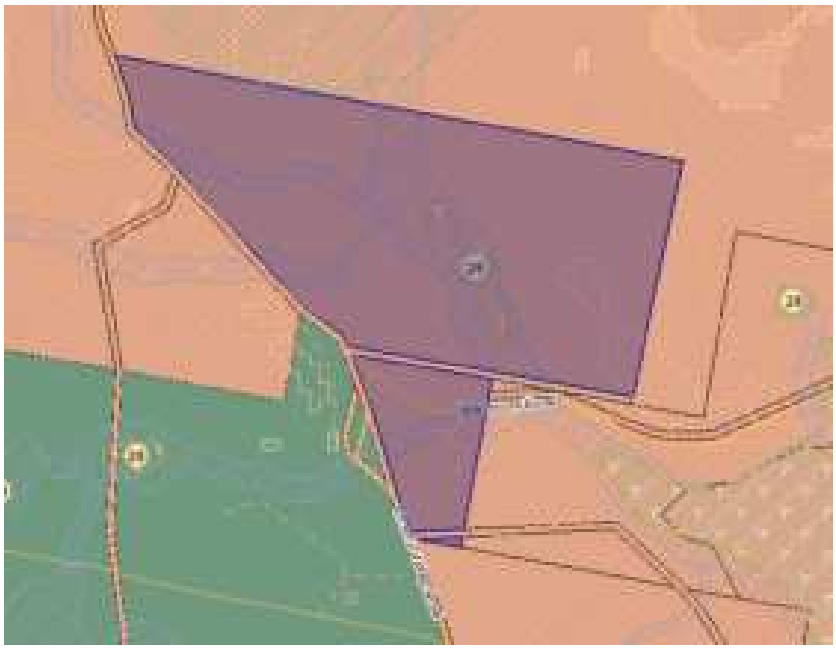
THE SITE
The property is situated to the east of Victoria Valley Road and Mentmore Road in the area known as Dee. Mentmore Road connects Victoria Valley Road to Echo Dam to the east. The property is vacant from any structures. There are no dwellings or sheds on adjacent properties either.

The Mentmore Creek runs north to south through the property. With the Seven Mile Creek and the Broken Bridge Creek running east to west.

1.7km noth-west of the property lies Mentmore Marsh, where as Highland Waters is situated to the north and Dee Lagoon to the west. The property is characterised by large areas of native forest vegetation and marsh in places. Surrounding areas comprise of sparsely developed land, crossed with rural gravel roads.



Map 1_ Lot 1 Victoria Valley Road is highlighted in blue. The light brown colour represents the Rural Zone of the Tasmanian Planning Scheme. The green identifies Private Timber Reserves (source: thelist. 10/06/2025)



Map 2_ Lot 1 Victoria Valley Road is shown with a blue line. The subject land is within the Bushfire Prone Area Code Overlay (brown lines), Natural Assets Code, Waterway and Coastal Protection Area (light blue lines) Natural Assets Code, Priority Vegetation (green lines). Threatened Native Vegetation Community 28 Highland grassy sedgeland (source:thelist. 10/06/2025)



Map 4_ The subject land area aerial photograph (source: thelist. 10/06/2025)

USE/DEVELOPMENT DEFINITION

The proposed use and development is defined in the Tasmanian Planning Scheme (The Scheme), as below:

"means the act of subdividing or the lot subject to an act of subdividing".

Subdivision is a Discretionary development, in accordance with Section 57 of the Land Use Planning and Approvals Act 1993 and Clause 6.8.1 (a) and (b) of the Tasmanian Planning Scheme – Central Highlands. Council has the discretion to grant a permit or refuse to grant a permit.

As a discretionary development, the application was advertised in accordance with Section 57 of the Act.

PUBLIC NOTIFICATION AND REPRESENTATIONS

The application was advertised for 14 days from 12 May until the 26 May 2025.

During which time one (1) representation was received. This is summarised in the table below. Please refer to enclosure to view the full copy of representation received.

***Public Notice Period* 12 – 26 May 2025**	
Representation 1	***Council Planning Officer Comment***
No issue with the proposal itself, but notes that the proposed building area for lot 1 is 50m from an adjoining PTPZL. Requests the following; • Highlight that the surrounding land is production forest and is subject to ongoing forest operations: and • Move the proposed building area to be no closer than 100m from PTPZL.	*The Bushfire Hazard Assessment indicates a "potential building area" only, in order to calculate the Bushfire Attack Level (BAL) for the land. The exact location of any future dwelling will form a part of separate Planning Applications.* *Advice notes in any potential Planning Permits for dwellings will state that the adjacent land is forestry. It is not possible to condition any future building area be 100m from the PTPZL in the Rural Zone. However, advice for future landowners will be provided when any Development Application enquiries are made with Council.*

ZONE ASSESSMENT – TASMANIAN PLANNING SCHEME – CENTRAL HIGHLANDS

The subject property is within the Rural Zone of the Tasmanian Planning Scheme – Central Highlands.

Subdivision is a discretionary use in this zone. Accordingly, the proposal must satisfy the requirements of the Zone Purpose and the following relevant development standards of these zones and Codes:

20.1 Zone Purpose
The purpose of the Rural Zone is to provide for a range of use or development in a rural location:
(a) where agricultural use is limited or marginal due to topographical, environmental or other site or regional characteristics;
(b) that requires a rural location for operational reasons;
(c) is compatible with agricultural use if occurring on agricultural land; and
(d) minimises adverse impacts on surrounding uses.

To minimise conversion of agricultural land for non-agricultural use and to ensure that use or development is of a scale and intensity that is appropriate for a rural location and does not compromise the function of surrounding settlements.

20.5 Development Standards for Subdivision 20.5.1 Lot design To provide for subdivision that: (a) relates to public use, irrigation or Utilities; or (b) facilitates use and development for allowable uses in the zone.		
Acceptable Solutions	**Performance Criteria**	***OFFICER COMMENT***
A1 Each lot, or a lot proposed in a plan of subdivision, must: (a) be required for public use by the Crown, a council or a State authority;	**P1** Each lot, or a lot proposed in a plan of subdivision, must: (a) have sufficient useable area and dimensions suitable for the intended purpose, excluding Residential	*Both lots are no less than 40ha in size and have significantly over 25m of frontage to a road. There are no buildings on the existing lot.*

(b) be required for the provision of Utilities or irrigation infrastructure; (c) be for the consolidation of a lot with another lot provided each lot is within the same zone; or (d) be not less than 40ha with a frontage of no less than 25m and existing buildings are consistent with the setback and separation distance required by clause 20.4.2 A1 and A2.	or Visitor Accommodation, that: (i) requires the rural location for operational reasons; (ii) minimises the conversion of agricultural land for a non-agricultural use; (iii) minimises adverse impacts on non-sensitive uses on adjoining properties; and (iv) is appropriate for a rural location; or (b) be for the excision of a dwelling or Visitor Accommodation existing at the effective date that satisfies all of the following: (i) the balance lot provides for the sustainable operation of a Resource Development use, having regard to: a. not materially diminishing the agricultural productivity of the land; b. the capacity of the balance lot for productive agricultural use; and c. any topographical constraints to agricultural use; (ii) an agreement under section 71 of the Act is entered into and registered on the title preventing future Residential use if there is no dwelling on the balance lot; (iii) the existing dwelling or Visitor Accommodation must meet the setbacks required by subclause 20.4.2 A2 or P2 in relation to setbacks to new boundaries; (iv) it is demonstrated that the new lot will not unreasonably confine or restrain the operation of any adjoining site used for agricultural use; and (c) be provided with a frontage or legal connection to a road by a right of carriageway, that is sufficient for the intended use, having regard to: (i) the number of other lots which have the land subject to the right of carriageway as their sole or principal means of access;	*The proposal meets Acceptable Solution A1.*

	(ii) the topography of the site; (iii) the functionality and useability of the frontage; (iv) the anticipated nature of vehicles likely to access the site; (v) the ability to manoeuvre vehicles on the site; (vi) the ability for emergency services to access the site; and (vii) the pattern of development existing on established properties in the area.	
A2 Each lot, or a lot proposed in a plan of subdivision, must be provided with a vehicular access from the boundary of the lot to a road in accordance with the requirements of the road authority.	**P2** Each lot, or a lot proposed in a plan of subdivision, is provided with reasonable vehicular access to a boundary of a lot or building area on the lot, if any, having regard to: (a) the topography of the site; (b) the distance between the lot or building area and the carriageway; (c) the nature of the road and the traffic, including pedestrians; and (d) the pattern of development existing on established properties in the area.	*Lot 1 and Lot 2 will be provided with a vehicular access from Victoria Valley Road, to meet the LGAT Rural Roads Typical Property Access standard and to the Bushfire Code standard, this will be a condition of the Planning Permit for Subdivision.* *The proposal meets the Acceptable Solution A2.*

ZONE ASSESSMENT – TASMANIAN PLANNING SCHEME – CENTRAL HIGHLANDS

Parking and Sustainable Transport Code
The Code applies to all use and development. The proposal must satisfy the requirements of the following relevant development standards:

C2.6.3 Number of accesses for vehicles
That:
(a) access to land is provided which is safe and efficient for users of the land and all road network users, including but not limited to drivers, passengers, pedestrians and cyclists by minimising the number of vehicle accesses;
(b) accesses do not cause an unreasonable loss of amenity of adjoining uses;
(c) the number of accesses minimise impacts on the streetscape.

Acceptable solutions	Performance Criteria	OFFICER COMMENT
A1 The number of accesses provided for each frontage must: (a) be no more than 1;	**P1** The number of accesses for each frontage must be minimised, having regard to: (a) any loss of on-street parking; and	*The acceptable solution A1 is met, the proposed Lots are provided with a single point of vehicular access.*

Or (b) no more than the existing number of accesses, whichever is the greater.	(b) pedestrian safety and amenity; (c) traffic safety; (d) residential amenity on adjoining land; and (e) the impact on the streetscape.	
A2 Within the Central Business Zone or in a pedestrian priority street no new access is provided unless an existing access is removed.	**P2** Within the Central Business Zone or in a pedestrian priority street, any new accesses must: (a) not have an adverse impact on: (i) pedestrian safety and amenity; or (ii) traffic safety; and (b) be compatible with the streetscape.	*Not applicable, the zone is Rural.*

Natural Assets Code
This Code applies as areas of Waterway & Coastal Protection Area and Priority Vegetation Overlay are located on the property.

The purpose of the Natural Assets Code is:

- To minimise impacts on water quality, natural assets including native riparian vegetation, river condition and the natural ecological function of watercourses, wetlands and lakes.
- To minimise impacts on coastal and foreshore assets, native littoral vegetation, natural coastal processes and the natural ecological function of the coast.
- To protect vulnerable coastal areas to enable natural processes to continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes and other sensitive coastal habitats due to sea-level rise.
- To minimise impacts on identified priority vegetation.
- To manage impacts on threatened fauna species by minimising clearance of significant habitat.

Both the Waterway & Coastal Protection Area and Priority Vegetation Area are shown on the overlay map of the Local Provisions Schedule.

The proposal must satisfy the requirements of the following relevant development standards:

C7.7.1 Subdivision within a waterway and coastal protection area or a future coastal refugia area
That:
(a) works associated with subdivision within a waterway and coastal protection area or a future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets; and
(b) future development likely to be facilitated by subdivision is unlikely to lead to an unnecessary or unacceptable impact on natural assets.

Acceptable solutions	Performance Criteria	OFFICER COMMENT
A1 Each lot, or a lot proposed in a plan of subdivision, within a	**P1** Each lot, or a lot proposed in a plan of subdivision, within a	*The proposal meets the Acceptable Solution as the*

waterway and coastal protection area or a future coastal refugia area, must: (a) be for the creation of separate lots for existing buildings; (b) be required for public use by the Crown, a council, or a State authority; (c) be required for the provision of Utilities; (d) be for the consolidation of a lot; or (e) not include any works (excluding boundary fencing), building area, services, bushfire hazard management area or vehicular access within a waterway and coastal protection area or future coastal refugia area.	waterway and coastal protection area or a future coastal refugia area, must minimise adverse impacts on natural assets, having regard to: (a) the need to locate building areas and any associated bushfire hazard management area to be outside a waterway and coastal protection area or a future coastal refugia area; and (b) future development likely to be facilitated by the subdivision.	*subdivision does not include any works (excluding boundary fencing), building area, services, bushfire hazard management area or vehicular access within a waterway area.*

C7.7.2 Subdivision within a priority vegetation area That: (a) works associated with subdivision will not have an unnecessary or unacceptable impact on priority vegetation; and (b) future development likely to be facilitated by subdivision is unlikely to lead to an unnecessary or unacceptable impact on priority vegetation.		
Acceptable solutions	**Performance Criteria**	**OFFICER COMMENT**
A1 Each lot, or a lot proposed in a plan of subdivision, within a priority vegetation area must: (a) be for the purposes of creating separate lots for existing buildings; (b) be required for public use by the Crown, a council, or a State authority; (c) be required for the provision of Utilities; (d) be for the consolidation of a lot; or (e) not include any works (excluding boundary fencing), building area, bushfire hazard management area, services or vehicular access within a priority vegetation area.	**P1.1** Each lot, or a lot proposed in a plan of subdivision, within a priority vegetation area must be for: (a) subdivision for an existing use on the site, provided any clearance is contained within the minimum area necessary to be cleared to provide adequate bushfire protection, as recommended by the Tasmania Fire Service or an accredited person; (b) subdivision for the construction of a single dwelling or an associated outbuilding; (c) subdivision in the General Residential Zone or Low Density Residential Zone;	*The proposal meets the Acceptable Solution A1 as* no works (excluding boundary fencing), building area, bushfire hazard management area, services or vehicular access are within a priority vegetation area.

	(d) use or development that will result in significant long term social and economic benefits and there is no feasible alternative location or design; (e) subdivision involving clearance of native vegetation where it is demonstrated that ongoing pre-existing management cannot ensure the survival of the priority vegetation and there is little potential for long-term persistence; or (f) subdivision involving clearance of native vegetation that is of limited scale relative to the extent of priority vegetation on the site. **P1.2** Works association with subdivision within a priority vegetation area must minimise adverse impacts on priority vegetation, having regard to: (a) the design and location of any works, future development likely to be facilitated by the subdivision, and any constraints such as topography or land hazards; (b) any particular requirements for the works and future development likely to be facilitated by the subdivision; (c) the need to minimise impacts resulting from bushfire hazard management measures through siting and fire-resistant design of any future habitable buildings; (d) any mitigation measures implemented to minimise the residual impacts on priority vegetation; (e) any on-site biodiversity offsets; and (f) any existing cleared areas on the site.	

ADD BUSHFIRE CODE
The purpose of the Bushfire-Prone Areas Code is to ensure that use and development is appropriately designed, located, serviced, and constructed, to reduce the risk to human life and property, and the cost to the community, caused by bushfires.

This code applies to:
(a) subdivision of land that is located within, or partially within, a bushfire-prone area; and

(b) a use, on land that is located within, or partially within, a bushfire-prone area, that is a vulnerable use or hazardous use.

C13.6 Development Standards for Subdivision
C13.6.1 Provision of hazard management areas
That subdivision provides for hazard management areas that:
(a) facilitate an integrated approach between subdivision and subsequent building on a lot;
(b) provide for sufficient separation of building areas from bushfire-prone vegetation to reduce the radiant heat levels, direct flame attack and ember attack at the building area; and
(c) provide protection for lots at any stage of a staged subdivision.

Acceptable solutions	Performance Criteria	OFFICER COMMENT
A1 (a) TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant the provision of hazard management areas as part of a subdivision; or (b) The proposed plan of subdivision: (i) shows all lots that are within or partly within a bushfire-prone area, including those developed at each stage of a staged subdivision; (ii) shows the building area for each lot; (iii) shows hazard management areas between bushfire-prone vegetation and each building area that have dimensions equal to, or greater than, the separation distances required for BAL 19 in Table 2.6 of Australian Standard AS3959:2018 Construction of buildings in bushfire-prone areas; and (iv) is accompanied by a bushfire hazard management plan that addresses all the individual lots and that is certified by the TFS or accredited person, showing hazard management areas equal to, or greater than the separation distances required for BAL 19 in Table 2.6 of	**P1** A proposed plan of subdivision shows adequate hazard management areas in relation to the building areas shown on lots within a bushfire-prone area, having regard to: (a) the dimensions of hazard management areas; (b) a bushfire risk assessment of each lot at any stage of staged subdivision; (c) the nature of the bushfire-prone vegetation including the type, fuel load, structure and flammability; (d) the topography, including site slope; (e) any other potential forms of fuel and ignition sources; (f) separation distances from the bushfire-prone vegetation not unreasonably restricting subsequent development; (g) an instrument that will facilitate management of fuels located on land external to the subdivision; and	A Bushfire Hazard Report has been prepared and submitted with the Development Application. This document includes a Bushfire Hazard Management Plan and includes Hazard management Areas, building areas and static water supply points for future buildings. The application meets the Acceptable Solution A1.

Australian Standard AS3959:2018 Construction of buildings in bushfire-prone Areas; and (c) if hazard management areas are to be located on land external to the proposed subdivision the application is accompanied by the written consent of the owner of that land to enter into an agreement under section 71 of the Act that will be registered on the title of the neighbouring property providing for the affected land to be managed in accordance with the bushfire hazard management plan.	(h) any advice from the TFS.	

C13.6.2 Public and fire fighting access

That access roads to, and the layout of roads, tracks and trails, in a subdivision:

(a) allow safe access and egress for residents, fire fighters and emergency service personnel;

(b) provide access to the bushfire-prone vegetation that enables both property to be defended when under bushfire attack, and for hazard management works to be undertaken;

(c) are designed and constructed to allow for fire appliances to be manoeuvred;

(d) provide access to water supplies for fire appliances; and

(e) are designed to allow connectivity, and where needed, offering multiple evacuation points.

Acceptable solutions	Performance Criteria	OFFICER COMMENT
A1 (a) TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant specific measures for public access in the subdivision for the purposes of fire fighting; or (b) A proposed plan of subdivision showing the layout of roads, fire trails and the location of property access to building areas, is included in a bushfire hazard management plan that: (i) demonstrates proposed roads will comply with Table C13.1, proposed property accesses will comply with Table C13.2 and proposed fire trails will comply with Table C13.3 and (ii) is certified by the TFS or an accredited person.	**P1** A proposed plan of subdivision shows access and egress for residents, fire-fighting vehicles and emergency service personnel to enable protection from bushfires, having regard to: (a) appropriate design measures, including: (i) two way traffic; (ii) all weather surfaces; (iii) height and width of any vegetation clearances; (iv) load capacity; (v) provision of passing bays; (vi) traffic control devices; (vii) geometry, alignment and slope of roads, tracks and trails; (viii) use of through roads to provide for connectivity;	A Bushfire Hazard Report has been prepared and submitted with the Development Application. The Bushfire Hazard Report and management Plan show the location of vehicular access to both lots, hazard management areas and meet the requirements to comply with the access requirements if the code. The application meets the Acceptable Solution A1.

	(ix) limits on the length of cul-de- sacs and dead-end roads; (x) provision of turning areas; (xi) provision for parking areas; (xii) perimeter access; and (xiii) fire trails; and (b) the provision of access to: (i) bushfire-prone vegetation to permit the undertaking of hazard management works; and (ii) fire fighting water supplies; and (c) any advice from the TFS.	

C13.6.3 Provision of water supply for fire fighting purposes

Objective

That an adequate, accessible and reliable water supply for the purposes of fire fighting can be demonstrated at the subdivision stage to allow for the protection of life and property associated with the subsequent use and development of bushfire-prone areas.

Acceptable solutions	Performance Criteria	OFFICER COMMENT
A1 In areas serviced with reticulated water by the water corporation: (a) TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant the provision of a water supply for fire fighting purposes; (b) A proposed plan of subdivision showing the layout of fire hydrants, and building areas, is included in a bushfire hazard management plan approved by the TFS or accredited person as being compliant with Table C13.4; or (c) A bushfire hazard management plan certified by the TFS or an accredited person demonstrates that the provision of water supply for fire fighting purposes is sufficient to manage the risks to property and	No Performance Criterion.	Not applicable as there is no reticulated water in the area.

lives in the event of a bushfire.		
A2 In areas that are not serviced by reticulated water by the water corporation: (a) The TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant provision of a water supply for fire fighting purposes; (b) The TFS or an accredited person certifies that a proposed plan of subdivision demonstrates that a static water supply, dedicated to fire fighting, will be provided and located compliant with Table C13.5; or (c) A bushfire hazard management plan certified by the TFS or an accredited person demonstrates that the provision of water supply for fire fighting purposes is sufficient to manage the risks to property and lives in the event of a bushfire.	No Performance Criterion.	A Bushfire Hazard Report has been prepared and submitted with the Development Application. The Bushfire Hazard Report and management Plan show the location of vehicular access to both lots, hazard management areas and meet the requirements to comply with the requirements if the code, in terms of building areas and supply. The application meets the Acceptable Solution A2.

CONCLUSION

This report has assessed the Development Application (DA2025/12) for a two (2) Lot Subdivision at Lot 1 Victoria Valley Road, Dee (CT236776/1) against the relevant standards of the Scheme and concludes that the proposal complies with these requirements.

During the Public Notification period, one representation was received, the concerns of which have been addressed in this report and conditioned were appropriate.

It is recommended that the Application be approved and a Permit issued with conditions and advice.

9.2 DEVELOPMENT APPLICATION (DA 2025/26) FOR DWELLING & OUTBUILDING AT BARREN PLAINS ROAD, MIENA (CT 19054/9), SUBMITTED BY GREEN DESIGN ARCHITECTS OBO M RALLINGS & S D RALLINGS

RESOLUTION 06/06.2025/C

Moved: Cr D Meacheam **Seconded**: Cr J Honner

THAT, in accordance with the provisions of the Tasmanian Planning Scheme – *Central Highlands* and section 57 of the *Land Use Planning & Approvals Act 1993*, Council APPROVE the Development Application Development Application (DA2025/26) for dwelling & outbuilding at Barren Plains Road, Miena (CT 19054/9), and that a permit be issued with the following conditions:

General

1) The use or development must be carried out substantially in accordance with the application for planning approval, the endorsed drawings and with the conditions of this permit and must not be altered or extended without the further written approval of Council.

2) This permit shall not take effect and must not be acted on until 15 days after the date of receipt of this letter or the date of the last letter to any representor, whichever is later, in accordance with section 53 of the Land Use Planning and Approvals Act 1993.

Amenity

3) The proposed colour and materials for the walls of the dwelling, stained rough-sawn hardwood, corten steel store and natural rock are approved. Any variation in the colour and materials must be submitted to and approved by the Council's Senior Planning Officer.

4) The proposed outbuilding must be painted a dark tone, such as colourbond "Night Sky" and all elevations clad with one or a combination of the three materials used in the walls of the dwelling, timber, rock and corten steel and be to the satisfaction of Council's Senior Planning Officer.

5) The proposed outbuilding is approved as ancillary to the Residential and is to be used for domestic storage only. It is not to be used for commercial, industrial or habitable purposes, unless in accordance with a permit issued by Council or as otherwise permitted by Council's Planning Scheme.

6) No vegetation other than that necessary for the construction of the development, associated access and services is to be cleared without the approval of Council.

Access & Parking

7) The siting of vehicular accesses, circulation space and car parking spaces must generally accord with the endorsed plans.

8) Vehicular accesses must be located and constructed in accordance with the standards shown on standard drawings TSD-R03 Rural Roads Typical Property Access, TSD-R04 Rural Roads Typical Driveway Profile and TSD-RF01 Guide To Intersection And Domestic Access Sight Distance Requirements prepared by the IPWE Aust. (Tasmania Division), or as otherwise required by this permit, and to the satisfaction of Council's Manger Infrastructure Works.

9) The internal driveway and areas set-aside for parking and associated access and turning must be designed, constructed and maintained to avoid dust or mud generation, erosion and sediment transfer off site or de-stabilisation of the soil on site or on adjacent properties to the standard required by Council's Manger of Infrastructure & Works.

10) At least one (1) car parking spaces must be provided for the use of the visitor accommodation and must be available for car parking at all times. Car parking must be in accordance with Standards Australia (2004) Australian Standard AS 2890.1 - 2004 – Parking Facilities Part 1: Off Street Car Parking; Standards Australia, Sydney.

Access to Public Road

Advice: No works on or affecting any Council road reservation is to be commenced until Central HIghlands Council has issued a WORKS IN ROAD RESERVATION PERMIT. Application for the issue of the necessary works permit is to be made to the Council's Manager of Infrastructure & Works prior to the proposed date of commencement of any works.

Services

11) The developer must pay the cost of any alterations and/or reinstatement to existing services, Council infrastructure or private property incurred as a result of the development. Any work required is to be specified or undertaken by the authority concerned.

Stormwater

12) Stormwater drainage from the proposed development must be retained on site (or) drain to a legal point of discharge to the satisfaction of Council's General Manager and in accordance with a Certificate of Likely Compliance or Plumbing permit issued by the Permit Authority in accordance with the Building Act 2016.

Wastewater

13) Wastewater from the development must discharge to an on-site waste disposal system in accordance with a Certificate of Likely Compliance or Plumbing Permit issued by the Permit Authority in accordance with the Building Act 2016.

Erosion and Sediment Control

14) An Erosion and Sediment Control Plan (here referred to as a 'ESCP') prepared in accordance with the guidelines Erosion and Sediment Control, The fundamentals for development in Tasmania, by the Derwent Estuary Programme and Tamar Estuary and Esk Rivers Program, must be approved by Council's General Manager before development of the land commences. The ESCP shall form part of this permit when approved.

15) Temporary run-off, erosion and sediment controls must be installed in accordance with the approved ESCP and must be maintained at full operational capacity to the satisfaction of Council's General Manager until the land is effectively rehabilitated and stabilised after completion of the development.

Weed Management

16) Before development of the land commences, the property owner must provide a weed management plan detailing measures to be adopted to limit the spread of weeds listed in the Weed Management Act 1999 through imported soil or land disturbance by appropriate water management and machinery and vehicular hygiene to the satisfaction of Council's Senior Planning Officer.

Construction Amenity

17) The development must only be carried out between the following hours unless otherwise approved by the Council's Manager of Development and Environmental Services:

Monday to Friday	7:00 a.m. to 6:00 p.m.
Saturday	8:00 a.m. to 6:00 p.m.
Sunday and State-wide public holidays	10:00 a.m. to 6:00 p.m.

18) All works associated with the development of the land shall be carried out in such a manner so as not to unreasonably cause injury to, or prejudice or affect the amenity, function and safety of any adjoining or adjacent land, and of any person therein or in the vicinity thereof, by reason of:
    a. Emission of noise, artificial light, vibration, odour, fumes, smoke, vapour, steam, ash, dust, waste water, waste products, grit or otherwise.
    b. The transportation of materials, goods and commodities to and from the land.
    c. Obstruction of any public footway or highway.
    d. Appearance of any building, works or materials.
    e. Any accumulation of vegetation, building debris or other unwanted material must be disposed of by removal from the site in an approved manner. No burning of such materials on site will be permitted unless approved in writing by the Council's Manager of Development and Environmental Services.

19) Public roadways or footpaths must not be used for the storage of any construction materials or wastes, for the loading/unloading of any vehicle or equipment; or for the carrying out of any work, process or tasks associated with the project during the construction period.

20) The developer must make good and/or clean any footpath, road surface or other element damaged or soiled by the development to the satisfaction of the Council's Manger of Works and Technical Services.

ADVICE NOTES

The following advice applies to this permit:

A. This Planning Permit is in addition to the requirements of the Building Act 2016. Approval in accordance with the Building Act 2016 may be required prior to works commencing. A copy of the Directors Determination – categories of Building Work and Demolition Work is available via the CBOS website: Director's Determination - Categories of Building and Demolition Work (PDF, 504.4 KB) or for Low Risk Building Work information go to: Consumer Guide to Low Risk Building and Plumbing Work.

B. This planning approval shall lapse at the expiration of two (2) years from the date of the commencement of planning approval unless the development for which the approval was given has been substantially commenced or extension of time has been granted. Where a planning approval for a development has lapsed, an application for renewal of a planning approval for that development may be treated as a new application.

C. This permit does not take effect until all other approvals required for the use or development to which the permit relates have been granted.

D. The issue of this permit does not ensure compliance with the provisions of the *Aboriginal Relics Act 1975*. If any aboriginal sites or relics are discovered on the land, stop work and immediately contact the Tasmanian Aboriginal Land Council and Aboriginal Heritage Unit of the Department of Tourism, Arts and the Environment. Further work may not be permitted until a permit is issued in accordance with the *Aboriginal Relics Act 1975*.

E. The issue of this permit does not ensure compliance with the provisions of the Threatened Species Protection Act 1995 or the Environmental Protection and Biodiversity Protection Act 1999 (Commonwealth). The applicant may be liable to complaints in relation to any non-compliance with these Acts and may be required to apply to the Threatened Species Unit of the Department of Tourism, Arts and the Environment or the Commonwealth Minister for a permit.

CARRIED

For the Motion

Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Louisa Brown, (Senior Planning Officer)

APPROVED BY Graham Rogers, (Manger of Development & Environmental Services)

Attachments - Development Application Documents
E371735 Instrument Creating Restrictive Covenants pursuant to section 34 Nature Conservation Act 20002
Representation 1 and Representation 2

Discretions
20.3.1 Discretionary Uses P2, P3
C2.6.3 Number of accesses for vehicles P1
C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area P1.1

PROPOSAL
An application has been made to Council by Green Design Architects to construct a dwelling and outbuilding, with vehicle access and circulation on the property Barren Plains Road, Miena (CT 19054/9).
The documents provided with the Development Application include the following:

- Completed Development Application Form
- Certificate of Title documents
- Nature Conservation Plan for Barren Plains Miena 2024

- Site Plans and Elevations;
  - DA01 Cover Page/site Plan
  - DA02 Floor Plan & Elevations (House)
  - DA03 Floor Plan & Elevations (Shed)

The property is zoned Rural in the Tasmanian Planning Scheme – Central Highlands and contains a significant area of land with restrictive Covenants under section 34 of the Nature Conservation Act 2002 "The Land". However, there is an area within the certificate of title that is not within the Conservation Covenant Area, marked as area A, B, C, D on the Instrument creating restrictive covenants E371735 as attached. The dwelling, outbuilding access and circulation spaces are located within this area.

The dwelling is proposed to be clad in suitable materials which would reduce the visual impact of the structure from Barren Plains Road and the surrounding landscape. The materials are earth tone in colour and texture and include stained rough-sawn hardwood, natural rock and corten steel store.

The Development Application was advertised for 14 days, during this time two (2) representations were received, two from the same representor.

This report to Council will assess the proposal against the relevant provisions of the Land Use Planning and Approvals Act 1993 (the Act) and the Tasmanian Planning Scheme – Central Highlands (The Scheme). It is recommended that Council grant a planning permit for the development application subject to conditions.

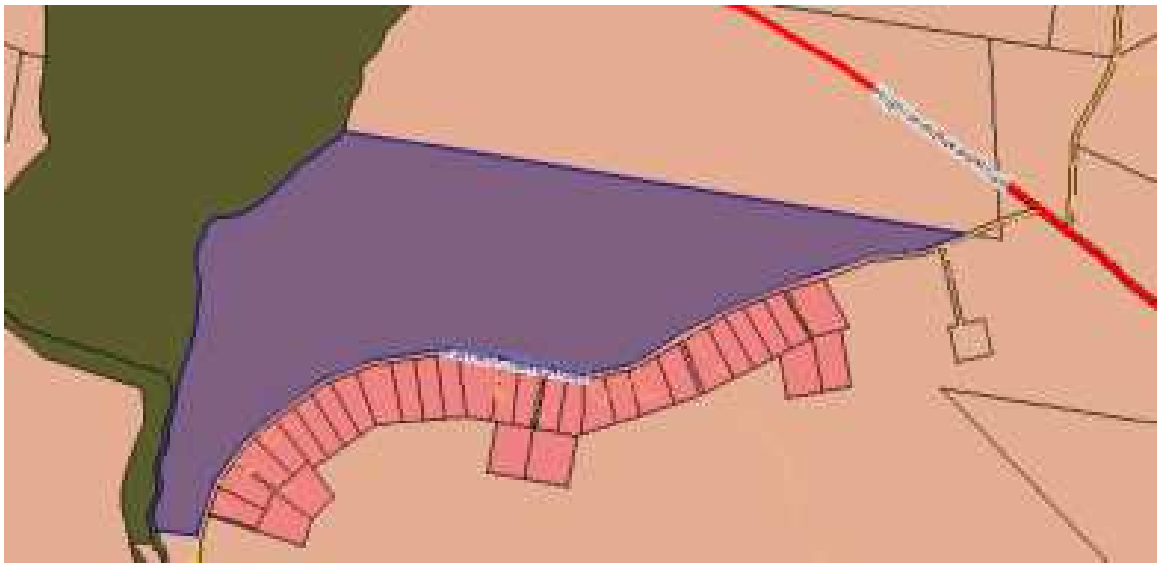
THE SITE
The property has a total area of 214.9ha and is located to the northern boundary of Barren Plains Road, Miena.

The property is vacant of any structures.

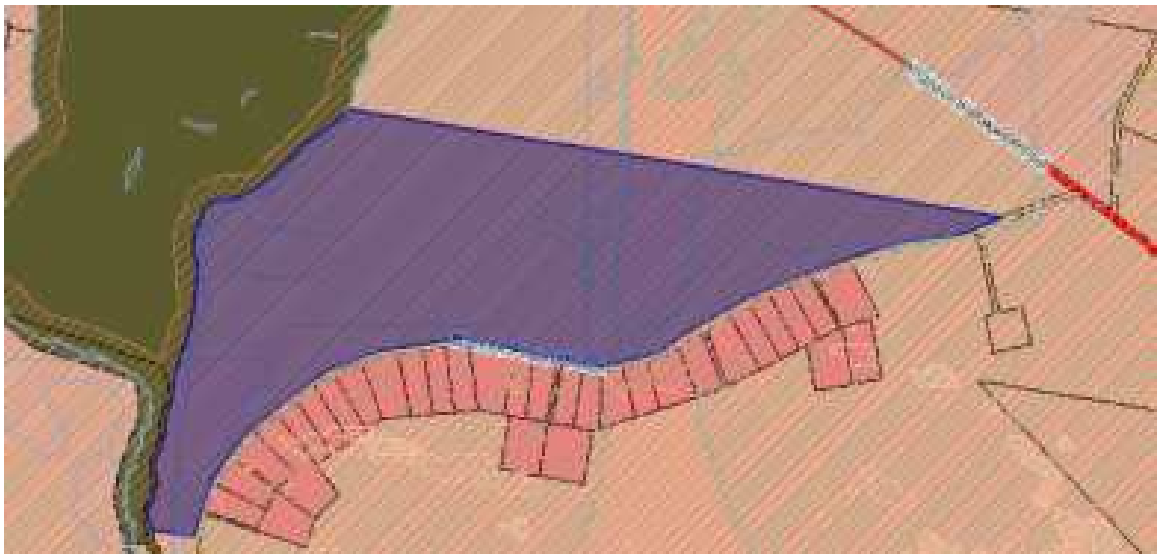
The property is zoned Rural, as is land adjacent to the property boundary to the north and east. Individual lots zoned Low Density Residential are located to the southern property boundary, on the opposite side of Barren Plains Road. One third of these lots contain structures, which may include dwellings. Shannon Lagoon is zoned Environmental Management and forms the western property boundary.

A Restrictive Covenant, E371735 was placed on the property by the Tasmanian Land Conservancy Inc in May 2024. As attached.

Maps 1, 2 and 3 below indicate the location, zoning and code overlays of the property and immediate area.



Map 1_ The subject land area highlighted in blue, pink represents land zoned Rural, red is Low Density Residential and green Environmental Management (source: thelist. 10/06/25)



Map 2_ The subject land area shaded blue with the Bushfire Prone Area Code Overlay (black lines), Natural Assets Code, Waterway and Coastal Protection Area (light blue lines) Natural Assets Code, Priority Vegetation (green lines) (source:thelist. 10/06/25)



Map 3_ The subject land area aerial photograph (source: thelist. 10/06/25)

USE/DEVELOPMENT DEFINITION
The proposed use and development is defined, under the Tasmanian Planning Scheme (The Planning Scheme), as 'residential' below:

Residential use of land for self-contained or shared accommodation. Examples include a single dwelling.

Use/Development Status under the Planning Scheme
Under the Tasmanian Planning Scheme – Central Highlands, a Development Application for Residential development in the Rural Zone is discretionary.

As a discretionary development, the application was advertised in accordance with Section 57 of the Act. Council has the discretion to grant a permit or refuse to grant a permit.

PUBLIC NOTIFICATION AND REPRESENTATIONS

The application was advertised for 14 days from 20 May until the 3 June 2025.. During which time two (2) representations were received and are summarised in the table below. Please refer to enclosure to view the full copies of representations received.

***Public Notice Period* 19th March to 8th April**	
Representation 1	***Council Planning Officer Comment***
It cannot be overlooked that Tas Land Conservancy, while well intentioned and highly successful purpose-driven organisation, seem to operating outside the law, ignored processes and operated in an unethical manner when it comes to releasing this block from a previously identified as reserved. There was no similar DA-type notice to owners of neighbouring properties when this significantly impactful subdivision was proposed. When I purchased my block in 2024, the selling point was that "Tas Land Conservancy acquire land to preserve it, and there is no way that there will be development on that side of the road, down to the lagoon, will be allowed into the future". It was discourteous and disingenuous to not engage local land owners on fundamental change to the reservation on Barren Plains Rd. The question also has to be asked of council, and their approval of the site without neighbour consultation. Overall, the owner and architect have submitted a modest and appropriate plan for the site, keeping at one story high. Of particular positive note is the inclusion of the rock facade on the road facing side of the main building which is a striking, but tasteful way to soften the structure into the surrounding area. This is a very clever and impressive detail. A request I have on the grounds of impact to the visual appeal of the surrounding landscape is the shed that sits in between the dwelling and the road. If there was a similar approach taken to use natural elements to soften this visual impact of this metal box, that would be appreciated and welcomed - be it hard scape or soft landscaping, e.g trees and bushes.	*Council records indicate that this property was approved as a part of a subdivision in 1983. No further subdivisions have been approved.* *The Tasmanian land Conservancy were previous owners of the property and made Restrictive Covenants on the property to conserve the environment.* *Covenants are made between Tasmanian Land Conservancy and future landowners. Council was not involved in this process. In addition, the creation of covenants falls outside of the role of council as Planning Authority.* *The property is not a reserve and has not ever been zoned a reserve in the current or previous Planning Schemes – Central Highlands.* *In addition a Nature Conservation Plan has been prepared and forms part of the Development Application documents. This will guide the conservation and development of the land.* *A small section of the land adjacent to the road is excluded from the covenant area. The proposed dwelling, outbuilding and access road is within this exclusion area.* *The dwelling has been carefully designed to reduce the visual dominance on the surrounding landscape, the design of the outbuilding has not taken the same approach. Council agrees that the outbuilding as is proposed will be visually dominant in the landscape. Therefore, a condition of the planning permit will be to clad the outbuilding in one of or a combination of the three materials used on the the dwelling.*
Representation 2	***Council Planning Officer Comment***
Letter was received very delayed in my property in Singapore, 2 June. Deadline of 3 June is impossible to respond adequately. I am confirming that no one, not the designer has sent me any details or drawings.	*Council confirms that the postal address of an adjacent land owner is in Singapore. Under the Land Use Planning and Approvals Act 1993, Council is required to notify adjacent land owners of the development application. The Act also states that representations must be made within the time period of 14 days. Council has acted as is required by the Act.*

No part of my land or boundaries to my land and its surroundings should be affected in any way by the planning application. I am reserving my rights and placing on record my notification that the planning consideration do not infringe or affect my land in any way. **Further correspondence from the same representor;** My husband and I are currently away and will review your documents when we get back later this month. We reserve our rights.	*Neighbours and designers are not required to approach surrounding properties when proposing to develop land. This is not a requirement of The Act.* *The proposed development will only occur on the application area, that being the property CT 19054/9. No development will take place outside of this site.* *In terms of neighbouring development affecting land, this does not form part of the planning assessment, as the proposed use is a dwelling and surrounding land uses are also residential. The development is compatible with surrounding land uses.*

ASSESSMENT – TASMANIAN PLANNING SCHEME – CENTRAL HIGHLANDS

Rural Zone
The subject site is in the Rural Zone of the Tasmanian Planning Scheme – Central Highlands.

The proposed residential use is discretionary in this zone. Accordingly, the proposal must satisfy the requirements of the following relevant use and development standards of this zone:

20.3 Use Standards		
20.3.1 Discretionary Uses That the location, scale and intensity of a use listed as Discretionary: (a) is required for operational reasons; (b) does not unreasonably confine or restrain the operation of uses on adjoining properties; (c) is compatible with agricultural use and sited to minimise conversion of agricultural land; and (d) is appropriate for a rural location and does not compromise the function of surrounding settlements.		
Acceptable Solutions	**Performance Criteria**	***OFFICER COMMENT***
A1 A use listed as Discretionary, excluding Residential, is for an alteration or extension to an existing use, if: (a) the gross floor area does not increase by more than 30% from that existing at the effective date; and (b) the development area does not increase by more than 30% from that existing at the effective date.	**P1** A use listed as Discretionary, excluding Residential, must require a rural location for operational reasons, having regard to: (a) the nature, scale and intensity of the use; (b) the importance or significance of the proposed use for the local community; (c) whether the use supports an existing agricultural use; (d) whether the use requires close proximity to infrastructure or natural resources; and	*Not applicable as the use is residential.*

	(e) whether the use requires separation from other uses to minimise impacts.	
A2 No Acceptable Solution	**P2** A use listed as Discretionary must not confine or restrain existing use on adjoining properties, having regard to: (a) the location of the proposed use; (b) the nature, scale and intensity of the use; (c) the likelihood and nature of any adverse impacts on adjoining uses; (d) whether the proposed use is required to support a use for security or operational reasons; and (e) any off site impacts from adjoining uses.	*Existing uses on adjoining properties include residential, natural values management and resource development (grazing). The proposed residential use will not confine or restrain these existing uses as the property contains conservation covenants and the developable area limited. The scale and intensity of the proposed dwelling and outbuilding is minor.* *The application meets the Performance Criteria P2.*
A3 No Acceptable Solution	**P3** A use listed as Discretionary, located on agricultural land, must minimise conversion of agricultural land to non-agricultural use and be compatible with agricultural use, having regard to: (a) the nature, scale and intensity of the use; (b) the local or regional significance of the agricultural land; and (c) whether agricultural use on adjoining properties will be confined or restrained.	*Although the property is zoned rural, the site is not considered agricultural land due to the Conservation Covenant prohibiting any use or disturbance of the land.* *In addition, the scale and intensity of the proposed dwelling and outbuilding is minor in the context of the total property.* *The application meets the Performance Criteria P3.*
A4 No Acceptable Solution.	**P4** A use listed as Discretionary, excluding Residential, must be appropriate for a rural location, having regard to: (a) the nature, scale and intensity of the proposed use; (b) whether the use will compromise or distort the activity centre hierarchy; (c) whether the use could reasonably be located on	*Not applicable as the use is residential.*

	land zoned for that purpose; (d) the capacity of the local road network to accommodate the traffic generated by the use; and (e) whether the use requires a rural location to minimise impacts from the use, such as noise, dust and lighting.	

20.4 Development Standards for Buildings and Works 20.4.1 Building height		
To provide for a building height that: (a) is necessary for the operation of the use; and (b) minimises adverse impacts on adjoining properties.		
Acceptable Solutions	**Performance Criteria**	***OFFICER COMMENT***
A1 Building height must be not more than 12m.	**P1** Building height must be necessary for the operation of the use and not cause an unreasonable impact on adjoining properties, having regard to: (a) the proposed height of the building; (b) the bulk and form of the building; (c) the separation from existing uses on adjoining properties; and (d) any buffers created by natural or other features.	*The height of the proposed dwelling is 3.72m and the outbuilding is 3.7m.* *The proposal complies with the Acceptable Solution A1.*

20.4.2 Setbacks That the siting of buildings minimises potential conflict with use on adjoining sites.		
Acceptable Solutions	**Performance Criteria**	***OFFICER COMMENT***
A1 Buildings must have a setback from all boundaries of: (a) not less than 5m; or (b) if the setback of an existing building is within 5m, not less than the existing building.	**P1** Buildings must be sited to provide adequate vehicle access and not cause an unreasonable impact on existing use on adjoining properties, having regard to: (a) the bulk and form of the building; (b) the nature of existing use on the adjoining properties;	*The dwelling is setback 47.2m and the outbuilding 13.5m from the front property boundary of Barren Plains Road.* *Setback to the rear and side boundaries is significantly more than 5m.* *The proposal complies with the Acceptable Solution A1.*

	(c) separation from existing use on the adjoining properties; and (d) any buffers created by natural or other features.	
A2 Buildings for a sensitive use must be separated from an Agriculture Zone a distance of: (a) not less than 200m; or (b) if an existing building for a sensitive use on the site is within 200m of that boundary, not less than the existing building.	**P2** Buildings for a sensitive use must be sited so as not to conflict or interfere with an agricultural use within the Agriculture Zone, having regard to: (a) the size, shape and topography of the site; (b)the prevailing setbacks of any existing buildings for sensitive uses on adjoining properties; (c) the location of existing buildings on the site; (d) the existing and potential use of adjoining properties; (e)any proposed attenuation measures; and (f)any buffers created by natural or other features.	*The proposal does include a sensitive use, a dwelling, however the surrounding zones are not Agriculture.* *The proposal complies with the Acceptable Solution A1.*

20.4.3 Access for New Dwellings		
That new dwellings have appropriate vehicular access to a road maintained by a road authority.		
Acceptable Solutions	**Performance Criteria**	***OFFICER COMMENT***
A1 New dwellings must be located on lots that have frontage with access to a road maintained by a road authority.	P1 New dwellings must have legal access, by right of carriageway, to a road maintained by a road authority that is appropriate, having regard to: (a) the number of users of the access; (b) the length of the access; (c) the suitability of the access for use by the occupants of the dwelling; (d) the suitability of the access for emergency services vehicles; (e) the topography of the site; (f) the construction and maintenance of the access; (g) the construction, maintenance and usage of the road; and (h) any advice from a road authority.	*The proposal complies with the Acceptable Solution A1, Barren Plains Road is a Council maintained road.*

Parking and Sustainable Transport Code

The Code applies to all use and development. The proposal must satisfy the requirements of the following relevant development standards:

C2.5 Use Standards **C2.5.1 Car parking numbers** That an appropriate level of car parking spaces are provided to meet the needs of the use.		
Acceptable solutions	**Performance Criteria**	**OFFICER COMMENT**
A1 The number of on-site car parking spaces must be no less than the number specified in Table C2.1, excluding if: (a) the site is subject to a parking plan for the area adopted by council, in which case parking provision (spaces or cash-in-lieu) must be in accordance with that plan; (b) the site is contained within a parking precinct plan and subject to Clause C2.7; (c) the site is subject to Clause C2.5.5; or (d) it relates to an intensification of an existing use or development or a change of use where: (i) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is greater than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case no additional on-site car parking is required; or (ii) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is less than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case on-site car parking must be calculated as follows: N = A + (C- B) N = Number of on-site car parking spaces required A = Number of existing on site car parking spaces B = Number of on-site car parking spaces required for the existing use or development specified in Table C2.1 C= Number of on-site car parking spaces required for the proposed use or development specified in Table C2.1.	**P1.1** The number of on-site car parking spaces for uses, excluding dwellings, must meet the reasonable needs of the use, having regard to: (a) the availability of off-street public car parking spaces within reasonable walking distance of the site; (b) the ability of multiple users to share spaces because of: (i) variations in car parking demand over time; or (ii) efficiencies gained by consolidation of car parking spaces; (c) the availability and frequency of public transport within reasonable walking distance of the site; (d) the availability and frequency of other transport alternatives; (e) any site constraints such as existing buildings, slope, drainage, vegetation and landscaping; (f) the availability, accessibility and safety of on-street parking, having regard to the nature of the roads, traffic management and other uses in the vicinity; (g) the effect on streetscape; and (h) any assessment by a suitably qualified person of the actual car parking demand determined having regard to the scale and nature of the use and development. **P1.2** The number of car parking spaces for dwellings must meet the reasonable needs of the use, having regard to: (a) the nature and intensity of the use and car parking required; (b) the size of the dwelling and the number of bedrooms; and	*The number of car parking spaces required for the dwelling is one (1) which is easily accommodated on the property adjacent to the dwelling or outbuilding.* *The proposal meets the acceptable solution A1.*

	(c) the pattern of parking in the surrounding area.	

C2.6 Development Standards for Buildings and Works **C2.6.1 Construction of parking areas** That parking areas are constructed to an appropriate standard.		
Acceptable solutions	**Performance Criteria**	**OFFICER COMMENT**
A1 All parking, access ways, manoeuvring and circulation spaces must: (a) be constructed with a durable all weather pavement; (b) be drained to the public stormwater system, or contain stormwater on the site; and (c) excluding all uses in the Rural Zone, Agriculture Zone, Landscape Conservation Zone, Environmental Management Zone, Recreation Zone and Open Space Zone, be surfaced by a spray seal, asphalt, concrete, pavers or equivalent material to restrict abrasion from traffic and minimise entry of water to the pavement.	**P1** All parking, access ways, manoeuvring and circulation spaces must be readily identifiable and constructed so that they are useable in all weather conditions, having regard to: (a) the nature of the use; (b) the topography of the land; (c) the drainage system available; (d) the likelihood of transporting sediment or debris from the site onto a road or public place; (e) the likelihood of generating dust; and (f) the nature of the proposed surfacing.	*The access, parking and manoeuvring spaces will be constructed from gravel and drained to a stormwater system as required by a Plumbing Permit issued by the authority.* *The proposal meets the Performance Criteria A1.*

C2.6.2 Design and layout of parking areas That parking areas are designed and laid out to provide convenient, safe and efficient parking.		
Acceptable solutions	**Performance Criteria**	**OFFICER COMMENT**
A1 Parking, access ways, manoeuvring and circulation spaces must either: (a) comply with the following: (i) have a gradient in accordance with Australian Standard AS 2890 - Parking facilities, Parts 1-6; (ii) provide for vehicles to enter and exit the site in a forward direction where providing for more than 4 parking spaces; (iii) have an access width not less than the requirements in Table C2.2; (iv) have car parking space dimensions which satisfy the requirements in Table C2.3;	**P1** All parking, access ways, manoeuvring and circulation spaces must be designed and readily identifiable to provide convenient, safe and efficient parking, having regard to: (a) the characteristics of the site; (b) the proposed slope, dimensions and layout; (c) useability in all weather conditions; (d) vehicle and pedestrian traffic safety; (e) the nature and use of the development; (f) the expected number and type of vehicles; (g) the likely use of the parking areas by persons with a disability;	*Car parking areas are relatively level and will meet the Australian Standard AS 2890.* *All vehicles will be able to exit the property in a forward direction.* *The width of the access roads are 4m, as required in the Bushfire Prone Area Code.* *The proposal meets the Acceptable Solution A1.*

(v) have a combined access and manoeuvring width adjacent to parking spaces not less than the requirements in Table C2.3 where there are 3 or more car parking spaces; (vi) have a vertical clearance of not less than 2.1m above the parking surface level; and (vii) excluding a single dwelling, be delineated by line marking or other clear physical means; or (b) comply with Australian Standard AS 2890- Parking facilities, Parts 1-6. A1.2 Parking spaces provided for use by persons with a disability must satisfy the following: (a) be located as close as practicable to the main entry point to the building; (b) be incorporated into the overall car park design; and (c) be designed and constructed in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009 Parking facilities, Off-street parking for people with disabilities. [S35]	(h) the nature of traffic in the surrounding area; (i) the proposed means of parking delineation; and (j) the provisions of Australian Standard AS 2890.1:2004 - Parking facilities, Part 1: Off-street car parking and AS 2890.2 -2002 Parking facilities, Part 2: Off-street commercial vehicle facilities.	

C2.6.3 Number of accesses for vehicles

That:

(a) access to land is provided which is safe and efficient for users of the land and all road network users, including but not limited to drivers, passengers, pedestrians and cyclists by minimising the number of vehicle accesses;

(b) accesses do not cause an unreasonable loss of amenity of adjoining uses;

(c) the number of accesses minimise impacts on the streetscape.

Acceptable solutions	Performance Criteria	OFFICER COMMENT
A1 The number of accesses provided for each frontage must: (a) be no more than 1; or (b) no more than the existing number of accesses, whichever is the greater.	**P1** The number of accesses for each frontage must be minimised, having regard to: (a) any loss of on-street parking; and (b) pedestrian safety and amenity; (c) traffic safety; (d) residential amenity on adjoining land; and (e) the impact on the streetscape.	*The proposal includes two access onto Barren Plains Road. This allows for manoeuvring for turning, parking, entering and exiting the property.* *No loss of on street parking, or reduction in pedestrian safety will occur having two accesses to the property.* *Traffic safety will not be affected due to low traffic volumes on the road.*

		The street scape will not be impacted nor residential amenity as the property frontage is more than adequate to accommodate two vehicular access.
A2 Within the Central Business Zone or in a pedestrian priority street no new access is provided unless an existing access is removed.	**P2** Within the Central Business Zone or in a pedestrian priority street, any new accesses must: (a) not have an adverse impact on: (i) pedestrian safety and amenity; or (ii) traffic safety; and (b) be compatible with the streetscape.	*Not applicable, the zone is Rural.*

Natural Assets Code
This Code applies as areas of Waterway & Coastal Protection Area and Priority Vegetation Overlay are located throughout the property.

The purpose of the Natural Assets Code is:

- To minimise impacts on water quality, natural assets including native riparian vegetation, river condition and the natural ecological function of watercourses, wetlands and lakes.

- To minimise impacts on coastal and foreshore assets, native littoral vegetation, natural coastal processes and the natural ecological function of the coast.

- To protect vulnerable coastal areas to enable natural processes to continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes and other sensitive coastal habitats due to sea-level rise.

- To minimise impacts on identified priority vegetation.

- To manage impacts on threatened fauna species by minimising clearance of significant habitat.

The Tasmanian Planning Scheme – Central Highlands defines the Waterway and Coastal Protection Area as land:

(a) shown on an overlay map in the relevant Local Provisions Schedule as within a waterway and coastal protection area; or

(b) within the relevant distance from a watercourse, wetland, lake or the coast shown in the Table C7.3 below, but does not include a piped watercourse or piped drainage line. If an inconsistency for the width exists between Table C7.3 and the area shown on the overlay map, the greater distance prevails, excluding the width measured from the high water mark of tidal waters where the distance shown on the overlay map in the relevant Local Provisions Schedule prevails. The depiction of a watercourse, or a section of a watercourse on an overlay map in the relevant Local Provisions Schedule, is definitive regardless of the actual area of the catchment

The Tasmanian Planning Scheme – Central Highlands defines the Priority Vegetation Area as land shown on an overlay map in the relevant Local Provisions Schedule, as within a Priority Vegetation Area.

Both the Waterway & Coastal Protection Area and Priority Vegetation Area are shown on the overlay map of the Local Provisions Schedule.

The proposal must satisfy the requirements of the following relevant development standards:

C7.6 Development Standards for Buildings and Works
C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area
That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

Acceptable solutions	Performance Criteria	OFFICER COMMENT
A1 Buildings and works within a waterway and coastal protection area must: (a) be within a building area on a sealed plan approved under this planning scheme; (b) in relation to a Class 4 watercourse, be for a crossing or bridge not more than 5m in width; or (c) if within the spatial extent of tidal waters, be an extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway that is not more than 20% of the area of the facility existing at the effective date..	**P1.1** Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to: (a) impacts caused by erosion, siltation, sedimentation and runoff; (b) impacts on riparian or littoral vegetation; (c) maintaining natural streambank and streambed condition, where it exists; (d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation; (e) the need to avoid significantly impeding natural flow and drainage; (f) the need to maintain fish passage, where known to exist; (g) the need to avoid land filling of wetlands; (h) the need to group new facilities with existing facilities, where reasonably practical; (i) minimising cut and fill; (j) building design that responds to the particular size, shape, contours or slope of the land; (k) minimising impacts on coastal processes, including sand movement and wave action; (l) minimising the need for future works for the protection of natural assets, infrastructure and property;	*The proposal must be assessed against the Performance Criteria P1.* *Applicable conditions have been added to the planning permit to prevent the adverse impacts caused by erosion, sedimentation and runoff.* *Impacts on riparian or littoral vegetation will be limited to the development area only.* *No fill of the wetland area is proposed.* *A Soil & Water Management Plan will form a part of the conditions of a planning permit.* *The proposal meets the performance criteria. P1.1* *P1.2 is not applicable.*

	(m) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and (n) the guidelines in the Tasmanian Coastal Works Manual. **P1.2** Buildings and works within the spatial extent of tidal waters must be for a use that relies upon a coastal location to fulfil its purpose, having regard to: (a) the need to access a specific resource in a coastal location; (b) the need to operate a marine farming shore facility; (c) the need to access infrastructure available in a coastal location; (d) the need to service a marine or coastal related activity; (e) provision of essential utility or marine infrastructure; or (f) provisions of open space or for marine-related educational, research, or recreational facilities.	
A2 Buildings and works within a future coastal refugia area must be located within a building area on a sealed plan approved under this planning scheme.	**P2.1** Buildings and works within a future coastal refugia area must allow for natural coastal processes to continue to occur and avoid or minimise adverse impacts on natural assets, having regard to: (a) allowing for the landward transgression of sand dunes and the landward colonisation of wetlands, saltmarshes and other coastal habitats from adjacent areas; (b) avoiding the creation of barriers or drainage networks that would prevent future tidal inundation;	*Not applicable.*

	(c) allowing the coastal processes of sand deposition or erosion to continue to occur; (d) the need to group new facilities with existing facilities, where reasonably practical; (e) the impacts on native vegetation; (f) minimising cut and fill; (g) building design that responds to the particular size, shape, contours or slope of the land; (h) the impacts of sea-level rise on natural coastal processes and coastal habitat; (i) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and (j) the guidelines in the Tasmanian Coastal Works Manual. P2.2 Buildings and works within a future coastal refugia area must be for a use that relies upon a coastal location to fulfil its purpose, having regard to: (a) the need to access a specific resource in a coastal location; (b) the need to operate a marine farming shore facility; (c) the need to access infrastructure available in a coastal location; (d) the need to service a marine or coastal related activity; (e) provision of essential utility or marine infrastructure; and (f) provision of open space or for marine-related educational, research, or recreational facilities.	
A3	**P3**	

Development within a waterway and coastal protection area or a future coastal refugia area must not involve a new stormwater point discharge into a watercourse, wetland or lake.	Development within a waterway and coastal protection area or a future coastal refugia area involving a new stormwater point discharge into a watercourse, wetland or lake must avoid or minimise adverse impacts on natural assets, having regard to: (a) the need to minimise impacts on water quality; and (b) the need to mitigate and manage any impacts likely to arise from erosion, sedimentation or runoff.	*Stormwater will be dealt with on the property inline with the Plumbing Permit.* *The Acceptable solution A3 is met.* *.*
A4 Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area.	**P4.1** Dredging or reclamation within a waterway and coastal protection area or a future coastal refugia area must minimise adverse impacts on natural coastal processes and natural assets, having regard to: (a) impacts caused by erosion, siltation, sedimentation and runoff; (b) impacts on riparian or littoral vegetation; (c) the need to avoid land filling of wetlands; (d) impacts on sand movement and wave action; and (e) the potential for increased risk to inundation of adjacent land. P4.2 Dredging or reclamation within a waterway and coastal protection area or a future coastal refugia area must be necessary: (a) to continue an existing use or development on adjacent land; or (b) for a use which relies upon a coastal location to fulfil its purpose, having regard to: (i) the need to access a specific resource in a coastal location; (ii) the need to operate a marine farming shore facility; (iii) the need to access infrastructure available in a coastal location;	*The proposal meets the acceptable solution A4, no dredging or reclamation will occur in the watercourse.*

	(iv) the need to service a marine or coastal related activity; (v) provision of essential utility or marine infrastructure; and (vi) provision of open space or for marine-related educational, research, or recreational facilities.	
A5 Coastal protection works or watercourse erosion or inundation protection works must not occur within a waterway and coastal protection area or a future coastal refugia area.	**P5** Coastal protection works or watercourse erosion or inundation protection works within a waterway and coastal protection area or a future coastal refugia area must be designed by a suitably qualified person and minimise adverse impacts on natural coastal processes, having regard to: (a) impacts on sand movement and wave action; and (b) the potential for increased risk of inundation to adjacent land.	*Not applicable.*

CONCLUSION

This report has assessed a Development Application for a dwelling and outbuilding at the property Barren Plains Road, Miena (CT 19054/9).

Two representations were received to Council during the notice period, these have been addressed in this report and conditions for development applied.

The proposal has been found to comply with all the relevant standards of the Rural Zone and the applicable Codes.

It is recommended that the Development Application be approved and a Permit issued with conditions and advice.

10. ORDINARY COUNCIL MEETING RESUMED

RESOLUTION 07/6.2025/C

Moved: Cr J Honner **Seconded**: Cr Y Miller

THAT Council no longer act as a Planning Authority and resume the Ordinary Council Meeting.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

Graham Rogers (Manager DES) and Louisa Brown (Contract Planner) left the meeting at 9.30 a.m.

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11. MONTHLY MAYORAL AND ELECTED MEMBERS ACTIVITY

RESOLUTION 08/6.2025/C

Moved: Cr J Honner **Seconded**: Cr J Hall

THAT the Council notes the Mayoral and Elected Members Activities.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

IMPLICATIONS AND FINANCIALS

Strategic Plan	6.2 Ensure that Council members have the resources and skills development opportunities to effectively fulfil their responsibilities
Council Policy	Councillor Code of Conduct Policy
Legislative Context	Local Government Act 1993 Local Government (General) Regulations 2015 Local Government (Model Code of Conduct) Order 2024
Consultation	The community and stakeholders.
Impact on Budget/Resources	Not applicable.
Risk	Allocations for Councillor Conference attendance are included in the operational budget.

PURPOSE
This report aims to provide an overview of the Mayor and Elected Member's monthly activities.

BACKGROUND
The Mayor and Elected members can provide an activity report each month summarising any civic events they attend.

DISCUSSION
The Mayor and Elected Members represent the council at public and civic events and are the political interface between other bodies, governments, and the Council. In accordance with the Local Government Act 1993, the Mayor is designated as the spokesperson for the Council as well as a representative for the Council on regional organisations and at intergovernmental forums at regional, state, and federal levels. Reports below are provided outside the general functions of a Councillor, whereby Councillors meet with ratepayers and attend workshops.

Mayor Loueen Triffitt

20 May 2025	Ordinary Council Meeting (Hamilton)
11 June 2025	CWA Meeting (Bothwell)
	Onsite Inspection Platypus Walk

- Business of Council **x 16**
- Ratepayer and community members – communications **2**
- Elected Members - communications **12**
- Council Management communications **6**

Deputy Mayor J Allwright

20 May 2025	Ordinary Council Meeting (Hamilton)
10 June 2025	Audit Panel Meeting (Hamilton)
12 June 2025	Audit Panel Meeting (Bothwell)

Cr A Archer

20 May 2025	Ordinary Council Meeting (Hamilton)

Cr A Bailey

20 May 2025	Ordinary Council Meeting (Hamilton)

Cr R Cassidy

20 May 2025	Ordinary Council Meeting (Hamilton)
23 May 2025	Meeting onsite with TasNetworks

Cr J Hall

29 April 2025	Budget Workshop (Bothwell)
20 May 2025	Ordinary Council Meeting (Hamilton)
22 May 2025	Volunteer Week Lunch (Bothwell)
28 May 2025	Bush Watch Meeting (Gretna)

Cr J Honner

20 May 2025	Ordinary Council Meeting (Hamilton)
22 May 2025	Volunteer Week Lunch (Bothwell)

Cr D Meacheam

20 May 2025	Ordinary Council Meeting (Hamilton)
12 June 2025	Audit Panel Meeting (Via Teams)

Cr Y Miller

20 May 2025	Ordinary Council Meeting (Hamilton)
22 May 2025	Volunteer Week Lunch (Bothwell)

12. OPERATIONAL MATTERS ARISING (STRATEGIC THEME – COMMUNITY WELL-BEING)

Build capacity to enhance community spirit and sense of wellbeing

1.1 Continue to upgrade existing public open spaces and sporting facilities and encourage community use

1.2 Advocate for improved health, education, transport and other government and non-government services within the Central Highlands

1.3 Continue to strengthen partnerships will all tiers of government

1.4 Support and encourage social and community events within the Central Highlands

1.5 Provide support to community organisations and groups

1.6 Foster and develop an inclusive and engaged community with a strong sense of ownership of its area

1.7 Foster and support youth activities in the Central Highlands

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12.1 HEALTH AND WELLBEING PLAN 2020-2025 – MONTHLY PROGRESS REPORT

RESOLUTION 09/6.2025/C

Moved: Cr J Honner **Seconded:** Cr D Meacheam

THAT *the Health and Wellbeing report be received.*

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Kat Cullen, Community Development Officer

BACKGROUND
The following activities were performed during **May 2025**.

COUNCIL PROJECTS AND ACIVITIES	
External Grant applications	Awaiting first payment: Disaster Ready Fund (DPAC) Clyde River Flood Resilience partnership with Derwent Catchment Project.
	Awaiting response: Tas Active Infrastructure Grants (DPAC) Gretna Oval application. Response expected August.

	New application: Tasmania Drought Ready Fund (DPAC) – community training and farming support projects being developed for application due 18 June.
	In discussion: Share the Dignity free period products dispensers, for Bothwell, as raised by Cr Meacheam
Tasmania's Top Tourism Town Awards	Bothwell entry into Tasmania's Top Tiny Tourism Town Award. In addition to entry submission, a two-day itinerary, editorial, and promotional video produced. This is hosted on Council's website at https://centralhighlands.tas.gov.au/tourism/
Community Grants Program	Community Grant applications - Playgroup Tas, Campdraft Tas. Advice for upcoming application Miena Seisun.
	Community Donations application received for Bronte Jones
	School Support request received for Glenora District School, Westerway and Bothwell due to submit request prior July.
Volunteer Week Event	22 May Bothwell Hall – 25 volunteering group representatives attended partnership project with Rural Business Tasmania. Volunteering workshop, followed by thankyou lunch. Follow-up work to include meetings discuss support for local volunteers.
Child Safety Policy update	Working with Deputy General Manager and LGAT to review Child Safety Standards compliance and update relevant policies.
Structure Plan Review	Meeting with Damien Mackey to provide structure plan input.
ANZAC Day follow-up	Follow up with Great Lake Community Centre, Hamilton. Meeting with Gretna FB to review and forward planning for 2026. Follow up to be included in June report.
COMMUNITY DEVELOPMENT	
Daycare Bothwell	Working with Bothwell community to identify extent of need for long-daycare in Community.
Ouse School	Communication of Council position regarding keeping school open to Minister Jo Palmer.

Central Highlands Community Health Centre — Innovative Model of Care project	Update following restart of project with change in Primary Health Tasmania (PHT) project manager: • PHT is engaging with service providers to look at options for Primary Health in Ouse – including Derwent Valley Medical Centre, Bothwell Doctors, Oatlands and Brighton Doctors. • Tas Department of Health considering funding opportunity for Ouse. PHT have expressed interest in collaboration. • PHT remain interested in involving Council in the local project officer position and aims to define the role collaboratively.
RACT driver training	RACT learner driver training, funded to Council through Cattle Hill Wind Farm Grant round 2, continues to be delivered to community. 10 lessons to be delivered to Ouse, Ellendale, Hamilton residents 15 & 24 July. Final round to be delivered later in year to Bothwell.
School holiday programs	Meetings with Ouse Online Access Centre and Communities for Children to look at developing school holiday activities Hamilton, Ouse, Ellendale.
South Central Workforce	Supporting job networking event to be held Hamilton Hall 17 July.
Rural Business Tasmania	Supporting re-launch of rural financial counselling service being run out of Bothwell Council offices once a fortnight.
Digital Inclusion Needs	Working with Ouse Online Access Centres and Libraries Tasmania to look at digital inclusion needs in community.
Bothwell School Support	Assisting school with securing work skills training for students.
Additional meetings	Local Government Health and Wellbeing Network, HATCH.
COMMUNICATION	
Residents guide	Finalisation of community information for guide (awaiting some respondents before final proof)
Rate notice annual newsletter	In development. To go printers, end of June.
New noticeboard Ellendale	Support for activation, and communication with community.
Council social media	Facebook account– 01-31 May net increase 29. Audience: 2,706. Posts: where to vote, recycle rewards, volunteer week event, tyre dumping Gretna, change to Council meeting times, free driving

	lessons, voting for Bothwell in top tourism town award.
Council Tourism Brochure	Review and reprint for Tourism Brochure exchange
Market Place Noticeboard	Working to update tourism contents of noticeboard opposite Visitors Centre, Bothwell.
Highland Digest	Liaising with Digest to include relevant council and community content monthly.

12.2 COMMUNITY GRANT REQUEST – CAMPDRAFTING TASMANIA AWARD SPONSORSHIP

RESOLUTION 10/6.2025/C

Moved: Cr J Honner **Seconded**: Cr J Hall

THAT Council allocate $300 to Campdrafting Tasmania Inc. for their annual Honorary Membership Award 2025.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Kat Cullen, Community Development Officer

Attachment - Redacted Community Grant Application and Flyer for annual awards showing (shows Central Highlands Council listed as sponsor of Honorary Membership Awards 2025)

BACKGROUND
Campdrafting Tasmania are hosting their annual awards at Ratho Farm, Bothwell. They have requested sponsorship of the Club Honorary Membership Awards 2025, which is awarded for more than 10 years continuous and dedicated service.

The application was received 28-05-2025, however event is 14-05-2025. Campdrafting Tasmania have been informed that they will not have confirmation of Council's decision regarding this application until after event has passed. The required timeframe for receipt of application for future years has also been communicated.

There is currently $6,141 remaining in the Community Grants allocation for 2024-2025 financial year.

12.3 COMMUNITY GRANT REQUEST – PLAYGROUP TASMANIA

RESOLUTION 11/6.2025/C

Moved: Cr D Meacheam **Seconded**: Cr Y Miller

THAT Council allocate $1,679 to Playgroup Tasmania Inc. for new storage cupboards for the Bothwell Playgroup, and to permit the placement of this storage in the Bothwell Hall dining area.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Kat Cullen, Community Development Officer

Attachment - Redacted grant application

BACKGROUND
Bothwell Playgroup has submitted a Community Grant request for storage which will be placed in the Bothwell Hall dining area. Playgroup have recently moved to the Bothwell Hall from the Football and Community centre, and as per Resolution 16/05.2025/C, Council have waived Hall hire fees for 2025.

The Playgroup are currently storing their items in a corner behind the stage. However, this is not a sustainable long-term solution as this may interfere with others using the Hall and is inconvenient to pack up and put away each week.

Playgroup wish to purchase three close-fronted lockable storage cupboards 910mm high, with wooden bench tops (see image below). This reduces impacts on other users of the dining area as they will be neat and tidy and can be used for drinks etc during functions in the Hall.



There is currently $6,141 remaining in the Community Grants budget for 24-25 financial year.

12.4 COMMUNITY DONATIONS REQUEST – BRONTE JONES

RESOLUTION 12/6.2025/C

Moved: Cr J Honner **Seconded**: Cr J Hall

THAT Council provide $500 from the Community Donations allocation to Bronte Jones for travel costs associated with attendance at the 2025 Australian Football 15 Years and Under Championships.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Kat Cullen, Community Development Officer

Attachment - Redacted Community Donations request

BACKGROUND
Council have received a Community Donations request for Bronte Jones from Bothwell to attend the 2025 Australian Football 15 Years and Under Championships. The Championships will take place from 26 July to 02 August 2025 in Brendale, Queensland.

Bronte's family has submitted a request of $300 as per Community Donations guidelines for inter-state representation costs.

There is currently $3,077 remaining in the Community Donations allocation for the 2024-2025 financial year.

13. OPERATIONAL MATTERS ARISING (STRATEGIC THEME – INFRASTRUCTURE AND FACILITIES

Manage Council's physical assets in an efficient and effective manner	
2.1	Develop and implement a 10 year Asset Management Plan for all classes of assets
2.2	Continue to lobby at regional and state levels to improve transport and infrastructure
2.3	Seek external funding to assist with upgrading of existing infrastructure and funding of new infrastructure and facilities
2.4	Ensure that the standard of existing assets and services are maintained in a cost effective manner

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13.1 WORKS & SERVICES MONTHLY REPORT – MAY 2025

RESOLUTION 13/6.2025/C

Moved: Cr J Hall **Seconded:** Cr Y Miller

THAT *the Works & Services monthly report for May 2025 be received.*

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Jason Branch, Works & Services Manager

BACKGROUND
The following activities were performed during **May 2025** by Works & Services –

Grading & Sheeting	Dennistoun Road, Southern Field Road, Old Mans Head Road, Nant Lane, Woodsprings Road, Tunbridge Tier Road, Bashan Road, Victoria Valley road, Browns Marsh Road
Maintenance Grading	McGuires Marsh Road, Church Road Osterley, Strickland Road, Wellwood Road, Pearce's Road, Eyles Road
Potholing / shouldering	Meadsfield Road, Waddamana Road, Victoria Valley Road, Bashan Road, Mark Tree Road, Jones River Road, Risbys Road, Holmes Road, Dillions Road, Rayners Hill Road, Wiggs Road, coopers Road, Ransleys Road, Dry poles Road, Rock Mount Road, Quinns Road, Gullys Road, McCaullums Road, Halls Road, Woodsprings Road,
Spraying:	Footpaths Bothwell
Culverts / Drainage:	Clean culverts Waddamana Road Extend culvert Waddamana Road Replace culvert Woodsprings Road Clean culverts Victoria Valley Road

	Clean culverts Pine Teir Road Clean culverts Browns Marsh Road
Occupational Health and safety	Monthly Toolbox Meetings Day to day JSA and daily prestart check lists completed Monthly workplace inspections completed. Playground inspections
Bridges:	
Refuse / recycling sites:	Cover Hamilton Tip twice weekly
Other:	2 x drum musters Tyre removal from Hamilton landfill site Bulk items removed from Miena waste transfer station Bulk items removed from Bronte waste transfer station Coldmix holes Victoria Valley Road Coldmix holes Pelham Road Crack Sealing Hollow Tree Road Repair Park gates Clean up Bothwell waste transfer station Clean out stock grids Sothern Field Road and Weasel Plains Road Dig out soft spot Bluff Road Dig out soft spot and drainage Langloh Road Repair bus stop area Repair defect Ellendale Road
Slashing:	Rotherwood Road, Wetheron Road, Waddamana Road
Municipal Town Maintenance:	Collection of town rubbish twice weekly Maintenance of parks, cemetery, recreation ground and Caravan Park. Cleaning of public toilets, gutters, drains and footpaths. Collection of rubbish twice weekly Cleaning of toilets and public facilities General maintenance Mowing of towns and parks Town Drainage
Buildings:	
Plant:	Vac trailer serviced Hilux ute Bothwell serviced Hilux ute Hamilton serviced Hose repair in JCB backhoe Komatsu grader serviced Mack truck new drive tyres Loader puncture repair
Private Works:	
Casuals	Toilets, rubbish and Hobart Hamilton general duties
Program for next 4 weeks	Sheeting and grading of Municipal Roads Cleaning of culverts Municipal Roads

14. OPERATIONAL MATTERS ARISING (STRATEGIC THEME – FINANCIAL SUSTAINABILITY

Manage Council's finances and assets to ensure long term viability and sustainability of Council

3.1	Manage finances and assets in a transparent way to allow the maximisation of resources to provide efficient and consistent delivery of services
3.2	Review annually, Councils Long Term Financial Management Plan and Council's Long Term Asset Management Plan
3.3	Where efficiency gains can be identified, resource share services with other local government councils
3.4	Endeavour to, and continue to lobby for, an increase in the level of grant income
3.5	Encourage development to expand Council's rate base
3.6	Identify revenue streams that could complement/substitute for existing resources
3.7	Develop and maintain sound risk management processes

14.1 MONTHLY FINANCE REPORT TO 31 MAY 2025

Moved: Deputy Mayor J Allwright **Seconded:** Cr R Cassidy

THAT the Monthly Finance Report to 31 May 2025 be received.

RESOLUTION 14/6.2025/C

Moved: Deputy Mayor J Allwright **Seconded:** Cr J Hall

That the meeting suspend standing order

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

RESOLUTION 15/6.2025/C

Moved: Deputy Mayor J Allwright **Seconded:** Cr R Cassidy

THAT the Monthly Finance Report to 31 May 2025 be received.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

IMPLICATIONS AND FINANCIALS

Strategic Plan	3.1 Manage finances and assets in a transparent way to allow the maximisation of resources to provide efficient and consistent delivery of services
Council Policy	Not applicable
Legislative Context	The council's decision-making is under the provisions of the Local Government Act 1993, and the report details the basis for the recommendation
Consultation	The financial statements form part of the public record within the Council minutes
Impact on Budget/Resources	As attached
Risk	The council must ensure that it meets its financial obligations. This report captures the ongoing financial performance

REPORT BY Zeeshan Tauqeer, Accountant

BACKGROUND
The following Finance reports are tabled for period ending **31 May 2025.**

Rates Reconciliation as at 31 May 2025

	2024	2025
Rates in Debit 30th June	$135,606.82	$196,877.36
Rates in Credit 30th June	-$171,244.88	-$145,341.00
Balance 30th June	**-$36,638.06**	**$51,536.36**
Rates Raised	$4,486,365.49	$4,729,920.23
Penalties Raised	$42,213.36	$60,490.00
Supplementaries/Debit Adjustments	$21,061.41	$29,368.78
Total Raised	**$4,549,640.26**	**$4,819,779.01**
Less:		
Receipts to Date	$4,082,711.47	$4,549,448.44
Credit Journals		$20,894.16
Pensioner Rate Remissions	$119,626.72	$130,435.03
Remissions/Supplementary Credits	$18,651.14	$10,758.57
Balance	***$293,012.87***	***$159,779.17***

Bank Reconciliation as at 31 May 2025

	2024	2025
Balance Brought Forward	$6,343,187.58	$4,236,940.06
Receipts for month	$487,220.20	$1,456,792.00
Expenditure for month	$2,045,836.52	$1,987,277.44
Balance	**$4,784,571.26**	**$3,706,454.62**
Represented By:		
Balance Commonwealth Bank	$510,958.98	$1,106,972.39
Balance Westpac Bank	$286,730.53	$412,442.86
CBA Credit Card		
Investments	$3,986,331.75	$2,184,760.81
Petty Cash & Floats	$550.00	
	$4,784,571.26	**$3,704,176.06**
Plus Unbanked Money		$2,278.56
	$4,784,571.26	**$3,706,454.62**
Less Unpresented Cheques	$0.00	
Unreceipted amounts on bank statements	$0.00	
	$4,784,571.26	**$3,706,454.62**

BANK ACCOUNT BALANCES AS AT 31 May 2025

No.	Bank Accounts	Investment Period	Current Interest Rate %	Due Date	BALANCE 2024	BALANCE 2025
11100	*Cash at Bank and on Hand*					
11105	Bank 01 - Commonwealth - General Trading Account				510,958.98	1,106,972.39
11106	Bank 02 - Westpac - Direct Deposit Account				286,730.53	412,442.86
1119	*CBA Credit Card*					0.00
11199	*TOTAL CASH AT BANK AND ON HAND*				797,689.51	1,519,415.25
11200	*Investments*					
11207	Bank 6	0	0.00		0.00	0.00
11207	Bank 9	0	0.00			0.00
11115	Bank 04	30	4.25%	2/04/2025	-	-
11110	Tascorp	91	4.10%	29/07/2025	82,259.93	87,584.40
11115	Bank 16	30	3.95%	25/06/2025	3,904,071.82	2,097,176.41
11299	*TOTAL INVESTMENTS*				3,986,331.75	2,184,760.81
	TOTAL BANK ACCOUNTS AND CASH ON HAND				4,784,021.26	3,704,176.06

Comprehensive Income Statement

31/05/2025

Recurrent Income	Budget 2023-2024	Actual to date prior year	Actual to Date	Budget 2024-2025
Rates Charges	$4,469,863	$4,477,140	$4,716,364	$4,682,233
User Fees	$355,450	$559,319	$394,878	$494,250
Grants - Operating	$124,860	$314,426	$476,262	$30,000
Other Revenue	$453,200	$694,397	$709,647	$704,366
Grants received in Advance	$2,998,566	$3,031,386	$2,782,241	$3,206,515
Total Revenues	**$8,401,939**	**$9,076,668**	**$9,079,392**	**$9,117,364**
Expenditure				
Employee Benefits	$2,553,663	$2,223,658	$2,690,436	$2,584,261
Materials and Services	$2,012,016	$2,580,179	$2,450,887	$2,447,768
Other Expenses	$1,715,852	$1,551,298	$1,571,143	$1,892,738
Depreciation and Amortisation	$2,260,000	$1,606,545	$2,104,785	$2,327,800
Total Expenditure	**$8,541,531**	**7,961,680**	**8,817,251**	**9,252,567**
Operating Surplus(Deficit)	**(139,592)**	**1,114,988**	**262,142**	**(135,203)**
Capital Grants & Other	$2,407,078	$554,876	$1,525,149	$2,424,996
Surplus(Deficit)	**2,267,486**	**1,669,864**	**1,787,291**	**2,289,793**
Capital Expenditure	**$8,107,503**	**$2,868,410**	**$3,927,785**	**$5,117,085**

	BUDGET 2024/2025	ACTUAL TO 31-May-25	% OF BUDGET SPENT	BALANCE OF BUDGET
CORPORATE AND FINANCIAL SERVICES				
ADMIN HAMILTON	$1,870,264	$1,875,159	100.26%	($4,895)
ELECTED MEMBERS EXPENDITURE(AMEH)	$256,040	$260,749	101.84%	($4,709)
MEDICAL CENTRE(MED)	$127,141	$98,209	77.24%	$28,932
STREET LIGHTING(STLIGHT)	$34,357	$29,164	84.88%	$5,193
ONCOSTS	($498,049)	($492,729)	98.93%	($5,320)
COMMUNITY & ECONOMIC DEVELOPMENT & RELATIONS(CDR+EDEV)	$460,441	$553,236	120.15%	($92,795)
TOTAL CORPORATE & FINANCIAL SERVICES	**$2,250,194**	**$2,323,788**	**103.27%**	**($73,594)**
DEVELOPMENT AND ENVIRONMENTAL SERVICES				
ADMIN BOTHWELL	$321,446	$304,638	94.77%	$16,808
ENVIRON HEALTH SERVICES (EHS)	$33,455	$28,253	84.45%	$5,202
ANIMAL CONTROL(AC)	$11,375	$13,662	120.11%	($2,287)
PLUMBING/BUILDING CONTROL (BPC)	$182,083	$137,244	75.37%	$44,839
SWIMMING POOLS (POOL)	$30,241	$43,471	143.75%	($13,230)
DEVELOPMENT CONTROL (DEV)	$351,850	$277,302	78.81%	$74,548
WASTE SERVICES	$928,956	$929,048	100.01%	($92)
ENVIRONMENT PROTECTION (EP)	$41,357	$2,751	6.65%	$38,606
TOTAL DEVELOPMENT & ENVIRONMENTAL SERVICES	**$1,900,763**	**$1,736,369**	**91.35%**	**$164,394**
WORKS AND SERVICES				
PUBLIC CONVENIENCES (PC)	$287,145	$177,969	61.98%	$109,176
CEMETERY (CEM)	$16,732	$16,130	96.40%	$602
HALLS (HALL)	$80,732	$98,932	122.54%	($18,200)
PARKS AND GARDENS(PG)	$97,057	$134,343	138.42%	($37,286)
REC. & RESERVES(Rec+tennis)	$119,900	$124,003	103.42%	($4,103)
TOWN MOWING/TREES/STREETSCAPES(MOW)	$193,285	$211,439	109.39%	($18,154)
HOUSING (HOU)	$116,424	$117,350	100.80%	($926)
CAMPING GROUNDS (CPARK)	$18,884	$15,618	82.70%	$3,266
LIBRARY (LIB)	$2,346	$1,687	71.90%	$659
ROAD MAINTENANCE (ROAD)	$1,056,382	$1,053,006	99.68%	$3,376
FOOTPATHS/KERBS/GUTTERS (FKG)	$13,813	$18,785	136.00%	($4,972)
BRIDGE MAINTENANCE (BR)	$23,026	$8,675	37.68%	$14,351
PRIVATE WORKS (PW)	$50,743	$23,468	46.25%	$27,275
SUPER. & WO OVERHEADS (SUPER)	$812,468	$807,671	99.41%	$4,797
QUARRY/GRAVEL (QUARRY)	($181,998)	($75,668)	41.58%	($106,330)
NATURAL RESOURCE MANAGEMENT(NRM)	$128,847	$131,065	101.72%	($2,218)
SES (SES)	$2,000	$305	15.23%	$1,696
PLANT MTCE & OPERATING COSTS (PLANT)	$640,571	$604,671	94.40%	$35,900
PLANT INCOME	($756,571)	($822,142)	108.67%	$65,571
DRAINAGE (DRAIN)	$42,124	$43,588	103.48%	($1,464)
OTHER COMMUNITY AMENITIES (OCA)	$40,559	$28,576	70.45%	$11,983
WASTE COLLECTION & ASSOC SERVICES (WAS)	$0	$5,001		($5,001)
FLOOD REPAIRS		$0		
TOTAL WORKS & SERVICES	**$2,804,469**	**$2,724,469**	**97.15%**	**$80,000**
DEPARTMENT TOTALS OPERATING EXPENSES				
Corporate Services	$2,250,194	$2,323,788	103.27%	($73,594)
Dev. & Environmental Services	$1,900,763	$1,736,369	91.35%	$164,394
Works & Services	$2,804,469	$2,724,469	97.15%	$80,000
Total All Operating	**$6,955,426**	**$6,784,626**	**97.54%**	**$170,800**

	BUDGET 2024/2025	ACTUAL TO 31-May-25	% OF BUDGET SPENT	BALANCE OF BUDGET
CAPITAL EXPENDITURE				
CORPORATE AND FINANCIAL SERVICES				
Computer Purchases	$41,500	$35,955	86.64%	$5,545
Equipment	$5,000	$0	0.00%	$5,000
Miscellaneous	$5,000	$0	0.00%	$5,000
	$51,500	**$35,955**	**69.82%**	**$15,545**
DEVELOPMENT & ENVIRONMENTAL SERVICES				
Swimming Pool	$5,000	$1,870	37.40%	$3,130
	$5,000	**$1,870**	**37.40%**	**($4,182)**
WORKS & SERVICES				
Plant Purchases	$760,000	$709,215	93.32%	$50,785
Camping Grounds	$0	$0		$0
Public Conveniences	$150,000	$0	0.00%	$150,000
Bridges	$0	$18,065	0.00%	($18,065)
Road Construction & Reseals	$2,918,000	$2,569,706	88.06%	$348,295
Drainage	$20,000	$4,898	0.00%	$15,102
Parks & Gardens Capital	$11,440	$239	2.09%	$11,201
Infrastructure	$82,145	$28,235	34.37%	$53,910
Footpaths, Kerbs & Gutters	$40,000	$28,343	70.86%	$11,657
Rec Grounds	$570,000	$315,117	55.28%	$254,883
Halls	$60,000	$11,755	19.59%	$48,245
Buildings	$449,000	$204,388	45.52%	$244,612
	$5,060,585	**$3,889,960**	**76.87%**	**$1,170,625**
TOTAL CAPITAL WORKS				
Corporate Services	$51,500	$35,955	69.82%	$15,545
Dev. & Environmental Services	$5,000	$1,870	37.40%	$3,130
Works & Services	$5,060,585	$3,889,960	76.87%	$1,170,625
	$5,117,085	**$3,927,785**	**76.76%**	**$1,189,300**

14.2 COUNCIL RATES RESOLUTION 2025-2026

RESOLUTION 16/6.2025/C

Moved: Cr J Honner **Seconded:** Cr R Cassidy

THAT Council by absolute majority, approves the following Rates Resolution for 2025-2026.

CENTRAL HIGHLANDS COUNCIL
NOTICE OF 2025-2026 RATES & CHARGES

Under the *Local Government Act 1993* and the *Fire Service Act 1979*, the Central Highlands Council has made the following rates and charges upon rateable land within the municipal area of Central Highlands ("the municipal area"): -

General Rate

1. A General Rate pursuant to Section 90 and Section 91 of the *Local Government Act 1993* consisting of:
   (a) **2.7585300** cents in the dollar on the assessed annual value for all separately valued parcels of rateable land within the Central Highlands Council area; and
   (b) A fixed charge of **$494.76** which applies to all rateable land.

Waste Management Charge

2 A Service Charge pursuant to Section 94 of the *Local Government Act 1993* consisting of:

(a) For the municipal area, a Waste Management Charge of **$348.00** for all rateable land; and

(b) For the different parts of the municipal area specified, by declaration of an absolute majority of Council pursuant to sections 94(3) and 107 of the *Local Government Act 1993*, the Waste Management Charge is varied as follows:

i. Land to which Council provides a garbage and recycling collection service and which is used for commercial purposes is charged **$654.00** per tenement; and
ii. All land outside the Council's garbage and recycling collection service area which comprises a separately valued parcel of rateable land within the municipal area is charged the amount specified under the heading "Charge" according to the use or non-use of the land specified under the heading "Type":

Type	Charge $	Factor
a. Commercial purposes	**623.00**	Use of Land
b. Land used for residential purposes, industrial purposes, public purposes, primary production, sporting or recreational facilities, or quarrying or mining.	**216.00**	Use of Land
c. Non-use of land	**110.00**	Non-Use of Land

Fire Service Contribution

3 For the Council's contribution to the State Fire Commission pursuant to Section 93A of the *Local Government Act 1993:*

(a) For land within the Bothwell Volunteer Brigade Rating District an amount of **0.309980** cents in the dollar on the assessed annual value of all separately valued parcels of rateable land subject to a minimum **$50.00**; and

(b) For all other land in the Municipal area an amount of **0.293100** cents in the dollar on the assessed annual value of all separately valued parcels of the land subject to a minimum **$50.00.**

Instalments

4 Rates are payable by four instalments due on the following dates:

Instalment No. 1	**30 August 2025**
Instalment No. 2	**29 November 2025**
Instalment No. 3	**28 February 2026**
Instalment No. 4	**30 April 2026**

Penalty

5 A penalty of **10%** applies to each instalment not paid by the due instalment date.

Adjusted Values

6 For the purposes of this resolution, any reference to the assessed annual value includes a reference to that value as adjusted pursuant to Section 89 and Section 89A of the *Local Government Act 1993* as amended.

These rates are for the year commencing **1st July 2025 and ending 30th June 2026** and are payable to the Council at its Offices at Alexander Street, Bothwell or Tarleton Street, Hamilton.

CARRIED

For the Motion

Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Zeeshan Tauqeer, Accountant

14.3 ANNUAL BUDGET ESTIMATES 2024-2025

RESOLUTION 17/6.2025/C

Moved: Cr Y Miller **Seconded:** Cr R Cassidy

THAT the Council approves the Annual Budget Estimates for 2025-2026.

CARRIED

For the Motion

Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Zeeshan Tauqeer, Accountant

Attachment - Draft Annual Budget Estimates for 2025-2026.

BACKGROUND

Section 82 of the *Local Government Act 1993* requires the General Manager to prepare budget estimates of the Council's revenue and expenditure for each financial year. Following on from Council's Budget Workshops held on 08 April 2025, 29 April 2025 and 17 June 2025; the Draft Budget Estimates for 2025-2026 have been prepared and are submitted to Council for adoption. The budget estimates are required to be adopted by Council by Absolute Majority.

These Budget Estimates have been increased in accordance with Council's adopted Long-Term Financial Plan of March CCI plus 2%. Therefore, all expenditure and rate revenue projections have an average increase of 5.13% across all areas which will ensure Council is in the best fiscal position under the current economic climate.

15. OPERATIONAL MATTERS ARISING (STRATEGIC THEME – NATURAL ENVIRONMENT

Encourage responsible management of the natural resources and assets in the Central Highlands.

4.1 Continue to fund and support the Derwent Catchment Project

4.2 Continue with existing waste minimisation and recycling opportunities

4.3 Promote the reduce, reuse, recycle, recover message

4.4 Continue the program of weed reduction in the Central Highlands

4.5 Ensure the Central Highlands Emergency Management Plan is reviewed regularly to enable preparedness for natural events and emergencies

4.6 Strive to provide a clean and healthy environment

4.7 Support and assist practical programs that address existing environmental problems and improve the environment

RESOLUTION 18/6.2025/C

Moved: Cr D Meacheam **Seconded:** Cr J Hall

THAT the meeting resume standing orders.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

15.1 DERWENT CATCHMENT PROJECT

RESOLUTION 19/6.2025/C

Moved: Cr J Honner **Seconded:** Cr Y Miller

THAT the Derwent Catchment Project Report for May 2025 be received.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

The Derwent Catchment Project
Increasing Productivity. Restoring Landscapes

Derwent Catchment Project Council Report May-June 2025

General business

Nature Repair Plan Pilot

Following Labor's election win and Rebecca White's success in securing the seat of Lyons, the Derwent Catchment Project is working on the next steps to secure our $10 million election commitment for a Nature Repair Plan Pilot for the Derwent Catchment.

We have an inception meeting this week with representatives from the Australian Government's Biodiversity Division at the Department of Climate Change, Energy, the Environment and Water to progress the Nature Repair Pilot project. We will keep Council informed as developments take place.

Water quality monitoring sites

The Derwent Catchment Project will assume responsibility for the ongoing management of two real-time Ion-Q® water quality analysers located on the Clyde and Ouse rivers. These in situ analysers, originally deployed by the Derwent Estuary Program with support from DEP stakeholders and The Ian Potter Foundation (2021–2024), provide continuous monitoring of 12 key elements, including nutrients and minerals critical to river health.

This initiative aligns with the launch of our major three-year river restoration program on the Clyde River, delivered in partnership with the Central Highlands Council through

funding from the Disaster Ready Fund. It also complements ongoing works on the Ouse River, where we have implemented post-flood revegetation and willow control, with further large-scale restoration funding in development.

Morgan has been back out to the Ouse and Clyde River sites with the Derwent Estuary Program to learn how to maintain the analysers and fix any issues that come up. The machines are backed by a technical support team, based interstate, which means we can get real-time help when something goes wrong and over the phone support. Knowing how to use and look after the equipment ourselves helps us get the most out of it and keep it running well for longer.

Agri-best practice programs

Strategic Actions 4.7 Support and assist practical programs that address existing environmental problems and improve the environment.

Pasture network activity has included updating results from trial sites, delivering a field day at Bothwell, a series of face to face interview with producers, supporting NRMs to deliver a pasture workshop at Geeveston, planning field day at one of our Upper Derwent trial sites, developing a native pastures management workshop and contributing a column to the New Norfolk and Derwent Valley News.

At Bothwell, five producers attended a field session at our fertiliser test strips at Wetheron. This relatively high fertility site showed responses to additional phosphorus (P) and potassium (K) when applied in combination with each other. Participants discussed additional total pasture yield, clover yield and positive return on investment. A clover response to lime with P+K was also noted despite apparently adequate pH. We hope to further demonstrate these results on a paddock scale. The benefit of rest from grazing was also demonstrated, with species composition and sown perennial grass vigour significantly improved in all strips compared to the surrounding paddock. This offers insight into the use of longer rest periods as a strategic improvement tool, particularly when soil nutrition is adequate and improved species are present. We will also be seeking to apply this strategy on a broader scale.

Knowledge gained from interviews with producers has influenced the approach to our climate-smart agriculture project and identified issues and topics producers see benefit in addressing and trialling. We are currently collating these interviews as a part of baseline report. There is an expression of interest by producers in paddock-based knowledge sharing and trial-focused activities, despite otherwise good access to information. There remains interest in, and a clear role for, the style of support our pasture network seeks to offer. We are currently working to conclude our project planning and implement a series of land management demonstrations that broadly address climate resilience from the pasture up.



Behind the wire: mown and rested, part of the paddock shines, fertilised or not.
Outside the wire, grazing pressures suppress the same plants, suppressing growth and vigour, hinting at a remediation strategy for the wider paddock.

Weed Management Programs

Central Highlands Weed Management Plan

Strategic Actions 4.4 Continue the program of weed reduction in the Central Highlands, and 4.7 Support and assist practical programs that address existing environmental problems and improve the environment.

May marks the end of the spray season in the Central Highlands. The team is proud of the outcomes achieved to date, and momentum remains strong as planning for the upcoming season gets underway. DCP is actively engaging with major stakeholders to shape and prioritise the next round of on-ground works, ensuring a strategic approach to weed control moving forward.

Looking ahead, we will host the annual weed meeting in early August, bringing together landholders, agencies, and community partners to reflect on the past year and collaborate on future efforts. The Derwent Catchment Project is a delivery partner for

four of the six available Weed Action Fund grants, with a strong focus on controlling invasive grasses (across the North and South of the State which is two programs), Foxglove, and Orange Hawkweed across the Highlands.

Restoration and Conservation

Strategic Actions: 4.1 Continue to fund and support the Derwent Catchment Project and 4.7 Support and assist practical programs that address existing environmental problems and improve the environment.

Hamilton Native Plant Nursery

Over the past month, the nursery has made excellent progress, with over 3000 plants being sold for various orders. This steady movement of stock highlights the continued demand for our plants and the growing reach of the nursery. Clearing this volume has also helped free up space, allowing for better organisation and making room for new stock. David, our volunteer, continues to come in weekly. We've been kept busy by a range of essential maintenance tasks, spending many hours weeding, potting up plants and preparing orders to go out. It's been a productive month with a strong focus on maintaining the health and presentation of our plants.

Rivers

Tyenna River Recovery

We recently facilitated the successful removal of a significant log jam on the Tyenna River near Mount Field National Park on behalf of TasRail, restoring flow and reducing the risk of infrastructure damage. The effectiveness of this operation led to Tasmania Parks and Wildlife Service engaging the same contractor to carry out additional works further upstream, focusing on the removal of invasive willows that were accumulating debris and restricting flow. Building on this momentum, Morgan is now working closely with multiple stakeholders to develop a coordinated plan to tackle a stand of large willows near Westerway, where recent wind damage has caused several trees to collapse into the river, creating a potential dam and flood risk.



Social media post about the Willow Warriors on our Facebook

Clyde River – Flood Resilience Project

Exciting news that Council has signed the deed to start the 3-year Clyde flood resilience project. We will be commencing this program shortly, beginning with landholder engagement to develop a project plan for the river to prioritise and schedule works.

Yours Sincerely,
The Derwent Catchment Team

Key Contacts:

Josie Kelman (CEO) 0427044700

Eve Lazarus (Deputy CEO) 0429170048

Morgan McPherson (Operations Manager) 0418 667 426

Karen Phillips (Nursery Manager) 0400 039 303

15.2 QUARTERLY REPORT SOUTHERN TASMANIAN REGIONAL WASTE AUTHORITY

RESOLUTION 20/6.2025/C

Moved: Deputy Mayor J Allwright **Seconded:** Cr J Honner

THAT council receive and note the Quarterly Report for the period ending 31 March 2025 from the Southern Tasmanian Regional Waste Authority.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Stephen Mackey, Acting General Manager

Attachment – Quarterly Report

DISCUSSION

The rules of the STRWA provide:

13.1 The STRWA must provide a report to members as soon as practicable after the end of March, June, September and December in each year.

13.2 The quarterly report must include:
(a) A statement the STRWA's general performance; and
(b) A statement of the STRWA's financial performance.

The report advises that the current funding agreement with the State Government for TasWaste South ends on 30 June 2025. Addressing the funding beyond 30 June is obviously a significant priority and work has occurred in conjunction with the other regional bodies in this regard. The current proposal involves funding the regional bodies for a 5-year period until 2030, to align with the next iteration of the Tasmanian Waste and Resource Recovery Strategy.

The current proposal is being considered by the Tasmanian Waste and Resource Recovery Board with a resolution intended to be achieved prior to 30 June.

As can be seen councils contribution is only $500.

16. OPERATIONAL MATTERS ARISING (STRATEGIC THEME – ECONOMIC DEVELOPMENT

Encourage economic viability within the municipality	
5.1	Encourage expansion in the business sector and opening of new market opportunities
5.2	Support the implementation of the Southern Highlands Irrigation Scheme
5.3	Continue with the Highlands Tasmania and Bushfest branding
5.4	Encourage the establishment of alternative industries to support job creation and increase permanent residents
5.5	Promote our area's tourism opportunities, destinations and events
5.6	Support existing businesses to continue to grow and prosper
5.7	Develop partnerships with State Government, industry and regional bodies to promote economic and employment opportunities
5.8	Work with the community to further develop tourism in the area

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Police Inspector - Luke Horne and Cr A Archer attended the meeting at 10.02 a.m.

RESOLUTION 21/6.2025/C

Moved: Cr R Cassidy **Seconded:** Cr J Hall

THAT council suspend standing orders.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

RESOLUTION 22/6.2025/C

Moved: Cr D Meacheam **Seconded:** Cr R Cassidy

THAT council resume standing orders.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

16.1 DEVELOPMENT & ENVIRONMENTAL SERVICES

RESOLUTION 23/6.2025/C

Moved: Cr J Honner **Seconded:** Cr Y Miller

THAT the Development & Environmental Services Report be received.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Graham Rogers, Manager DES

PLANNING PERMITS ISSUED UNDER DELEGATION

The following planning permits have been issued under delegation during the past month.

NO PERMIT REQUIRED

DA NO.	APPLICANT	LOCATION	PROPOSAL
2025/00023	J Webb	268 Marked Tree Road, Gretna	Road & Access Construction

PERMITTED

DA NO.	APPLICANT	LOCATION	PROPOSAL
2024/00031	K De Koning	485 Rockmount Road, Ellendale	Caravan Shelter

DISCRETIONARY

DA NO.	APPLICANT	LOCATION	PROPOSAL
2025/00018	Exceed Engineering CBM Sustainability P/L	27 Drysdale Road, Miena	Outbuilding

ANIMAL CONTROL

Total Number of Dogs Registered in 2023/2024 Financial Year – 998
Total Number of Kennel Licences Issued for 2023/2024 Financial Year – 29

2024/2025 Dog Registration Renewal have been issued and were due by 31 July 2024.
Infringement Notices have now been issued for 10 unregistered dogs.

Statistics as of 11 June 2025	
Number of Dogs Impounded during last month	0
Number of Dogs Currently Registered	947
Number of Dogs Pending Re-Registration	10
Number of Kennel Licence Renewals	33

17. OPERATIONAL MATTERS ARISING (STRATEGIC THEME – GOVERNANCE AND LEADERSHIP

Provide governance and leadership in an open, transparent, accountable and responsible manner in the best interests of our community

6.1 Ensure Council fulfils its legislative and governance responsibilities and its decision making is supported by sustainable policies and procedures

6.2 Ensure that Council members have the resources and skills development opportunities to effectively fulfil their responsibilities

6.3 Ensure appropriate management of risk associated with Council's operations and activities

6.4 Provide a supportive culture that promotes the well-being of staff and encourages staff development and continuous learning

6.5 Provide advocacy on behalf of the community and actively engage government and other organisations in the pursuit of community priorities

6.6 Consider Council's strategic direction in relation to resource sharing with neighbouring councils and opportunities for mutual benefitp

6.7 Support and encourage community participation and engagement

6.8 Ensure that customers receive quality responses that are prompt, accurate and fair

6.9 Council decision making will be always made in open council except where legislative or legal requirements determine otherwise.

17.1 ANNUAL PLAN 2025-2026

RESOLUTION 24/6.2025/C

Moved: Cr R Cassidy **Seconded:** Cr D Meacheam

THAT Council approves the Annual Plan 2025-2026.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Adam Wilson, Deputy General Manager

Attachment - Annual Plan 2025-2026 (DRAFT)

IMPLICATIONS AND FINANCIALS

Strategic Plan	3.1 Manage finances and assets in a transparent way to allow the maximisation of resources to provide efficient and consistent delivery of services
Legislative Context	Local Government Act 1993

Consultation	Councillors, Council's Audit Panel and Senior Management Team
Impact on Budget/Resources	As per the Budget Estimates for 2025-2026 if adopted
Risk	The council must ensure that it meets its legislative and governance responsibilities as per section 71 of the Local Government Act 1993.

BACKGROUND
Under Section 71 of the Local Government Act 1993, Council is required to have an Annual Plan. The 2025-2026 Annual Plan is submitted for Council's approval which includes the Budget Estimates for 2025-2026 if adopted.

17.2 POLICY 2022 - 63 CLIMATE CHANGE ADAPTATION AND MITIGATION

RESOLUTION 25/6.2025/C

Moved: Cr D Meacheam **Seconded:** Cr Y Miller

THAT Council adopt Policy No. 2022 – 63 Climate Change Adaption and Mitigation.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Adam Wilson, Deputy General Manager

Attachment - Policy No. 2022 – 63 Climate Change Adaption and Mitigation (DRAFT)

IMPLICATIONS AND FINANCIALS

Strategic Plan	6.1 Ensure Council fulfils its legislative and governance responsibilities and its decision making is supported by sustainable policies and procedures
Council Policy	Policy No. 2022 – 63 Climate Change Adaption and Mitigation
Legislative Context	Local Government Act 1993
Consultation	Council's Audit Panel and Senior Management Team
Impact on Budget/Resources	As per 24/25 Council approved budget
Risk	The council must ensure that it meets its legislative and governance responsibilities as per the Local Government Act 1993.

BACKGROUND
The previous Climate Change Adaption and Mitigation Policy was approved by Council in the July 2022.

Dr Josie Kelman CEO Derwent Catchment Project has reviewed Policy 2022 – 63 Climate Change Adaptation & Mitigation in line the draft Climate Change Adaption Plan 2024 for the Central Highlands. Dr Kelman suggests that this policy will support Council with the preparation and delivery of climate change adaptation and mitigation planning, actions and programs. The policy also aims to ensure that Council lead the community by example, taking reasonable and practical measures to reduce carbon

emissions and increase climate change resilience in its operations, and by increasing community understanding of climate change, and promoting preparedness.
The Audit Panel reviewed the Climate Change Adaption and Mitigation policy at its meeting on the 12 June 2025 and made the following resolution:

RESOLUTION

Moved: Cr D Meacheam *Seconded: Deputy Mayor J Allwright*

THAT Council adopt Policy No. 2022 – 63 Climate Change Adaption and Mitigation.

CARRIED

***For the Motion**: Mr I McMichael (Chair); Deputy Mayor J Allwright; and Cr D Meacheam*

17.3 POLICY 2015 - 37 INFORMATION MANAGEMENT (RECORDKEEPING)

RESOLUTION 26/6.2025/C

Moved: Cr R Cassidy **Seconded:** Cr J Honner

THAT Council adopt Policy No. 2015 – 37 Information Management (Recordkeeping) Policy.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Adam Wilson, Deputy General Manager

Attachment - Policy No. 2015 – 37 Information Management (Recordkeeping) Policy (DRAFT)

IMPLICATIONS AND FINANCIALS

Strategic Plan	6.1 Ensure Council fulfils its legislative and governance responsibilities and its decision making is supported by sustainable policies and procedures
Council Policy	Policy No. 2015 – 37 Information Management (Recordkeeping) Policy
Legislative Context	Local Government Act 1993
Consultation	Council's Audit Panel and Senior Management Team
Impact on Budget/Resources	As per 24/25 Council approved budget
Risk	The council must ensure that it meets its legislative and governance responsibilities as per the Local Government Act 1993.

BACKGROUND
The previous policy was approved by Council in the November 2021.

The purpose of this policy is to provide an effective framework for Council's recordkeeping practices and document management procedures. It covers the creation of records, and their maintenance,

storage, accessibility and retention, along with the individual responsibilities of Councillor's and staff with regard to their records management obligations.

The Audit Panel reviewed the Information Management (Recordkeeping) policy at its meeting on the 12 June 2025 and made the following resolution:

RESOLUTION

Moved: Deputy Mayor J Allwright *Seconded: Cr D Meacheam*

THAT Council adopt Policy No. 2015 – 37 Information Management (Recordkeeping) Policy.

CARRIED

***For the Motion**: Mr I McMichael (Chair); Deputy Mayor J Allwright; and Cr D Meacheam*

17.4 POLICY 2013 - 07 COUNCIL CAMPING GROUND FACILITIES POLICY

RESOLUTION 27/6.2025/C

Moved: Cr J Honner **Seconded:** Cr Y Miller

THAT Council adopt Policy No. 2013 - 07 Council Camping Ground Facilities Policy.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Adam Wilson, Deputy General Manager

Attachment - Policy No. 2013- 07 Council Camping Ground Facilities Policy (DRAFT)

IMPLICATIONS AND FINANCIALS

Strategic Plan	6.1 Ensure Council fulfils its legislative and governance responsibilities and its decision making is supported by sustainable policies and procedures
Council Policy	Policy No. 2013 - 07 Council Camping Ground Facilities Policy
Legislative Context	Local Government Act 1993
Consultation	Council's Audit Panel and Senior Management Team
Impact on Budget/Resources	As per 24/25 Council approved budget
Risk	The council must ensure that it meets its legislative and governance responsibilities as per the Local Government Act 1993.

BACKGROUND
The previous Council Camping Ground Facilities Policy was approved by Council in the March 2021. This policy has been prepared to address the management of Council owned camping facilities in the Central Highlands.

The Audit Panel reviewed the Council Camping Ground Facilities policy at its meeting on the 12 June 2025 and made the following resolution:

RESOLUTION

Moved: Deputy Mayor J Allwright *Seconded: Cr D Meacheam*

THAT Council adopt Policy No. 2013 - 07 Council Camping Ground Facilities Policy.

CARRIED

***For the Motion**: Mr I McMichael (Chair); Deputy Mayor J Allwright; and Cr D Meacheam*

Deputy Mayor J Allwright left the meeting at 10.44 a.m.

17.5 MOTION FROM AUDIT PANEL – RISK MANAGEMENT REGISTER

RESOLUTION 28/6.2025/C

Moved: Cr Y Miller **Seconded:** Cr D Meacheam

THAT Council adopt the Risk Management Register.

CARRIED

For the Motion
Mayor L Triffitt, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT BY Adam Wilson, Deputy General Manager

Attachment - Risk Management Register (DRAFT)

IMPLICATIONS AND FINANCIALS

Strategic Plan	6.1 Ensure Council fulfils its legislative and governance responsibilities and its decision making is supported by sustainable policies and procedures
Council Policy	Policy No. 2015 - 41 Risk Management Policy and Strategy
Legislative Context	Local Government Act 1993
Consultation	Council's Audit Panel and Senior Management Team
Impact on Budget/Resources	As per 24/25 Council approved budget
Risk	The council must ensure that it meets its legislative and governance responsibilities as per the Local Government Act 1993.

BACKGROUND
The previous Risk Management Register was approved by Council in the April 2024.

This policy has been prepared to address the management of Council owned camping facilities in the Central Highlands.

The Audit Panel met on Thursday 12 June 2025 and reviewed the statutory financial requirements report, financial reports, risk management register and policy review. The Audit Panel made the following resolution:

RESOLUTION
Moved: Deputy Mayor J Allwright *Seconded: Cr D Meacheam*

THAT Council adopt the Risk Management Register.

CARRIED

***For the Motion**: Mr I McMichael (Chair); Deputy Mayor J Allwright; and Cr D Meacheam*

17.6 RELATED PARTY DECLARATIONS – QUARTERLY UPDATE

FOR ACTIONING (if required)

REPORT BY Katrina Brazendale, Executive Assistant

BACKGROUND
As part of Council's legislative requirements under the AASB 124 Related Party Disclosures, local governments must disclose related party relationships, transactions and outstanding balances, including commitments, in the annual financial statements.

All Councillors and Senior Managers must declare any close family member or any entities that they control or jointly control, which have any transactions between them and Council; whether it is monetary or not, needs to be identified and disclosed.

These declarations are completed an annual basis but from time to time, circumstances may change throughout any one year and therefore, a new updated declaration must be completed.

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18. CONSIDERATION OF SUPPLEMENTARY AGENDA ITEMS TO THE AGENDA

Deputy Mayor J Allwright returned to the meeting at 10.45 a.m.

18.1 NOTICE OF MOTION – CR J HALL

RESOLUTION 29/06.2025/C

Moved: Cr J Hall **Seconded:** Cr D Meacheam

THAT Council invite Alexander Simpson (rate payer), Project Manager of Granville Harbour Wind Farm to a workshop.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

CENTRAL HIGHLANDS COUNCIL

NOTICE OF MOTION

Under Division 2 – Motions, Section 16 (5) of the Local Government (Meeting Procedures) Regulations 2015, a Councillor may give to the General Manager, at least 7 days before a meeting, written notice of a motion, together with supporting information and reasons, to be included on the agenda of that meeting.

Date of Meeting:	17-6-2025
Councillor Name:	JOHN HALL
Proposed Motion:	TO INVITE ALEXANDER SIMPSON A RATE PAYER, PROJECT MANAGER GRANVILLE HARBOUR WIND FARM FOR A WORKSHOP.
Background Details:	TO TALK ABOUT HOW THEY do COMMUNITY FUNDING. AND INVOLVEMENT WITH THERE COUNCIL.
Signature:	
Date:	3.6.2025.

18.2 DRAFT COUNCIL FEES AND CHARGES 2025-2026

RESOLUTION 30/06.2025/C

Moved: Cr R Cassidy **Seconded:** Cr J Honner

THAT *the Council approved the Fees and Charges for 2025-2026.*

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

REPORT By Zeeshan Tauqeer, Accountant

ATTACHMENT - Draft Fees and Charges 2025-2026.

BACKGROUND
Under Section 205 of the *Local Government Act 1993*, Council may impose fees and charges in respect of any one or all of the following matters –

a) The use of any property or facility owned, controlled, managed or maintained by the council;
b) Services supplied at a person's request;
c) Carrying out work at a person's request;
d) Providing information or materials, or providing copies of, or extracts from, records of the council;
e) any application to the council;
f) any licence, permit, registration or authorisation granted by the council;
g) any other prescribed matter.

These fees and charges have been increased in accordance with Council's adopted Long-Term Financial Plan of March CPI plus 2%. This grants a total increase of 5.13% across imposed fees and charges.

18.3 HATCH UPDATE

RESOLUTION 31/06.2025/C

Moved: Cr Y Miller **Seconded:** Cr J Hall

THAT Council, received the verbal report from Cr Y Miller in relation to HATCH and the update on the neighbourhood house.

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

19. CLOSURE OF THE MEETING TO THE PUBLIC

RESOLUTION 32/06.2025/C

Moved: Cr J Honner **Seconded**: Cr J Hall

THAT pursuant to Regulation 15 (1) of the Local Government (Meeting Procedures) Regulations 2015, Council, by an absolute majority, close the meeting to the public to consider the following matters in Closed Session:

Item Number	*Matter*	*Outcome*
2.1	*Confirmation of the Minutes - Closed Session of the Ordinary Meeting of Council held on 20 May 2025.*	*Regulation 15 (2)(G) of the Local Government (Meeting Procedures) Regulations 2015 – information of a personal and confidential nature or information provided to Council on the condition it is kept confidential.*
4.1	*Voting for the LGAT General Management Committee*	*Regulation 15 (2)(G) of the Local Government (Meeting Procedures) Regulations 2015 – information of a personal and confidential nature or information provided to Council on the condition it is kept confidential.*
4.2	*Personnel Matter – General Manager Update*	*Regulation 15 (2)(G) of the Local Government (Meeting Procedures) Regulations 2015 – information of a personal and confidential nature or information provided to Council on the condition it is kept confidential.*
4.3	*Recruitment Options – General Manager*	*Regulation 15 (2)(G) of the Local Government (Meeting Procedures) Regulations 2015 – information of a personal and confidential nature or information provided to Council on the condition it is kept confidential.*

CARRIED

For the Motion
Mayor L Triffitt, Deputy Mayor J Allwright, Cr A Archer; Cr R Cassidy; Cr J Hall; Cr J Honner; Cr D Meacheam and Cr Y Miller.

PURPOSE

Under Regulation 15 (1) of the *Local Government (Meeting Procedures) Regulations 2015* states that at a meeting, a council by absolute majority, or a council committee by simple majority, may close a part of the meeting to the public for a reason specified in sub-regulation (2).

As per *Regulation 15 (1) of the Local Government (Meeting Procedures) Regulations 2015*, this motion requires an absolute majority.

MEETING CLOSED to the public at 11.12 am.

20. RE-OPEN MEETING TO THE PUBLIC

The meeting re-opened to the public at 12.18 p.m.

21. PUBLIC RELEASE ANNOUNCEMENT(S)

The Chairperson announced that pursuant to Regulation 15(8)(9) of the Local Government (Meeting Procedures) Regulations 2015 and having considered privacy and confidential issues, the Council authorised the release to the public of the following discussions, decisions, reports or documents relating to the closed meeting:

Item Number	***Matter***	***Decision***
2.1	*Confirmation of the Minutes - Closed Session of the Ordinary Meeting of Council held on 20 May 2025.*	***THAT*** *the Minutes of the Closed Session of the Ordinary Meeting of Council held on 20 May 2025 be confirmed*
4.1	*Voting for the LGAT General Management Committee*	***THAT*** *the voting was undertaken*
4.2	*Personnel Matter – General Manager Update*	***THAT*** *the information was received*
4.3	*Recruitment Options – General Manager*	***THAT*** *the information was received*

22. CLOSURE

Mayor Triffitt thanked everyone for their contribution and declared the meeting closed at 12.18 p.m.

_____

Mayor L Triffitt

Dated: 15 July 2025

07 March 2025

Ms Louisa Brown

Central Highlands Council

By email: planner@centralhighlands.tas.gov.au

Our Project Ref: 2212

Dear Louisa,

WEASEL SOLAR FARM – DEVELOPMENT APPLICATION

On behalf of our client Weasel Solar Farm Pty Ltd, we are pleased to submit this Discretionary Development Application (DA) for the Weasel Solar Farm (the Proposal). The DA package outlines the anticipated use and development of land for an approximately 250MW large-scale solar farm and associated infrastructure, on private land known at Weasel Plains Road, Central Highlands (no street number).

As one of Tasmania's earliest large-scale solar farms, the Weasel Solar Farm will boost the state's renewable energy capacity and diversify its energy portfolio. Feasibility studies show that, despite being the southernmost solar farm in Australia, the site benefits from extended summer daylight during peak usage hours, reducing transmission costs due to its proximity to Hobart and Launceston. The project aligns with Tasmania's 2040 goal of 200% renewable energy generation and will foster local employment and economic diversification in the Central Highlands, supporting the region's transition to a clean energy future while complementing existing industries like forestry.

The proposal was referred to the EPA, and it was determined that under section 24(1) of the *Environmental Management and Pollution Control Act* (EMPCA), the proposal does not require further referral to the Board. As a result, the permit application under the *Land Use Planning and Approvals Act 1993* can proceed without additional Board review. Please find the letter provided by the EPA enclosed with this package.

The proposed solar farm and associated infrastructure are defined as 'Utilities' under the Central Highlands Planning Scheme and require a planning permit. The following DA triggers apply to the proposal, with reliance upon some Performance Criteria among the Use and Development Standards:

- Clause 21.2 Use Table: Discretionary Use Class (Agriculture Zone)
- Clause C2.0 Parking and sustainable transport
- Clause C4.0 Electricity transmission infrastructure protection
- Clause 7.0 Natural assets (Waterway and coastal protection area only)
- Clause C13.0 Bushfire-prone areas

The project has been rigorously assessed and the potential impacts evaluated. Based on technical impact assessments, the Proposal is not expected to generate any unreasonable or significant environmental or community impacts. It will provide critical renewable energy generation, energy storage, and a new substation that can service future energy projects, as well as significant regional economic benefits. The site is ideally suited to a solar farm and associated infrastructure development, as it is well-concealed from public view, benefits from existing transmission infrastructure on site, and has minimal sensitive receptors. Native vegetation removal has primarily been avoided and impacts to natural values minimised, no known sites of cultural significance are disturbed, and agricultural activities ('Agrisolar' sheep grazing) will continue.

The Site includes three parcels of private freehold land, and access works required on the Council-managed Weasel Plains Road and Dept. of State Growth-managed Highland Lakes Road.

To support Council's assessment of the DA, please find enclosed with this application the following documents:

- Application form and Council and DoSG consents to lodge
- Board Assessment Not Required Letter, EPA Tasmania
- Planning Report, Cogency Australia
- Certificates of Title (Appendix A)
- Design Plans, DNV & Cogency (Appendix B)
- Landscape and Visual Impact Assessment, Human Habitats (Appendix C)
- Ecological and Natural Assets Code Assessment, Van Diemen Consulting (Appendix D)
- Flooding Impact Assessment, Pitt&Sherry (Appendix E)
- Aboriginal Heritage Assessment Report, Cultural Heritage Management Australia (Appendix F)
- Bushfire Impact Statement, Ground Proof Mapping (Appendix G)
- Traffic Impact Assessment, Pitt&Sherry (Appendix H)
- Agricultural Assessment, Pinion Advisory (Appendix I)
- Noise Impact Assessment, SLR (Appendix J)
- Glint and Glare Impact Assessment, SLR (Appendix K)
- Historic Heritage Assessment Report, Cultural Heritage Management Australia (Appendix L)
- Consultation Summary Report, Cogency (Appendix M)
- Socio-Economic Impact Assessment, Urban Enterprise (Appendix N)

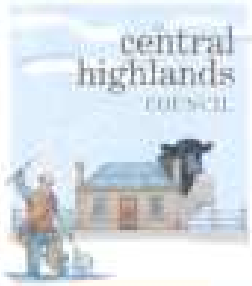
For the reasons outlined above and in the enclosed Planning Report, it is considered that the proposal warrants planning approval. Furthermore, please note that all landowners have been notified of this proposal and DA.

Please refer to the Planning Report and accompanying technical assessments for further information. Should you have any questions, please do not hesitate to contact me on 0422424144 or via email.

Yours Sincerely,



Billy Greenham
Associate Director
Cogency Australia



Development & Environmental Services
19 Alexander Street
BOTHWELL TAS 7030

Phone: (03) 6259 5503
Fax: (03) 6259 5722

www.centralhighlands.tas.gov.au

OFFICE USE ONLY

Application No.: _____

Property ID No.: _____

Date Received: _____

Application for Planning Approval
Use and Development

Use this form to apply for planning approval in accordance with section 57 and 58 of the *Land Use Planning and Approvals Act 1993*

Applicant / Owner Details:

Applicant Name	Weasel Solar Farm Pty Ltd		
Postal Address	Level 2, 33 George Street	Phone No:	
	Launceston, TAS 7250	Fax No:	
Email address			
Owner/s Name (if not Applicant)	Attachment provided of owners names (two landowners are involved in this proposal)		
Postal Address		Phone No:	
		Fax No:	
Email address:			

Description of proposed use and/or development:

Address of new use and development:	'The Weasel' - 3145 Highland Lakes Road Bothwell TAS 7030, 'Weasel Plains' - 3236 Highland Lakes Road Bothwell TAS 7030 and 'Rockford' 3759 Highlands Lakes Road Bothwell TAS 7030		
Certificate of Title No:	Volume No: 140433, 140881, 104288	Lot No:	
Description of proposed use or development:	Use and development of land for Utilities (large-scale solar farm & associated infrastructure, including BESS and transmission connection).		ie. New Dwelling /Additions/ Demolition / /Shed / Farm Building / Carport / Swimming Pool or detail other etc.
Current use of land and buildings:	The Development Area for this project currently supports various agricultural activities including grazing and irrigation		Eg. Are there any existing buildings on this title? If yes, what is the main building used as?
Proposed Material	What are the proposed external wall colours: N/A	What is the proposed roof colour:	N/A
	What is the proposed new floor area m²: Approx. 440 Ha	What is the estimated value of all the new work proposed:	$ 468,900,000

Is proposed development to be staged:	*Yes* ☐	*No* ☒	Tick ✓
Is the proposed development located on land previously used as a tip site?	*Yes* ☐	*No* ☒	
Is the place on the Tasmanian Heritage Register?	*Yes* ☐	*No* ☒	
Have you sought advice from Heritage Tasmania?	*Yes* ☐	*No* ☒	
Has a Certificate of Exemption been sought for these works?	*Yes* ☐	*No* ☒	

Signed Declaration

I/we hereby apply for a planning approval to carry out the use or development described in this application and in the accompanying plans and documents, accordingly I declare that:

1. The information given is a true and accurate representation of the proposed development. I understand that the information and materials provided with this development application may be made available to the public. I understand that the Council may make such copies of the information and materials as, in its opinion, are necessary to facilitate a thorough consideration of the Development Application. I have obtained the relevant permission of the copyright owner for the communication and reproduction of the plans accompanying the development application, for the purposes of assessment of that application. I indemnify the Central Highlands Council for any claim or action taken against it in respect of breach of copyright in respect of any of the information or material provided.

2. In relation to this application, I/we agree to allow Council employees or consultants to enter the site in order to assess the application.

3. I am the applicant for the planning permit and I have notified the owner/s of the land in writing of the intention to make this application in accordance with Section 52(1) of the *Land Use Planning Approvals Act 1993* (or the land owner has signed this form in the box below in "Land Owner(s) signature);
Applies where the applicant is not the Owner and the land is not Crown land or owned by a council, and is not land administered by the Crown or a council.

Applicant Signature (if not the Owner)	Applicant Name *(Please print)*	Date
	Wedge1 Solar Farm Pty Ltd	19/09/2024

Land Owner(s) Signature	Land Owners Name *(please print)*	Date

Land Owner(s) Signature	Land Owners Name *(please print)*	Date

Information & Checklist sheet

1. A completed Application for Planning Approval – title and Development form.
   Please ensure that the information provided on pages one describing the proposal, has the correct address and contact details and is signed and dated by the applicant. ☑

2. A current copy of the Certificate of Title for all lots involved in the proposal.
   The title details must include, where available, a copy of the search page, title plan, sealed plan or diagram and any schedule of easements (if any), or other restrictions, including covenants, Council notification or conditions of transfer. ☑

3. Two (2) copies of the following information -
   a) An analysis of the site and surrounding area setting out accurate descriptions of the following - ☑
      (i) topography and major site features including an indication of the type and extent of native vegetation present, natural drainage lines, water courses and wetlands, trees greater than 3 metres in height in areas of skyline or landscape importance and identification of any natural hazards including flood prone areas, high fire risk areas and land subject to instability;
      (ii) soil conditions (depth, description of type, land capability etc);
      (iii) the location and capacity of any existing services or easements on the site or connected to the site;
      (iv) existing pedestrian and vehicle access to the site;
      (v) any existing buildings on the site;
      (vi) adjoining properties and their uses; and
      (vii) soil and water management plans
   b) A site plan for the proposed use or development drawn, unless otherwise approved, at a scale of not less than 1:200 or 1:1000 for sites in excess of 1 hectare, showing - ☑
      (i) a north point;
      (ii) the boundaries and dimensions of the site;
      (iii) Australian Height Datum (AHD) levels;
      (iv) natural drainage lines, watercourses and wetlands;
      (v) soil depth and type;
      (vi) the location and capacity of any existing services or easements on the site or connected to the site;
      (vii) the location of any existing buildings on the site, indicating those to be retained or demolished, and their relationship to buildings on adjacent sites, streets and access ways;
      (viii) the use of adjoining properties;
      (ix) shadow diagrams of the proposed buildings where development has the potential to cause overshadowing;
      (x) the dimensions, layout and surfacing materials of all access roads, turning areas, parking areas and footpaths within and at the site entrance;
      (xi) any proposed private or public open space or communal space or facilities;
      (xii) proposed landscaping, indicating vegetation to be removed or retained and species and mature heights of plantings; and
      (xiii) methods of minimising erosion and run-off during and after construction and preventing contamination of storm water discharged from the site.
   c) Plans and elevations of proposed and existing buildings, drawn at a scale of not less than 1:100, showing internal layout and materials to be used on external walls and roofs and the relationship of the elevations to natural ground level, including any proposed cut or fill. ☑

4. A written submission supporting the application that demonstrates compliance with the relevant parts of the Act, State Polices and the Central Highlands Interim Planning Scheme 2015, including for industrial and commercial uses, the hours of operation, number of employees, details of any point source discharges or emissions, traffic volumes generated by the use and a Traffic Impact Statement where the development is likely to generate more than 100 vehicle movements per day. ☑

5. Prescribed fees payable to Council. An invoice for the fees payable will be issued once application has been received.

Information If you provide an email address in this form then the Central Highlands Council ("the Council") will treat the provision of the email address as consent to the Council, pursuant to Section 6 of the Electronic Transactions Act 2000, to using that email address for the purposes of assessing the Application under the Land Use Planning and Approvals Act 1993 ("the Act"). If you provide an email address, the Council will not provide hard copy documentation unless specifically requested. It is your responsibility to provide the Council with the correct email address and to check your email for communications from the Council. If you do not wish for the Council to use your email address as the method of contact and for the giving of information, **please tick** ✓ the box	☑
Heritage Tasmania If the Property is listed on the Tasmanian Heritage Register then the Application will be referred to Heritage Tasmania unless an Exemption Certificate has been provided with this Application. (Phone 1300 850 332 or email enquires@heritage.tas.gov.au)	
TasWater Depending on the works proposed Council may be required to refer the Application to TasWater for assessment (Phone 136992)	
Submission of Application Applications can be submitted in a number of ways as follows: • Electronically: Email to development@centralhighlands.tas.gov.au • Post: 19 Alexander Street, BOTHWELL 7030 • In Person: Development & Environmental Services Office, 19 Alexander Street, Bothwell 7030	

Memo

DATE	28 August 2024
AUTHOR	A Pitcher
TOPIC	Owner/s Names – Wreckel Sheer Farm
TO	Central Highlands Council

Our Project Reference: 2252

1. Owner 1

Name: Dungrove Lane Company Pty Ltd
Postal Address: The Weasel' – 3715 Highland Lakes Road Bothwell TAS 7030
Phone No: 0428596192
Fax No: N/A
Email Address: peterjdownie@gmail.com

2. Owner 2

Name: Cluny Pty Ltd
Postal Address: 'Weasel Pastoral' – 3236 Highland Lakes Road Bothwell TAS 7030
Phone No: 0448559157
Fax No: N/A
Email Address: N/A

3. Owner 3

Name: Scott Reardon
Postal Address: 'Rockford' - 3759 Highland Lakes Road Bothwell TAS 7030
Phone No: (03) 6259 8154
Fax NO: N/A
Email Address: N/A

Department of State Growth

Salamanca Building Parliament Square
4 Salamanca Place, Hobart TAS
GPO Box 536, Hobart TAS 7001 Australia
Email permits@stategrowth.tas.gov.au Web www.stategrowth.tas.gov.au
Ref: SRA-24-615

Aliza Pfitzner
Cogency Australia
By email: aliza@cogencyaustralia.com.au

Dear Aliza

Crown Landowner Consent Granted – 3415 and 3236 Highland Lakes Road (Lake SR), Bothwell

I refer to your recent request for Crown landowner consent relating to the development application at 3415 and 3236 Highlands Lakes Road, Bothwell for development of large-scale solar farm.

I, Fiona McLeod, Director Asset Management, the Department of State Growth, having been duly delegated by the Minister under section 52 (1F) of the *Land Use Planning and Approvals Act 1993* (the Act), and in accordance with the provisions of section 52 (1B) (b) of the Act, hereby give my consent to the making of the application, insofar as it affects the State road network and any Crown land under the jurisdiction of this Department.

The consent given by this letter is for the making of the application only insofar as that it impacts Department of State Growth administered Crown land and is with reference to your application dated 30 August 2024, and the approved documents, as accessible via the link below:

https://files.stategrowth.tas.gov.au/index.php/s/QemNXSlnFlZK0IX

A copy of the Instrument of Delegation from the Minister authorising the delegate to sign under section 52 of the Act can also be accessed via the above link.

Please access and download these documents for your records as soon as possible as this link will expire six months from the date of this letter.

In giving consent to lodge the subject development application, the Department notes the following applicable advice:

- **Access – construction or alteration (Access works permit required)**

  In giving consent to lodge the subject development application, the Department notes that the proposed access to the State road network will require the following additional consent:

  The consent of the Minister under Section 16 of the *Roads and Jetties Act 1935* to undertake works within the State road reservation.

  For further information please visit https://www.transport.tas.gov.au/roads_and_traffic_management/permits_and_bookings/new_or_altered_access_onto_a_road_driveways or contact permits@stategrowth.tas.gov.au.

  On sealed State roads all new accesses must be sealed from the road to the property boundary as a minimum.

Pursuant to Section 16 of the *Roads and Jetties Act 1935*, where a vehicle access has been constructed from land to a State highway or subsidiary road, the owner of that land is responsible for the maintenance and repair of the whole of the vehicular access.

- **Other types of works (pipeline, etc.) OR Construction of infrastructure in the road reserve/on Crown land (Works permit required)**

  In giving consent to lodge the subject development application, the Department notes that the works in the State road network will require the following additional consent:

  The consent of the Minister under Section 16 of the *Roads and Jetties Act 1935* to undertake works within the State road reservation.

  For further information please visit https://www.transport.tas.gov.au/roads_and_traffic_management/permits_and_bookings or contact permits@stategrowth.tas.gov.au.

- **Requires Crown land owner consent from DPIPWE**

  Please note that Crown land owner consent is also required from the Department of Natural Resources and Environment Tasmania (NRE tas) in this case. Please see https://www.parks.tas.gov.au/index.aspx?base=33332 for the relevant NRE Tas contact details and application form.

The Department reserves the right to make a representation to the relevant Council in relation to any aspect of the proposed development relating to its road network and/or property.

Yours sincerely



Fiona McLeod
DIRECTOR ASSET MANAGEMENT

Delegate of
Minister for Infrastructure and Transport
Michael Ferguson MP

9 October 2024

cc: General Manager, Central Highlands Council

central highlands COUNCIL

Our Ref: PID 2538314
Email: development@centralhighlands.tas.gov.au
Telephone: (03) 6259 5503

24 September 2024

Billy Greenham
Cogency Australia Pty Ltd

Email: billy@cogencyaustralia.com.au

Dear Sir / Madam,

COUNCIL CONSENT TO APPLICATION FOR PLANNING PERMIT
WEASEL SOLAR FARM
WORKS REQUIRED IN COUNCIL ROAD RESERVE

I refer to your request for landowner consent relating to a development application for the Weasel Solar Farm.

Consent is hereby given, pursuant to Section 52(1B) of the *Land Use Planning and Approvals Act 1993*, for the proposal outlined in the "Consent Application Details" prepared by Cogency Australia Pty Ltd dated 23/09/2024.

The consent given by this letter is for the making of the application only insofar as that it impacts land that is owned or administered by Central Highlands Council.

Yours faithfully

Stephen Mackey
Acting General Manager

Environment Protection Authority

GPO Box 1550 HOBART TAS 7001 Australia

Enquiries: Zoë Brown
Phone: 0472 545 85
Email: Zoe.Brown@epa.tas.gov.au
Web: www.epa.tas.gov.au
Our Ref: D24-201575

6 September 2024

Peter Downie
Weasel Solar Farm Pty Ltd
Level 2, 33 George Street
LAUNCESTON TAS 7250

By Email Only: peterdownie@gmail.com

Dear Peter Downie

WEASEL SOLAR FARM – WEASEL PLAINS ROAD, CENTRAL HIGHLANDS
BOARD ASSESSMENT NOT REQUIRED

I refer to correspondence of 13 August 2024 from Cogency Australia on behalf of Weasel Solar Farm Pty Ltd, providing a project description and supporting documentation (including a Flora and Fauna Assessment) for the above proposal. In that correspondence advice is requested as to whether the Director of the Environment Protection Authority (EPA) is likely to require Central Highlands Council to refer the proposal to the Board of the EPA for assessment under Section 24(1) of the *Environmental Management and Pollution Control Act 1994* (EMPCA).

I note that the most significant potential environmental impacts that may result from the proposal include impacts on threatened flora and fauna communities from vegetation clearing and the impacts of noise emissions on nearby sensitive receptors, particularly during construction.

It is noted the proposal site was selected to avoid areas of native vegetation and will use existing agricultural land which has been previously cleared. However, there are some patches of remnant native vegetation adjacent to and within the proposal site including an area of *Eucalyptus tenuiramis* (silver peppermint) forest and woodland not on dolorite (DTO) listed as a threatened native vegetation community under the *Nature Conservation Act 2002*. It is understood that disturbance of this vegetation community will be avoided as far as practicable. Any potential disturbance of this vegetation should be discussed with Conservation Assessments, Department of Natural Resources an Environment Tasmania before it occurs.

After reviewing the information provided and taking into account you intend to submit a referral to the Commonwealth for a controlled action decision under the *Environment Protection and Biodiversity Conservation Act 1999,* and a development application to the Central Highlands Council, it is my opinion that given the controls you have described in your documentation, the likelihood of the activity causing serious or material environmental harm is low.

I have considered the environmental aspects of the proposal, and as a delegate of the Director of the Environment Protection Authority, have determined that the proposal also does not need to be referred to the Board under section 24(1) of EMPCA.

You may proceed with the permit application under the *Land Use Planning and Approvals Act 1993* without further reference to the Board.

The above decision is based on the information provided in the project description.

If details of the proposal change significantly, particularly in relation to the type of activity being proposed or potential environmental impacts, you should seek advice from the Environment Protection Authority before proceeding, to ensure that the proposed activity will comply with EMPCA.

If you have any queries regarding the above, please contact the officer nominated at the head of this correspondence.

Yours sincerely



Martin Read
EXECUTIVE DIRECTOR, ENVIRONMENTAL ASSESSMENTS
Delegate for the Director, Environment Protection Authority

cc: Stephen Mackey, General Manager, Central Highlands Council, council@centralhighlands.tas.gov.au
Billy Greenham, Cogency Australia, billy@cogencyaustralia.com.au



Planning Report

Weasel Solar Farm

Central Highlands, Tasmania

For Weasel Solar Farm Pty Ltd C/- Robert Luxmoore Pty Ltd

05 March 2025

cogency

Planning | Engagement | Strategy

Document Details

Weasel Solar Farm

Project No:	2212
Report Name:	Planning Report
Revision:	1
Date:	05 March 2025
Client:	Weasel Solar Farm Pty Ltd C/- Robert Luxmoore Pty Ltd

This document has been prepared for, and for the exclusive use of, the client listed above, and is subject to the fee proposal and terms of conditions between Cogency and the client. Cogency accepts no liability for any use of, or reliance upon, this document by any party other than the client.

Cogency Australia Pty Ltd
cogencyaustralia.com.au
office@cogencyaustralia.com.au

Document history

Revision	Date	Description	Author	Approved
1	26/09/2024	First Draft	AP, BG	BG
2	05/03/2025	Final Report	AP, BG	BG



We celebrate the physical and spiritual connections between Indigenous people and place expressed through the Birrarung Wilam (Common Ground) art project on the banks of Melbourne's Yarra River.

Acknowledgement of Country

Cogency acknowledges the Traditional Owners and Custodians of the land on which we meet, work and write, the Wurundjeri Woi-wurrung peoples of the Kulin nation, and their connections to land, sea, and community. We pay our respect to their Elders past and present and emerging.

Cogency also extends that respect and acknowledges the Traditional Custodians of Bothwell, the Big River Tribe, or Teen Toomie Mennenyer. We recognise and respect their cultural heritage, beliefs and continuing connection with the land and waterways. We also recognise the resilience, strength, and pride of the palawa and First Nations communities and acknowledge that Sovereignty was never ceded.

Executive Summary

Cogency Australia (Cogency) has been engaged by Robert Luxmoore, on behalf of Weasel Solar Farm Pty Ltd (the Proponent), to prepare and lodge a Development Application for a large-scale solar farm and associated infrastructure at Weasel Plains, near Bothwell, Central Highlands (east of Highland Lakes Road). The Proposal is known as the **Weasel Solar Farm**. This planning report supports an application for the use and development of land for Utilities (solar farm – electricity generation), including associated battery energy storage system (BESS) and infrastructure and works.

The Site is zoned Agriculture under the Tasmanian Planning Scheme – Central Highlands (Planning Scheme), with Utilities a Discretionary Use (discretionary permit application required). The purpose of this planning application package is to provide the Central Highlands Council (as the planning authority) and referral authorities with comprehensive details of the Proposal. This includes details on the Proponent and project team, design features, potential impacts and mitigations, and compliance with relevant Acts, regulations, plans, land use controls and guidelines, contained primarily within the Planning Scheme.

The Proposal is located across three parcels of private freehold land, currently used for agricultural grazing. Combined, these three parcels have a total of 3841 ha (the Site). The Development Area for the Proposal is approximately 430 ha within the Site.

The Proposal includes approximately 270 ha of solar arrays, a BESS, as well as associated infrastructure such as an internal 33 kV transmission line, inverters, transformers and ancillary infrastructure, access tracks, fencing, landscaping, and transmission connection and substation into the existing 220 kV transmission line crossing the Site. The Development Area will be primarily accessed from Weasel Plains Road, with secondary/emergency access points to Highland Lakes Road.

The Site is suitable because much of the land has already been distributed from agricultural activities, and there are minimal key environmental values present. The Proponent is conscious of the natural environment and has ensured the design responds to the topography of the Site, avoiding earthworks that would otherwise disturb regrowth and promote weed spread. Proximity to existing transmission infrastructure and convenient access via Highland Lakes Road further enhances the site's suitability by minimising costs and disruptions to surrounding landowners. Additionally, the project design allows for agrisolar practices, enabling the land to continue supporting agricultural productivity while contributing to renewable energy generation.

The Proponent acknowledges that active and early engagement with the community and other relevant stakeholders is crucial to the planning process. To date, the Proponent is committed to delivering best practice engagement, with the overarching objective of ensuring that the identified community and stakeholder groups are proactively and meaningfully informed, consulted and involved and that the benefits of the Project are genuinely felt by the local community.

The following Development Application triggers apply to the Proposal, with reliance upon some Performance Criteria among the Use and Development Standards:

- Clause 21.2 Use Table: Discretionary Use Class (Agriculture Zone), relies upon some Performance Criteria
- Clause C2.0 Parking and sustainable transport, relies upon some Performance Criteria
- Clause C4.0 Electricity transmission infrastructure protection, relies upon some Performance Criteria
- Clause 7.0 Natural assets (Waterway & coastal protection area only), relies upon some Performance Criteria
- Clause C13.0 Bushfire-prone areas, relies upon some Performance Criteria

Based on technical impact assessments, the Proposal is not expected to generate any unreasonable or significant environmental or community impacts. The Proposal will provide critical renewable energy generation, energy storage, and a new substation that can service future energy projects, as well as significant regional economic benefits. The Site is ideally suited to a solar farm and associated infrastructure development, as it is well-concealed from public view, benefits from existing transmission infrastructure on site, and has minimal sensitive receptors. Native vegetation removal has primarily been avoided and impacts to natural values minimised, no known sites of cultural significance are disturbed, and agricultural activities ('Agrisolar' sheep grazing) will continue.

Application Summary	
Site	
Address	**Primary Address: '**The Weasel' – 3415 Highland Lakes Road Bothwell TAS 7030 **Secondary Addresses:** 'Weasel Plains' - 3236 Highlands Lakes Road Bothwell TAS 7030 and 'Rockford' – 3759 Highlands Lakes Road Bothwell TAS 7030
Title Description	140433/1; 140581/1; 104298/1
Area	3841 ha (the Site), 432 ha (Development Area)
Municipality	Central Highlands
Restrictions on title	None
Planning	
Planning Scheme	Tasmanian Planning Scheme – Central Highlands
Responsible Authority	Central Highlands Council
Zoning	21.0 Agriculture Zone
Overlays	**Mapped codes:** ▪ C4.0 Electricity Transmission Infrastructure Protection (partial) ▪ C7.0 Natural Assets (partial) ▪ C10.0 Bushfire-prone Area (whole) ▪ C15.0 Landslip Hazard code (partial) **Other Applicable Codes:** ▪ Clause C2.0 Parking and Sustainable Transport ▪ Clause C3.0 Road and Railway assets
Permit triggers	▪ Clause 21.2 Use Table: Discretionary Use Class (Agriculture Zone), relies upon some use and development standards' Performance Criteria ▪ Clause C2.0 Parking and sustainable transport, relies upon some Performance Criteria ▪ Clause C4.0 Electricity transmission infrastructure protection, relies upon some Performance Criteria ▪ Clause 7.0 Natural assets (Waterway and coastal protection area only), relies upon some Performance Criteria ▪ Clause C13.0 Bushfire-prone areas, relies upon some Performance Criteria

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Appendix C Landscape and Visual Impact Assessment
Appendix D Ecological and Natural Assets Code Assessment
Appendix E Flooding Impact Assessment
Appendix F Aboriginal Heritage Assessment Report
Appendix G Bushfire Impact Statement
Appendix H Traffic Impact Assessment
Appendix I Agricultural Assessment
Appendix J Noise Impact Assessment
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Glossary

Abbreviation	Meaning
ABS	Australian Bureau of Statistics
AEMO	Australian Energy Market Operator
BESS	Battery Energy Storage System
CEC	Clean Energy Council
EPA	Environmental Protection Authority
EPBC	Environment Protection and Biodiversity Conservation Act (Cth)
LGA	Local Government Area
kV	kilovolt
MER	Monitoring, Evaluation and Reporting
MW	Megawatt
NEM	National Energy Market (NEM)
O&M	Operations and Management
ReCFIT	Renewables, Climate and Future Industries Tasmania
REZ	Renewable Energy Zone

1. Introduction

Cogency has been engaged by Robert Luxmoore, on behalf of Weasel Solar Farm Pty Ltd (the Proponent) to prepare and lodge a Development Application for a large-scale solar farm and associated infrastructure at Weasel Plains, near Bothwell, Central Highlands (east of Highland Lakes Road). The Proposal is known as the Weasel Solar Farm.

The Proposal is a private landowner-led development by Weasel Solar Farm Pty Ltd, a company founded by the Proponent, Peter Downie, a local landowner and community member. The Proponent is a significant family business with a long history of grazing and agricultural practices in the Central Highlands.

Cogency is a boutique planning and engagement firm, focused on renewable energy projects. Cogency has prepared this Planning Report as well as the Community & Stakeholder Engagement Strategy and Summary Report.

The Development Application is for the use and development of Utilities. Under the Tasmanian Planning Scheme, 'Utilities' is defined as:

The use of land for utilities and infrastructure including:

- (b) electricity generation;
- (c) transmitting or distributing gas, oil or electricity;
- (d) transport networks.

The site comprises three lots, detailed in Chapter 2. The details of these three lots comprise the following:

- One lot is for solar arrays within the Dungrove property (The Weasel)
- One lot is for solar arrays within the Bowden property (Weasel Plains)
- One lot is for the use of an existing access track within the Reardon property (Rockford)

In addition to the above, some works are required for access to Weasel Plains Road (Council-owned) and Highland Lakes Road (State Road) reserves.

The Development Area covers a smaller area within the broader Site, with an approximate 432 ha required for the solar arrays, internal transmission and associated infrastructure to connect to the existing 220 kV transmission line. The Development Area comprises two key sections: Solar North and Solar South.

The Weasel Solar Farm will have a nameplate capacity of up to 250MW. To provide supply stability and energy storage capacity, the solar farm will be accompanied by a BESS. An internal 33kv transmission line will help connect Solar North and Solar South to the BESS.

A regular Council-assessed Development Application process is warranted as neither solar farms, BESS facilities nor transmission lines are listed as Level 2 developments under the *Environmental Management and Pollution Control Act 1994* (Tas.) (EMPCA). Moreover, it is also not considered that the Proposal qualifies as a Major Project or Project of State Significance under the *Land Use Planning and Approvals Act 1993* (Tas.) (LUPAA) or the *State Policies and Projects Act 1993* (Tas.). Through correspondence in 2024, the EPA has indicated that the likelihood of the activity causing serious, or material environmental harm is negligible and therefore it is unlikely the proposal would be referred to the Board for environmental assessment.

The area is suitable as it is located in the Central Highlands Renewable Energy Zone, sits alongside existing transmission lines, and has sufficient solar irradiance. The Development Area has historically been used for grazing and is generally cleared of vegetation. The specific locations of solar arrays and other infrastructure have been chosen due to their lower agricultural productivity, poorer soil quality and low environmental value relative to the remainder of the Site. These qualities are evidenced within the suite of specialist reports attached with this report. Responding to the existing environmental conditions of the Site has been a central part of the planning and design process. The main objective of the Proposal's design has been ensuring

through construction, operation and decommissioning, the project avoids as much as possible, existing environmental values, supports agricultural productivity and mitigates potential risks.

Increasing renewable energy targets at both a state and national level indicates a high level of legislative and market confidence in developing new renewable energy infrastructure. The development of new renewable energy projects such as the Weasel Solar Farm would contribute to developing an alternative industry and local employment base for the Central Highlands Region. A solar farm will both contribute to the nation's clean energy transition and assist in strengthening existing local industries such as forestry.

As one of the first large-scale solar farms in the state, the Weasel Solar Farm would not only add to Tasmania's already impressive renewable energy capacity but also help to diversify its renewable energy portfolio. Feasibility studies indicate that while the Weasel Solar Farm project will be the most southern solar farm in Australia, summer daylight hours extend longer than in the northern north and during peak usage hours nationally. The project's central location to Hobart and Launceston will also ensure there is a reduction in the cost of transmission compared to other sites. The project will support the vision for Tasmania's Renewable Energy Future and the 2040 Renewable Energy Target of 200% renewable generation.

1.1 Project Summary

The Proponent is seeking to develop a portion of their landholding located in the Central Highlands region of Tasmania into a solar energy asset. The Weasel Solar Farm features a large-scale solar farm with a capacity of up to 250MW, battery storage and associated infrastructure and works. The Weasel Solar farm is planned to comprise the use and development of land for:

- A large-scale solar farm, containing approximately 270 hectares of solar panels with a nameplate capacity of up to 250MW;
- A battery energy storage system (BESS) within an approximately two-hectare development area;
- Other electricity infrastructure including 33 kV transmission lines, inverters and a switchyard containing an electrical substation to connect to the existing 220kV transmission line;
- Other elements required for construction, maintenance, and operation, such as an operations and management (O&M) compound, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, landscaping, and workers facilities;
- Existing vegetation will screen the project from most views along Highlands Lake Road, with additional planting proposed to further obscure viewlines; and
- The solar farm will be constructed to enable for the continued use of the land for grazing sheep underneath the solar panels, known as 'agrisolar.'

The project components are described in greater detail in Chapter 3.

1.2 The Proponent

This project is a landowner-led development by Weasel Solar Farm Pty Ltd (Table 1), a company founded by the Proponent and primary landowner Peter Downie.

Table 1 – Proponent Details

Proponent	Weasel Solar Farm Pty Ltd
ACN	675 406 649
Registered Address	Level 2, 33 George Street, Launceston, TAS 7250

The Downie family from Dungrove are working in partnership with Andrew Clark from Alternate Path Solutions to develop the Weasel Solar Farm. The Downie family are the owners of the land 'The Weasel' and own much of the land surrounding the project. Other land within the project is owned by the Bowden family, who are lessors of the Weasel Solar Farm. The Downie family have a long history in the central Highlands

region and have been grazing sheep and cattle on Dungrove for over 150 years. Alternate Path provides strategic support and structuring advice for projects in the renewable energy, power, infrastructure and transport sectors. Backed by industry expertise in the legal, financial, engineering and technology sectors, they help support the delivery of new businesses and projects.

As a local landowner and community member, the Proponent is committed to engaging respectfully with the community and neighbours concerning the Project. The Proponent is committed to sensitively considering the environmental and cultural values of the area and making positive contributions to the local and broader communities and region.

1.3 Proposal Vision

The Weasel Solar Farm is the first proposed element of a broader vision - the 'Highlands Renewable Energy Hub'. The vision is to use renewable energy alongside agricultural and forestry practices to generate significant social and economic benefits for the local community, surrounding landowners and the state of Tasmania.

The vision of the Highlands Renewable Energy Hub is to combine and co-locate the development of a solar farm, wind farm, battery storage and a renewable energy business park. The Energy Hub will provide critical support for existing and proposed renewable energy projects within the Central Highlands Renewable Energy Zone, and large electricity users and energy generation facilities in the area. An energy project of this scale in the Central Highlands will have the potential to create local jobs and lower electricity costs for the communities in and around Bothwell.

The Weasel Solar Farm proposal is a standalone Development Application. Other projects within the broader vision are subject to separate, individual approvals, to be pursued in future.

1.4 Site and Development Area Information

The Site includes three lots in different ownership. Within the Site, the Development Area covers only a portion of each parcel. This section provides a clear demarcation of the Site and Development Area (Figure 1).

As per the Planning Scheme definitions:

- Site means 'the lot or lots on which a use or development is located or proposed to be located'.
- Development Area means 'the area of land occupied by development including its yard, outbuildings, vehicle parking, driveways, storage areas, landscaping and wastewater disposal areas.'

2. Site and Context Analysis

2.1 Site Analysis

The solar farm site area consists of three parcels under different ownerships, currently used for agricultural grazing and cropping purposes. Table 2 and Figure 1 provide an overview of the Site details (excludes roads).

Table 2 – Parcel Details

Address	Property ID	Title reference
'The Weasel' – 3415 Highland Lakes Road Bothwell TAS 7030	2538314	140433/1
'Weasel Plains' - 3236 Highlands Lakes Road Bothwell TAS 7030	2538322	140581/1
'Rockford' – 3759 Highlands Lakes Road Bothwell TAS 7030	5014022	104298/1

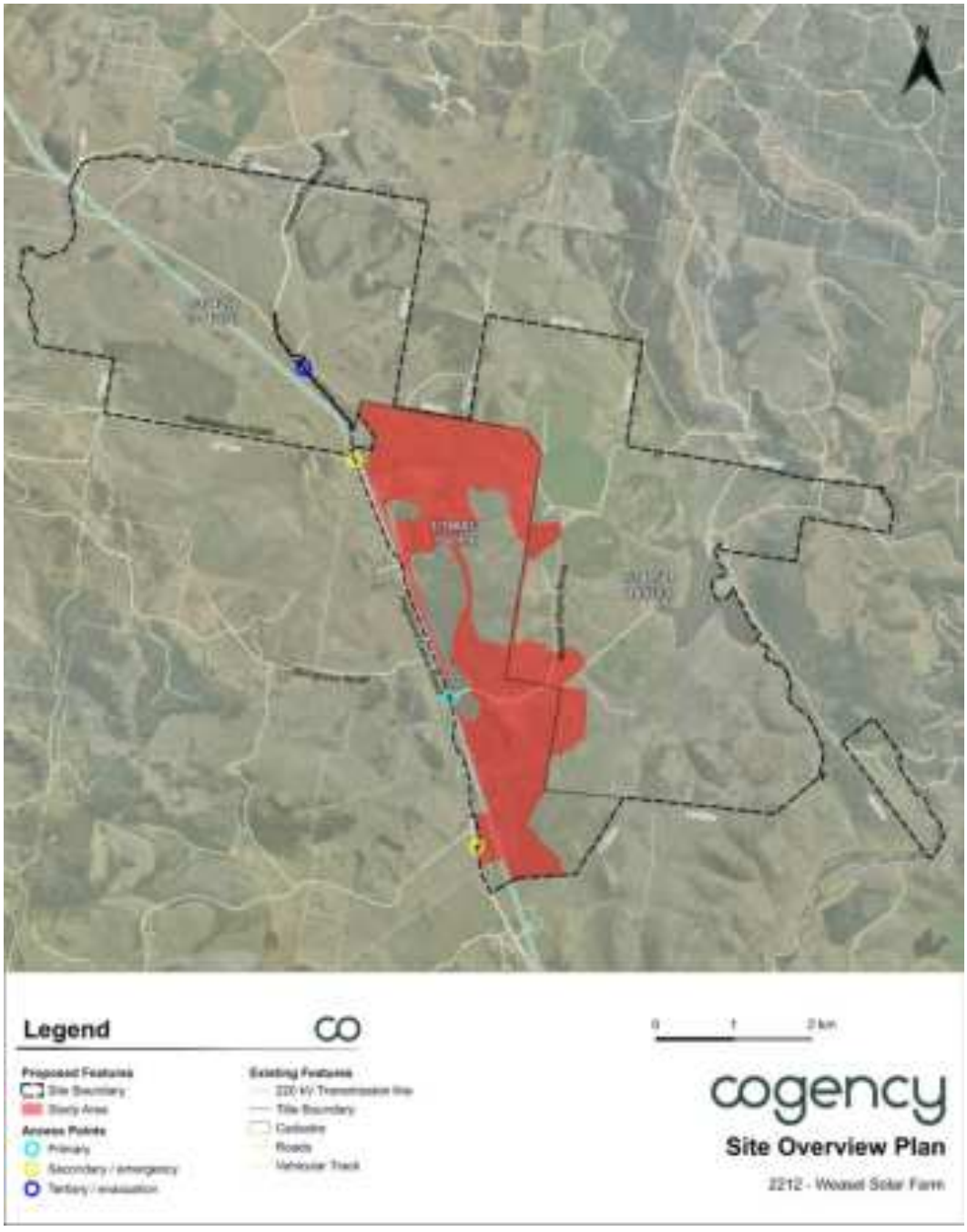


Figure 1 – Site Overview Plan

The Weasel

The Weasel is a rural landholding of approximately 918.8 ha which forms part of the larger Dungrove farming property owned by the Downie family. The property address is 3415 Highland Lakes Road Bothwell TAS 7030 and is the primary parcel for the development of the Proposal.

The primary access to this property is via Weasel Plains Road, an unsealed road that directly connects to Highland Lakes Road. Additional access is made via farm gates located adjacent to Highlands Lakes Road.

An existing 220kV overhead transmission (Waddamana to Lindisfarne) line transects the western border of the property, adjacent to Highland Lakes Road. Discussions with Watts Advisory and TasNetworks have confirmed that this line would be capable of supporting a grid connection for a large-scale solar farm.

The lot is relatively cleared of vegetation, with some wooded forested areas. Weasel Plains Creek transects the northern portion of the lot. No conservation covenants are affecting the Site. The land specially selected for the development supports agricultural activities and some waterbodies. The following subsections provide further details on site characteristics.

Weasel Plains

Weasel Plains is a rural landholding of approximately 1775.9 ha which forms part of the larger farming property owned by the Bowden family. This parcel is under different ownership to 'The Weasel' and is addressed a 3236 Highlands Lakes Road Bothwell TAS 7030. Weasel Plains is identified as the secondary parcel for the development of the Proposal.

Access to this property is also made via Weasel Plains Road, an unsealed road that directly connects to Highland Lakes Road. Dwellings are located near the north extent of the property where the unsealed section of Weasel Plain Roads ends.

The broader property supports irrigated cropping and grazing activities, along with man-made waterbodies. Weasel Plains Creek transects the northern portion of the lot. The site is relatively cleared of vegetation with limited and scattered forested trees. No conservation covenants are found within this parcel. The area of land selected to host solar panels is cleared grazing paddocks.

Rockford

Rockford is a rural landholding of approximately 1146.7 hectares and is owned by the Reardon Family. This parcel is addressed as 3759 Highland Lakes Road Bothwell TAS 7030. This parcel is involved for approximately 40 ha of land along an existing access track to be used for emergency access/egress.

The broader property supports grazing activities and Weasel Plains Creek transects the site along the western boundary. The parcel is undulating and relatively cleared of vegetation. Larger forested areas are located on top of hills scattered throughout the site.

Access to this property is via Highland Lakes Road, with two access points located towards the southwest portion of the parcel. One dwelling is located near the northwest corner of the property and is located approximately 4km from the main solar development areas.

2.2 Site Photos

1. Weasel Plains Rd, view eastwards within primary parcel / Development Area



2. Weasel Plains Rd, view northwest within primary parcel / Development Area



3. Existing 220 kV line, view north within Site



4. Weasel Plains Rd, view west to access to Highland Lakes Road



5. Weasel Plains Rd, view east towards Development Area (over crest)(same viewpoint as photo 4)



6. Highland Lakes Rd, view south at intersection to Weasel Plains Rd



7. Secondary site access, from Highland Lakes Rd, southern site extent





8. Watercourse under Highland Lakes Rd (view south)



9. View east from Highland Lakes Rd towards solar north area

2.3 Planning Summary

As per the Planning Scheme, this development application is for the use and development for Utilities which is defined as: '*The use of land for utilities and infrastructure including:*

(b) electricity generation;

(c) transmitting or distributing gas, oil or electricity;

(d) transport networks.'

The Project is located within the Agriculture Zone under Clause 21.0 (Highland Lakes Road is within the Utilities Zone). Rezoning is not required as part of the Proposal's permit approval.

The Development Area is subject to the following mapped codes/overlays:

- Clause C4.0 Electricity transmission infrastructure protection (partial)
- Clause 7.0 Natural assets (*Waterway and coastal protection area only, not Priority vegetation area*) (partial)
- Clause C13.0 Bushfire-prone areas (whole)
- Clause C15.0 Landslip hazard (however the Proposal is exempt under this clause) (whole)

The following codes are also relevant to the Proposal:

- Clause C2.0 Parking and Sustainable Transport
- Clause C3.0 Road and railway assets

An overview of the mapped zone and overlays are shown in thumbnail form in Table 3 and Chapters 7.3 and 7.4 provide an assessment against the planning provisions, including larger maps of the zoning and code overlays.

Table 3 – Summary of Zones and Codes











2.4 Indigenous History

The Development Area is situated within the traditional lands of the Big River Nation, an area with deep cultural and historical significance. The Big River Nation is believed to have been home to five distinct Clans, each with its own unique connection to the land:

- The **Leenowwenne** people lived near New Norfolk, a region characterised by its fertile river valleys and location along the River Derwent. This area was central to their way of life, providing abundant resources and serving as a key point for travel and trade.
- The **Pangerninghe** people resided on the west bank of the River Derwent, directly opposite the confluence of the River Derwent and River Clyde. This location was likely significant for its rich aquatic resources and its position at the meeting of two major waterways, which would have been important for both sustenance and cultural practices.
- The **Braylwunyer** people inhabited the hilly plains between the Ouse River and Dee River, a landscape that offered diverse resources, including game and plant life. These hilly plains would have provided a mix of open land and shelter, ideal for hunting and gathering.
- The **Larmairrenener** people lived in the high country west of the Dee River. This elevated terrain, with its cooler climate and rugged landscape, was likely a key area for seasonal activities, including hunting in the highlands and gathering unique mountain resources.
- The **Luggermairrernerpairner** people occupied the lands north of the Great Lake, an area known for its expansive freshwater resources and vast landscapes. This region would have been crucial for fishing, as well as for its role in the broader network of trails and connections between different Clan territories.

These Clans, each with their distinct territories and traditions, together formed the Big River Nation. Their deep connection to the land and its resources shaped their culture, spirituality, and way of life. The presence of the Development Area within these traditional lands underscores the importance of recognising and respecting the historical and ongoing significance of these territories to the descendants of the Big River Nation today. Chapter 9.7 provides further information on the findings of the Aboriginal Cultural heritage assessment completed for the Proposal.

2.5 Context Analysis

2.5.1 Central Highlands

The Proposal is located within the Central Highlands Council area. The LGA covers more than 8,000 square kilometres and makes a significant and increasing contribution to the economic wealth of Tasmania.

Known for its great lakes and scenic mountainous areas, the region is popular for tourism and recreation. The region boasts multiple thriving industries including agriculture (diverse crop and livestock production), horticulture, forestry, power generation and trout fishing. The key communities in the region of the Weasel Solar Farm are Bothwell, Osterley, Victoria Valley and Ouse. These towns and villages are relatively small and distinct rural communities. Central Highlands' major transport services are the Midland Highway and Highland Lakes Road.

Bothwell

The Site is located within the locality of Bothwell, approximately 9km north of the township (Figure 2). In the 2021 census (ABS, 2021), Bothwell recorded a small population of 499 people. Bothwell sits on the river Clyde and is surrounded by rich rural land, primarily used for agriculture and is known as the southern gateway to the central highlands of Tasmania, and the gateway to some of the best trout fishing in Australia near Arthurs Lake and the Great Lake. First established by settlers of Scottish descent in 1824, the Scottish influence can still be seen in Bothwell today. Bothwell received its name from Governor George Arthur, after the town in Scotland similarly located on the River Clyde. It is one of the most historically significant towns in Tasmania, with a total of 60 buildings and locations of historic interest.

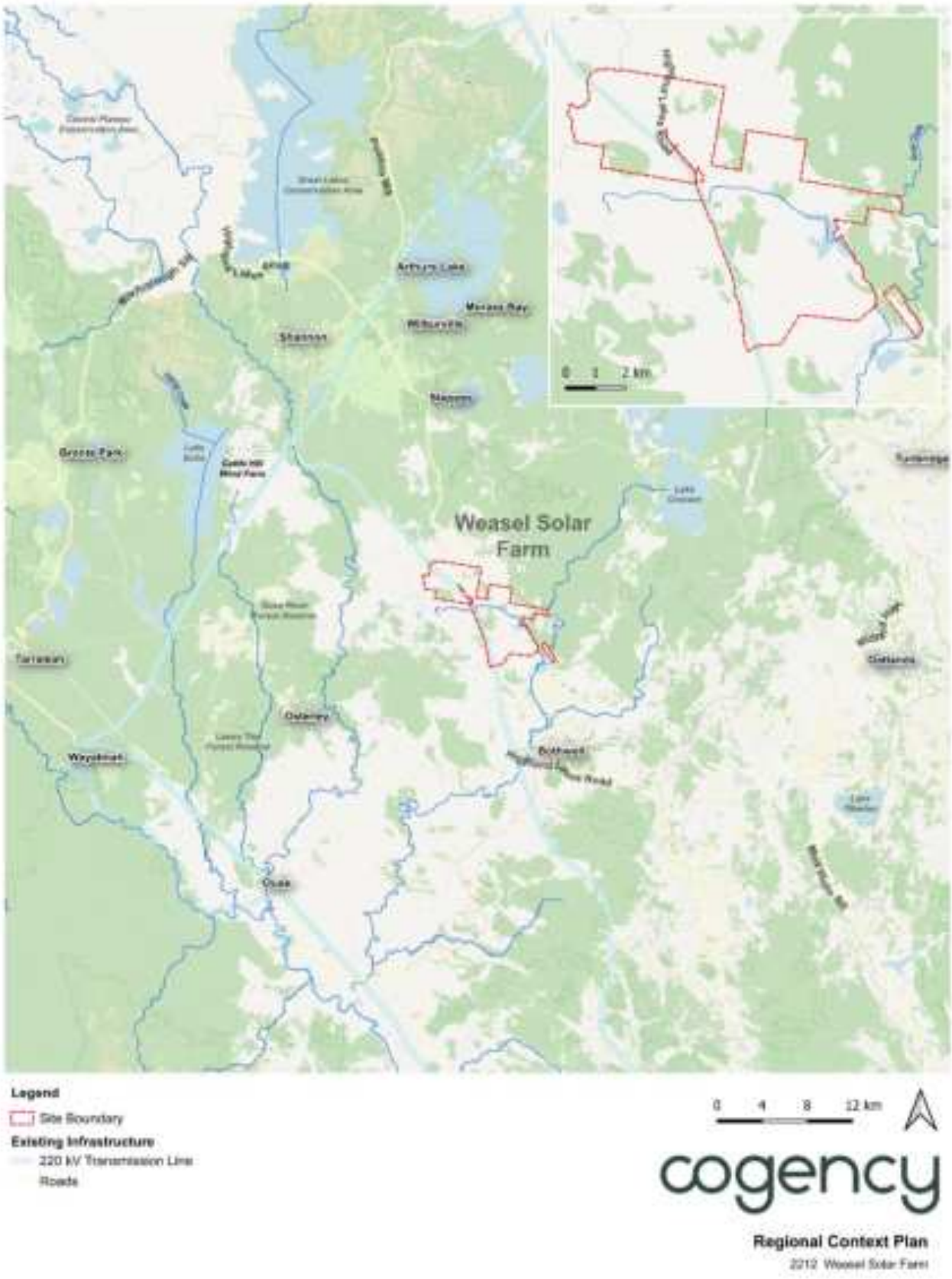


Figure 2 – Regional Context Plan

2.5.2 Surrounding Land Uses

The land surrounding the Development Area and Site is generally modified agricultural land, predominantly used for grazing, irrigation, and cropping. Further to the west, the site is bordered by forestry plantations. The Development Area is situated well outside urban settlements, with the nearest town, Bothwell, located approximately 9 kilometres away. There are 31 residential dwellings within a 5-kilometer radius of the Development Area. Of those, 12 are non-involved dwellings, two of which are within 1 kilometre of the Site (Figure 3).

Key roads near the Development Area include Highland Lakes Road and Weasel Plains Road, which provide primary access to the proposed solar farm. Highland Lakes Road, running along the western boundary of the Site, is one of the main thoroughfares servicing the area. Additionally, an existing 220 kV transmission line (Waddamana to Lindisfarne) runs along the western boundary of the Site, parallel to Highland Lakes Road. To the east of the Site lies the River Clyde.

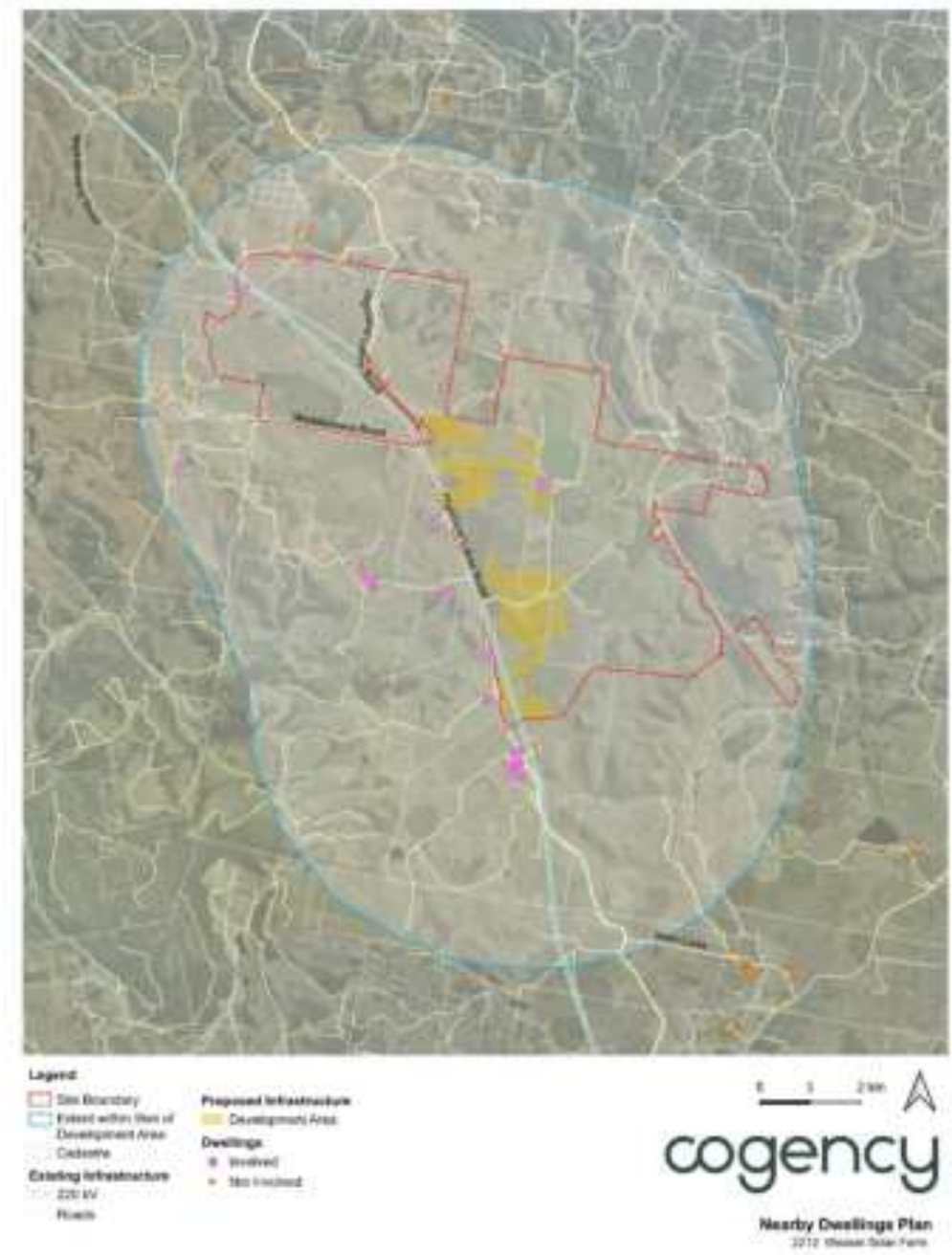


Figure 3 – Nearby Dwellings Plan

2.6 Environment and Physical Conditions

The physical characteristics of the Site are suitable for a solar farm, particularly the land selected as the Development Area. The Site has some undulations, while the Development Area is generally flat and comprises areas of lower agricultural productivity and low-value environmental features. Areas within the Site that lack native vegetation, have lower agricultural output and possess poorer soil quality have been prioritised for the construction of the solar farm and its associated infrastructure.

The environmental conditions of the Site are diverse, comprising a mix of agricultural land, tributaries, woodlands, and forested areas. The Site has undergone significant land disturbance due to long-term grazing and cropping activities across the farming properties. As a result, much of the Site consists of paddocks dominated by improved pastures, with some regrowth areas, characteristic of the Development Area.

The Site's gentle to moderately undulating plains are underlain by a geology dominated by glaciomarine sequences, including pebbly mudstone, sandstone, and limestone. While no major waterways traverse the Site, Weasel Plains Creek runs through the northern portion, and tributaries of Bark Hut Creek flow through the southern portion.

The Site is largely cleared of native vegetation, with some adjoining patches of remnant woodland and native vegetation. Importantly, no significant fauna species or their habitats were identified within the Development Area, ensuring that the solar farm development will have minimal ecological impact. See Chapter 2.6.2 and Appendix D for detailed information on the Site's flora and fauna values.

2.6.1 Topography

The Site is relatively flat with some hills and rises. The Site's elevation ranges between 410AHD and 670 AHD (Figure 4). The Site is surrounded by a series of more steeply undulating hills, including Weasel Hills to the south-west, Cluny Hill to the south, Twelve O'clock Hill to the east and the Bitters to the north. Across the Site slope gradients typically range between 2 degrees and 15 degrees.

The Development Area has been selected to be relatively flat, with heights ranging between 440 AHD and 560 AHD.



Figure 4 – Topography Plan

2.6.2 Ecology

According to the Ecological and Natural Assets Code Assessment (Van Diemen's Consulting, Appendix D), the Site's environmental and biodiversity features are predominantly of low ecological value. Critical ecological areas have been carefully avoided in the design and layout of the Development Areas, ensuring minimal disruption to key natural values.

The Study Area is located within the Tasmanian Southeast bioregion, as defined by the Interim Biogeographic Regions of Australia (IBRA) and straddles the Ouse and Clyde catchment areas.

Given that the majority of the Site consists of previously disturbed agricultural land, which holds low ecological significance, the Development Areas are largely composed of improved pastures. The Site does include small patches of native vegetation communities, such as Eucalyptus tenuiramis forest and woodland not on dolerite, Eucalyptus pauciflora forest and woodland not on dolerite, and Lowland grassy sedgeland. Among these, the Eucalyptus tenuiramis forest and woodland not on dolerite is the only community listed as threatened under native vegetation classifications. This community is limited to approximately 4.66 hectares within the Site, primarily along a narrow north-south corridor in the central proposed development area.

Although some native vegetation types and listed species are present on the Site, they will not be adversely affected by the Proposal. Areas where these sensitive flora and fauna have been identified are minimal and have been strategically excluded from the Development Areas.

The Ecological and Natural Assets Code Assessment includes detailed vegetation maps (TasVEG) (Appendix D, Figures 6 and 7), along with a comprehensive analysis of the Site's natural values, highlighting the careful consideration given to preserving the ecological integrity of the Site.

2.6.3 Watercourses and Waterbodies

As outlined within the Flooding Impact Assessment (Pitt & Sherry), across the 'Weasel Plains' and 'The Weasel' there are numerous watercourses and waterbodies of varying sizes (See Figure 5).

Weasel Plains Creek transects the northern portion of the Development Area, which is a tributary of the River Clyde. Tributaries of Bark Hut Creek flow through the southern portion of the Site. Other minor creek, minor tributaries and drainage lines exist across the two lots but are significantly modified through past farming-related activities. Additionally, the site features several drainage culverts designed to manage water flow.

The Proposal has been sited and designed to avoid significant disruptions to existing water flows, and to help mitigate potential flood risks have been located away from Weasel Plains Creek and the identified drainage culverts.

2.6.4 Soil

As noted in the Agricultural Assessment (Appendix I), the Site's geology is dominated by glaciomarine sequences of pebbly mudstone, sandstone, and limestone, with smaller areas of dolerite and quartz sandstone to the southeast. The soil across both land parcels comprises grey/brown duplex soil consistent with the chromosol soil type. This soil type is generally suitable for pasture production; however, the productivity of this soil is limited by certain factors related to the land's overall capability. The Proposal would be located on lighter sandy/sandy loam soils identified across the Site. Based on the findings of the agricultural impact assessment, the soil structure of the Site is deemed suitable for the Proposal.

2.6.5 Existing Access

The Site is located along Highlands Lakes Road, a State road, approximately 9 km north of Bothwell. Access to the Development Area is currently primarily via Weasel Plains Road, an unsealed road off Highland Lakes Road. The initial 1.4km of Weasel Plains Road is a Council access road, which after this point continues as a private farm access road. Additional access points to the Site, include two gated farming entrances off

Highland Lakes Road including one opposite the Waddamana Road intersection and at the Natural Resources and Environment (NRE Tas) laydown area.

The Proposal will rely upon Weasel Plains Road as the primary access for construction traffic to the site (northern and southern parts) and once operational. The two gated farm entrances off Highlands Lakes Road will be used as additional access points for use during construction and as emergency accesses once the solar farm is operational. As part of the proposal, existing access points will need to be sealed. The primary access and construction/ emergency access points are shown in Figure 13 in Chapter 3.

2.6.6 Existing Transmission Lines and Easements

The existing 220kV overhead transmission line (Waddamana to Lindisfarne) runs within the western boundary of the Site, adjacent to Highland Lakes Road, within a designated transmission corridor that is protected by a planning overlay (and easements on Title). This well-established infrastructure has sufficient capacity to accommodate a point of connection for the proposed solar farm and BESS.

To facilitate this grid connection, an on-site substation will be constructed. This eliminates the need for constructing extensive new transmission lines, providing an efficient connection process and reducing associated footprints and environmental and logistical impacts. The use of existing infrastructure not only ensures reliability but also supports the delivery of renewable energy to the NEM.



Figure 5 – Site Analysis Plan

3. The Proposal

3.1 Overview and Masterplan

The Weasel Solar Farm will comprise the use and development of a large-scale solar farm (across three properties, primarily The Weasel and Weasel Plains), containing approximately 270 ha of solar arrays with a nameplate capacity of up to 250 MW. The development will also comprise the following elements:

- A battery energy storage system (BESS) within an approximately two-hectare footprint;
- Internal 33 kV transmission line approximately 3km in length
- Other electricity infrastructure including inverters and a switchyard containing an electrical substation to connect to the existing 220kV transmission line; and
- Other elements required for construction, maintenance, and operation, such as an operations and management (O&M) compound, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, landscaping, and workers' facilities.

The land selected for the Weasel Solar Farm has already experienced disturbance from agricultural activities and the gentle topography avoids the need for significant changes to the landscape. The solar arrays will be constructed to enable the continued use of the land for grazing sheep on pastures underneath the solar panels, known as ‘agrisolar.’

Figure 6 illustrates the concept masterplan layout. The concept masterplan layout will be refined during detailed design engineering, post-approval.

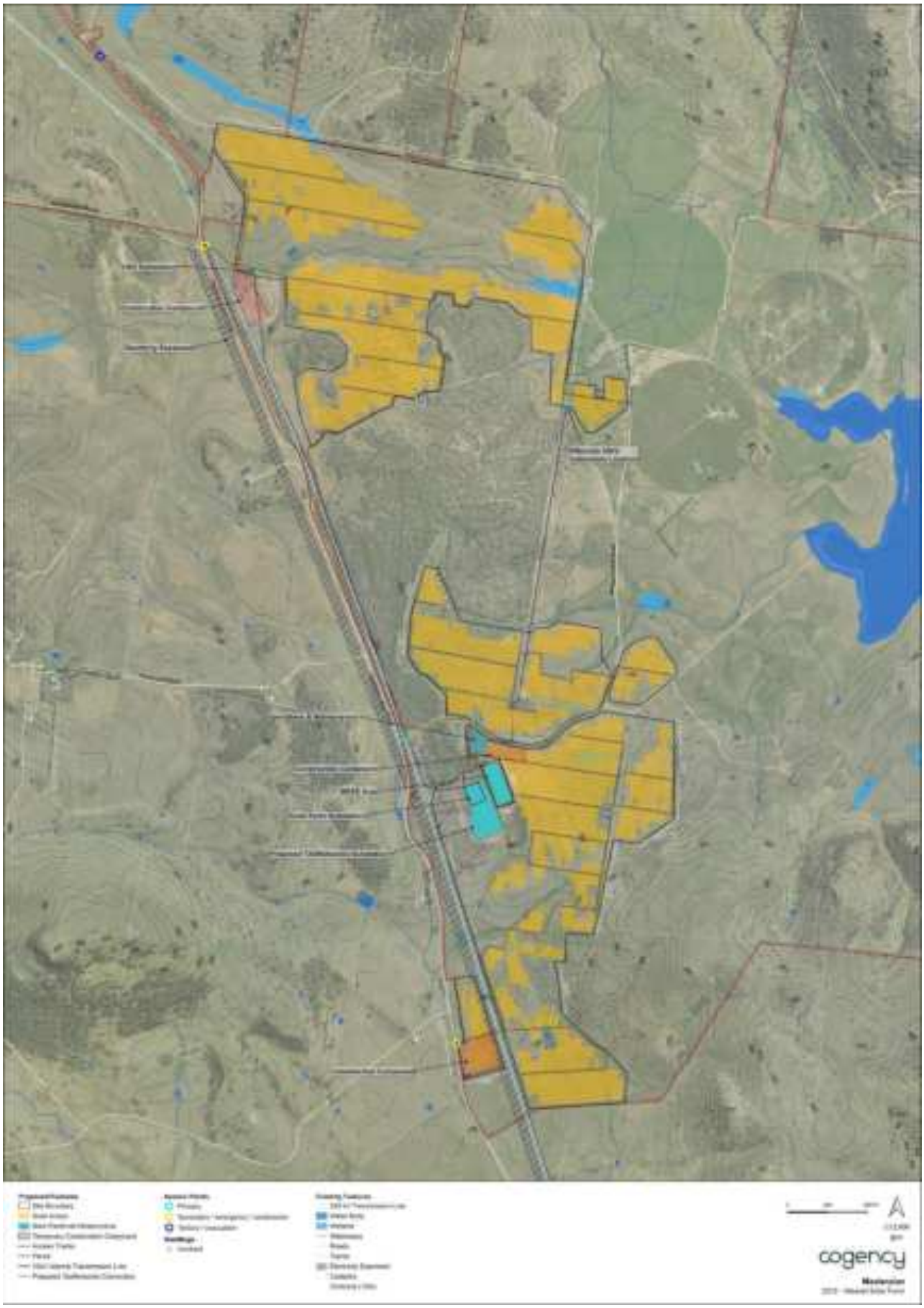


Figure 6 – Concept Masterplan Layout

3.1.1 Project Iterations

The siting of the Proposal has been specifically designed to avoid areas of high sensitivity or constraint. The solar arrays are positioned primarily on lower-value, cleared agricultural land. Key considerations such as high-risk flood zones, along with findings of ecological and cultural heritage assessments, have informed and shaped the design adjustments for the solar farm.

The key changes made to the siting and layout of the Proposal during the planning and design phase stemmed from the:

- Design ethos of reducing visibility from Highland Lakes Road and neighbouring residences;
- Aboriginal cultural heritage assessment, which identified key potential archaeological sensitivity (PAS) sites that the Development Area has avoided;
- Flora and fauna assessment of high-quality native vegetation and habitat to preserve where possible,
- Hydrology assessment of potential high-hazard flooding, which the key elements of the Proposal have been positioned to avoid; and
- Providing an efficient transmission connection and BESS area with appropriate distance to vegetation.

Accordingly, the design iterations have appropriately dealt with various matters to ensure that the siting and layout proposed largely avoids the key constraints and minimise potential environmental impacts. Figure 7 summarises the key considerations in avoidance, including Key Sensitive Areas (high value ecological features, cultural heritage PAS, and higher risk inundation areas).

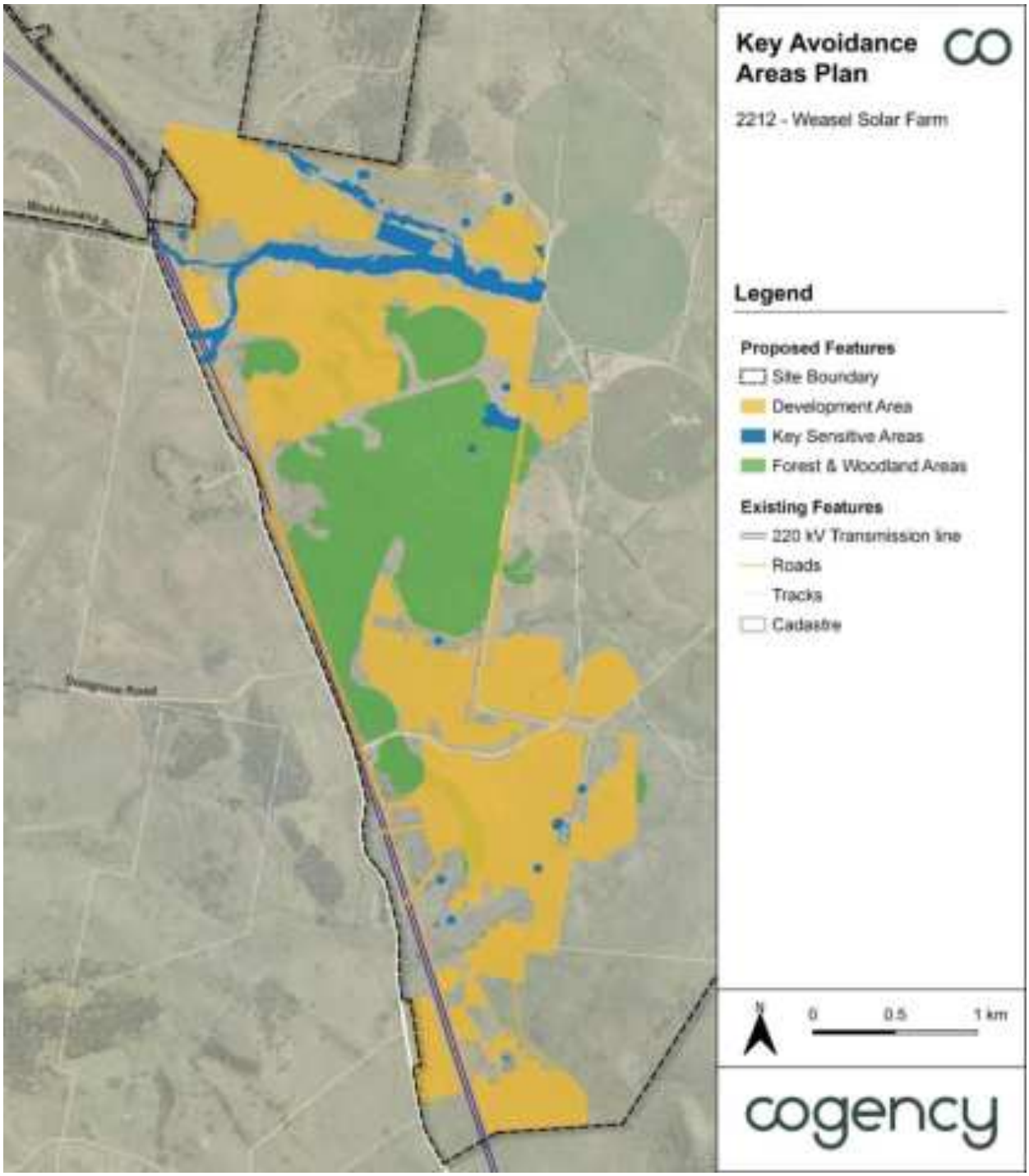


Figure 7 – Key Avoidance Areas Plan

3.2 Solar Panels and Associated Infrastructure

The Proposal will comprise:

- Solar components (PV Modules, trackers, inverters)
- Infrastructure (switchyard, BESS, Operations and maintenance building, internal 33 kV transmission line, fire-fighting supply infrastructure)
- Construction Area
- Security perimeter fencing

- Access routes
- Landscaping (vegetation planting)

The solar panels generate an electric current (DC) from energy in sunlight. Groups of solar arrays are linked (via cabling) to an inverter, that converts the current to AC. This AC electricity is carried by 33kV internal transmission lines to a substation, that steps the voltage up to 220kV. This 220kV electricity goes from the substation to the 220kV Switchyard, where it connects into the existing high-voltage transmission network. The BESS, switchyard, and substation are adjacent to each other, forming a 'primary infrastructure area'. This facilitates BESS connection to the grid and concentrates the larger infrastructure together.

Each component is summarised in the following subsections. See Appendix B for the concept masterplan layout and indicative elevation (by Cogency and DNV).

3.2.1 Solar Panels and Mounting System

The solar farm is expected to have a capacity of approximately 250MW, with the solar arrays covering approximately 270 ha of the broader 432 ha Development Area. The concept design is predicated upon panels being single-axis tracking in 2P format, with a concept string size of 27 modules (see Figure 8, Figure 9 and Figure 10). Importantly, this concept design is subject to detailed design and procurement (undertaken once a planning approval has been granted). The installation process involves direct piling and therefore does not require excavation or concrete footings for the solar arrays. Some trenching for in-ground conduits will be required. Typically, solar modules are aluminium framed with glass face, and generally 240cm x 110cm x 3cm – although subject to final selection in detailed design. The panels are mounted on galvanised steel racks as shown in Figure 8.

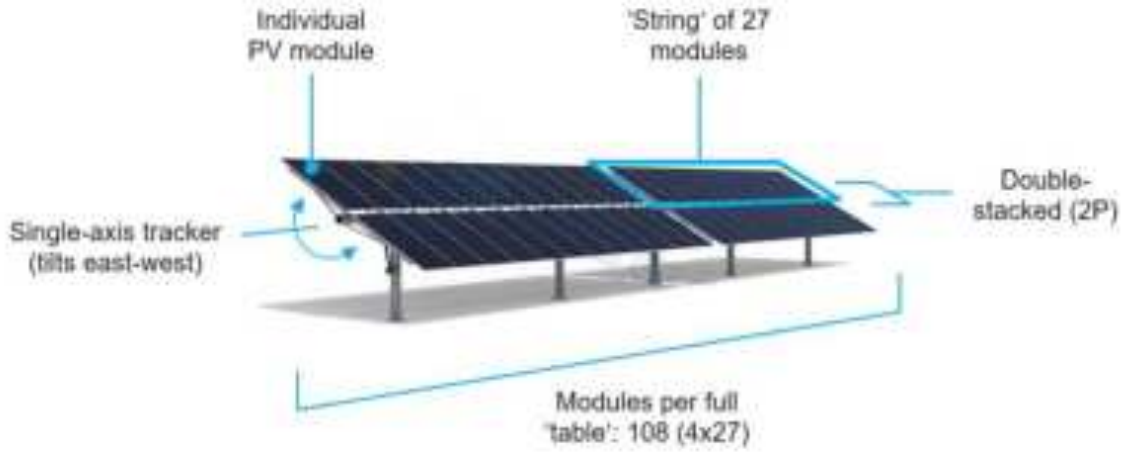


Figure 8 – Typical solar array layout



Figure 9 – PV Trackers Layout Elevation View

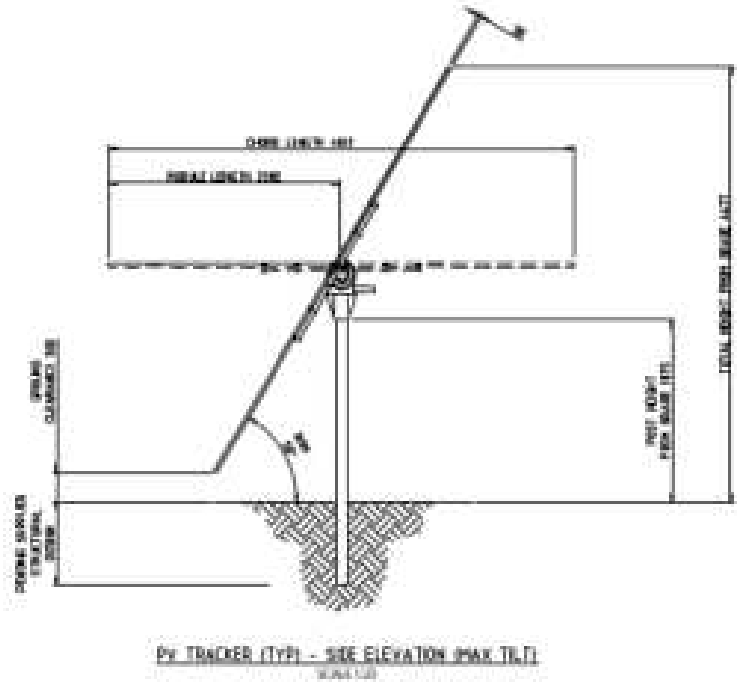


Figure 10 – Proposed solar panel tracker

3.2.2 Inverters and Transformers

Spaced throughout the solar areas will be approximately 60 inverters. These inverters (see Figure 11) are approximately 6 m long, 2.4 m wide, and 2.8 m high.

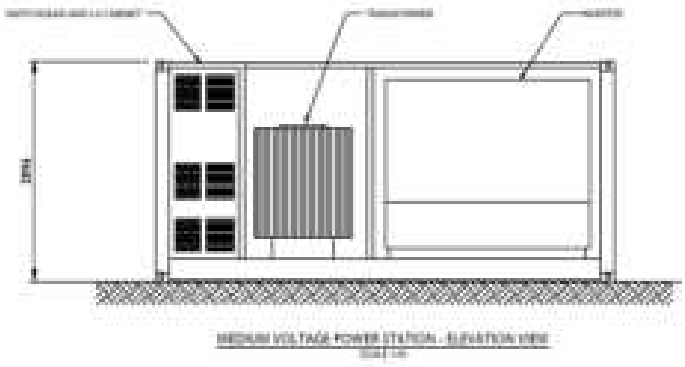


Figure 11 – Design of the Inverter (DNV)

3.2.3 Internal Transmission – 33 kV Overhead Transmission Line

An internal 33 kV transmission line will be installed within the western extent of the site, connecting the northern solar area to the southern area (to the substation). An alternate eastern alignment has been included in technical investigations, allowing it to be considered during detailed design. The line length along the western boundary adjacent to Highland Lakes Road will be approximately 3km long, running overhead. The eastern option would be approximately 2km long (along an existing fence line). Minimal clearing will be required to accommodate the overhead transmission lines. The concept dimensions are shown in Figure 12, typically a height of 18 m.

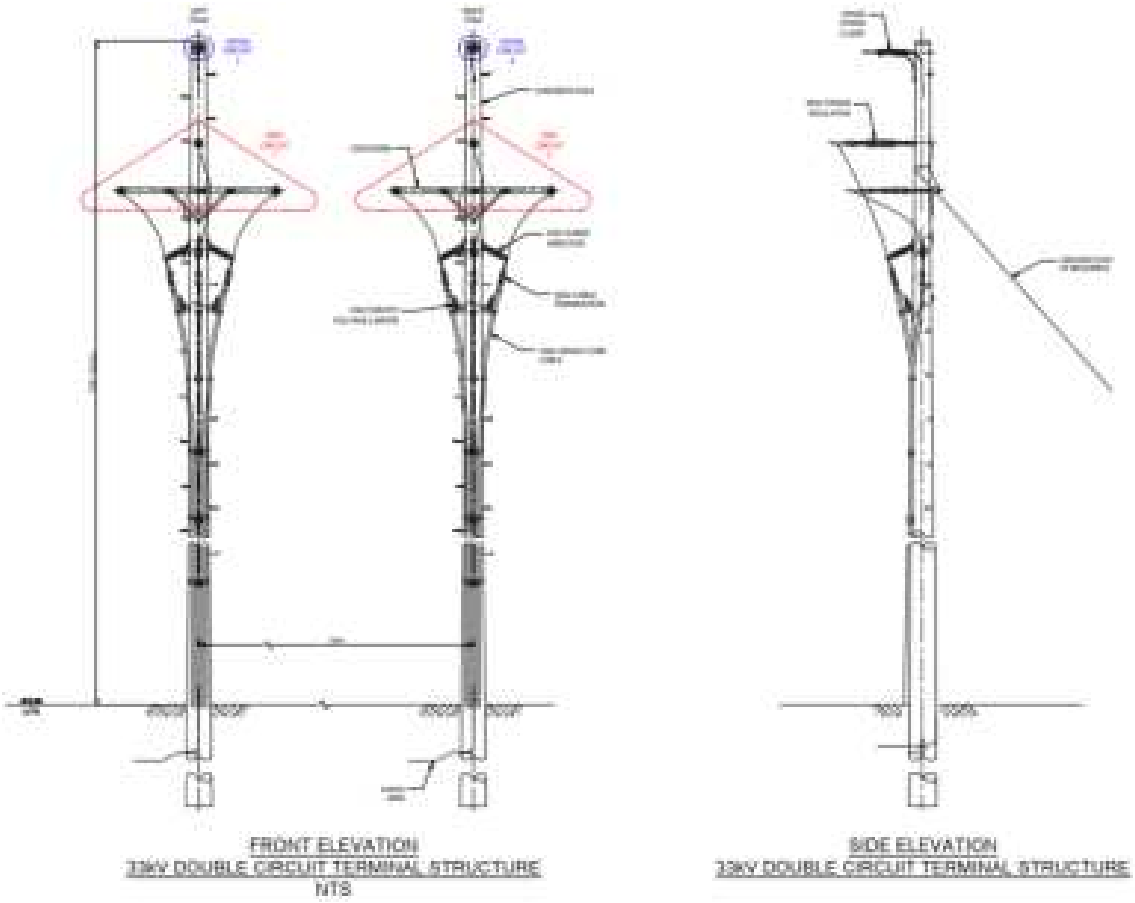


Figure 12 – Proposed 33kV overhead transmission design (DNV)

3.2.4 Battery Energy Storage System

The BESS component is located within the western portion of the site, with a benching footprint of 274m x 115m (approximately 3 ha). The potential capacity is in the order of 4hr/144MW (576MWh), subject to detailed design. Figure 13 shows the BESS general arrangement layout and dimensions (battery modules in red, with associated inverters at the end of each row). The typical height of each BESS unit is up to-3 m. The primary purpose of the BESS is to soak up electricity generated by the solar farm during the day, available for discharge in evening peak periods. The BESS is located next to the substation/switchyard infrastructure for maximum efficiency to import/export to the grid. The BESS may be developed in stages, pending final design.

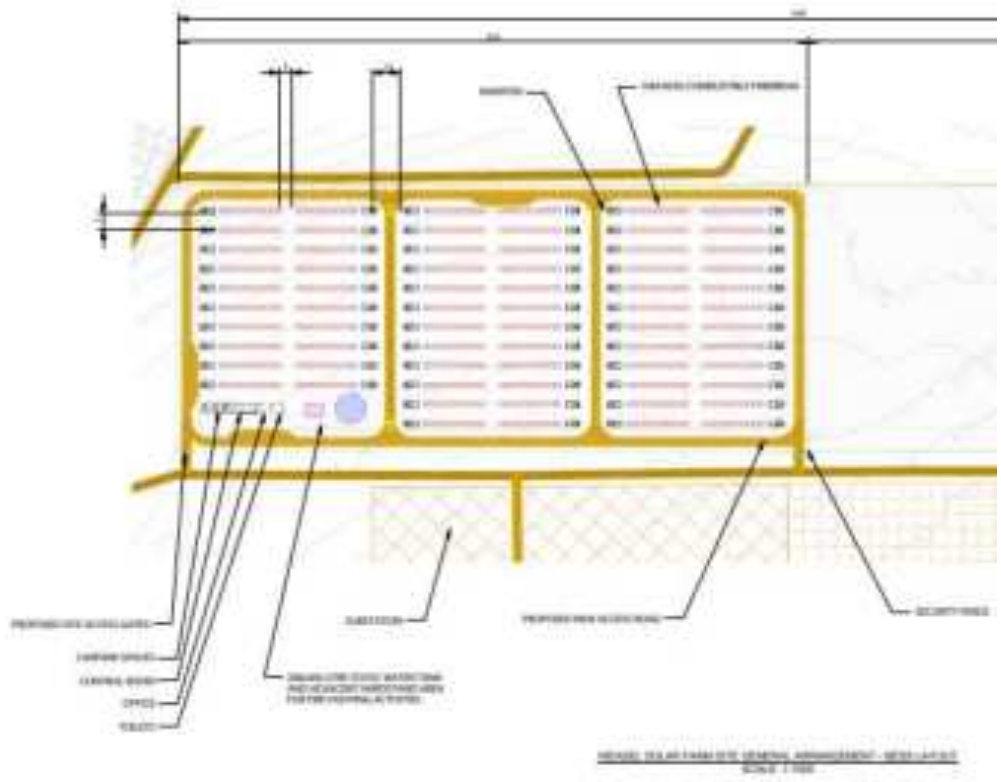


Figure 13 – General Layout of BESS (DNV)

3.2.5 Substation and Switchyard

The substation (33kV-220kV) and switchyard (220kV) are located in the primary infrastructure area together with the BESS. Collectively, they allow the transfer of electricity between the solar farm/BESS and national grid. Typically, the 220kV switchyard becomes a TasNetworks asset. The final design of both switchyard and substation are subject to TasNetworks approval, separate to the DA.

The switchyard provides the export point of the generated electricity into the grid (via the existing 220 kV transmission line). It will comprise the 33 kV transformers as it receives the two internal 33 kV line connections that feed into the northern solar arrays within the Development Area. The indicative Switchyard layout and elevation are shown in Figure 14.

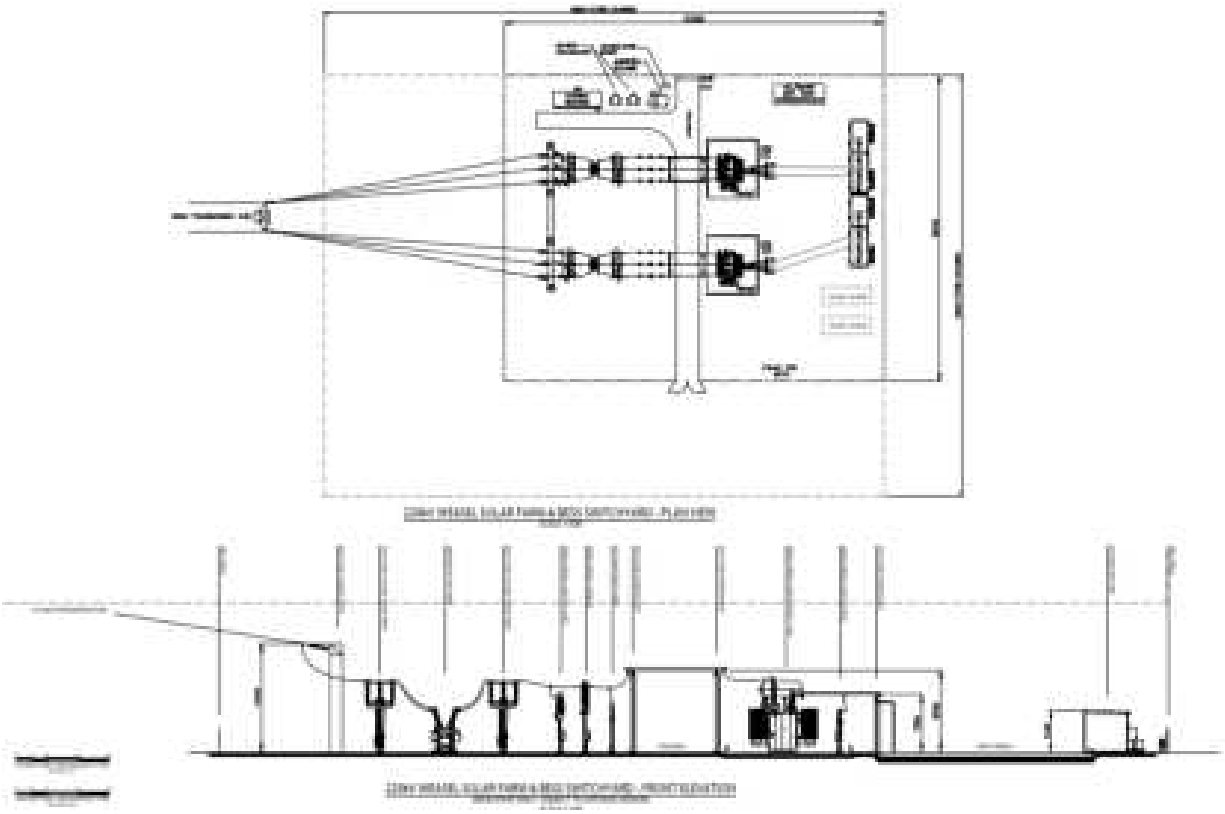


Figure 14 – Design and Layout of Switchyard (DNV)

3.2.6 Fencing and Security

The perimeter of the solar array areas and primary infrastructure area will be secured with a security fence topped with barbed wire to prevent unauthorised access (typically 2.4 m tall). Only a small portion of the fencing, along the northern boundary of the Development Area and the southernmost solar array area within The Weasel parcel, will align with title or property boundaries. The majority of the fencing will be internal, located within 'The Weasel' and 'Weasel Plains' parcels. See Appendix B Design Plans by DNV for a typical elevation diagram.

3.2.7 Operations and Maintenance Building

Control and operations and management buildings are proposed for the Switchyard and BESS areas. These will include a site office for operations. These building will be single-storey colourbond, essentially presenting as agricultural sheds. See Appendix B Design Plans by DNV for typical elevation diagrams. The larger building is approximately 9 m high, 20 m x 40 m.

3.2.8 Fire-fighting supply

The solar areas, BESS, and substation and switchyard require static water supplies, held in storage tanks. The Bushfire Impact Statement (Appendix G) outlines the requirements for fire-break separations, static water supply, access (including track standards and passing bays) and other necessary measures. These requirements will be subject to final detailed design.

3.3 Site Access

The Proposal will rely upon Weasel Plains Road as the main access route (access and egress) for construction and operation traffic to both the northern and southern sections of the site. In addition to Weasel Plains Road, three existing farm gate entrances located off Highlands Lakes Road will be designated as supplementary access points. The two farm gates located on 'Weasel Plains' will be used as secondary access points to

facilitate additional access during the construction phase, particularly for larger vehicles and equipment. Following the completion of construction, these entrances will remain available as emergency access/egress points. The entrance located along Rockford will be used as a tertiary access point only for evacuation purposes. To accommodate increased traffic and ensure safe and reliable access, all existing access points, including those on Highlands Lakes Road, will need to be sealed (Figure 15).

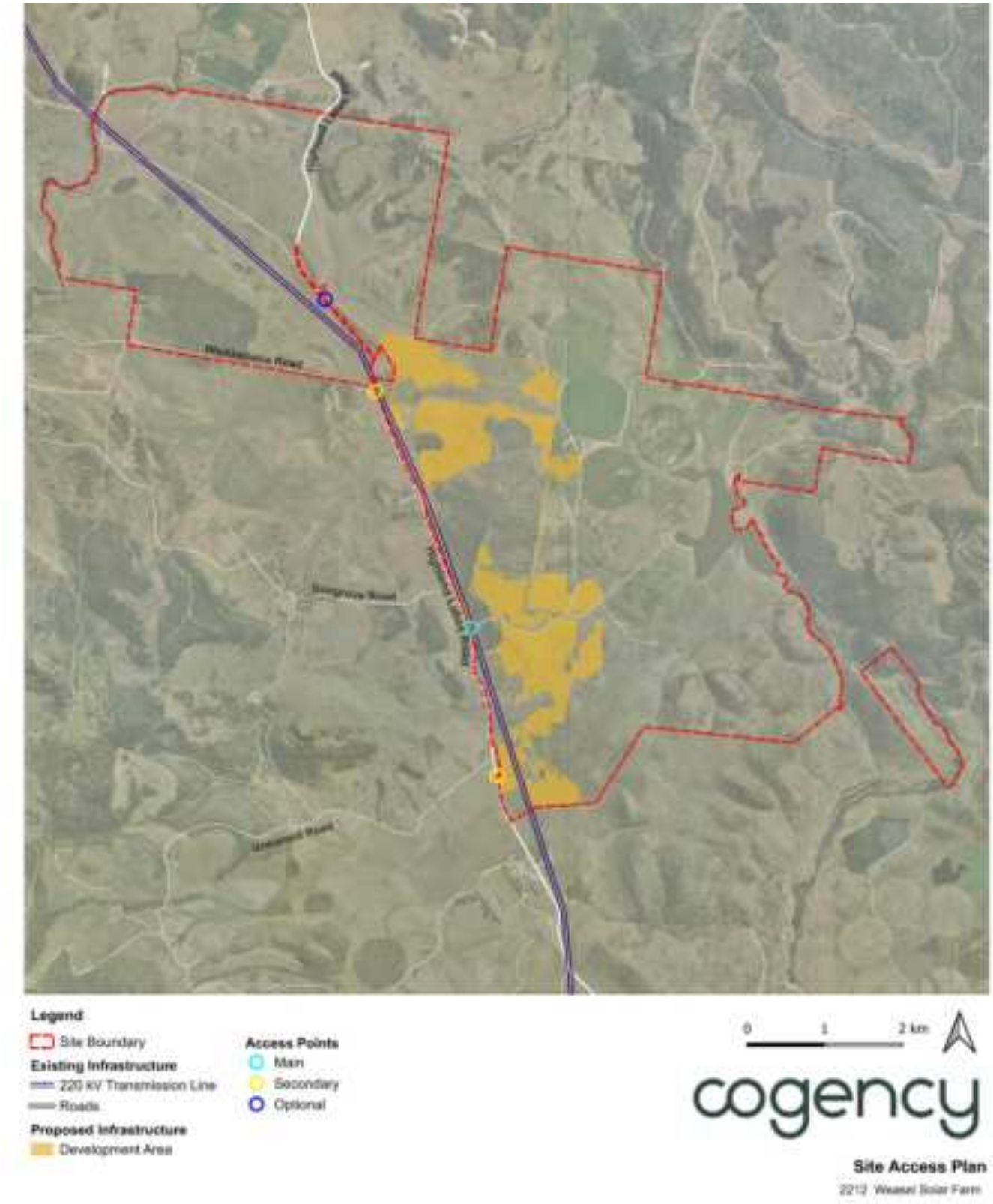


Figure 15 – Site Access Plan

3.4 Vegetation and Landscaping

3.4.1 Vegetation Removal

Some vegetation removal will be necessary as part of the Proposal. However, the siting and design process has carefully considered environmental impacts and prioritised the protection of high-quality native vegetation and tree species, seeking to maximise avoidance and minimisation of native vegetation removal. In line with the findings of the Ecology Assessment, the Proposal has been designed to avoid significant native vegetation areas as much as possible. The majority of the vegetation that will be cleared consists of non-native species, ensuring that much of the forested areas, particularly those with ecological value, are retained. Chapter 9.3 and Appendix D provide further detail on vegetation removal.

3.4.2 Vegetation Planting and Screening

As part of the LVIA, amelioration planting has been proposed along solar area boundaries at the far northern and southern extents, on the Highland Lakes Rd side. These proposed plantings will further obscure and soften the limited public views towards the solar farm. Final planting location will be subject to detailed design, coordinating with fire break requirements and offsets to solar arrays and security fencing.

3.5 Construction, Operation and Lifespan

The construction period is expected to take approximately 1.5 years. Typical solar farm operation periods are 30-40 years, subject to lease arrangements. Replacement of solar panel modules and extension of lease (lifespan) can be altered.

3.5.1 Employment Opportunities

The project is anticipated to generate significant local and regional employment opportunities, particularly during the construction phase. Additionally, the project will actively encourage the participation of local businesses, creating opportunities for suppliers and service providers to contribute to its development. Once operational, the solar farm will also create ongoing jobs, with positions available in areas such as maintenance, operations, and administration, fostering long-term employment within the community. The Socioeconomic Impact Assessment (Appendix N) outlines the economic and employment benefits in detail.

3.5.2 Construction

Due to its scale, the construction activities will be undertaken using a staged approach. The construction period will require haulage of large components and associated access upgrades. Temporary construction laydown and facility areas are located within the Project Area. The two primary construction laydown areas can be filled with solar arrays as a final stage of construction.

3.5.3 Operation

Within the operation phase, there is minimal day-to-day activity relative to construction. It is expected that there will be 20 ongoing jobs (FTE) (8 direct and 12 indirect), related to maintenance, inspections and management.

The Agrisolar component means sheep grazing is the primary method for grass (height) management, although slashing would be used in addition if required, to maintain grass height to a suitable fire-risk management standard during fire-season.

Modern large-scale solar farms comprise live performance monitoring components, allowing detailed operational monitoring, often remotely. Detailed design and development will confirm system details.

3.5.4 Decommissioning

For solar farm projects, lease programs generally include provisions for either extending the operational period or decommissioning the site after a set duration, typically ranging from 30 to 40 years. At the end of this period, the developer is typically obligated to decommission the site, a process that involves the complete removal of all solar infrastructure and the restoration of the land to its original, pre-development condition. This restoration is usually detailed in a decommissioning plan, which must be agreed upon by both the landowner and the developer and is often enforced as a condition of the project's planning permit. Decommissioning ensures that the land remains viable for future use, whether for agriculture, conservation, or other purposes and is a key aspect of responsible renewable energy development.

3.6 Agrisolar

'Agrisolar' combines sheep grazing or other agricultural activities, such as vegetable growing, with solar electricity generation. The goal is to create a mutually beneficial relationship that supports both farming and energy production. There is increasing research across Australia and internationally on the benefits of Agrisolar. The benefits can be derived from:

- Increased land use efficiency, by maximising the utility of available farming land.
- Diversification of income due to the addition of renewable electricity production over grazing land.
- Natural grass management under solar panels (instead of relying upon slashing or spraying).
- Extra shading of sheep and pastures.
- Reduces carbon footprint of agricultural practices
- In drier climates, additional moisture through condensation on panels and reduced evaporation on hot days.

Considering the lower agricultural capability of the Development Areas, diversifying and using agrisolar practices concurrently can provide significant agricultural benefits for the Proponent.

4. Proposal Justification

4.1 Site Suitability

The Site – and Development Area – have been carefully selected based on its suitable characteristics for a solar farm, ensuring minimal environmental constraints and broader social benefits. The Site has already undergone significant disturbance due to longstanding agricultural activities, making it a more favourable location for the Proposal. Its topography is well-suited to support the Proposal, avoiding the need for major earthworks, and being well screened from public view.

Feasibility studies indicate that while the Weasel Solar Farm project will be the most southern solar farm in Australia, summer daylight hours extend longer than in northern parts of the state and during peak usage hours nationally.

The Development Areas are largely free of vegetation, with minimal presence of significant flora and fauna species. Large patches of vegetation within the wider Site have been excluded from the Development Areas, ensuring that the Proposal will integrate with minimal impact into the existing environment.

Additionally, the design of the solar arrays will allow for the continued use of the land for grazing sheep underneath the panels, a practice known as 'agrisolar.' This approach underscores the Site's suitability by maintaining agricultural productivity alongside renewable energy generation.

The Site is located more than 9 km from the nearest town, Bothwell, with very few non-involved residential dwellings within 5km of the Development Area. The Site benefits from proximity to major routes, with direct access to Highland Lakes Road (State Route A5) adjacent to the western extent of the site.

A critical advantage of this location is the existing 220 kV transmission line running through the Site, eliminating the need for new external transmission infrastructure. This reduces both the environmental impact and costs associated with the Proposal. Centrally positioned between Hobart and Launceston, the location ensures reduced transmission costs compared to alternative locations.

At a broad scale, the Project aligns with state and local government policies, supporting existing agricultural land uses while contributing to local economic development. The establishment of the solar farm and associated infrastructure offers a strategic opportunity to diversify the local economy, particularly in response to the declining forestry industry, by fostering alternative industries that can stimulate economic growth.

4.2 Social, Economic and Energy Benefits

4.2.1 Social and Economic Benefits

This local landowner-led project is expected to generate significant positive impacts for the local community as well as Tasmania's environment and economy.

A key benefit of this local landowner-led project is the sensitivity towards local concerns, meaning the Proposal can be tailored to the local context and where benefits may be more tangible and of value to the community. As such, the Proponent has sought to ensure the Bothwell community and surrounding towns are positively impacted by the Proposal and can benefit from the uptake of renewable energy in the Central Highlands Region.

A solar farm in the Central Highlands will increase reliable, affordable and renewable power for the region. The development will be supporting burgeoning renewable energy industry in Tasmania, helping reach critical mass for training and job creation, supporting nearby communities of Bothwell, Ouse, Osterley and beyond. It will further support growth in the local/Tasmanian economy through direct investment and job creation, during construction and once the solar farm is operational.

During the construction phase, several employment and contracting opportunities will be available and local contractors, suppliers and businesses will be engaged, where possible. A local business register will be developed, as well as a community benefit sharing program.

Based on the socioeconomic assessment completed for the proposal the key benefits have been identified as:

- Estimated to generate economic output in the order of $428 million during the construction phase, and support more than 300 direct jobs (FTE).
- Estimated to generate $11 million total economic output operationally, and support 8 direct FTE jobs.

The Socioeconomic Impact Assessment (Appendix N) by Urban Enterprise provides further detail on the social and economic benefits.

4.2.2 Energy Benefits

The Site's location and favourable conditions – such as relatively flat topography, solar irradiance, and proximity to existing transmission infrastructure – are critical factors that contribute to the efficiency and effectiveness of the Weasel Solar Farm, maximising energy production and transmission potential. Additionally, the scale and capacity of the Proposal are designed to provide a substantial source of clean energy, aligning with and advancing Tasmania's renewable energy targets, supporting cheaper electricity and strengthening Tasmania's grid.

The key energy benefits of the Proposal include:

- Transitioning the grid to sources of renewable energy
- Increased renewable energy generation to meet demands for future local industry and the transition to renewable energy, reducing associated climate change drivers.
- Avoidance of more than 44,000 tonnes of CO2.
- More than 30,000 Tasmanian Homes Powered
- Emissions saved equivalent to planting more than 450,000 trees
- Supporting Tasmania's goal of achieving 200% renewable energy by 2030.

5. Community and Stakeholder Engagement

Since the inception of the Project, the Proponent has been committed to early, proactive, and meaningful engagement with stakeholders. To help support the Proponent's commitment to community and stakeholder engagement, Cogency prepared a comprehensive Community and Stakeholder Engagement Strategy. This Strategy detailed the engagement objectives, principles, methodology, stakeholder mapping, monitoring and review processes, and an action plan. A Consultation Summary Report is provided in Appendix M that provides a record of the engagement activities and their outcomes.

5.1 Engagement Schedule Overview

The Engagement Schedule for the Project has been structured around three key stages, each designed to ensure early, proactive, and meaningful engagement with key stakeholders and nearby community members. These stages were organised to facilitate open communication and gather valuable input and support for the Proposal at the State, regional, and local levels.

The three phases of engagement are:

- Feasibility and Early Engagement Phase (Q4 2023 -Q2 2024)
- Pre-lodgement Engagement (Q2-Q3 2024)
- Post Lodgement and Advertising Engagement (Q4 2024 – Q1 2025)

In addition to relevant authorities, the early stages of engagement have been mostly targeted towards near-neighbour and local landowners before introducing the project to the broader community. This is largely due to the project being located well outside key settlement areas, and there are a limited number of non-involved residents within 5km of the Proposal.

The engagement activities aimed not only to introduce the Proposal to stakeholders and neighbours of the Proposal but also to help them understand its implications and the associated benefit-sharing opportunities. The schedule was carefully planned to provide ample time for all interested parties to be well-informed and actively involved throughout the process.

5.2 Key Activities and Findings

As a local landowner and key member of the Bothwell community, the Proponent has proactively initiated early engagement with key stakeholders and nearby neighbours to build support and gather valuable feedback for the proposed Weasel Solar Farm. This approach has allowed for meaningful dialogue and consultation with those most directly impacted by the Proposal.

Preliminary discussions with immediate neighbours provided an overview of the Proposal, including key components, timeline, planning approvals process, and the potential amenity impacts and benefits. Those neighbours have demonstrated a positive or neutral sentiment – notably, no negative sentiment.

High-level discussions with the State Government representatives and the Central Highlands Council have focused on introducing the project, along with the broader concept of the Highlands Renewable Energy Hub, which encompasses four key renewable energy projects. These discussions have highlighted the benefits for both the local community and Tasmania, and have included plans for future engagement, detailed project timelines, and the pathways for obtaining necessary approvals.

Engagement with Traditional Owners has been managed by cultural heritage consultants CHMA (Appendix F), ensuring that cultural heritage considerations are respected and integrated into the project planning process.

Following the formal lodgement of the Development Application, the Proponent plans to host a Community Drop-in Information Session. This event will serve as an opportunity to introduce the project to the broader community, provide updates, answer questions, and ensure transparency throughout the development process. For more information, please refer to the Consultation Summary Report provided in Appendix M.

6. Legislation, Guidelines and Policy Context

6.1 Policy & Strategic Alignment Summary

Table 4 outlines the federal, state, regional and local policies, legislation and plans that are relevant to the development of the Weasel Solar Farm.

Table 4 – Policy Alignment Overview

	Relevant Objectives & Actions	Proposal Alignment
Commonwealth		
Paris Agreement 2016	▪ Strengthen the global response to the threat of climate change ▪ Maintain global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit temperature increase to 1.5°C". ▪ Achieve net zero emissions by 2050, and inscribe low emissions technology stretch goals	▪ The proposal aligns with Australia's commitment to the Paris Climate Agreement and will significantly contribute to achieving net-zero targets through the supply and generation of renewable energy. ▪ As a result of the Proposal, it is expected that approximately 44,676 tonnes of CO2 will be saved annually.
Climate Change Act 2022	▪ Advance Australia's response to climate change ▪ Promote accountability in governance and policy-making in regard to climate change. ▪ Achieve Australia's greenhouse gas emissions reduction targets, per s 10 of the Act, at least 43% below 2005 levels by 2030, and net zero by 2050.	▪ By generating renewable energy, the proposal will support Australia's greenhouse gas reduction target and contribute to minimising the reliance on fossil fuels.
Australian Renewable Energy Target Scheme	▪ Reduce greenhouse gas emissions in the electricity sector ▪ Encourage the generation of electricity from sustainable and renewable sources ▪ Investment in new renewable energy projects until the target of 33,000 gigawatt-hours of renewable electricity generation is met and sustained until 2030.	▪ The Proposal supports the national renewable energy targets by supplying electricity generation through renewable energy sources and seeking to reduce greenhouse gas emissions.
AEMO Integrated System Plan 2024	▪ Support the development of the National Energy Market (NEM)	▪ The Proposal will connect to the NEM. Along with providing locally generated renewable energy, the BESS component will help improve grid stability and management in the region.
Energy Networks Australia National Connection Guidelines	▪ Provides a set of nationally consistent guidelines for the safe, consistent, and efficient connection of renewable energy sources to the grid. ▪ Outlines the key technical requirements to facilitate streamlined integration into the national grid as the renewable energy transition accelerates.	▪ During the evaluation of the proposal's integration into the national grid, a thorough assessment of technical, safety, social, and environmental factors was conducted. Taking these factors into account, the proposal closely adheres to the core principles of the National Connection Guidelines, ensuring the safe, reliable, and efficient connection of renewable energy to the national grid.
Environmental Protection and Biodiversity Conservation Act 1999	▪ Environmental law that provides environmental protection in relation to Matters of National Environmental Significance (MNES). ▪ Ensures "that 'nationally significant' animals, plants, habitats, and places are	▪ Based on the findings of the Ecology Assessment, species listed under the EPBC Act were not found to be present on site. Therefore, the Proposal is unlikely to be a 'Controlled Action'.

	identified, and any potential negative impacts on them are carefully considered before changes in land use or new developments are approved".	▪ Regardless, the Project will be referred to the Minister for the Environment who will determine if the Project will be considered a controlled action and therefore require formal assessment and approval.
State		
Resource Management & Planning System	▪ Promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity ▪ Provide for the fair, orderly and sustainable use and development of air, land, and water ▪ Encourage public involvement in resource management and planning ▪ Facilitate economic development in accordance with the objectives set out in the above paragraphs ▪ Promote the sharing of responsibility for resource management and planning between the different spheres of government, the community and industry in the State	▪ By providing a source of renewable energy generation with minimal environmental impacts, the Proposal promotes the state's sustainable development objectives and orderly planning. ▪ The Proposal also represents a significant economic investment in the region.
Land Use Planning & Approvals Act 1993 (LUPA Act)	▪ Regulate the use and development of land, and some resources, within local government areas. ▪ Schedule 1 of the LUPA Act sets out the objectives of the Resource Management and Planning System (RMPS) (Part 1) and Planning Process (Part 2).	▪ Pursuant to the LUPA Act and the Planning Scheme, a planning permit is required. ▪ The application for this proposal will be made under Part 4, Division 2 section 57 of the LUPA Act. This is because the Use under the Agriculture Zone is Discretionary (Tasmanian Planning Scheme – Central Highlands).
Land Use Planning & Approvals Regulations 2014	▪ Prescribes notice requirements for certain exhibitions, approvals and applications under the LUPAA Act. ▪ Prescribes fees payable under the LUPAA Act.	▪ The regulations outlined in the Land Use Planning & Approvals Regulations 2014 (Tas) will be adhered to during the approvals process of the proposal.
Environmental Management and Pollution Control Act 1994 (EMPCA Act)	▪ Regulate activities that may cause environmental harm, and encourage environmental management by industry, planning authorities, and State agencies. ▪ Determines whether a development is considered a Level 1, 2 or 3 activity, based on the attributes of the project and their potential environmental impact. ▪ Activities not requiring EPA approval are still subject to the EMPCA, its regulations and policies. ▪ Level 1 activities are regular uses and developments which may have their approval covered by regular planning schemes. Their approval does not normally require EPA contribution, though may under a set of triggers outlined in Clauses 24 and 20.B. ▪ Level 2 and Level 3 (highest level) activities are defined as those listed in Schedule 2 to the EMPCA and they require EPA referral for approval.	▪ The Proposal does not fall within the categories contained in Schedule 2 of the EMPC Act as being a level 2 activity. ▪ Confirmation was received from EPA that the Proposal is not considered a high-impact (Level 2 or 3) activity and will be assessed by Council, as a Level 1 activity.

State Policies and Projects Act 1993	▪ Encourage the development of State policies that achieve the objectives outlined in the RMPS. ▪ Provide for the determination and integrated assessment of projects of State Significance. ▪ Guide and outline requirements for State of the Environment Reporting. ▪ Seeks to further objectives of the RMPS.	▪ The proposal is not considered to qualify as a project of State Significance under the LUPA Act or this Act. ▪ Therefore, this planning approvals pathway has not been selected for the proposal.
Aboriginal Heritage Act 1975	▪ Protect and conserve relics (places, objects and sites) of Indigenous heritage.	▪ An Aboriginal Cultural Heritage assessment has been completed. The findings determined that there are no known European or Aboriginal cultural heritage values on site. ▪ The Weasel Solar Farm is not expected to impact existing Aboriginal cultural heritage values and therefore is considered to align with the objectives and requirements of the AHA Act.
Historic Cultural Heritage Act 1995	▪ Protect and conserve places of cultural heritage significance in Tasmania ▪ Seeks to further objectives of the RMPS	▪ A European cultural heritage assessment was completed for this proposal, and it determined the Proposal will not impact on existing heritage values in the vicinity.
Major Infrastructure Development and Approvals Act 1999	▪ Make special provisions in relation to the approval of major infrastructure projects. ▪ Applies to projects having effects extending beyond a single council area. ▪ Seeks to further objectives of the RMPS.	▪ The Proposal is not considered to qualify as a Major infrastructure project based on the requirements under the LUPA Act. ▪ The Proposal's footprint is within a single council area. Therefore, the Proposal will not be considered under this approvals process.
Water Management Act 1999	▪ Promote the sustainable and fair use, management, and development of freshwater resources. ▪ Maintain ecological processes and diversity of aquatic and riparian ecosystems. ▪ Seeks to further objectives of the RMPS.	▪ A Flooding Impact Assessment has been prepared by a suitably qualified hydrologist for this proposal. ▪ Under this assessment, it is considered that the Proposal aligns with the objectives and requirements of the WM Act.
Nature Conservation Act 2002	▪ Conserve and protect the fauna, flora and geological diversity of the State. ▪ Protect national parks and other reserved land for related purposes.	▪ The likelihood of impact on the quality of flora and fauna habitat of the Proposal is expected to be negligible. ▪ It is therefore considered that the proposal aligns with the objectives of the NCA Act.
Threatened Species Protection Act 1995	▪ Aim to protect threatened species in Tasmania	▪ Based on the findings of the Flora and Fauna report, some species listed in the Act were deemed to have the potential to occur on site. ▪ However, as demonstrated in the concept layout, the Proposal has been sited and designed to ensure the impact on native vegetation and listed species is negligible.
Forest Practices Act 1985	▪ Provide a code of conduct for forest practices ▪ Aim to conserve and protect land for the use and maintenance of forests, native vegetation, and timber assets ▪ Maintain natural and cultural values of forests in Tasmania	▪ The *Forest Practices Act 1985* is not considered relevant to the Proposal.
Tasmania's Climate Change Act (2008)	▪ Aim to achieve net zero greenhouse gas emissions by 2030 and help the State adapt to climate change.	▪ The Proposal will help the state in achieving its emissions target through the generation and storage of additional renewable energy.

Tasmanian Renewable Energy Target 2022	▪ Expand generation of renewable energy and increase network resilience capability. Aim to achieve 150% (15,750 GWh of electricity generated by NEM-connected equipment) by 2030 and 200% (21,100 GWh per the same conditions) by 2040.	▪ The Proposal will be a key contributor to the heightened TRET target and support the Tasmanian Government's transition to a major clean power exporter. ▪ The target in itself highlights the Tasmanian Government's strong support for new renewable energy generators.
Tasmania Renewable Energy Coordination Framework 2022	▪ The framework provides greater clarity optimal development locations for the community and renewables sector. ▪ Two Key actions include: Action 8 – Assist Local Economic Opportunity and Action 9 – A Guideline to Community Engagement, Local Procurement and Benefit-Sharing Practice.	▪ The Proposal will generate substantial direct and indirect benefits for the Tasmanian economy. It will stimulate job creation and economic growth through renewable energy investment, along with building a skilled workforce. The Proposal, through community consultation, will also seek to create other benefits for the Bothwell community.
Tasmanian Renewable Energy Action Plan 2020	▪ Transform the State into a global renewable energy powerhouse ▪ Improve energy security and lower energy prices through renewable energy ▪ Growing the economy and creating jobs	▪ The Proposal to use and develop land for a solar farm is well aligned with the REAP's goals and would contribute to each of its priorities, as well as support its vision.
Guideline for Community Engagement Benefit, Benefit Sharing and Local Procurement	▪ Sets best practice standards for renewable energy projects in Tasmania. ▪ Outlines key principles for effective community engagement, ensuring that local communities are consulted and involved throughout a project's lifecycle.	▪ As part of the Proposal, community engagement activities, guided by the principles of ReCFIT's Guideline to Community Engagement, Local Procurement and Benefit Sharing Practice have been undertaken. ▪ Based on the Guidelines, the approach to community engagement was to facilitate early, proactive, and meaningful interactions with the local community to ensure the benefits of the Proposal are tangible and valued.
Strategic Regional Plan for Tasmania (2023)	▪ Delivering renewable energy projects and leveraging the benefits for Tasmania's industries and people ▪ Diversifying off-island opportunities in new economy sectors	▪ The Proposal will deliver a new renewable energy project in Tasmania and support industry diversification.
Regional		
Southern Tasmania Regional Land Use Strategy 2010-2035	▪ Outlines a strategic vision for the sustainable development of Southern Tasmania, guiding land use planning and management ▪ Manage and protect the value of non-significant agricultural land in a manner that recognises sub-regional diversity in land and production characteristics	▪ The overarching vision of the regional Land Use Strategy is generally supportive of the development of renewable energy assets in Southern Tasmania. ▪ The Proposal will generate significant economic value for the region through the productive use of land through agrisolar.
Local		
Central Highlands Strategic Plan 2015-2024	▪ Encourage sustainable economic and social development of the region. ▪ Encourage the establishment of alternative industries to support job creation and increase permanent residents. ▪ Encourage expansion in the business sector and open new market opportunities.	▪ The Proposal represents an economically sustainable investment for the local economy and will provide many community benefits within the Central Highlands. ▪ The Proposal is expected to create opportunities for local business involvement during the construction phase and will facilitate the development of new industries to support local economic development.

7. Planning Assessment

7.1 Planning Scheme Overview

This section provides a comprehensive planning assessment of the Proposal against the planning controls set out in the Tasmanian Planning Scheme – Central Highlands.

In 2023, the Central Highlands Council reformed its planning system to align with the new, State-wide Tasmanian Planning Scheme (TPS). The TPS comprises two components: (a) State Planning Provisions (SPPs), which set consistent, State-wide planning rules, and (b) Local Provisions Schedules (LPSs), administered by local governments, which designate zoning and special areas for additional, unique controls.

Under the Planning Scheme, the Proposal is within the Agriculture Zone (Clauses 21.0). It is also partially affected by code overlays: Electricity Transmission Infrastructure Protection Code (Clause C4.0), Natural Assets Code (Clause C7.0), Bushfire Prone Areas Code (Clause C13.0) and Landslip Hazard Code (Clause 15.0).

Planning Scheme Operation and Application

The purpose of the Planning Scheme is to control and coordinate use and development by applying planning controls to land. These controls are set out in Zones, Codes and General Provisions, and can become operative when a proposal exceeds certain use or built parameters or is located within a Zone or Code area.

There are two types of controls in the scheme that can be included in Zones, Controls or General Provisions: 'Acceptable Solution' and 'Performance Criteria'. The two are intended to work together. Some controls, however, include only one of either. The purpose of acceptable solutions is to act as suggested, frontline requirements that should be met where possible. The purpose of Performance Criteria, then, is to provide backup decision guidelines for the planning authority to consider if the Acceptable Solution is not met by a proposal. Where there is only an Acceptable Solution, it is considered that it is a requirement, not an encouragement; where there are only Performance Criteria, it is considered that there are no specific requirements and only decision guidelines.

Project Definition

The Proposal is appropriately defined in the planning scheme as:

- (Clause 6.0, Table 6.2) **Utilities**: use of land for utilities and infrastructure including:
  - (b) **electricity generation**;
  - (c) **transmitting** or distributing gas, oil or **electricity**;

While there are more specific definitions that describe some of the Proposal's components, all components are considered associated with/subservient to the primary component, the solar farm ('Utilities'), and therefore grouped under the primary use class (Clause 6.2). The use class 'Minor utilities' is not an appropriate description of the Proposal components.

7.2 Summary of Requirements

The following Development Application triggers apply to the Proposal, with reliance upon some Performance Criteria among the Use and Development Standards:

- Clause 21.2 Use Table: Discretionary Use Class (Agriculture Zone), relies upon some Performance Criteria
- Clause C2.0 Parking and sustainable transport, relies upon some Performance Criteria
- Clause C4.0 Electricity transmission infrastructure protection, relies upon some Performance Criteria
- Clause 7.0 Natural assets (Waterway and coastal protection area only), relies upon some Performance Criteria
- Clause C13.0 Bushfire-prone areas, relies upon some Performance Criteria

There are no major exemptions to exempt the entire Proposal.. However, within specific clauses some exemptions apply to specific components, including within the Landslip hazard and Electricity transmission infrastructure protection codes. Under the Planning Scheme Table 4.6 Miscellaneous exemptions, fencing within the Agriculture Zone is exempt.

Although Battery Use/Storage is not clearly defined in the Planning Scheme as a hazardous use, the TFS have determined that both the battery storage compounds and compounds for diesel storage (construction and operating phases) will exceed the manifest quantities and therefore are considered as a hazardous use under the Bushfire Prone Areas Code (Appendix G), as per the *Tasmanian Work Health and Safety Regulations 2022* Chapter 7, Part 7.1, the *Explosives Act 2012* and Clause C13.0 Bushfire-Prone Areas Code – C1.5.2 – P1. Therefore, these components are considered a 'Hazardous use'. This is relevant to the assessment against the bushfire and landslip risk codes, addressed in Appendix G.

7.3 Zoning

The Development Area is subject to the Clause 21.0 Agriculture Zone (Figure 16). While Highland Lakes Road is zoned Utilities, the only works occurring in that road reserve are access roadworks, therefore the Utilities Zone is not relevant for assessment.

Clause 21.0 – Agriculture Zone

The purpose of the Agriculture Zone is:

- 21.1.1: To provide for the use or development of land for agricultural use.
- 21.1.2: To protect land for the use or development of agricultural use by minimising:
  - (a) conflict with or interference from non-agricultural uses;
  - (b) non-agricultural use or development that precludes the return of the land to agricultural
  - use; and
  - (c) use of land for non-agricultural use in irrigation districts.
- 21.1.3: To provide for use or development that supports the use of the land for agricultural use

Under Clause 21.2 Use Table, the use class for Utilities is Discretionary, with no associated condition.

The following clauses apply to the Proposal, with an assessment against each provided in Table 6 and Table 7:

- 21.3 Use Standards: 21.3.1 Discretionary uses
- 21.4 Development Standards for Buildings and Works (all standards)

Clause 21.5 Development Standards for Subdivision is not applicable as the Proposal does not include subdivision.

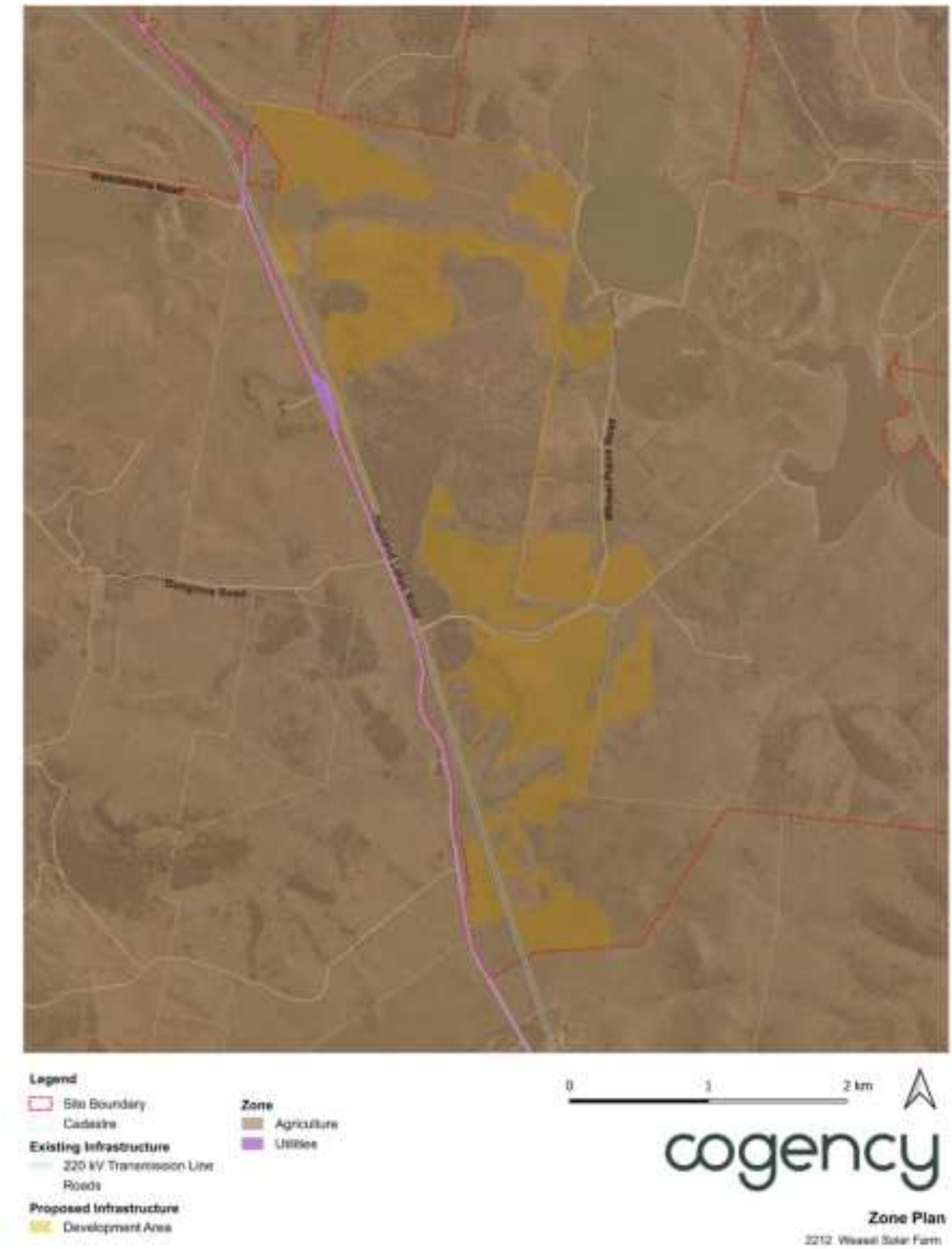


Figure 16 – Zoning Plan

Table 5 – Agriculture Zone – 21.1 Purpose

Purpose	Response
21.1.1: To provide for the use or development of land for agricultural use.	The Proposal supports the agricultural use of the land. The Development Areas consist of low-value agricultural land within the broader Site. The integration of agrisolar practices within the solar farm areas will allow for the continued grazing of sheep, thereby maintaining the agricultural productivity of the land.
21.1.2: To protect land for the use or development of agricultural use by minimising: (a) conflict with or interference from non-agricultural uses; (b) non-agricultural use or development that precludes the return of the land to agricultural use; and (c) use of land for non-agricultural use in irrigation districts.	The Proposal will not constrain or limit existing agricultural land uses or potential future expansion of such activities. The solar farm will integrate with the surrounding agricultural landscape with minimal impacts upon existing local farming operations. For a comprehensive assessment, refer to the Agricultural Assessment report.
21.1.3: To provide for use or development that supports the use of the land for agricultural use	The Proposal has been designed to support the continued agricultural use of the land.

Table 6 – Agriculture Zone – 21.3 Use Standards

21.3.1 Discretionary Uses	
Objective: That uses listed as Discretionary: (a) support agricultural use; and (b) protect land for agricultural use by minimising the conversion of land to non-agricultural use.	
Acceptable Solution or Performance Criteria	**Assessment**
P1 A use listed as Discretionary, excluding Residential or Resource Development, must be required to be located on the site, for operational or security reasons or the need to contain or minimise impacts arising from the operation such as noise, dust, hours of operation or traffic movements, having regard to: (a) access to a specific naturally occurring resource on the site or on land in the vicinity of the site; (b) access to infrastructure only available on the site or on land in the vicinity of the site; (c) access to a product or material related to an agricultural use; (d) service or support for an agricultural use on the site or on land in the vicinity of the site; (e) the diversification or value adding of an agricultural use on the site or in the vicinity of the site; and (f) provision of essential Emergency Services or Utilities.	**Satisfies P1** The Discretionary Use for Utilities (f) supports the diversification and value add of the farming properties involved in the Proposal (d, e). Large-scale solar farms typically require expansive areas of land with suitable topography and minimal vegetation, making agricultural land a suitable choice for solar generation (c). For this Proposal, the siting of the solar farm is proximate to the necessary infrastructure (220 kV Waddamana to Lindisfarne transmission line), (b), and has appropriate solar access (a). The Proposal will provide economic diversity for the agricultural businesses of Dungrove, Cluny and Rockford.
P2 A use listed as Discretionary, excluding Residential, must minimise the conversion of agricultural land to non-agricultural use, having regard to: (a) the area of land being converted to non-agricultural use; (b) whether the use precludes the land from being returned to an agricultural use; (c) whether the use confines or restrains existing or potential agricultural use on the site or adjoining sites.	**Satisfies P2** Approximately 430 hectares of low-value agricultural land will be used for solar arrays for the Proposal. The majority of the Development Area will continue to be used for sheep grazing (a), will not impact surrounding agricultural operations (c), and can be fully decommissioned and returned to its former state if/when the solar farm is closed (a).

P3 A use listed as Discretionary, excluding Residential, located on prime agricultural land must: (a) be for Extractive Industry, Resource Development or Utilities, provided that: (i) the area of land converted to the use is minimised; (ii) adverse impacts on the surrounding agricultural use are minimised; and (iii) the site is reasonably required for operational efficiency; or (b) be for a use that demonstrates a significant benefit to the region, having regard to the social, environmental and economic costs and benefits of the proposed use.	**Satisfies P3** The Proposal satisfies (a) and (b) The Proposal comprises a Utilities use (solar farm) located on low-value agricultural land and will not impact surrounding agricultural uses. The solar farm will provide direct use to existing farming properties and benefits from its location next to existing transmission infrastructure. Furthermore, the Proposal will provide significant benefits to the region, in economic investment, diversification, energy security and construction jobs.
A4/P4 (Residential use) does not apply	**Satisfies P4** (not applicable – Proposal use is not Residential)**.**

Table 7 – Agriculture Zone – 21.4 Development Standards for Buildings and Works

21.4.1 Building Height	
Objective: To provide for a building height that: (a) is necessary for the operation of the use; and (b) minimises adverse impacts on adjoining properties.	
Acceptable Solution or Performance Criteria	**Assessment**
P1 Building height must be necessary for the operation of the use and not cause an unreasonable impact on adjoining properties, having regard to: (a) the proposed height of the building; (b) the topography of the site; (c) the bulk and form of the building; (d) separation from existing use on adjoining properties; (e) the nature of the existing uses on adjoining properties; and (f) any buffers created by natural or other features.	**Satisfies P1** All solar farm, BESS and associated structures are below the 12m acceptable solution height. The project will be connected to the NEM via an interconnection to the existing TasNetworks 220 kV transmission line that lies within the western boundary of the site, parallel to Highland Lakes Road. The substation and switchyard will have some electrical components above 12m, necessary for electrical engineering and safety reasons. The internal 33kV transmission and 220kV external transmission connection will use poles above 12m high. Again, these are strictly necessary, and are at acceptable heights with negligible visual impact. The attached LVIA assesses and justifies the proposal (Appendix C).
21.4.2 Setbacks	
Objective: The siting of buildings minimises potential conflict with use on adjoining properties.	
P1 Buildings must be sited to provide adequate vehicle access and not cause an unreasonable impact on existing use on adjoining properties, having regard to: (a) the bulk and form of the building; (b) the nature of existing use on the adjoining properties; (c) separation from existing use on the adjoining properties; and (d) any buffers created by natural or other features.	**Satisfies P1** The layout is distant from adjoining property uses, particularly any sensitive uses such as dwellings (c). Figure 3 shows significant separation between the solar farm component of the Proposal and any nearby dwellings. The development is adjacent to neighbouring agricultural uses, all are private freehold land, and the Proposal does not cause an unreasonable impact through use, visual impact or bulk/form (a)(b). There are no relevant buffers for sensitive or hazardous uses or environmental or scenic features (d).

A2	Complies
Buildings for a sensitive use must have a setback from all boundaries of: (a) not less than 200m; or (b) if the setback of an existing building for sensitive use on the site is within 200m of that boundary, not less than the existing building.	The proposal is not a sensitive use.

21.4.3 Access for new dwellings

*No dwellings are proposed; therefore, this **does not apply**.*

7.4 Codes

The Development Area is subject to the following mapped codes/overlays:

- Clause C4.0 Electricity transmission infrastructure protection (partial)
- Clause 7.0 Natural assets (*Waterway and coastal protection area only, not Priority vegetation area*) (partial)
- Clause C13.0 Bushfire-prone areas (whole)
- Clause C15.0 Landslip hazard (however the Proposal is exempt under this clause) (whole)

The following codes are also relevant to the Proposal:

- Clause C2.0 Parking and Sustainable Transport
- Clause C3.0 Road and railway assets

The following subsections provide an assessment of the proposal against relevant codes.

7.4.1 Clause C2.0 Parking and Sustainable Transport Code

For a comprehensive assessment of the Proposal against this code, see Chapters 6.2 and 6.3 within the Traffic Impact Assessment prepared by Pitt & Sherry (Appendix H).

All acceptable solutions are met under the C2.5 Use Standards. For the C2.6 Development Standards, while most relevant acceptable solutions are complied with, certain aspects rely on Performance Criteria. Given the size of the Development Area, all necessary access, turning, loading, and parking requirements for the Proposal can be adequately addressed.

7.4.2 Clause C3.0 Road and Railway Assets Code

For a comprehensive assessment of the Proposal against this code, see Chapter 6.4 within the Traffic Impact Assessment prepared by Pitt & Sherry (Appendix H).

Broadly, the use will generate negligible traffic in operation. During construction, Highlands Lakes Road is expected to have sufficient capacity to accommodate additional traffic generated during this period. Once operational, the traffic volumes generated from the Weasel Solar Farm are estimated to be minimal and are not expected to have any noticeable impact on the safety and function of the surrounding road network after construction. Therefore, the Proposal is not expected to generate any unacceptable impacts.

7.4.3 Clause C4.0 – Electricity Transmission Infrastructure Protection Code

The Electricity Transmission Infrastructure Protection Code is mapped along the western boundary of the Site and relates to the existing 220 kV (Waddamana to Lindisfarne) transmission line (Figure 17). Additionally, the mapped overlay comprises an area associated with a now-removed 110kV transmission line. Because the '*electricity transmission corridor'* covers two lines (one removed), it varies in width where the old and new transmission routes diverged. The mapping of the now-removed 110kV line is considered outdated, so while the mapped area generally comprises two 50 m Inner zones plus 25 m on either side (total width 200 m), the realistic Inner zone for the 220kV would be 60m width (aligning with its easement) and corridor typically 120m wide.

Under Clause C4.2.1, the Electricity Transmission Infrastructure Protection Code applies to the use or development of land within an electricity transmission corridor, if for buildings and works.

Of critical note, no solar array or associated infrastructure (security fencing) is proposed within the easement of the 220kV transmission line (equating to the Inner zone). The Proposal *does* have a length of internal 33kV transmission adjacent to the Inner zone, with its own easement sharing the Inner zone.

Technically, due to outdated mapping of the removed 110kV line, there is solar array development within the Inner zone, at the south-west corner of the Development Area (solar arrays on west side of the 220kV line). Given the outdated purpose of the 110kV Inner zone, this is not considered in the assessment tables for this Code.

The broader transmission corridor does include:

- The internal 33 kV overhead transmission line
- Solar Arrays
- Internal Access Tracks
- Security fencing
- Connection point into existing 220 kV transmission line.

Nominally, the Proposal triggers this application of the code, although some components are exempt under Clause C4.4.1. The proposed connection point into the 220 kV transmission line and the internal 33 kV line are exempt under Clause C4.4.1, as they are for the use and development of electricity transmission infrastructure. The connection point and 33 kV line are considered to meet the purpose and expectations of the code.

The below assessment therefore focuses on the development components listed above including the solar arrays and security fencing, which are not exempt under this code.

Broadly, the Proposal does not include any major development within the overlay that could create conflict with the existing transmission infrastructure and therefore is appropriate. The Weasel Solar Farm requires TasNetworks approval through their connection enquiry approval process, and this DA will be referred to TasNetworks for comment. The project team have consulted with TasNetworks closely over the past year.

Some of the Development Standards do not apply. The Proposal is not for a sensitive use and is not a use listed within Table C.4.1 (Uses with potential to create dust or other airborne particulates), is not within a substation facility buffer and does not include subdivision. The Development Standards are assessed in Table 9 and Table 10.

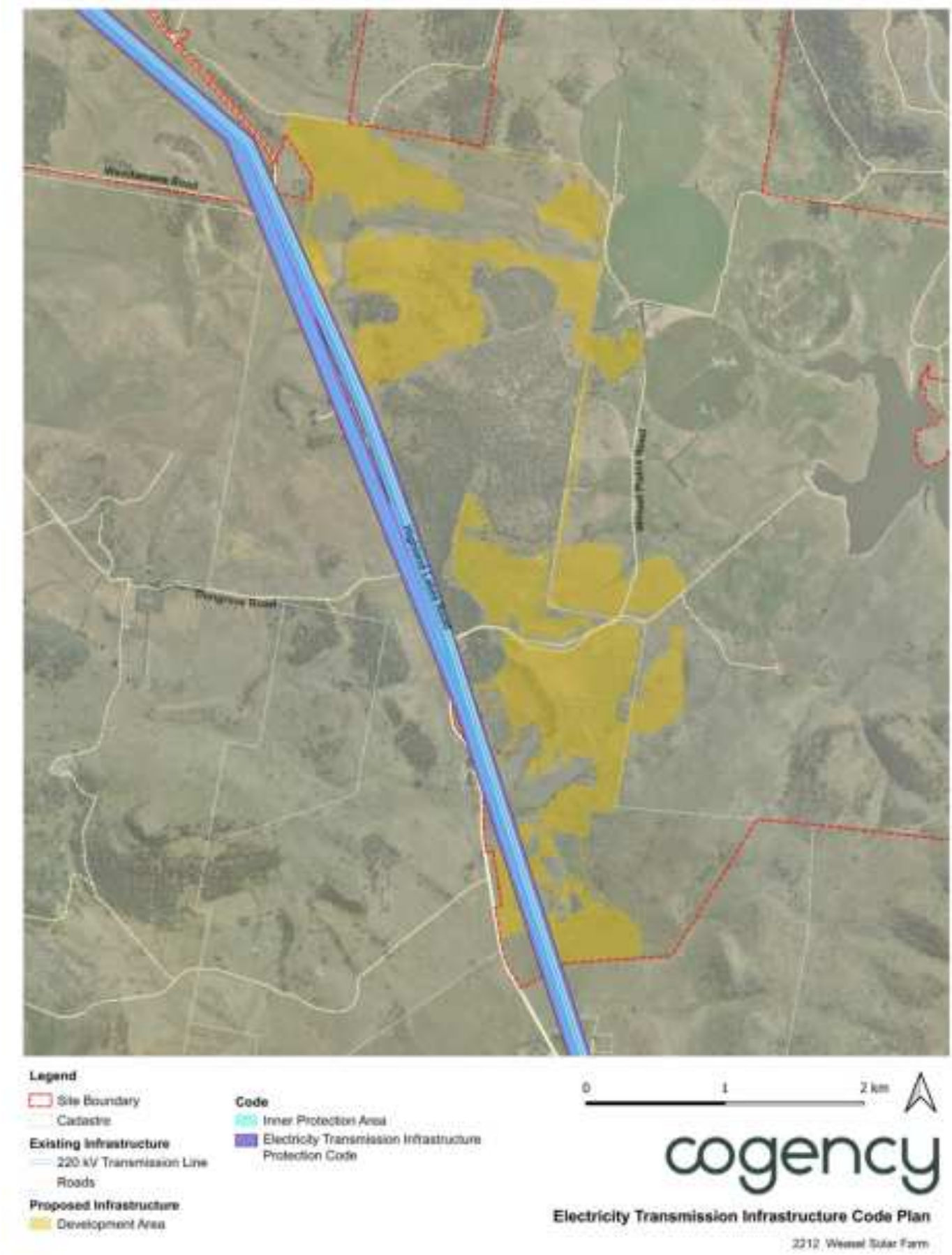


Figure 17 – Electricity transmission Infrastructure protection Code Plan

Table 8 – Electricity transmission Infrastructure protection Code – C4.1 Purpose

Purpose	Response
C4.1.1: To protect use and development against hazards associated with proximity to electricity transmission infrastructure.	▪ The Proposal is sited so that it does not create any hazards or conflict with the nearby electricity transmission infrastructure.
C4.1.2: To ensure that use and development near existing and future electricity transmission infrastructure does not adversely affect the safe and reliable operation of that infrastructure.	▪ The Proposal is sited so that it does not adversely affect the safe and reliable operation with the nearby electricity transmission infrastructure.
C4.1.3: To maintain future opportunities for electricity transmission infrastructure.	▪ The Proposal includes internal transmission lines, in an appropriate location adjacent to existing lines.

Table 9 – Electricity transmission Infrastructure protection Code – 21.3 Use standards

C4.5.1 Sensitive sue within a substation facility buffer
*The Proposal is not within a substation facility buffer; therefore, this **does not apply**.*
C4.5.2 Dust or other airborne particulates within an electricity transmission corridor
*The Proposal does not include a use listed in Table C4.1; therefore, this **does not apply**.*
C4.5.3 Dust or other airborne particulates within a substation facility buffer
*The Proposal is not within a substation facility buffer; therefore, this **does not apply**.*

Table 10 – Electricity transmission Infrastructure protection Code – C4.6 Development Standards for Buildings and Works

C4.6.1 Buildings or works within an electricity transmission corridor	
Objective: That buildings or works within an electricity transmission corridor are located at appropriate distances from transmission lines or cables to: (a) ensure operational efficiencies, access to, and security of, existing or future electricity transmission infrastructure; and (b) protect against a safety hazard associated with proximity to existing or future electricity transmission infrastructure.	
Acceptable Solution or Performance Criteria	**Assessment**
A1 Buildings or works within an electricity transmission corridor must not be within: (a) an inner protection area; or (b) a registered electricity easement.	**Complies** The Proposal does not include any buildings within an inner protection area / registered electricity easement. As noted, the 220kV transmission line has a 60m easement width (equating to Inner Zone). Only access tracks are within the Inner Zone. Notably, all components of the Proposal within the transmission corridor are appropriate to the context and do not cause an impact on the safety, security, operation of, or access to, existing or future electricity transmission infrastructure.
C4.6.2 Buildings or works within a substation facility buffer area	
*The Proposal is not within a substation facility buffer; therefore, this **does not apply**.*	
C4.6.3 Buildings or works within a communications station buffer area	
*The Proposal is not within a communications station buffer area; therefore, this **does not apply**.*	

C4.7 Does not apply as no subdivision is proposed.

7.4.4 Clause C7.0 – Natural Assets Code

Under Clause C7.2.1, the Natural Assets Code applies to development on land within a waterway and/or coastal protection area. There are some mapped waterways within the Development Area, including Weasel Plains Creek. This code is mapped waterways and drainage lines across the Site (Figure 18). The Development Standards are assessed in Table 12.

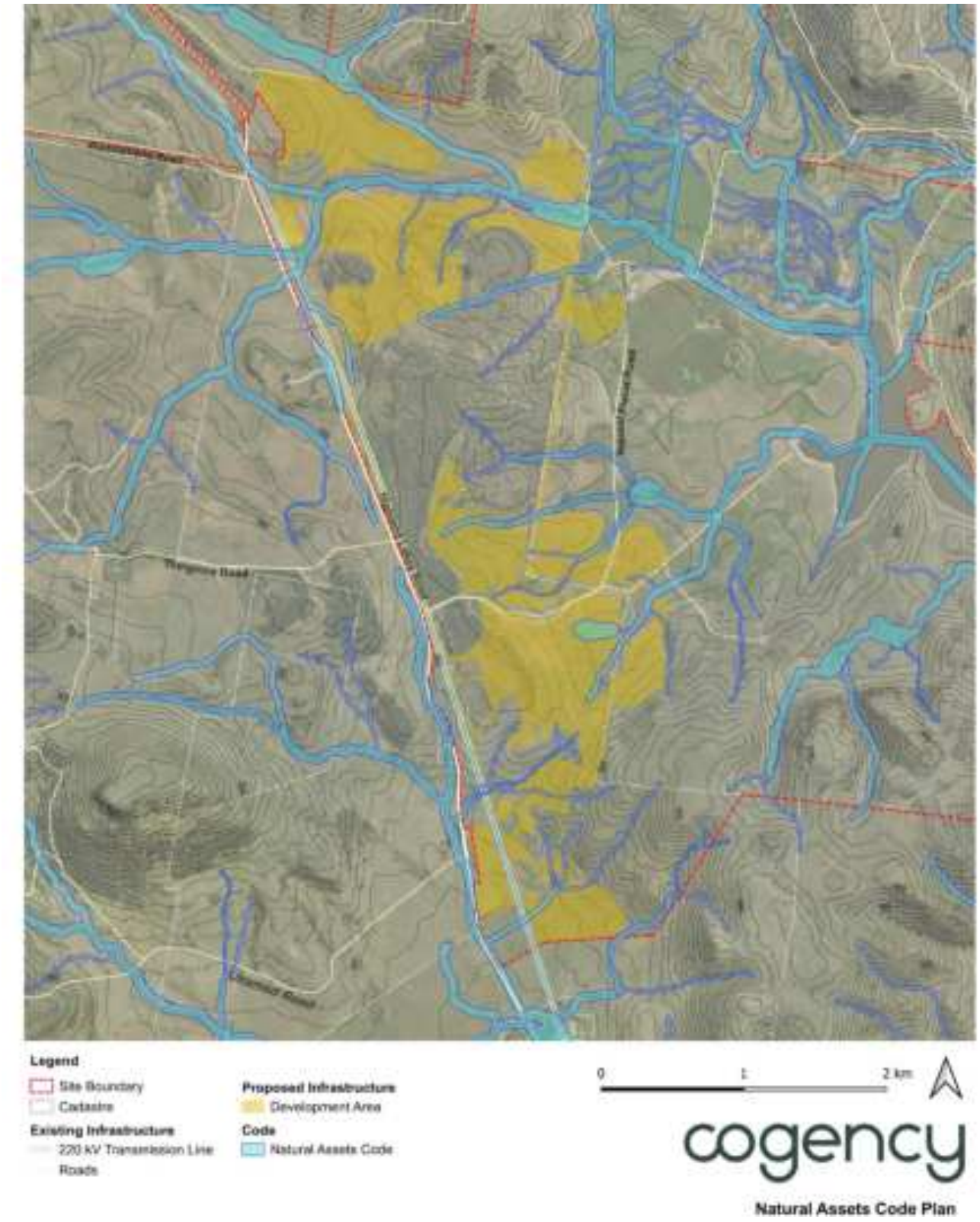


Figure 18 – Natural Assets Code Plan

Table 11 – Natural Assets Code (Waterways) – C7.1 Purpose

Purpose	Response
C7.1.1 To minimise impacts on water quality, natural assets including native riparian vegetation, river condition and the natural ecological function of watercourses, wetlands and lakes.	▪ The Proposal will not negatively impact water quality, as confirmed by the supporting flooding impact assessment report (Appendix E). ▪ The Proposal has been designed to avoid higher class waterway corridors. With careful planning and the implementation of construction management measures, key natural values will be protected and preserved. Additionally, the flow of waterways will remain unobstructed, with only minor drainage works such as the introduction of culverts at new crossing points with trafficable surfaces, being necessary. The Ecological and Natural Assets Code Report (Appendix D) addresses these matters in detail.
C7.1.2 To minimise impacts on coastal and foreshore assets, native littoral vegetation, natural coastal processes and the natural ecological function of the coast.	▪ Not applicable
C7.1.3 To protect vulnerable coastal areas to enable natural processes to continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes and other sensitive coastal habitats due to sea-level rise.	▪ Not applicable
C7.1.4 To minimise impacts on identified priority vegetation.	▪ Not applicable
C7.1.5 To manage impacts on threatened fauna species by minimising clearance of significant habitat.	▪ Not applicable

Table 12 – Natural Assets Code (Waterways) – C7.6 Development Standards for Buildings and Works

C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area

Objective:

That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

Acceptable Solution or Performance Criteria	Assessment
P1.1 Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to: (a) impacts caused by erosion, siltation, sedimentation and runoff; (b) impacts on riparian or littoral vegetation; (c) maintaining natural streambank and streambed condition, where it exists; (d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation; (e) the need to avoid significantly impeding natural flow and drainage; (f) the need to maintain fish passage, where known to exist; (g) the need to avoid land filling of wetlands;	**Satisfies P1.1** The Proposal has typically been designed to avoid waterways. The buildings are watercourse crossing points (e.g., culvert-based structures with a trafficable surface), where they don't already exist, to enable equipment and machinery to access installation areas for the solar panels and other structures. On balance, the areas intersected by the Overlay are areas of agricultural land or areas where there has been the regeneration of some native species such as rushes, grasses and sedges. The implementation of construction management measures as can further mitigate the risk of adverse impacts to natural assets where the Overlay intersects the development. See Ecological and Natural Assets Code Assessment (Appendix D) for detailed assessment.

(h) the need to group new facilities with existing facilities, where reasonably practical; (i) minimising cut and fill; (j) building design that responds to the particular size, shape, contours or slope of the land; (k) minimising impacts on coastal processes, including sand movement and wave action; (l) minimising the need for future works for the protection of natural assets, infrastructure and property; (m) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and (n) the guidelines in the Tasmanian Coastal Works Manual.	**P1.2 is not applicable.**

A2, A4, A5 do not apply

A3	**Complies**
Development within a waterway and coastal protection area or a future coastal refugia area must not involve a new stormwater point discharge into a watercourse, wetland or lake.	No new stormwater discharge points into a watercourse, wetland or lake are required for the Proposal.

C7.6.2 Clearance within a priority vegetation area

Does not apply (not within a priority vegetation area)

7.4.5 Clause C13.0 Bushfire-Prone Areas Code

Under Clause C13.2.1, the Bushfire-Prone Areas code applies to the subdivision and any use, on the land for a vulnerable or 'hazardous' use within the mapped area. The entire site is mapped within the Bushfire-Prone Area. See Figure 19.

Under C13.3.1, 'Hazardous use' means a use where:

(a) hazardous chemicals of a manifest quantity are stored on a site; or

(b) explosives are stored on a site and where classified as an explosives location or large explosives location as specified in the *Explosives Act 2012*.

C13.5.1 Vulnerable uses and C13.6 Development Standards for Subdivision do not apply to this Proposal.

The supporting report Bushfire Impact Statement (BIS)(Appendix G) assesses the Proposal against the relevant clause C13.5.2 Hazardous uses and determines that the Proposal meets the Objective, specifically, it satisfies P1, and complies with A2 and A3.

The BIS is supported by a Bushfire Emergency Management Strategy (BEMS), Bushfire Mitigation Plan (BMP) and plans for each area of the proposal (that show a Bushfire Hazard Management Area (HMA)). Furthermore, the Victorian Country Fire Authority *Design Guidelines and Model Requirements - Renewable Energy Facilities* (v3 March 2022) have been considered in the design of the Proposal, to minimise risk. Where a requirement of the Planning Scheme is more stringent than the CFA guidelines, the Planning Scheme requirement has been addressed as the minimum.

The TFS have been engaged as part of the preparation of the Bushfire Impact Statement and relevant supporting plans.

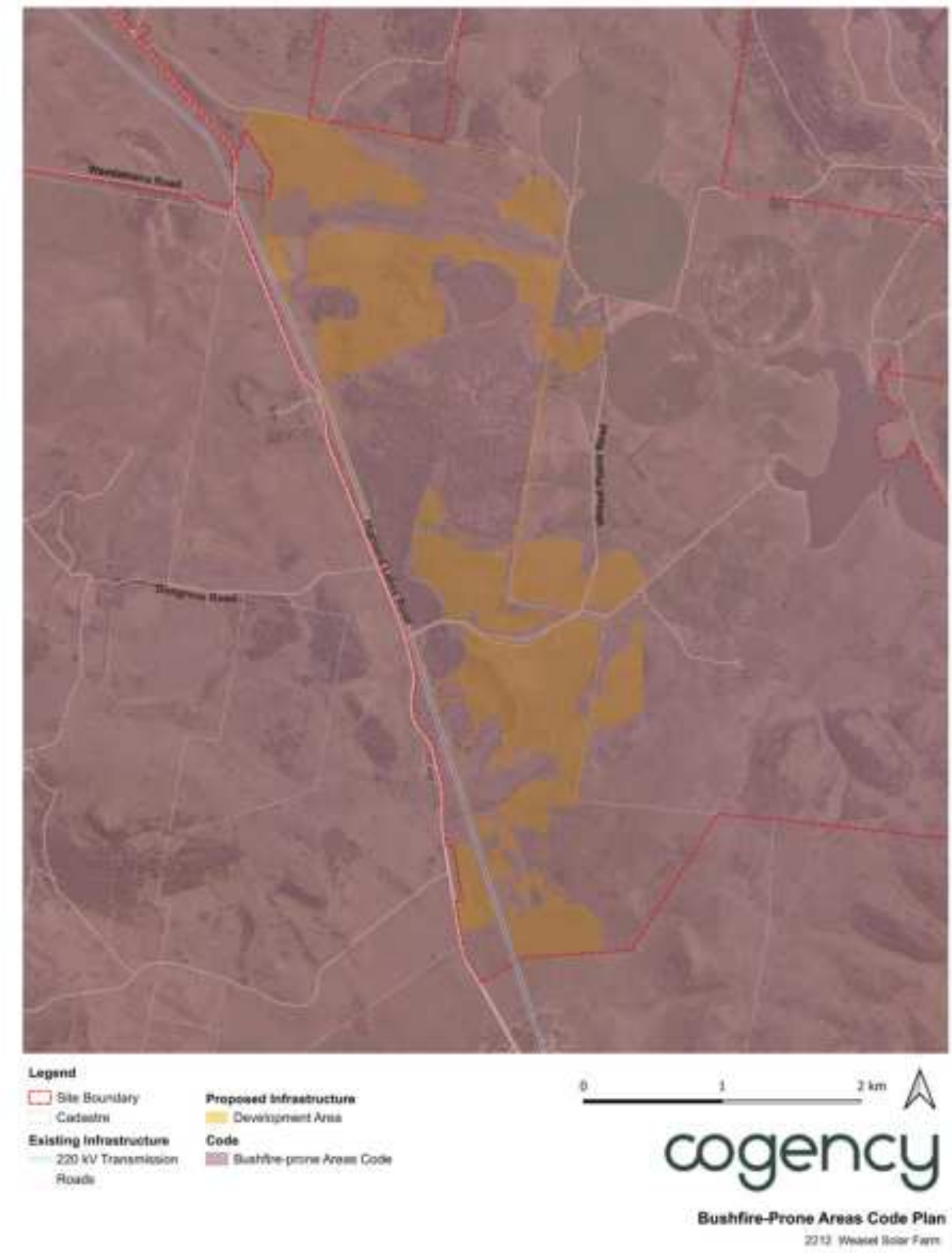


Figure 19 – Bushfire-prone Areas Code Plan

7.4.6 Clause C15.0 – Landslip Hazard Code

Under Clause C15.2.1, the Landslip Hazard Code applies to the use or development of land within a landslip hazard area.

Within the Development Area there are very limited, small patches of 'Low' landslip hazard risk areas (generally in the southern solar area, and on the northern boundary) (Figure 20). These areas are only proposed for solar arrays and/or security fencing – both installations are minor in nature.

Despite the fractional overlap of the Development Area and low landslip hazard risk area, the development is exempt under Clause C15.4.1 (a), (c)(iv) and (e):

- (a) use of land within a low or medium landslip hazard band, excluding critical use, hazardous use or vulnerable use;
- (c) use of land for:
  - (iv) Utilities;
- (e) development, including subdivision, on land within a low landslip hazard band, if it does not involve significant works;

The areas of overlap will include some security fencing and solar arrays. Further avoidance of these areas of low hazard risk may be achieved in detailed design. Nonetheless, Clause C15.3.1 defines **Significant works** as any of the following:

(a) excavation equal to or greater than 1m in depth, including temporary excavations for the installation or maintenance of services or pipes;

(b) excavation or landfilling of greater than 100m^3 whether or not material is sourced on the site or imported;

(c) felling or removal of vegetation over a contiguous area greater than 1000m^2;

(d) the collection, pooling or storage of water in a dam, pond, tank or swimming pool with a volume of more than 45000L;

(e) removal, redirection, or introduction of drainage for surface or groundwater; and

(f) discharge of stormwater, sewage, water storage overflow or other wastewater.

The minor works proposed within areas of landslip hazard risk do not comprise 'significant works' under the above definition. Therefore, no further assessment against the code is required.

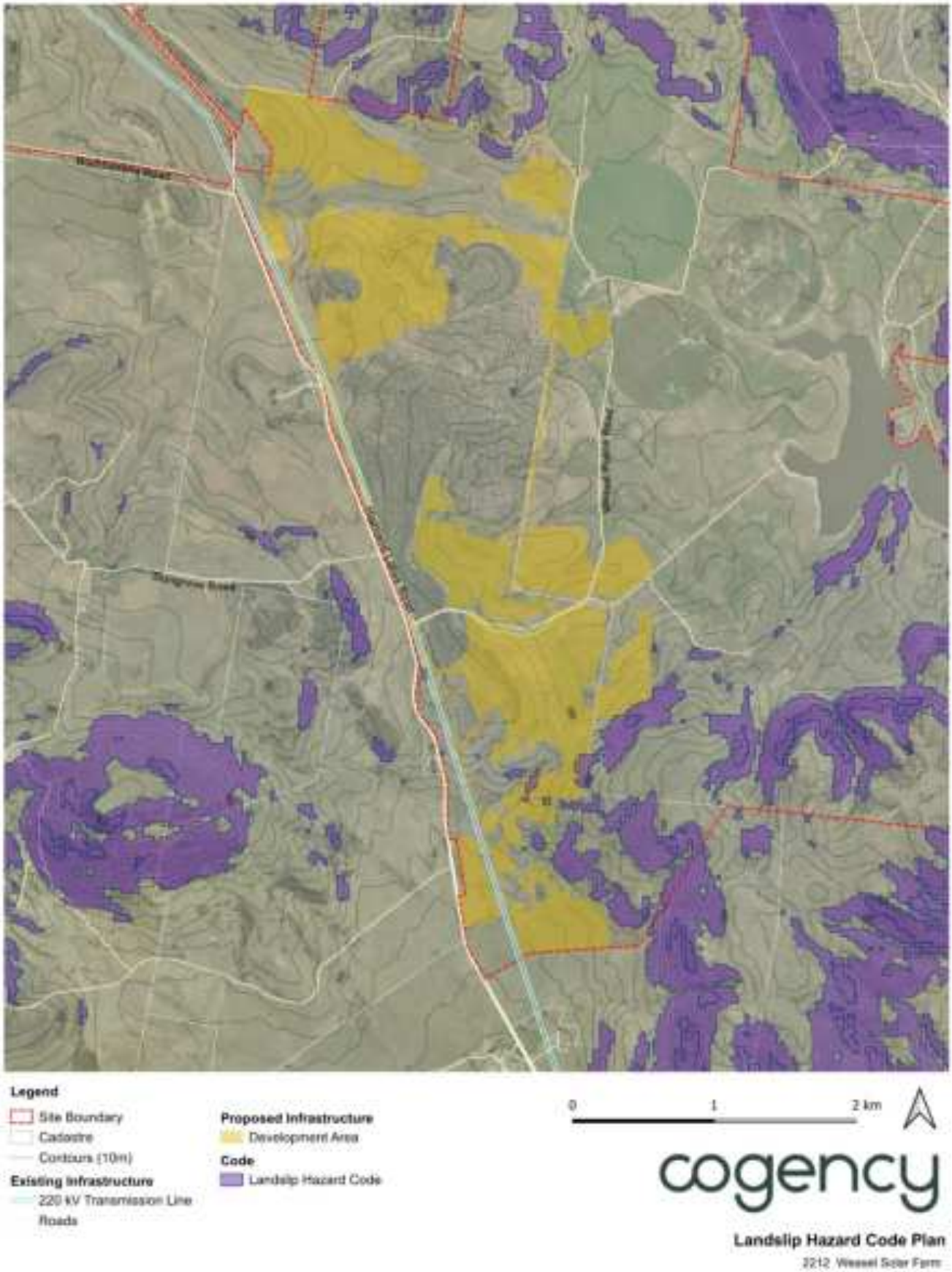


Figure 20 – Landslip Hazard Code Plan

7.5 Central Highlands Local Provisions Schedule

There are no Local Area Objectives or other relevant provisions, such as Particular Purpose Zones within the Central Highlands Local Provisions Schedule that apply to the Development Area.

7.6 Planning Assessment Summary

As demonstrated by the above planning assessment, the Weasel Solar Farm complies with the relevant planning provisions under the Tasmanian Planning Scheme – Central Highlands. While the Use Class 'Utilities' is Discretionary within the Agriculture Zone, the Proposal aligns with the objectives of the relevant zone. It satisfies the applicable Acceptable Solutions or, where necessary, adheres to the corresponding Performance Criteria outlined in the zones and related codes.

Potential risks, constraints, hazards and impacts have been addressed proactively through the design process, including the avoidance of key constraints due to flooding, environmental values (such as waterways and native vegetation), and cultural heritage, as well as mitigation of risks associated with bushfires. The Proposal has further minimised these risks wherever feasible and can incorporate further mitigation measures that at the detailed design stage.

The placement infrastructure and works have been integrated into the existing landscape to ensure they complement the surroundings and have minimal impact on nearby properties. Visual impact has been thoughtfully minimised through careful planning and positioning of infrastructure and also benefits from existing topography and vegetation screening along Highlands Lakes Road.

The suite of supporting technical investigations in the appendices provides further detail on the design considerations and mitigations of the Proposal.

Importantly, the Proposal allows for continued agricultural activity across the Site and will help while also providing substantive economic benefits for both Bothwell and the wider Central Highlands region.

In summary, the Proposal aligns strongly with the relevant planning requirements and merits approval.

8. Relevant Applications and Amendments

There are no current public applications and/or amendments in the vicinity of the Weasel Solar Farm that would impede the development of the Proposal.

Within the Central Highlands, multiple renewable energy projects are currently under development or in operation. Notably, St Patricks Plains Wind Farm Pty Ltd, is advancing the development of the recently approved St Patricks Plains Wind Farm approximately 26km northwest of the Site. The two projects are do not interact given the distance between both projects and connection into different transmission lines across TasNetworks infrastructure. Conversely, both projects will help strengthen existing transmission networks and can benefit from the proximity to the existing skills and infrastructure in the region.

The Proponent is also in the early stages of preparing the Cellars Hill Wind Farm project adjacent to the Proposal, as part of the Highlands Renewable Energy Hub vision. The Cellars Hill Wind Farm, currently in the early design phase, is seeking to follow the Major Project Proposal approvals pathway – completely distinct from the Weasel Solar Farm DA process.

The presence of multiple renewable energy projects is positive for the Central Highlands and the region holds immense potential for the development of a variety of renewable energy sources. Developing renewable energy in the region is crucial for increasing reliable and affordable power and promoting investment and job creation in both the local region and Tasmania's economy.

9. Technical Impact Assessments

To inform the project design and support the DA, a group of suitably qualified, experienced specialist consultants were engaged to assess and provide input on various environmental and technical matters.

The Proponent, Weasel Solar Farm Pty Ltd, engaged Robert Luxmoore to lead the project management.

The following impact assessments have been prepared to support the Development Application and should be read in conjunction with this report:

- Design Plans, DNV & Cogency
- Landscape and Visual Impact Assessment, Human Habitats
- Ecological and Natural Assets Code Assessment, Van Diemen Consulting
- Flooding Impact Assessment, Pitt&Sherry
- Aboriginal Heritage Assessment Report, Cultural Heritage Management Australia
- Bushfire Impact Statement, Ground Proof Mapping
- Traffic Impact Assessment, Pitt&Sherry
- Agricultural Assessment, Pinion Advisory
- Noise Impact Assessment, SLR
- Glint and Glare Impact Assessment, SLR
- Historic Heritage Assessment Report, Cultural Heritage Management Australia
- Consultation Summary Report, Cogency
- Socio-Economic Impact Assessment, Urban Enterprise

Furthermore, Watts Advisory was engaged to provide advice on grid connection.

9.1 Engineering and Concept Layout

The conceptual design of the solar farm and its associated infrastructure has been developed by DNV. The design process has been highly iterative, incorporating findings from a range of technical impact assessments, as summarised below.

The layout of the solar farm has been designed to align with the site's natural topography and environmental characteristics, ensuring minimal ground disturbance. The Development Area is primarily situated on cleared agricultural paddocks within the lower-value agricultural areas of the two key land parcels, 'The Weasel' and 'Weasel Plains.' The placement of the solar arrays and electrical infrastructure has been carefully selected to minimise disturbance to natural values, such as native vegetation and waterways, and to reduce any potential environmental impacts. Special consideration has also been given to two areas of Aboriginal Cultural heritage of potential archaeological sensitivity (PAS). These areas have been deliberately excluded from the Development Areas to ensure their preservation, and ongoing monitoring will be conducted throughout both the construction and operational phases of the project to safeguard these significant cultural sites.

The design plans are subject to further refinement during the detailed design phase, which may include planning permit conditions that require updated plans or allow for minor amendments to the endorsed plans. As the development of a major renewable energy generation facility involves a high degree of complexity, additional consents beyond planning approval are required, including grid connection design and approval by TasNetworks, the local network service provider.

9.2 Landscape and Visual Impact Assessment

The Landscape and Visual Impact Assessment (LVIA) includes landscape, and visual assessments characterise the setting and examine how the Proposal may impact the landscape and visual amenity. This considers viewer sensitivity, magnitude of chance, visual impact, residual visual impact, mitigation measures (including a proposed Landscape Concept Plan), and viewshed analysis.

There are no relevant landscape overlays or controls in the Development Area or vicinity. The Site and surrounds is predominantly utilised for broadacre grazing purposes, with some forested areas. The landscape includes prominent, existing electrical transmission infrastructure. While not officially designated as such, Highland Lakes Road has been assessed with some tourist driving usage in mind.

Given the relatively low level of scenic quality, the low-profile form of the majority of the development components, and the lack of opportunities for overlooking (from nearby residences and Highland Lakes Road), the Proposal is considered to have a limited and relatively isolated impact on the landscape character of the setting.

Detailed viewpoint assessment from northern and southern approaches on Highland Lakes Road, and a 'mid-point' view, demonstrate the limited potential visual impact, with small landscaping belts reducing the residual visual impact further to 'low'. Overall, the design's clever use of existing topography means the small crest-line running parallel to Highland Lakes Road significantly blocks and obscures views to the Proposal. Its isolated location in freehold agricultural land means there are very limited overlooking points, and the nearest non-involved residence has existing vegetation and topography blocking views.

9.3 Ecological and Natural Assets Code Assessment

An Ecological and Natural Assets Code Assessment has been prepared by Van Diemen Consulting to determine the potential extent and conditions of native vegetation, fauna habitats and the likelihood of the occurrence of listed flora and fauna species listed under the state *Threatened Species Protection Act 1995 (TSP Act),* the *Nature Conservation Act 2002 (NC Act)*, and the *Commonwealth Environment Protection and Biodiversity Act 1999 (EPBC Act)* an. This included an analysis of the Protected Matters database, the Natural Values Atlas and onsite surveys and field assessments.

The assessment's conclusion is that the proposed Weasel Solar Farm will not impact significant environmental values. The identified native vegetation types and listed species will not be adversely affected. No significant fauna species or their habitats were found in the survey area, ensuring that the development will have minimal ecological impact.

No species listed under the EPBC Act were found. Three species listed under the TSP Act 1995 were observed (ferny buttercup, dagger wattle, and spreading knawel), but no impact on these species is expected from the development.

No fauna species listed under the TSP Act 1995 or EPBC Act 1999 were observed. No masked owl or blue-winged parrot nests were found, although trees suitable for their breeding were present, mainly as 'paddock trees' in agricultural land (most of which are dead or partly dead).

Three native vegetation types were identified in the survey area:

- *Eucalyptus tenuiramis* forest and woodland not on dolerite
- Eucalyptus pauciflora forest and woodland not on dolerite
- Lowland grassy sedgeland.

Of these three native vegetation types, *Eucalyptus tenuiramis* forest and woodland not on dolerite is the only species listed as threatened Native vegetation community. Approximately 4.66 hectares are present on site and mostly limited to a narrow north-south corridor in the central proposed development area. Where possible these areas will be avoided in the final design and layout of the solar farm.

As the majority of the site consists of previously disturbed agricultural land, which is of low ecological value, the Proposal is unlikely to have adverse impacts on any significant environmental features of the site or the surrounding area, particularly given the design intent of avoiding woodland and locating on cleared agricultural paddocks.

9.4 Flood Impact Assessment

The Flood Impact Assessment evaluated the hydrology and flood conditions of the Weasel Solar Farm site and assessed how the proposal may affect existing watercourses and flood behaviour. The study followed the Australian Rainfall and Runoff 2019 guidelines for flood estimation, though it did not include detailed flood modelling for the development.

Given that several watercourses cross the site and border the development areas, hazard maps were produced to identify flood-prone zones. The assessment recommended that solar panels avoid high-hazard areas (H2-H6) to prevent potential flood damage, and the current layout adheres to this by positioning panels outside these zones. Most infrastructure is strategically placed to avoid significant disruptions to water flows or environmental impacts, with additional recommendations to keep panels away from Weasel Plains Creek and drainage culverts informing the current design iteration.

The study concluded that the proposed layout minimises flood risks and maintains the natural flow of watercourses, resulting in minimal hydrological impact. However, further analysis is required to determine finished floor levels (FFL) for sensitive infrastructure and to inform the drainage design once earthworks and layouts are finalized. Future hydraulic studies will assess potential impacts on critical infrastructure, such as batteries and transformers, to ensure adequate protection through additional drainage measures. The current flood model, based on LIDAR data, will need to be updated to incorporate these design elements.

9.5 Aboriginal Heritage Assessment Report

Cultural Heritage Management Australia (CHMA) conducted an Aboriginal Heritage Assessment Report for the Weasel Solar Farm. The assessment found no known Aboriginal sites on the project site; however, two areas of potential archaeological sensitivity (PAS) were identified. Beyond these areas, the likelihood of undetected Aboriginal heritage sites is considered low to very low.

In recognition of the cultural significance of the Tasmanian landscape, the project has sought to be sensitive to both cultural and natural resources. The site is primarily located within cleared farmland, avoiding areas of native vegetation where cultural values may still be present.

To address the two identified PAS areas, the assessment has been shared with key Tasmanian Aboriginal organizations for review and input. Feedback from Aboriginal community representatives has been incorporated into the solar farm's design and layout to ensure cultural heritage concerns are addressed. Notably, the design layout was modified to ensure full avoidance of the two PAS areas.

The draft assessment by CHMA was submitted to Aboriginal Heritage Tasmania (AHT) for final review and endorsement. Engagement with Tasmanian Aboriginal communities and Registered Indigenous Parties has been integral to this process, and their input will inform ongoing management strategies. AHT provided their endorsement on 26 August 2024 (included with Appendix F).

9.6 Bushfire Impact Statement

The Bushfire Impact Statement (BIS) provides an analysis and evaluation of the bushfire potential at a local and landscape level surrounding the Proposal. Factors including, but not limited to, vegetation types and flammability, topographical layout, fire weather, fire history, current land use, proposed land use and proposed infrastructure have been assessed.

The BIS concludes that while there is potential for bushfire to impact the site (predominantly ember transfer), there is a lack of bushfire prone vegetation connectivity, reducing potential fire severity – considered unlikely

to be a significant threat. No development can be zero-risk, so site selection and mitigation measures ensure that this Proposal is as low-risk as possible.

The Proposal is considered low fire risk (emanating from the development), both during construction and operation. The report includes management and mitigation measures, as well as design guidance (mostly via the Bushfire Mitigation Plan (BMP)) on emergency vehicle access, static water (firefighting) supply, vegetation layout, firebreaks and separation of renewable energy components.

The BIS addresses the Bushfire Prone Areas Code. Additionally, a Bushfire Emergency Management Strategy (BEMS) has been incorporated, to ensure that the facility is prepared in the event of an unplanned fire, providing for safety of site personnel, emergency responders and the community. This will cover the construction and production phases. This BEMS will guide the formation of a Bushfire Emergency Plan (BEP) to be prepared at Building Approval stage.

9.7 Traffic Impact Assessment

The Traffic Impact Assessment (TIA) provides an analysis of the current site access, transport routes, traffic volumes, and safety history. It has been prepared in accordance with the Department of State Growth's Traffic Impact Assessment (TIA) Guidelines and with reference to the Tasmanian Planning Scheme – Central Highlands (the Planning Scheme).

The local road network consists of Highland Lakes Road, and other rural roads with low existing traffic volumes, operating well below capacity. It is not expected that the additional traffic generated during the construction phase of the Weasel Solar Farm will adversely affect the function or safety of the local network.

A review of the crash history for Highland Lakes Road near the site did not reveal any safety concerns at the proposed access points. Sight distances at the primary, secondary, and tertiary access points were evaluated, and it was confirmed that the Austroads guidelines for safe intersection sight distances are met at all locations.

The proposed transport routes are deemed to have sufficient capacity to handle the increased traffic during the construction phase of the development. Once operational, traffic volumes from the Weasel Solar Farm are anticipated to be minimal, with no noticeable impact on the safety or functionality of the surrounding road network post-construction.

The primary access via Weasel Plains Road (Council-managed), to Highland Lakes Road, is a suitable access point considering road safety requirements. Access intersections will be sealed prior to construction, as required.

9.8 Agricultural Assessment

The Agricultural Assessment (Pinion Advisory) provides an evaluation of the current and potential agricultural activities on the subject parcels, as well as an analysis of potential impacts on both the site and surrounding agricultural lands.

The assessment assesses the two primary parcels containing development, using the standard Land Capability Classification methodology. This classification system ranks land from Class 1 to Class 7, with Class 1 being the most versatile and suitable for a wide range of agricultural uses. As the class number increases, the land's versatility for agriculture decreases due to inherent limitations. Classes 1 to 4 are deemed suitable for cropping, while Classes 5 and 6 are more appropriate for pastoral grazing. Class 7 land is considered unsuitable for agricultural purposes due to significant limitations and necessary management practices.

The land designated for the proposed solar farm falls predominately within Class 5, which is considered unsuitable for cropping and more appropriate for grazing activities. The development has been carefully planned and designed to accommodate the continuation of current and future agricultural activities, while also delivering a range of positive operational and management benefits for both properties.

Sheep will still be able to graze under and around the solar array and the current level of livestock productivity of this land will be maintained. Although the Weasel Solar Farm will result in the permanent loss of 8.22 hectares of pastureland (primarily due to the BESS and infrastructure areas), this impact is expected to be outweighed by significant ongoing benefits, such as reduced ewe and lamb mortality and improved overall livestock productivity from the shelter offered from the solar array infrastructure. The proposed development is designed in a way that will not constrain, prejudice, or limit existing agricultural land uses or potential future expansion of such activities.

Overall, the Agricultural Assessment concludes that the solar farm will integrate effectively with the surrounding agricultural landscape, promoting sustainable land use while delivering additional benefits to local farming operations.

9.9 Noise Impact Assessment

SLR undertook a Noise Impact Assessment for the Proposal. Evaluation of noise impacts on sensitive receptors has been undertaken in accordance with the *Environmental Management and Pollution Control Act 1994*, *Environmental Management and Pollution Control (Noise) Regulations 2016* and the *Environmental Protection Policy (Noise) 2009*. The Noise Impact Assessment concludes that key potential impacts in relation to noise are:

Noise from construction activities: All construction works will be completed under a Construction Environmental Management Plan (CEMP). Due to the distance between the proposed site and non-project-involved receivers, construction noise impacts are relatively minimal. However, scheduling construction activities in accordance with the Prohibited Hours as defined in the Regulations. community engagement and best practice noise management controls: regular maintenance, broadband reversing alarms, etc. will further minimise the residual risk of harm to nearby receptors.

Noise from operational activities: The closest non-project-involved receiver, R8 is located approximately 100 m from the boundary of the project (approximately 730 m to the BESS area). Compliance for all time periods is achieved at this receiver and all others with all solar farm inverters, BESS and substations operating at 100% capacity with no additional mitigation.

Overall, the assessment indicates that the Project complies with the relevant noise legislation at all sensitive receptors across all time periods, without the need for additional mitigation. During the detailed design phase, all plants to ensure that compliance with the noise goals is maintained as the acoustic performance of the plant and site layout is refined. Updated noise modelling will be conducted during this phase, and post-commissioning noise measurements will be taken to verify compliance.

9.10 Glint and Glare Assessment

SLR conducted a Glint and Glare Assessment, evaluating potential glare impacts under both daytime and nighttime conditions.

During the day, the assessment focused on reflective glare (glint) from the solar PV panels, while nighttime conditions examined potential glare from 24/7 operational security lighting. Baseline glare modelling was conducted, assessing the impact on nearby residences and the surrounding road network.

The results indicated no significant glare impacts from the Proposal, with existing vegetation around the site providing additional shielding. For nighttime conditions, the assessment concluded that nuisance glare from security lighting would be negligible if mitigation measures were implemented, including limiting light spill to no more than 1 lux on nearby residences and adhering to light spill minimisation guidelines per AS/NZS 4282-2023.

9.11 Historic Heritage Assessment Report

CHMA undertook a Historic Heritage Assessment Report, including an archaeological potential investigation for the Development Area. A three-stage project methodology was implemented Stage 1 (pre-field work background work), Stage 2 (fieldwork) and Stage 3 (report production).

The field survey was undertaken over 5 days in May 2024. The primary focus of the field survey assessment was the proposed potential overall development area for the Weasel Solar Farm project, which encompasses approximately 471.57ha. The field team walked a total of 68.45 km of survey transects across this area with the average width of the transects being 10m.

No historic heritage sites, features or areas of elevated archaeological potential have been identified within the Development Area for the Proposal, and it has been assessed that there is a very low potential for additional undetected historic sites or features to be present. On this basis, it is recommended that there are no further historical heritage requirements or constraints that apply to the Proposal.

9.12 Socio-economic Impact Assessment

A Socioeconomic Impact Assessment (SEIA) was completed by Urban Enterprise to evaluate the full range of potential socioeconomic impacts for the construction and operation of the Proposal. The assessment covers economic impacts, including both direct and indirect activities that will arise during the construction and operational phases of the Proposal. It also examines social impacts, addressing potential changes—both positive and negative—to the Bothwell community's lifestyle and environment throughout the Weasel Solar Farm lifecycle.

Notably, the Proposal is modelled to generate significant economic and employment benefits. The following results are modelled in the SEIA:

Construction phase:

- $428 million in total economic output, including:
  - $188 million direct output; and
  - $240 million indirect output.
- 927 jobs, including
  - 348 direct jobs; and
  - 579 indirect jobs.

Operation phase:

- $11 million in total economic output, including:
  - $4.7 million direct output; and
  - $6.3 million indirect output
- 20 jobs, including
  - 8 direct jobs; and
  - 12 indirect jobs.

10. Conclusion

As demonstrated within this Planning Report, the Weasel Solar Farm Development Application for the use and development of land for Utilities, is an appropriate use and form of development for the Site.

The Weasel Solar Farm will provide critical renewable energy generation, energy storage, and a new substation that can service future energy projects, as well as provide significant local and regional economic benefits. The Proposal supports local economic development policy advocating.

Approval of this Development Application is considered appropriate for the following reasons:

- It will increase renewable energy generation in the region, contributing directly to Tasmanian renewable energy targets and advancing the state's transition to a clean energy future;
- The Proposal leverages existing transmission infrastructure crossing the Site, eliminating the need for additional transmission infrastructure, thereby reducing environmental and broader amenity impacts;
- Development Areas are located on a highly modified landscape currently used for agricultural grazing, with the design prioritising areas of the lowest agricultural value. The Proposal integrates 'agrisolar' practices with continued grazing of sheep, thereby maintaining the land's agricultural productivity;
- The Proposal features a site-responsive design that avoids sensitive ecological, hydrological and cultural heritage areas as determined by rigours technical assessments;
- There are very few rural dwellings near the Development Areas, with PV panel locations strategically located behind a crest-line to primarily hide and obscure any public views to the development;
- The project will provide significant local and regional economic benefits including:
  - Creation of approximately 348 direct jobs during construction and 8 direct ongoing operational jobs;
  - Local employment and procurement opportunities for construction, operation and maintenance;
  - Direct funding to community organisations to further support local area.
- It is consistent with the relevant planning provisions within the Planning Scheme:
  - Although classified as a Discretionary Use within the Agricultural Zone, the Proposal aligns with the zone's objectives and provisions. The development is strategically located on low-value agricultural land, ensuring minimal impact on high-value farming areas. Furthermore, it supports the economic diversification of the rural properties involved, enhancing long-term agricultural sustainability;
  - The Proposal is consistent with the applicable codes, and environmental buffers and fire safety requirements, ensuring the development meets all statutory obligations and mitigates potential risks.
  - It aligns with state and local government policy for Southern Tasmania, complementing existing agricultural land uses while enhancing renewable energy capacity.
- Any potential negative impacts, which are expected to be minimal or negligible, are minimised, mitigated or offset through the design, mitigation measures and necessary environmental plans.

This Development Application is supported by technical impact assessments that provide detailed analysis and justification of the Proposal. Based on the findings of the various technical assessments, the Proposal is expected to generate positive impacts on the environment, economy and local community.

The Proponent is committed to ongoing community and stakeholder engagement and will ensure that nearby residents and the broader Bothwell community remain well-informed about the Proposal. To date, key authorities and neighbouring properties have been provided with comprehensive details on the Proposal, including its potential benefits and impacts. A Community Drop-in Information Session is planned to offer further information and gather feedback from the local community. The project team has been in regular communication with the Central Highlands Council and other key stakeholders, including the EPA, ReCFIT, and State Government representatives.

Taking the above reasons into consideration, it is requested that Council approve the development application permit.

Appendices

Appendix A	Certificates of Title
Appendix B	Design Plans
Appendix C	Landscape and Visual Impact Assessment
Appendix D	Ecological and Natural Assets Code Assessment
Appendix E	Flooding Impact Assessment
Appendix F	Aboriginal Heritage Assessment Report
Appendix G	Bushfire Impact Statement
Appendix H	Traffic Impact Assessment
Appendix I	Agricultural Assessment
Appendix J	Noise Impact Assessment
Appendix K	Glint and Glare Assessment
Appendix L	Historic Heritage Assessment Report
Appendix M	Consultation Summary Report
Appendix N	Socioeconomic Impact Assessment

Appendix A Certificates of Title

Appendix B Design Plans

Appendix C Landscape and Visual Impact Assessment

Appendix D Ecological and Natural Assets Code Assessment

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Appendix G Bushfire Impact Statement

Appendix H Traffic Impact Assessment

Appendix I Agricultural Assessment

Appendix J Noise Impact Assessment

Appendix K Glint and Glare Assessment

Appendix L Historic Heritage Assessment Report

Appendix M Consultation Summary Report

Appendix N Socioeconomic Impact Assessment

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Planning | Engagement | Strategy

Cogency provides planning, environmental assessment and stakeholder engagement services for the renewable energy, property, clean tech and circular economy sectors.

Our collaborative teams bring a uniquely nuanced understanding of planning processes and the technical aspects of renewable energy property, infrastructure and circular economy projects, which helps to build a strong rapport and trust with local community members and stakeholders.

Unlike many in-house engagement and planning teams that are managed separately, our planners work in collaboration with our engagement practitioners to ensure that stakeholder and community consultation is at the heart of the planning process and a critical tool for delivering positive outcomes for our clients.

www.cogencyaustralia.com.au

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
140433	1
EDITION	DATE OF ISSUE
4	13-Sep-2021

SEARCH DATE : 22-Aug-2023
SEARCH TIME : 09.46 AM

DESCRIPTION OF LAND

Parish of ST ALBANS Land District of CUMBERLAND
Lot 1 on Plan 140433
Derivation : Part of 83 Acres Located to William Clarke, Part of 103 Acres Gtd to J Clarke, Part of 341 Acres Gtd to William Clarke, Part of 84 Acres Gtd to G Piper and Part of 1,917 Acres Located to William Clarke
Prior CT 124037/1

SCHEDULE 1

M895767 TRANSFER to DUNGROVE LAND COMPANY PTY LTD Registered 13-Sep-2021 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
C660407 NOTICE of Notified Corridor under Section 15 of the Major Infrastructure Development Approvals Act 1999 affecting the land therein described Registered 25-Jul-2005 at noon
C869984 APPLICATION: BURDENING ELECTRICITY EASEMENT with the benefit of a restriction as to user of land in favour of Transend Networks Pty Ltd over the land marked Electricity Easement shown passing through the said land within described Registered 30-Jan-2009 at noon
M277982 Application by Aurora Energy Pty Ltd for Noting of a Notable Interest pursuant to Section 12(1) (2) (a) & (b) of the Electricity Wayleaves and Easement Act 2000 Registered 14-Jul-2011 at noon
E277392 MORTGAGE to Australia and New Zealand Banking Group Limited Registered 13-Sep-2021 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

PLAN OF TITLE

Registered Number

P 140433

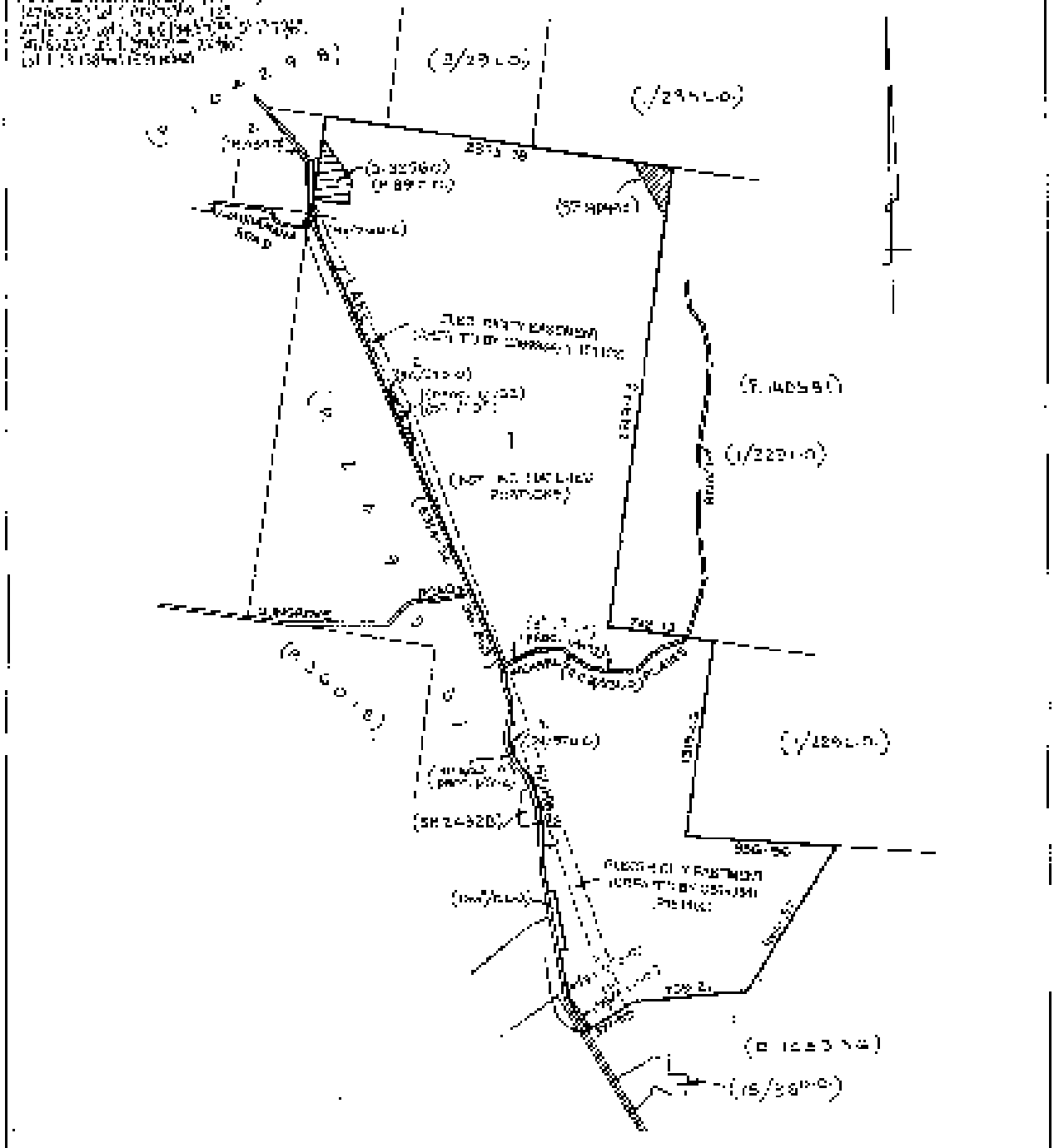
LOCATION
LAND DISTRICT OF CUMBERLAND
PARISH OF ST. ALBANS

SURVEYED BY Tigerak, Dorsey & Anderson Pty Ltd.

NOT TO SCALE

SKETCH BY WAY OF ILLUSTRATION ONLY

BALANCE PLAN



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
140581	1
EDITION	DATE OF ISSUE
3	02-Dec-2020

SEARCH DATE : 27-Feb-2024
SEARCH TIME : 02.02 PM

DESCRIPTION OF LAND

Town of ST ALBANS
Lot 1 on Plan 140581
Derivation : For grantees see plan
Prior CTs 140432/1 and 140581/1000

SCHEDULE 1

C568873 TRANSFER to CLUNY PTY LTD

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
D151750 BURDENING WAYLEAVE EASEMENT with the benefit of a restriction as to user of land in favour of Tasmanian Networks Pty Ltd over the land marked Wayleave Easement 12.00 Wide on Plan 140581 Registered 18-May-2015 at noon
E215426 BURDENING WAYLEAVE EASEMENT with the benefit of a restriction as to user of land in favour of Tasmanian Networks Pty Ltd over the land marked Wayleave Easement 'A' 12.00 wide on Plan 140581 Registered 02-Dec-2020 at noon
C522534 MORTGAGE to English Scottish & Australian Bank Limited excepting out Lot 1 on Sealed Plan No.140432 Registered 02-Mar-2004 at noon
C521971 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 10-Sep-2004 at noon

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

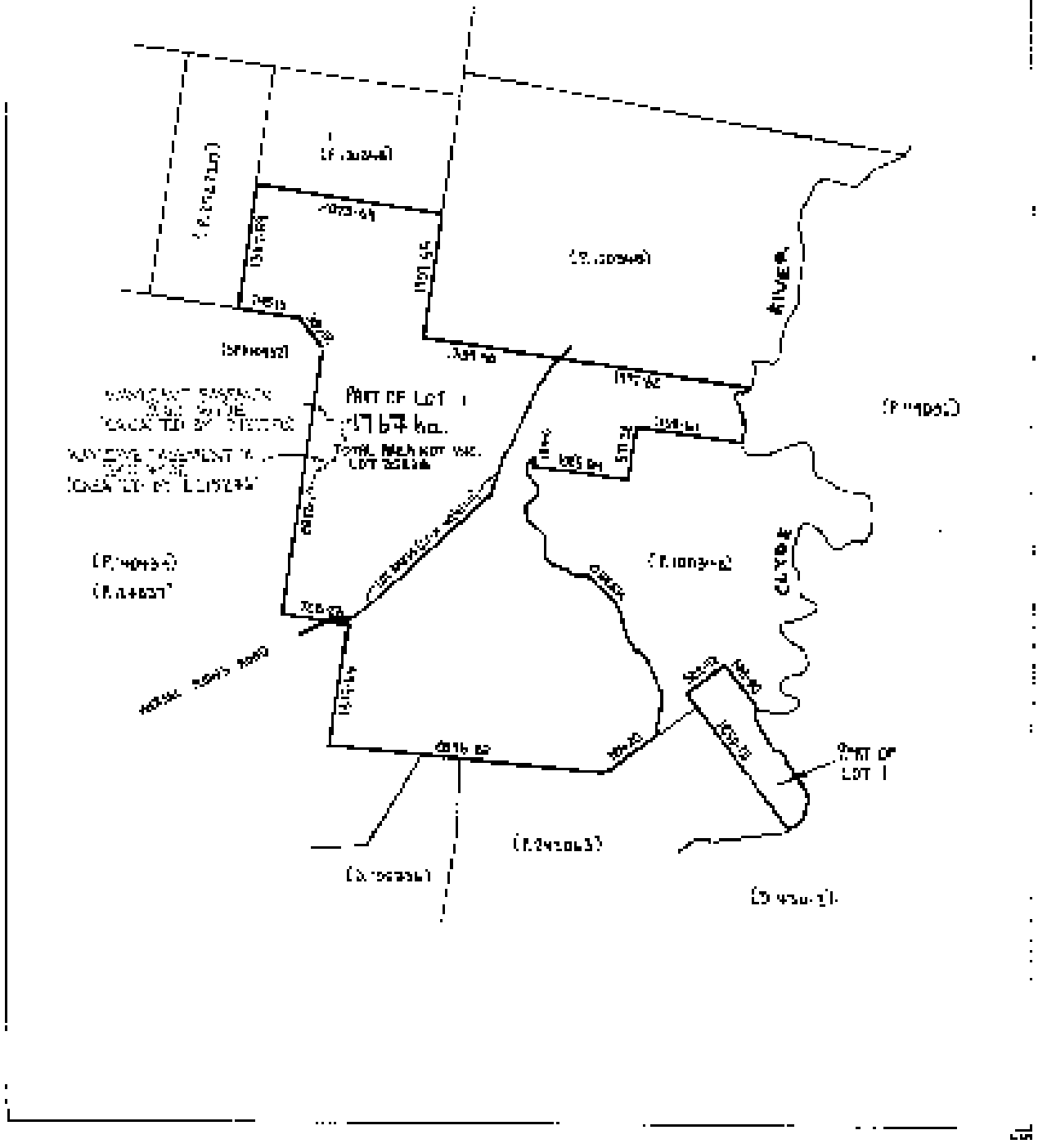
PLAN OF TITLE

LOCATION CUMBERLAND
ST. ALBANS

P. 140581

APPROVED 19 SEP 1984

BALANCE PLAN



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
104298	1
EDITION	DATE OF ISSUE
4	11-Mar-2014

SEARCH DATE : 16-Sep-2024
SEARCH TIME : 02.49 PM

DESCRIPTION OF LAND

Parish of MALMSBURY, Land District of CUMBERLAND
Lot 1 on Plan 104298
Being the land described in Assent No. 65/2456
Excepting thereout PROC. 1/658, (68R/27 L.O.), 11A-2R-38Ps., NOTN. 15/5152, (106R/37 L.O.), 1A-3R-8PS., NOTN. 47/180, (94/13 D.O.), (98/21 D.O.) & (98/22 D.O.), Part of C.T. 4401/91, (D32560)
Derivation : Part of Lots 413 & 414, 791-0-0 & Whole of Lot 148, 640-0-0 Gtd. to Robert Patterson, Whole of Lot 307, 1005-0-0 Gtd. to Robert Patterson & Edward Nicholas Jr.
Derived from A11676

SCHEDULE 1

SCOTT HEDLEY REARDON

SCHEDULE 2

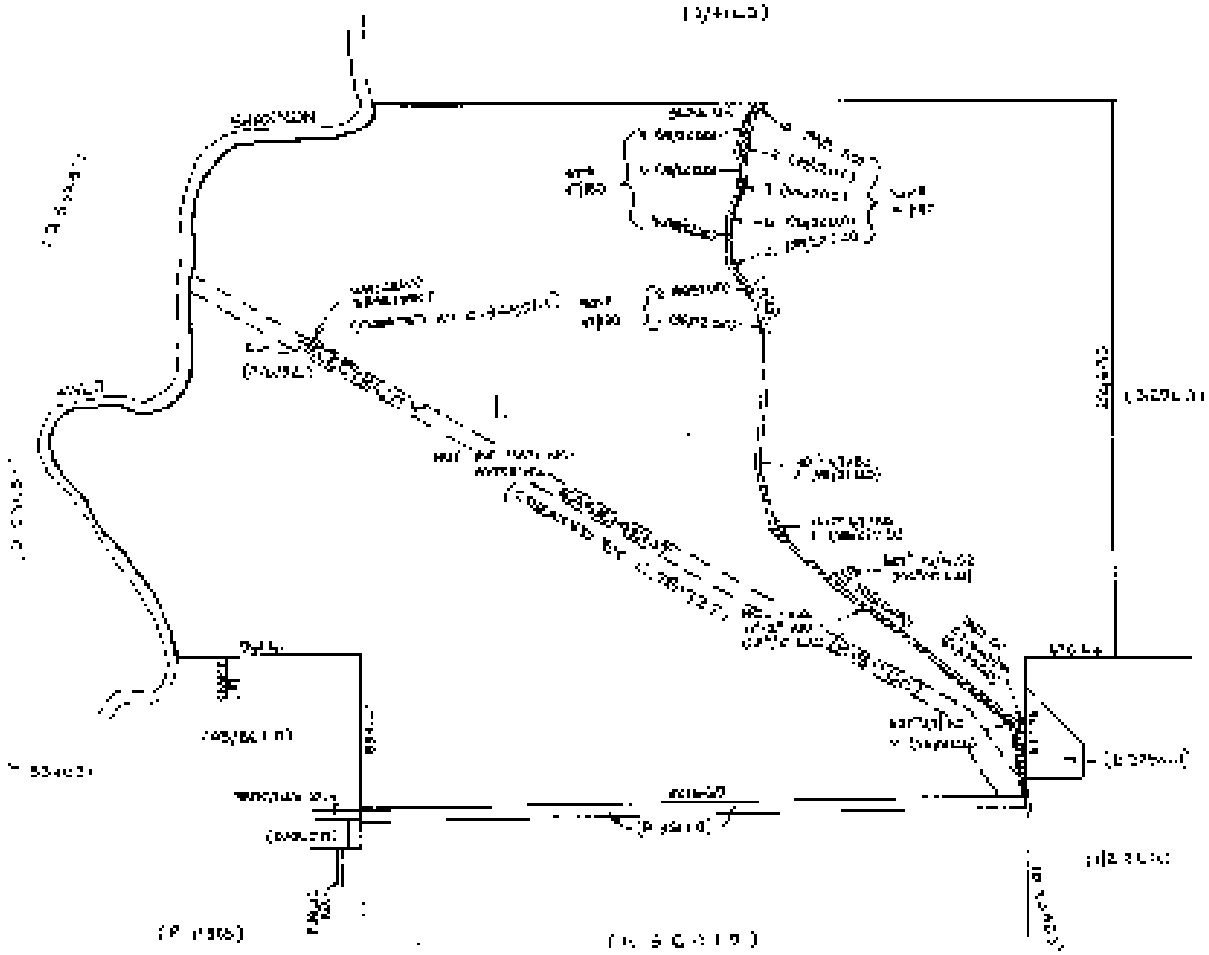
Reservations and conditions in the Crown Grant if any
C949565 BURDENING ELECTRICITY INFRASTRUCTURE EASEMENT with the benefit of a restriction as to user of land in favour of Aurora Energy Pty Ltd over the Electricity Infrastructure Easement on Plan 104298 (Subject to Provisions) Registered 11-May-2011 at noon
C660353 NOTICE of Notified Corridor under Section 15 of the Major Infrastructure Development Approvals Act 1999 affecting the land therein described Registered 25-Jul-2005 at noon
C781729 BURDENING ELECTRICITY EASEMENT with the benefit of a restriction as to user of land in favour of Transend Networks Pty Ltd over the Electricity Easement shown passing through the said land within described. Registered 27-May-2008 at noon
D98993 Mortgage to Rabobank Australia Limited Registered 11-Mar-2014 at 12.02 PM

UNREGISTERED DEALINGS AND NOTATIONS

151100 PLAN Lodged by TRANSEND 1-7 MARIA STREET, LENAH VALLEY on 11-May-2007 BP: 151100

CONVERSION PLAN

P.104298



Weasel Solar Farm - DA 2024/55

Appendix B - Design Plans - Table of Contents:

- Site Overview Plan
- Topography Plan
- Site Analysis Plan
- Design Layout Plan
- Masterplan (A1)
- Masterplan - Northern Section (A2)
- Masterplan - Southern Section (A2)
- Internal Transmission Overview
- Access & Construction Laydown Overview
- Internal Tracks & Waterways Overview
- General arrangement - BESS area
- Elevations (power station unit, pv trackers, switchyard, BESS units, security fencing, O&M buildings, 33kV internal transmission poles)

See separately, within Traffic Impact Assessment:

- Access Point Swept Paths
- Intersection Concept Designs
- Construction laydown and car parking *[note: under preparation, due 22/05)*

See separately, within Landscape & Visual Impact Assessment:

- Concept Landscape Plan

See separately within Appendix 2 of Bushfire Impact Statement:

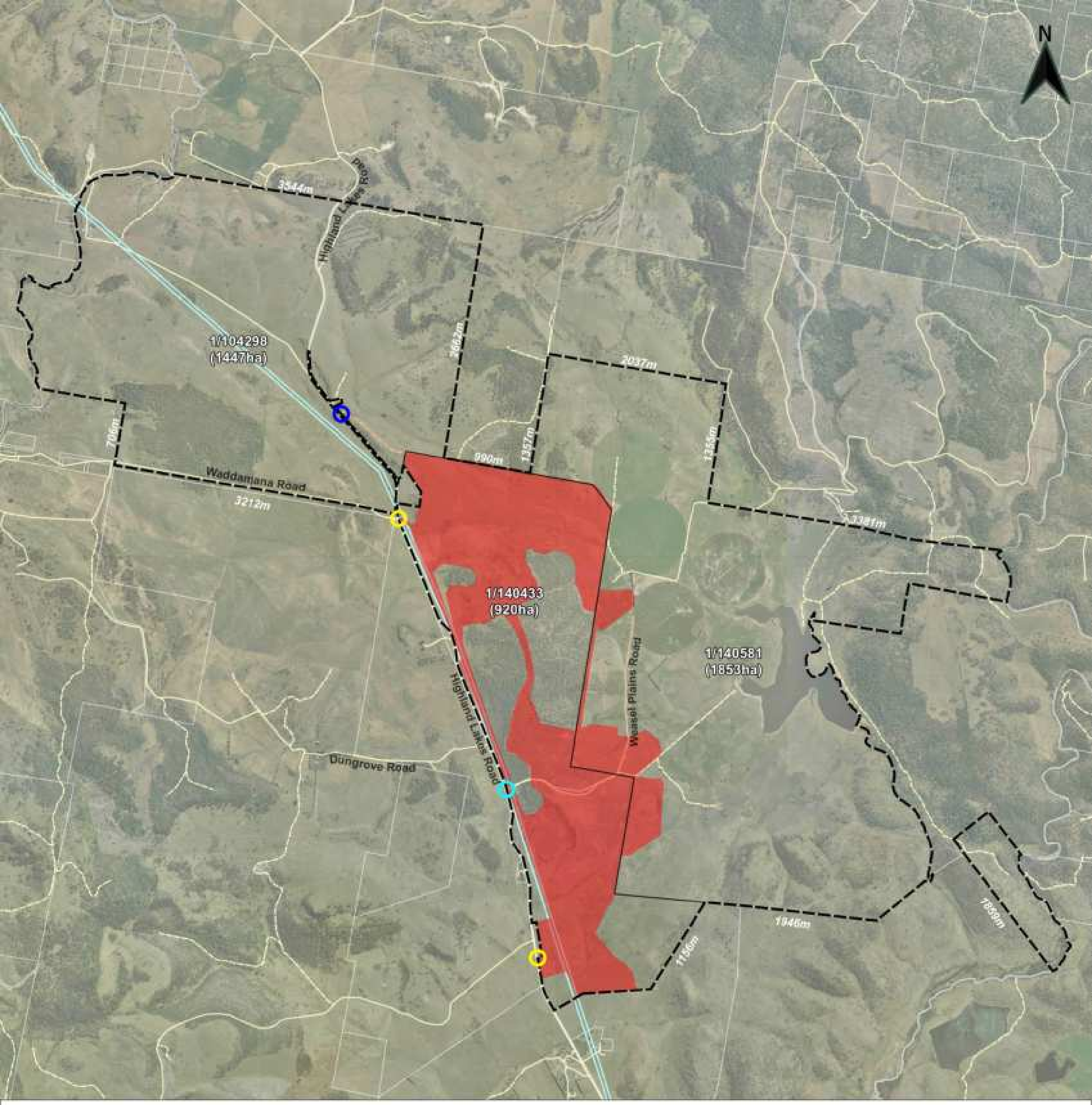
- Bushfire Mitigation Plan (BMP) (containing additional details on bushfire risk design measures, including fire breaks, internal tracks, static water supply and grass management.)

General notes:

All design is indicative and subject to detailed design.

Due to the large scale of the Development Area, individual plans among this suite do not all contain the same level of detail (for legibility). Each plan addresses select focuses.

The entire plan pack, including those contained within the Traffic Impact Assessment, should be read in conjunction with each other.



Legend

Proposed Features
- Site Boundary
- Study Area

Access Points
- Primary
- Secondary / emergency
- Tertiary / evacuation

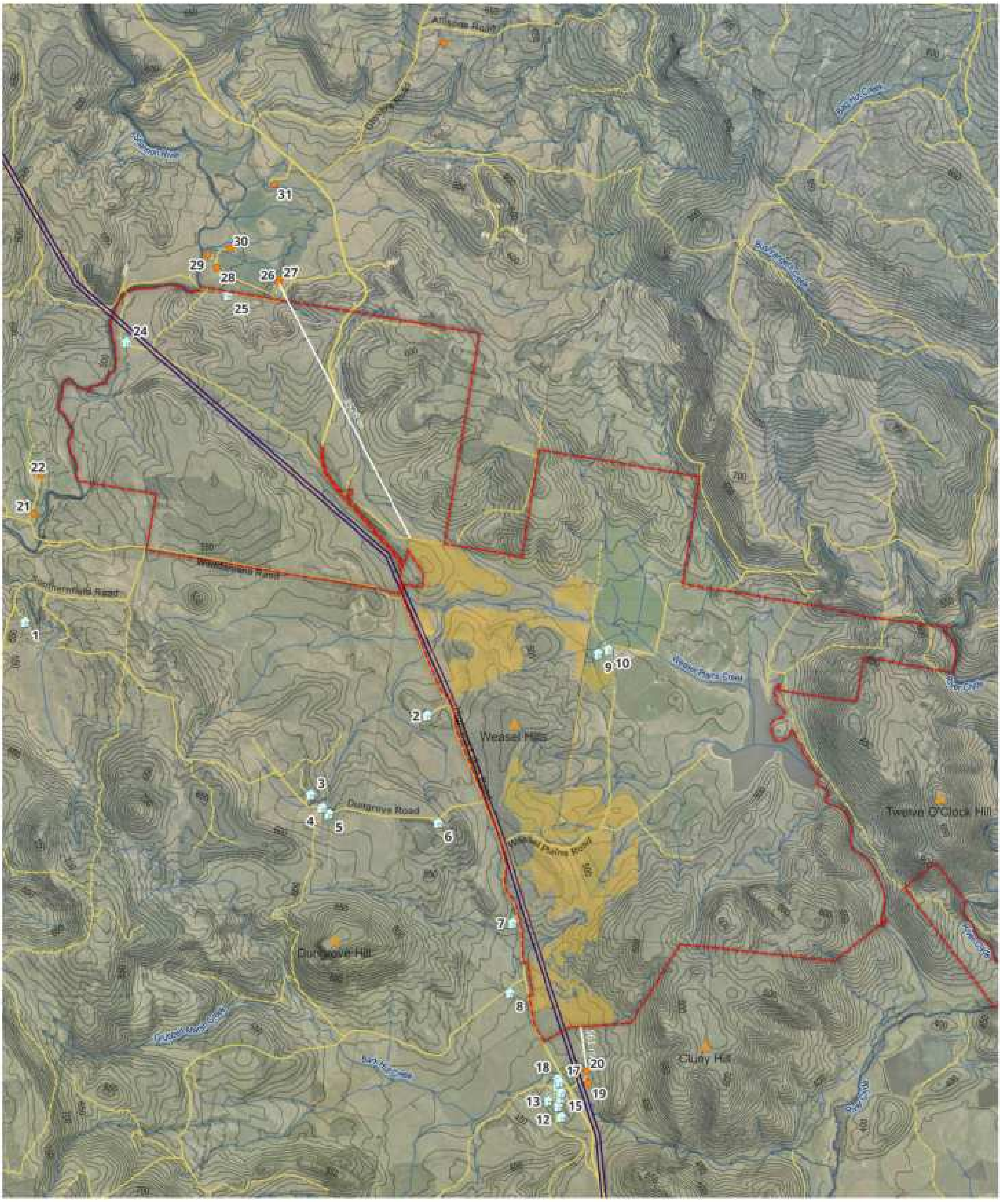
Existing Features
- 220 kV Transmission line
- Title Boundary
- Cadastre
- Roads
- Vehicular Track

0 1 2 km

cogency

Site Overview Plan

2212 - Weasel Solar Farm



Legend

- Cadastre
- Hills
- Contours (10m)
- Waterways

Proposed Infrastructure

- Development Area

Existing Infrastructure

- 220 kV Transmission Line
- Roads

Dwellings

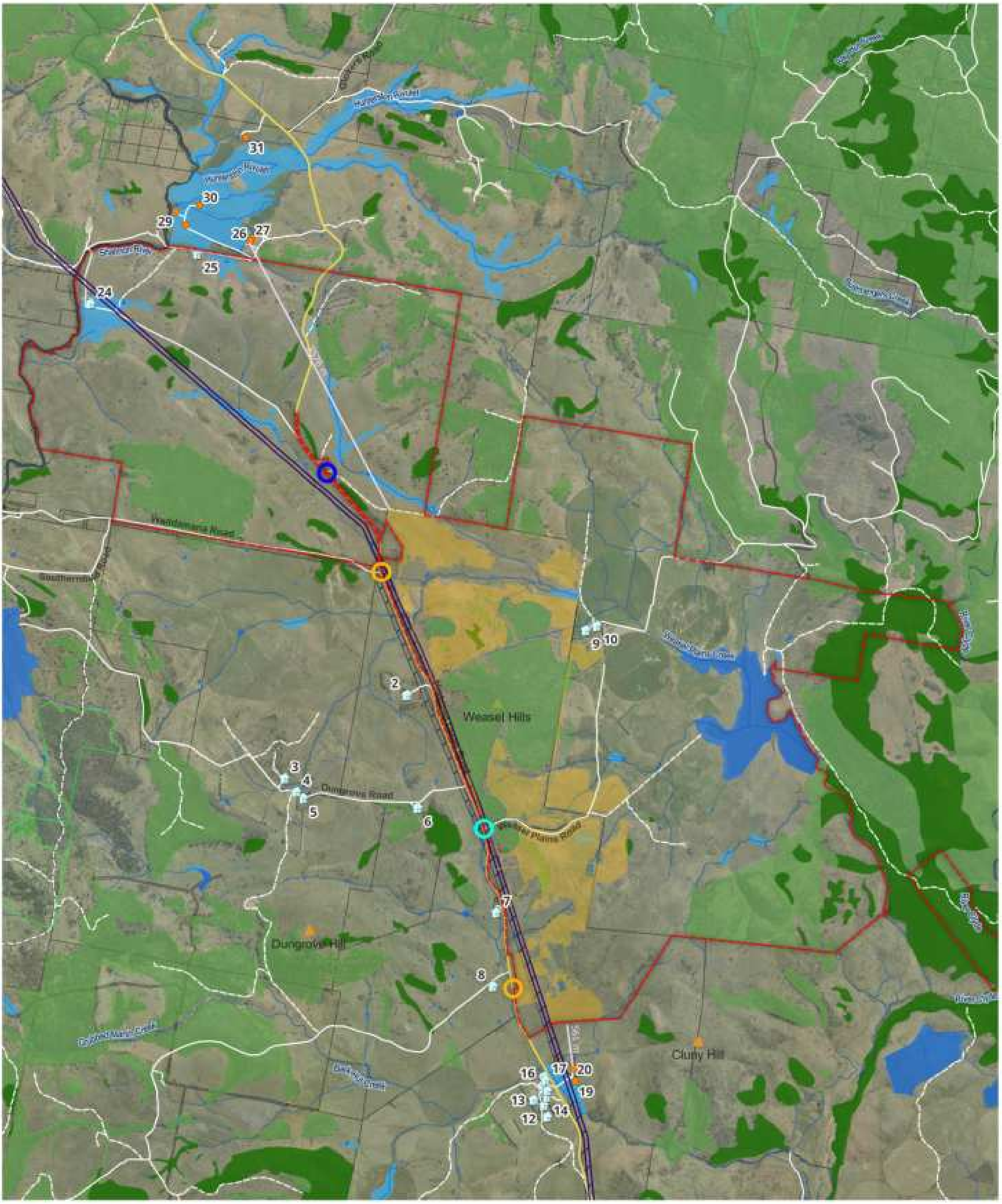
- Involved
- Not Involved

0 1 2 km

cogency

Topography Plan

2212 Weasel Solar Farm



Legend

Proposed Features

- Primary Access
- Secondary Access
- Tertiary Access
- Development Area
- Site Boundary

Environmental Features

- Hills
- Waterways
- Water Body
- Wetland
- Conservation Covenant
- Forest
- Woodland

Existing Infrastructure

- Electricity Easement
- Cadastre
- 220 kV Transmission Line
- Vehicular Track
- Access Road

Dwellings

- Involved
- Not Involved

0 1 2 km

cogency

Site Analysis Plan

2212 Weasel Solar Farm

N

Feature	Area (ha)
Site Boundary	4221
Study Area	683
Development	435
Temporary Construction Compound	13

Legend

Proposed Features
- Site Boundary
- Study Area
- Development Area
- Temporary Construction Compound
- BESS and Network Connection Components

Existing Features
- 220 kV Transmission line
- Title Boundary
- Waterways
- Roads
- Cadastre
- Water Body
- Wetland

- Hills

Dwellings
- Involved
- Not Involved

Access Points
- Primary
- Secondary / emergency
- Tertiary / evacuation

0 1 2 km

cogency

Design Layout Plan

2212 - Weasel Solar Farm

Tertiary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Secondary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

33kV Substation

Construction Compound

Electricity Easement

Construction compound A: to be removed after completion of construction works. See TIA.

Under the 2P configuration panels will be spaced approximately 10m apart as inter-row shading provides a constraint.

Access vehicles will require access between rows for cleaning and maintenance of the panels, therefore ground over is not excessive.

See Dwg No:10500480 ME-0001-02 for elevation diagram of solar PV.

Alternate 33kV Substation Location

Weasel Hills

Dungrove Road

Dungrove Hill

Operations & Maintenance

Primary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/ gravel tracking

Widen entrance, extend culverts at entrance and on the opposite side of highway, and relocate timber structure. See TIA.

Construction Compound

BESS Area

Solar Farm Substation

Proposed TASNetworks Substation

Construction compound B: to form part of solar array footprint post construction.

Under the 2P configuration panels will be spaced approximately 10m to provide sufficient light to pasture, and avoid inter-row shading.

Access vehicles will require access between rows for cleaning and maintenance of the panels, therefore ground over is not excessive.

See Dwg No:10500480 ME-0001-02 for elevation diagram of solar PV.

Secondary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Construction Compound

Construction compound C: to form part of solar array footprint post construction works.

Clony Hill

Proposed Features
- Solar Arrays
- Main Electrical Infrastructure
- Temporary Construction Compound
- Access Tracks
- Fence
- Proposed TasNetworks Connection
- 33 KV Internal Transmission line
- 33 kV Internal Transmission Poles

Access Points
- Primary
- Secondary / emergency / construction
- Tertiary / evacuation

Dwellings
- Involved
- Not Involved

Existing Features
- 220 kV Transmission Line
- Hills
- Water Body
- Wetland
- Waterways
- Roads
- Tracks
- Electricity Easement

- Cadastre
- Contours (10m)
- Distance to security fence perimeter

0 250 500 m

1:14,000 @A1

cogency

Masterplan
2212 - Weasel Solar Farm

Tertiary / Evacuation Access

Tertiary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Secondary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Secondary / Emergency / Construction Access

33kV Substation

Construction Compound

Electricity Easement

Construction compound A: to be removed after completion of construction works. See TIA.

Under the 2P configuration panels will be spaced approximately 10m to provide sufficient light to pasture, and avoid inter-row shading.

Access vehicles will require access between rows for cleaning and maintenance of the panels, therefore ground over is not excessive.

See Dwg No:10500480 ME-0001-02 for elevation diagram of solar PV.

Alternate 33kV Substation Location

Weasel Hills

Proposed Features
- Solar Arrays
- Main Electrical Infrastructure
- Temporary Construction Compound
- Access Tracks
- Fence
- 33 kV Internal Transmission Poles
- 33 KV Internal Transmission Line

Dwellings
- Involved

Existing Features
- Hills
- 220 kV Tranmission Line
- Water Body
- Wetland
- Roads
- Tracks
- Electricity Easement
- Cadastre
- Contours (10m)

Distance from security fence perimeter

0 250 500 m

1:12,000 @A2

cogency

Masterplan - Northern Section

2212 - Weasel Solar Farm

Weasel Hills

Electricity Easement

Operations & Maintenance

Primary Access

Primary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/ gravel tracking

Widen entrance, extend culverts at entrance and on the opposite side of highway, and relocate timber structure. See TIA.

Construction Compound

BESS Area

Solar Farm Substation

Proposed TASNetworks Substation

Construction compound B: to form part of solar array footprint post construction.

Under the 2P configuration panels will be spaced approximately 10m to provide sufficient light to pasture, and avoid inter-row shading.

Access vehicles will require access between rows for cleaning and maintenance of the panels, therefore ground over is not excessive.

See Dwg No:10500480 ME-0001-02 for elevation diagram of solar PV.

Secondary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Secondary / Emergency / Construction Access

Construction Compound

Construction compound C: to form part of solar array footprint post construction works.

Cluny Hill

Proposed Features
- Solar Arrays
- Main Electrical Infrastructure
- Temporary Construction Compound
- Access Tracks
- Fence
- Proposed TasNetworks Connection
- 33 KV Internal Transmission Line
- 33 kV Internal Transmission Poles

Dwellings
- Involved
- Not Involved

Existing Features
- 220 kV Tranmission Line
- Water Body
- Wetland
- Roads
- Tracks
- Electricity Easement
- Cadastre
- Hills
- Contours (10m)
- Distance to security fence perimeter

0 250 500 m

1:12,000 @A2

cogency

Masterplan - Southern Section

2212 - Weasel Solar Farm

Internal transmission Option 1:
Western transmission alignment is preferred route, pending detailed design.

Internal transmission Option 2:
Eastern transmission alignment is an alternate route, pending detailed design.

Distances between proposed transmission route and Highland Lakes Road.

Vertical transmission poles are spaced approximately 85m apart. Some poles along the route, where the slope of land changes, have distances between ranging from 70-100m. Pending detailed design.

Feature	Area (ha)
Site Boundary	4221
Study Area	683
Development	435
Temporary Construction Compound	13

Legend

Proposed Features
- Site Boundary
- Study Area
- Development Area
- BESS & Network Connection Compunds
- 33 kV substation
- 33 kV Internal Transmission Poles
- 33 KV Internal Transmission Line
- Internal Access Tracks

Existing Features
- Hills
- 220 KV Transmission Line
- Waterways
- Vehicular Track
- Roads
- Cadastre
- Natural Assets Code

Dwellings
- Involved
- Not Involved

0 1 2 km

Internal Transmission Overview

2212 - Weasel Solar Farm

Tertiary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Secondary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Construction compound A: to be removed after completion of construction works. See TIA.

General Notes:

Construction compounds to include sufficient parking for staff and delivery vehicles. Loading area to be included.

Gravel construction (or similar) will include detailed drainage design to ensure no channelling or erosion is created by stormwater runoff.

Drainage, rehabilitation works and timeframes to be prepared within a Construction / Environment Management Plan as a condition of permit.

See Bushfire Mitigation Plan (BMP) (Appendix 2 of Bushfire Impact Statement) for additional details on bushfire risk design measures, including fire breaks, internal tracks, static water supply and grass management.

Primary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/ gravel tracking

Widen entrance, extend culverts at entrance and on the opposite side of highway, and relocate timber structure. See TIA.

Construction compound B: to form part of solar array footprint post construction.

Secondary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Construction compound C: to form part of solar array footprint post construction works.

Feature	Area (ha)
Site Boundary	4221
Study Area	683
Development	435
Temporary Construction Compound	13

Waddamana Road

Weasel Hills

Dungrove Road

Dungrove Hill

Clony Hill

N

Legend

0 1 2 km

Proposed Features

- Site Boundary
- BESS & Network Connection Components
- Construction Compound
- Development Area
- Study Area
- Primary Access
- Secondary Access
- Tertiary Access

Existing Features

- Hills
- 220 kV Transmission Line
- Waterways
- Vehicular Track
- Roads
- Cadastre
- Natural Assets Code

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Access & Construction Laydown Overview

2212 - Weasel Solar Farm

Upgrade culvert at access point. See TIA. Subject to detailed design as condition of permit.

General Note:
Internal access roads

4m-wide all-weather tracks for 20-tonne vehicles.

Include passing bays every 200m for two-way traffic.

Subject to detailed design as condition of permit.

Upgrade culvert at access point. See TIA. Subject to detailed design as condition of permit.

Upgrade culvert at access point. See TIA. Subject to detailed design as condition of permit.

General Note:

Internal access roads crossing waterways (Natural Assets Code)

As highlighted in red, the indicative layout for internal tracks includes numerous crossings of waterways. Exact routes will be confirmed in detailed design.

Design principle commitments include ensuring:

- Existing overland flow paths will be maintained (in a 1-in-100 RTA event). Exact crossing and culvert design will be completed post-approval, however, informed by hydrology/flood modelling.
- All internal track waterway crossings will be designed with appropriate culverts, and construction techniques/sediment control will be in place to manage stormwater and runoff appropriately. Table 7 of the Ecological & Natural Assets Code Assessment presents recommended management measures to address, including:
  - Minimise soil disturbance and sediment release.
  - Control erosion and sedimentation risk.
  - Avoid contaminant spills.
  - Stabilise and rehabilitate banks.
- Any large, impermeable surfaces will have drainage management for any runoff concentration, and will not allow direct, unfiltered discharge directly into waterways.
- Design and works will reference the Derwent Estuary Program's "Erosion and sediment control" (2023) for additional measures.
- Detailed design plans will be prepared (as a condition of permit) for all waterway crossings and hardstand areas , along with the Construction Management Plan (and/or Environment Management Plan) that addresses soil and water management and erosion risk.

Feature	Area (ha)
Site Boundary	4221
Study Area	683
Development	435
Temporary Construction Compound	13

Legend

Proposed Features
- Site Boundary
- BESS & Network Connection Components
- Construction Compound
- Development Area
- Internal Access Tracks
- Primary Access
- Secondary Access
- Tertiary Access

Existing Features
- Hills
- 220 kV Transmission Line
- Waterways
- Vehicular Track
- Roads
- Cadastre
- Natural Assets Code

0 1 2 km

cogency

Internal Tracks & Waterways Overview

2212 - Weasel Solar Farm

N

Waddamana Road

Weasel Plains Creek

Weasel Hills

Highland Lakes Road

Dungrove Road

Weasel Plains Road

Dungrove Hill

Cluny Hill

Bark Hut Creek

Feature	Area (ha)
Site Boundary	4221
Study Area	683
Development	435
Temporary Construction Compound	13

Legend

Proposed Features

- Site Boundary
- BESS & Network Connection Components
- Construction Compound
- Development Area
- Primary Access
- Secondary Access
- Tertiary Access

Existing Features

- Hills
- 220 kV Transmission Line
- Waterways
- Vehicular Track
- Roads
- Cadastre

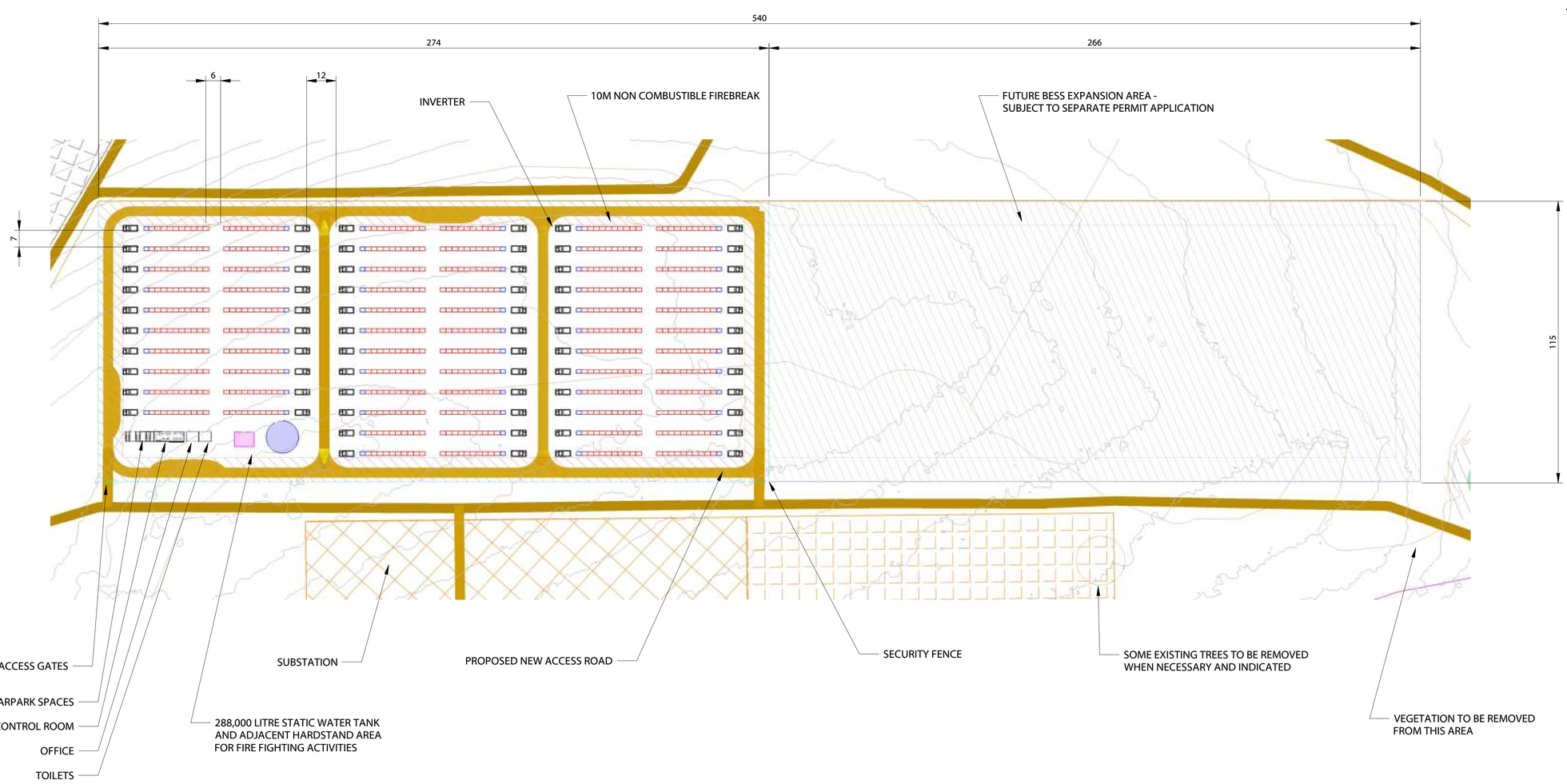
- Water Body
- Wetland
- Natural Assets Code
- Flood constraints (H2 and above)

0 1 2 km

cogency

Internal Tracks &Flooding Overview

2212 - Weasel Solar Farm



WEASEL SOLAR FARM SITE GENERAL ARRANGEMENT - BESS LAYOUT
SCALE: 1:1000

NOTES:

1. DESIGN IS CONCEPT ONLY. NOT FOR CONSTRUCTION.
2. BATTERY ENERGY STORAGE SYSTEM INDICATIVE. ADEQUATE VENTILATION OF THE BESS CONTAINER/STORAGE AREA IS ALLOWED BASED IN COMPLIANCE WITH AS/NZS 5139-2017 AND MANUFACTURER'S REQUIREMENTS.
3. BATTERY ENERGY STORAGE SYSTEM TO BE IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION REQUIREMENTS AND RELEVANT AUSTRALIAN STANDARDS, INCLUDING REQUIREMENTS OF THE DANGEROUS GOODS ACT 1985.
4. BATTERY ENERGY STORAGE FACILITY AREAS TO BE KEPT FREE OF EXTRANEOUS MATERIALS AND COMBUSTIBLE MATERIALS OF ALL KINDS.
5. CONTAINERS/INFRASTRUCTURE FOR BATTERY INSTALLATIONS ARE TO BE PROVIDED WITH APPROPRIATE SPILL CONTAINMENT/BUNDING THAT INCLUDES PROVISION FOR FIRE WATER RUNOFF.
6. FOR THIS FACILITY, WITH A BATTERY ENERGY STORAGE SYSTEM AND WITH NO RETICULATED WATER AVAILABLE, THE FIRE PROTECTION SYSTEM MUST INCLUDE A FIRE WATER SUPPLY IN STATIC WATER STORAGE TANKS, WHERE THE STATIC WATER TANKS ARE TO:
   - 6.1. COMPLY WITH AS 2419.1. AUSTRALIAN STANDARD FIRE HYDRANT INSTALLATIONS.
   - 6.2. SHALL BE OF NOT LESS THAN 288,000L EFFECTIVE CAPACITY, OR AS PER THE PROVISIONS FOR OPEN YARD PROTECTION OF AS 2419.1-2005 FLOWING FOR A PERIOD OF NO LESS THAN FOUR HOURS AT 20L/s, WHICHEVER IS THE GREATER.
   - 6.3. THE QUANTITY OF STATIC FIRE WATER STORAGE IS TO BE CALCULATED FROM THE NUMBER OF HYDRANTS REQUIRED TO FLOW FROM AS 2419.1-2005, TABLE 3.3.
   - 6.4. FIRE HYDRANTS MUST BE PROVIDED AND LOCATED SO THAT EVERY PART OF THE BATTERY ENERGY STORAGE SYSTEM IS WITHIN REACH OF A 10m HOSE STREAM ISSUING FROM A NOZZLE AT THE END OF A 60m LENGTH OF HOSE CONNECTED TO A FIRE HYDRANT OUTLET.
   - 6.5. THE FIRE WATER SUPPLY MUST BE LOCATED AT VEHICLE ENTRANCES TO THE FACILITY, AT LEAST 10m FROM ANY INFRASTRUCTURE (ELECTRICAL SUBSTATIONS, INVERTERS, BATTERY ENERGY STORAGE SYSTEMS, BUILDINGS).
   - 6.6. THE FIRE WATER SUPPLY MUST BE REASONABLY ADJACENT TO THE BATTERY ENERGY STORAGE SYSTEM AND SHALL BE ACCESSIBLE WITHOUT UNDUE DANGER IN AN EMERGENCY. (E.G., FIRE WATER TANKS ARE TO BE LOCATED CLOSER TO THE SITE ENTRANCE THAN THE BATTERY ENERGY STORAGE SYSTEM.
   - 6.7. STATIC WATER TANK SHALL BE AN ABOVE-GROUND WATER TANK CONSTRUCTED OF CONCRETE OR STEEL.
   - 6.8. THE STATIC WATER STORAGE TANK(S) MUST BE CAPABLE OF BEING COMPLETELY REFILLED AUTOMATICALLY OR MANUALLY WITHIN 24 HOURS.
   - 6.9. HARDSTAND AND ACCESS ROAD TO BE KEPT CLEAR AT ALL TIMES.
   - 6.10. THE HARD-SUCTION POINT MUST BE PROVIDED, WITH A 150mm FULL BORE ISOLATION VALVE EQUIPPED WITH A STORZ CONNECTION, SIZED TO COMPLY WITH THE REQUIRED SUCTION HYDRAULIC PERFORMANCE. ADAPTERS THAT MAY BE REQUIRED TO MATCH THE CONNECTION ARE 125mm, 100mm, 90mm, 75mm, 65mm STORZ TREE ADAPTERS WITH A MATCHING BLANK END CAP TO BE PROVIDED.
   - 6.11. THE HARD SUCTION POINT MUST BE POSITIONED WITHIN FOUR (4) METRES TO A HARDSTAND AREA AND PROVIDE A CLEAR ACCESS FOR EMERGENCY SERVICES PERSONNEL.
   - 6.12. ALL-WEATHER ROAD ACCESS AND HARDSTAND SHALL BE PROVIDED TO THE HARD-SUCTION POINT. THE HARDSTAND SHALL BE MAINTAINED TO A MINIMUM OF 15 TONNES GVM, 8m LONG AND 6m WIDE OR TO THE SATISFACTION OF THE RELEVANT FIRE AUTHORITY.
   - 6.13. THE HARD-SUCTION POINT MUST BE PROTECTED FROM MECHANICAL DAMAGE WHERE NECESSARY.
   - 6.14. AN EXTERNAL WATER LEVEL INDICATOR MUST BE PROVIDED TO THE TANK AND BE VISIBLE FROM THE HARDSTAND AREA.
7. ASSUMED POWIN CENTIPEDE 750E BATTERY CONTAINERS AND SMA SCS 3600-UP-XT INVERTERS

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REFERENCE DRAWINGS:

10500480 CI-0100-01 WEASEL SITE GA - OVERALL LAYOUT
10500480 CI-0100-02 WEASEL SITE GA - AREA ONE LAYOUT
10500480 CI-0100-03 WEASEL SITE GA - AREA TWO LAYOUT
10500480 CI-0100-04 WEASEL SITE GA - AREA THREE LAYOUT
10500480 CI-0100-05 WEASEL BESS LAYOUT

GENERAL NOTES:

- ALL DIMENSIONS IN METRES
- DRAWN TO AS1100
- DO NOT SCALE FROM THIS DRAWING
- ALWAYS CHECK DIMENSIONS ON SITE BEFORE USING ANY INFORMATION CONTAINED WITHIN THIS DRAWING.
- ALL DIMENSIONS SHOWN ARE INDICATIVE ONLY AND NEED TO VERIFIED ON-SITE, DNV ACCEPTS NO LIABILITY FROM ERRORS OR OMISSIONS SHOWN ON THIS DRAWING.
- CHECK THIS DRAWING IS THE LATEST VERSION. DO NOT REPRODUCE ALL OR PART OF THIS DRAWING WITHOUT PRIOR CONSENT.
- DESIGN IS CONCEPT ONLY. NOT FOR CONSTRUCTION.

LEGEND:

- FLOOD ZONE
- SUB CATCHMENT REFERNCE STREAM LINES
- EXISTING HIGH VOLTAGE TRANSMISSION LINES
- PROPOSED INTERNAL OVERHEAD CONNECTION
- EXISTING TAS NETWORK OVERHEAD POWER LINES
- TRANSMISSION LINE POINT OF CONNECTION
- SERVICE EASEMENTS BOUNDARY
- TITLE BOUNDARY
- SECURITY FENCE (2.5m HIGH MAXIMUM)
- CONTOUR LINES (1m DEM)
- TREE SHADING ZONE
- EXISTING ROADS & TRACKS
- SITE ACCESS ROADS (4m WIDE MINIMUM)
- HABITAT BUFFER ZONE
- EXISTING VEGETATION ZONE - RETAIN
- VEGETATION TO BE REMOVED
- EXISTING DAMS TO BE RETAINED
- INVERTER STATION (PCS)
- EXISTING TREE WITH 10m FIRE BREAK
- TREE TO BE REMOVED
- 45,000L STATIC WATER TANK FOR SOLAR FARM
  288,000L STATIC WATER TANK FOR BESS
- 8x6m HARDSTAND AREA FOR FIRE FIGHTING
- SECURITY GATE
- 10m FIRE BREAK AND ASSET PROTECTION ZONE (APZ)
- CONSTRUCTION LAY DOWN AREA
- SOLAR SUBSTATION
- EXISTING BUILDING
- SENSITIVE AREAS
- PV - 4 STRING TRACKER

PRELIMINARY

Rev	Date	Comments	Dwn	Chkd
D	22/08/24	PRELIMINARY ISSUE	JH	SS
C	21/08/24	PRELIMINARY ISSUE	JH	SS
B	05/08/24	PRELIMINARY ISSUE	JH	SS
A	18/04/24	PRELIMINARY ISSUE	JH	SS

CLIENT: WEASEL SOLAR FARM

CLIENT LOGO:

THIRD ANGLE PROJECTION

DESIGNED BY: SS | CHECKED BY: RC

DRAWN BY: JH | APPROVED BY: RC

DNV
T: +613 8615 1515
W: www.dnv.com.au
ABN: 14 154 635 319

PROJECT: WEASEL SOLAR FARM

TASMANIA, AUSTRALIA (42°17'20"S, 146°57'29"E)

TITLE: SOLAR FARM SITE GENERAL ARRANGEMENT

BESS LAYOUT

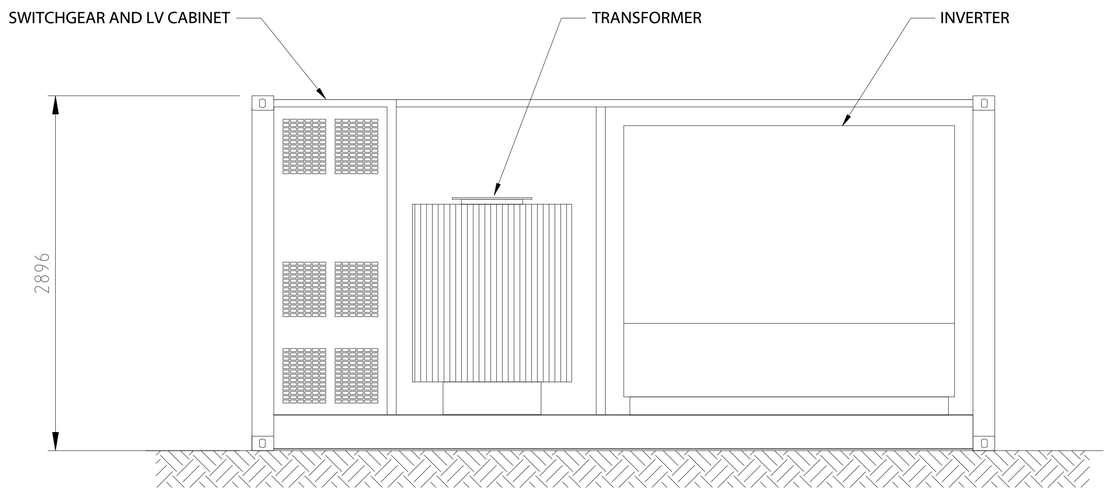
Dwg No: 10500480 CI-0001-05 | Scale: 1:1000 | Rev: D | A1

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MEDIUM VOLTAGE POWER STATION - PLAN VIEW

SCALE 1:50



MEDIUM VOLTAGE POWER STATION - ELEVATION VIEW

SCALE 1:50

0 0.5 1 2 3

Full Size 1:50 ; Half Reduction 1:100

SCALE (m)

REFERENCE DRAWINGS:

10500480 CI-0001-01 SITE GENERAL ARRANGEMENT (WEASEL SOLAR FARM & BESS)

GENERAL NOTES:

- DRAWN TO AS1100
- DO NOT SCALE FROM THIS DRAWING
- ALWAYS CHECK DIMENSIONS ON SITE BEFORE USING ANY INFORMATION CONTAINED WITHIN THIS DRAWING.
- ALL DIMENSIONS SHOWN ARE INDICATIVE ONLY AND NEED TO VERIFIED ON-SITE, DNV ACCEPTS NO LIABILITY FROM ERRORS OR OMISSIONS SHOWN ON THIS DRAWING.
- CHECK THIS DRAWING IN THE LATEST VERSION. DO NOT REPRODUCE ALL OR PART OF THIS DRAWING WITHOUT PRIOR CONSENT.

NOTES:

1. DRAWING PRELIMINARY ONLY. NOT FOR CONSTRUCTION.
2. ALL EQUIPMENT TO BE INSTALLED AS PER ALL RELEVANT MANUFACTURER REQUIREMENTS.
3. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
4. BASED ON SMA SUNNY CENTRAL 4200-UP MEDIUM VOLTAGE POWER STATION. 'INVERTER TBD'

PRELIMINARY

Rev	Date	Comments	Dwn	Chkd
B	05/08/24	PRELIMINARY ISSUE	GC/PD	SS
A	19/04/24	PRELIMINARY ISSUE	GC/PD	SS

CLIENT: WEASEL SOLAR FARM

CLIENT LOGO:

DESIGNED BY: SS CHECKED BY: RC

DRAWN BY: GC/PD APPROVED BY: RC

THIRD ANGLE PROJECTION

metric

DNV

T: +613 8615 1515
W: www.dnv.com.au
ABN: 14 154 635 319

PROJECT: WEASEL SOLAR FARM AND BESS

TASMANIA, AUSTRALIA (42°17'20"S, 146°57'29"E)

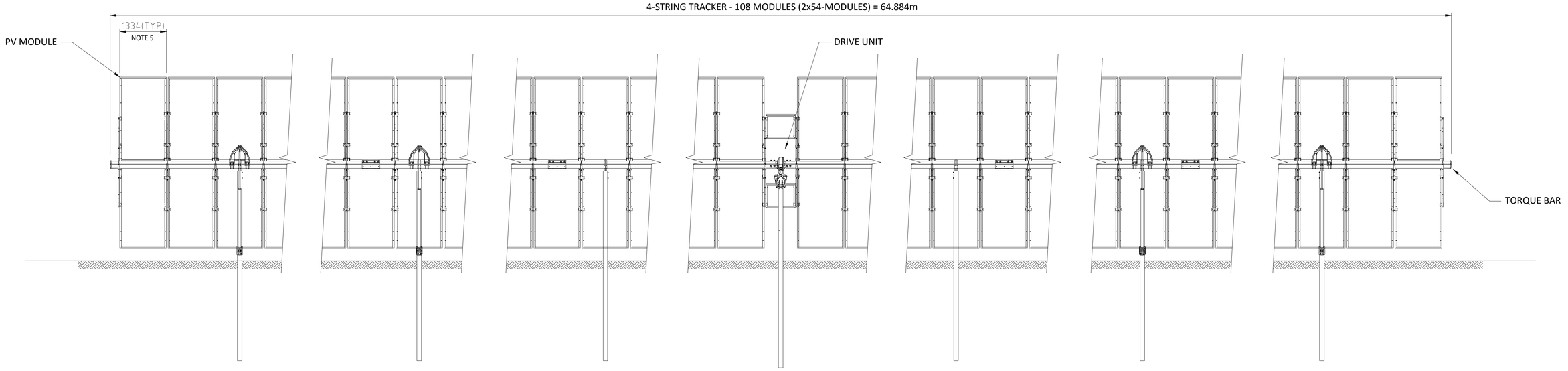
TITLE: MEDIUM VOLTAGE POWER STATION

PLAN AND ELEVATIONS

Dwg No: 10500480 ME-0001-01 Scale: AS SHOWN Rev: B A1

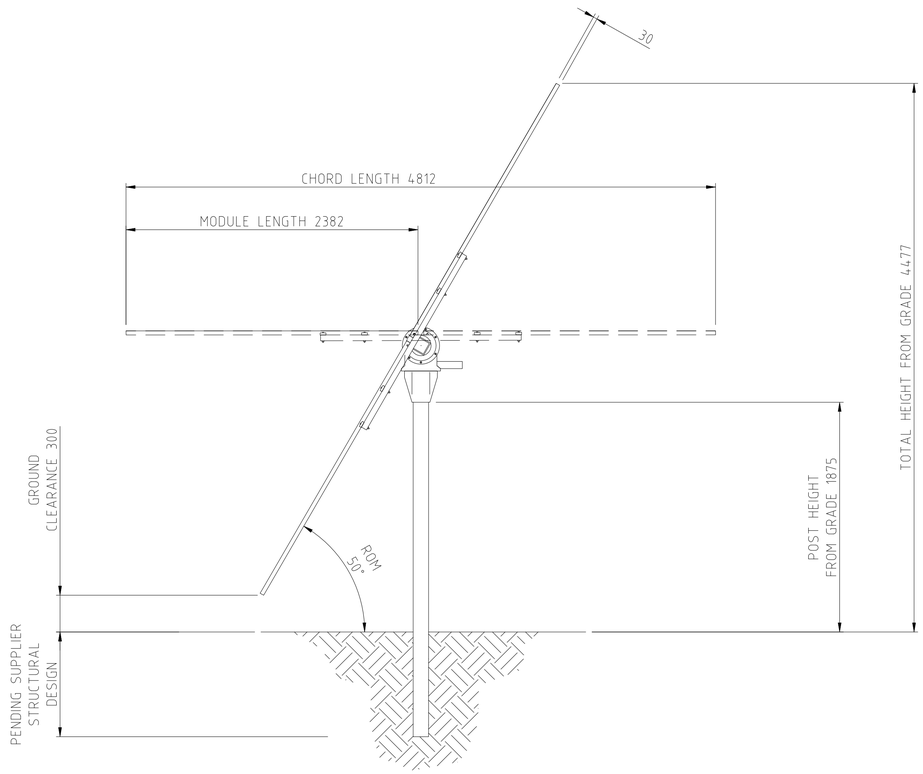
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PV TRACKER (TYP) - ELEVATION VIEW

SCALE 1:50



PV TRACKER (TYP) - SIDE ELEVATION (MAX TILT)

SCALE 1:25

0 0.5 1 2 3
Full Size 1:50 ; Half Reduction 1:100
SCALE (m)

0 0.25 0.5 1.0 1.5
Full Size 1:25 ; Half Reduction 1:50
SCALE (m)

REFERENCE DRAWINGS:

10500480 CI-0001-01 SITE GENERAL ARRANGEMENT (WEASEL SOLAR FARM & BESS)

GENERAL NOTES:

- DRAWN TO AS1100
- DO NOT SCALE FROM THIS DRAWING
- ALWAYS CHECK DIMENSIONS ON SITE BEFORE USING ANY INFORMATION CONTAINED WITHIN THIS DRAWING.
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NOTES:

1. DRAWING PRELIMINARY ONLY, NOT FOR CONSTRUCTION.
2. ALL EQUIPMENT TO BE INSTALLED AS PER ALL RELEVANT MANUFACTURER REQUIREMENTS.
3. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE SPECIFIED.
4. TYPICAL PV TRACKER SHOWN.
5. MODULE WIDTH CALCULATED AT 1334mm ALLOWING FOR 2mm TOLERANCE

PRELIMINARY

Rev	Date	Comments	Dwn	Chkd
B	05/08/24	PRELIMINARY ISSUE	GC/PD	SS
A	19/04/24	PRELIMINARY ISSUE	GC/PD	SS

CLIENT: WEASEL SOLAR FARM

CLIENT LOGO:

DESIGNED BY: SS CHECKED BY: RC

DRAWN BY: GC/PD APPROVED BY: RC

THIRD ANGLE PROJECTION

metric

DNV
T: +613 8615 1515
W: www.dnv.com.au
ABN: 14 154 635 319

PROJECT: WEASEL SOLAR FARM AND BESS

TASMANIA, AUSTRALIA (42°17'20"S, 146°57'29"E)

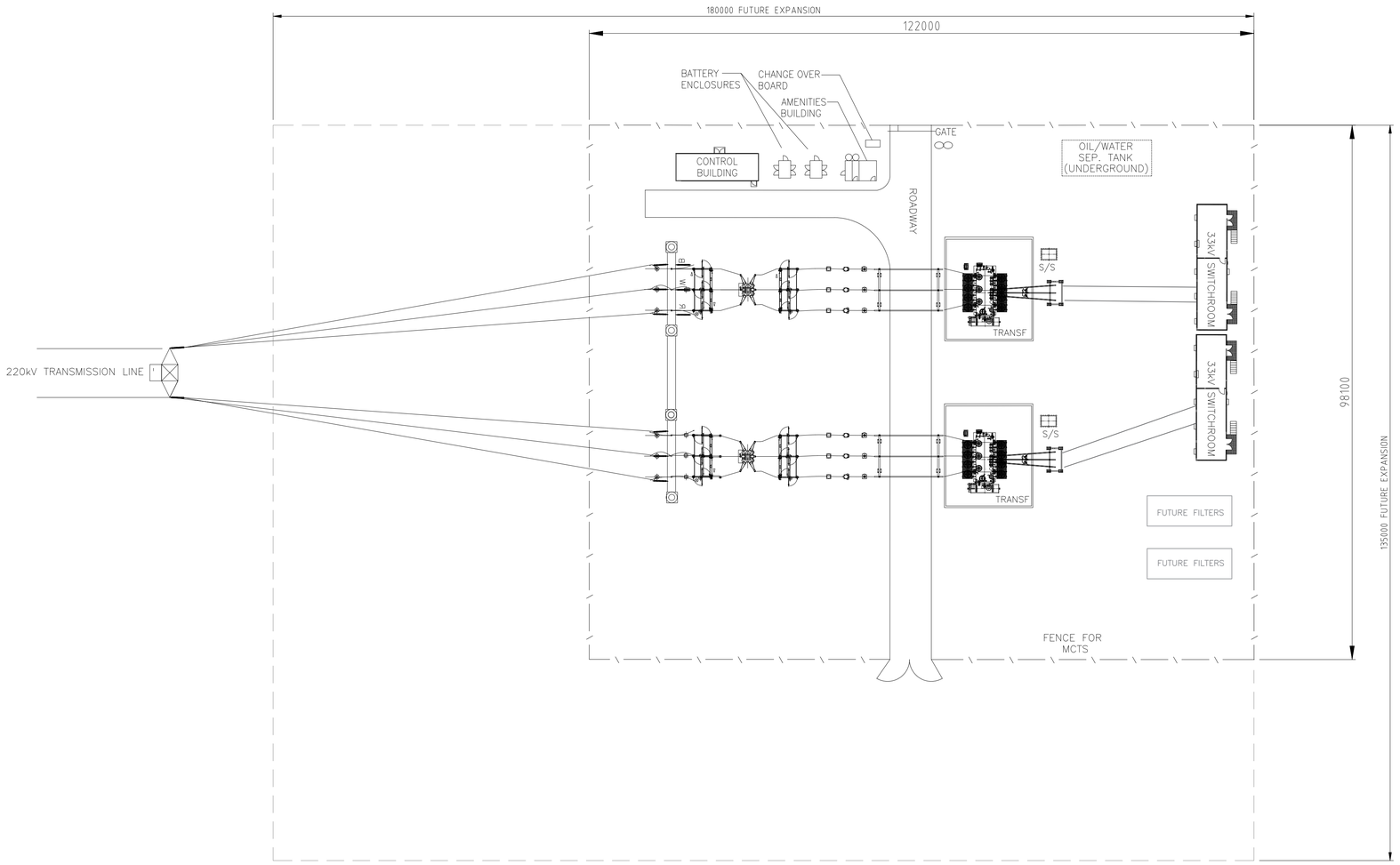
TITLE: TYPICAL ELEVATIONS

PLAN AND ELEVATIONS

Dwg No: 10500480 ME-0001-02 Scale: AS SHOWN Rev: B A1

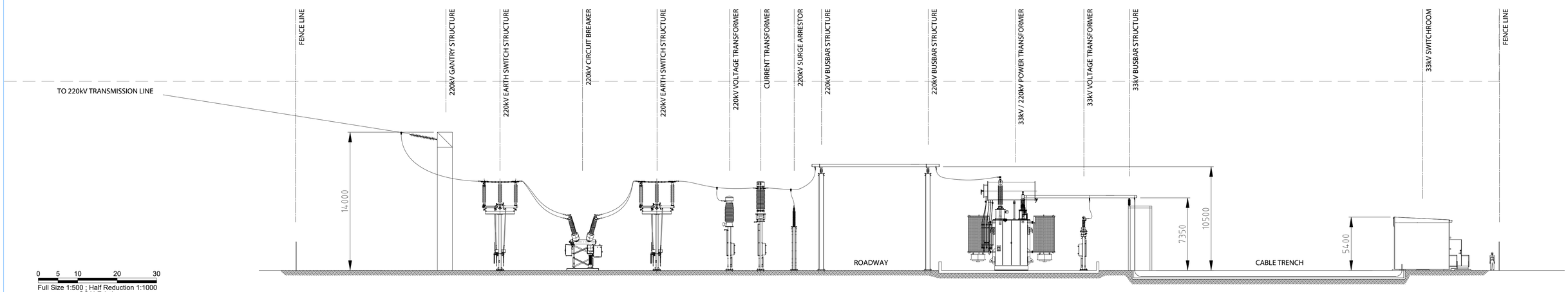
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220kV WEASEL SOLAR FARM & BESS SWITCHYARD - PLAN VIEW

SCALE 1:500



0 5 10 20 30
Full Size 1:500 ; Half Reduction 1:1000
SCALE (m)

0 2 4 8 12
Full Size 1:200 ; Half Reduction 1:400
SCALE (m)

220kV WEASEL SOLAR FARM & BESS SWITCHYARD - FRONT ELEVATION

(INDICATIVE ONLY- SUBJECT TO DETAILED DESIGN)

SCALE 1:200

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CLIENT: WEASEL SOLAR FARM

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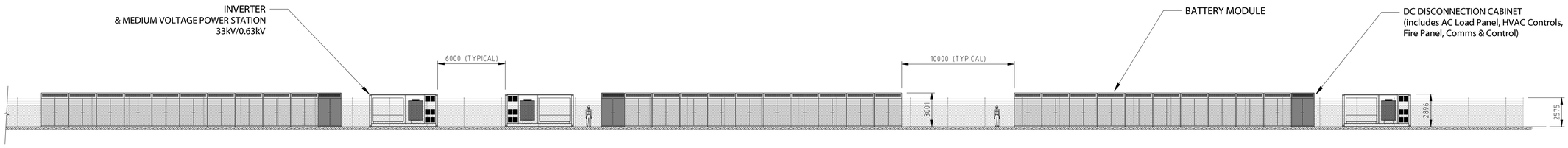
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TITLE: 220kV SWITCHYARD

PLAN AND FRONT ELEVATION

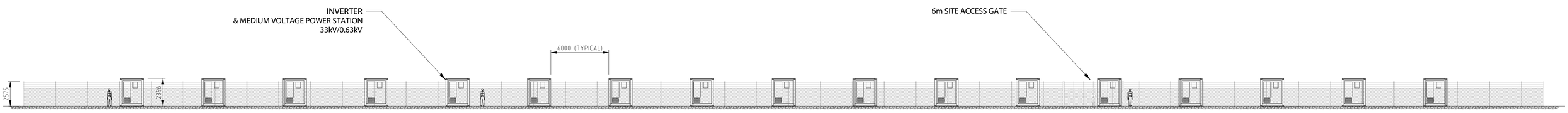
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AC-COUPLED BESS - TYPICAL FRONT ELEVATION

SCALE 1:200



AC-COUPLED BESS - TYPICAL SIDE ELEVATION

SCALE 1:200

0 2 4 8 12

Full Size 1:200 ; Half Reduction 1:400
SCALE (m)

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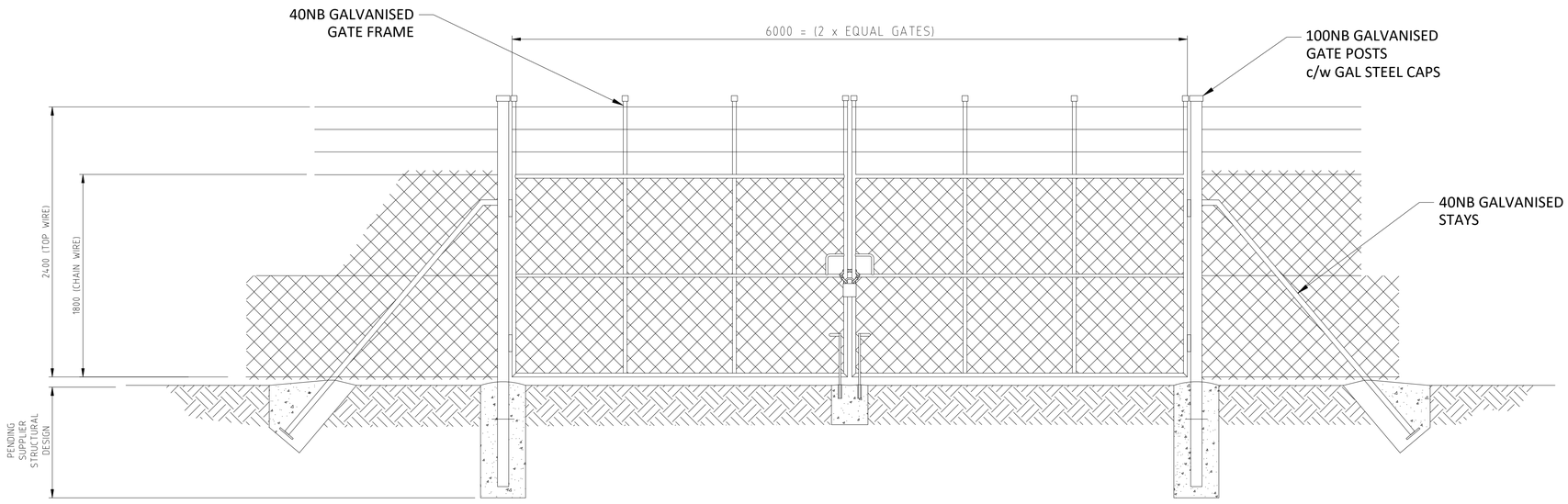
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FRONT & SIDE ELEVATIONS

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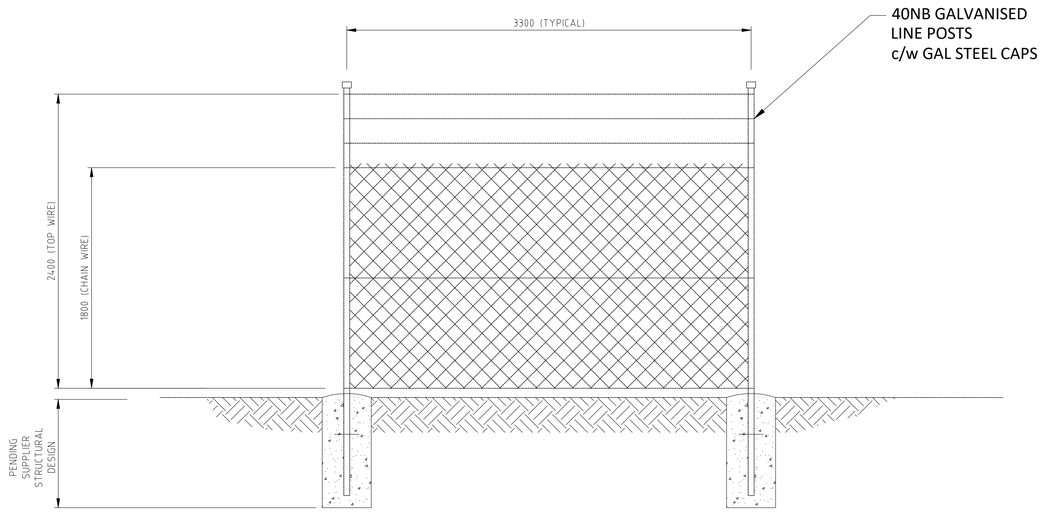
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SOLAR FARM & BESS SECURITY FENCING - TYPICAL SITE GATE

SCALE 1:25



SOLAR FARM & BESS SECURITY FENCING - TYPICAL FENCE PANEL

SCALE 1:25

0 0.25 0.5 1.0 1.5

Full Size 1:25 : Half Reduction 1:50
SCALE (m)

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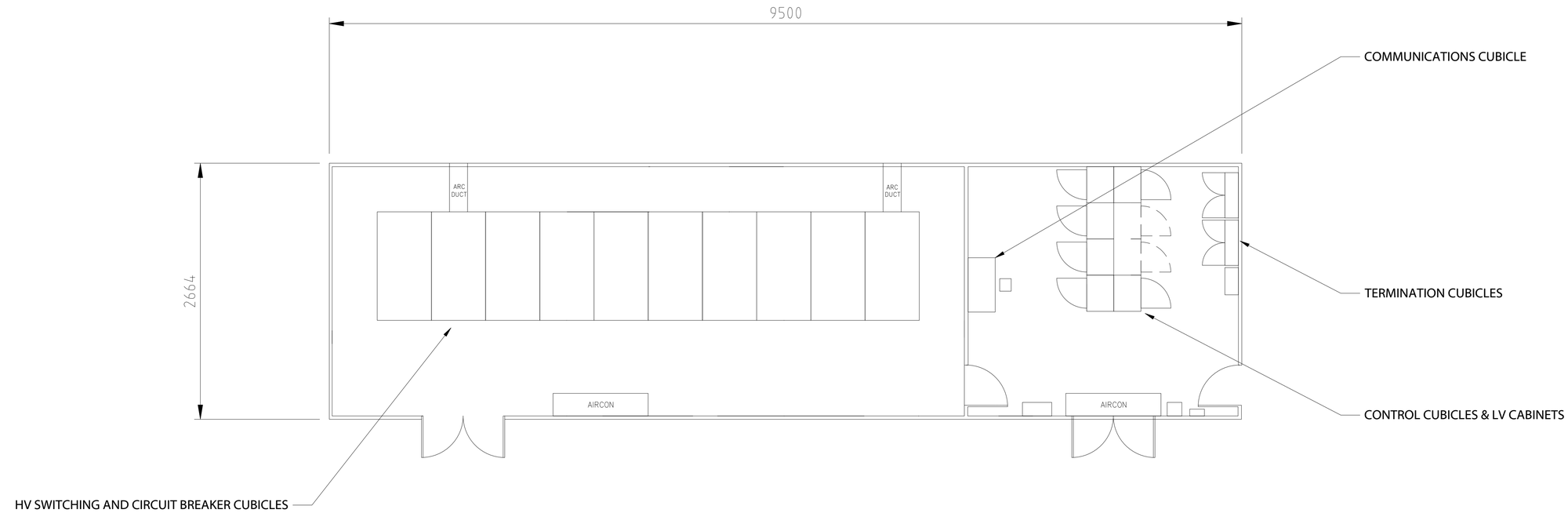
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TYPICAL DETAIL

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SWITCH ROOM AND CONTROL ROOM - PLAN VIEW

SCALE 1:50

0 0.5 1 2 3
Full Size 1:50 ; Half Reduction 1:100
SCALE (m)

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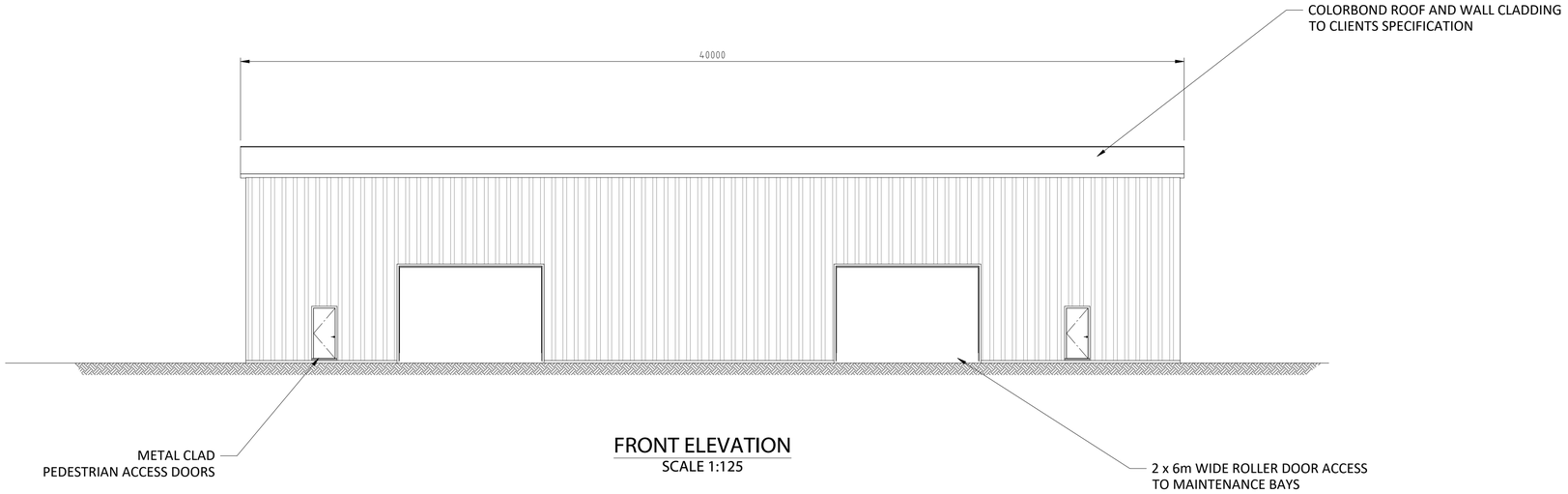
TITLE: SWITCH ROOM AND CONTROL ROOM

PLAN VIEW

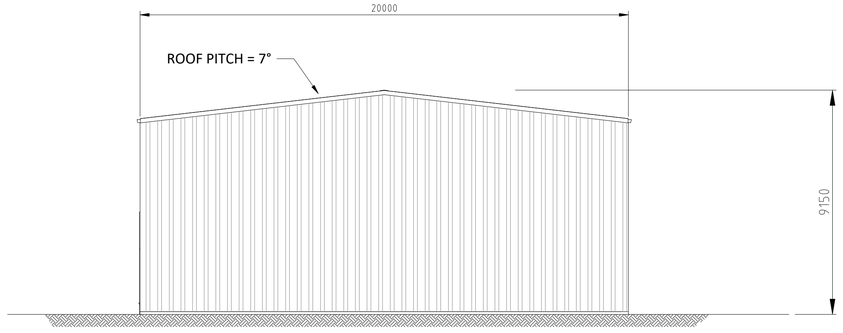
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FRONT ELEVATION
SCALE 1:125



SIDE ELEVATION
SCALE 1:125

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SCALE (m)

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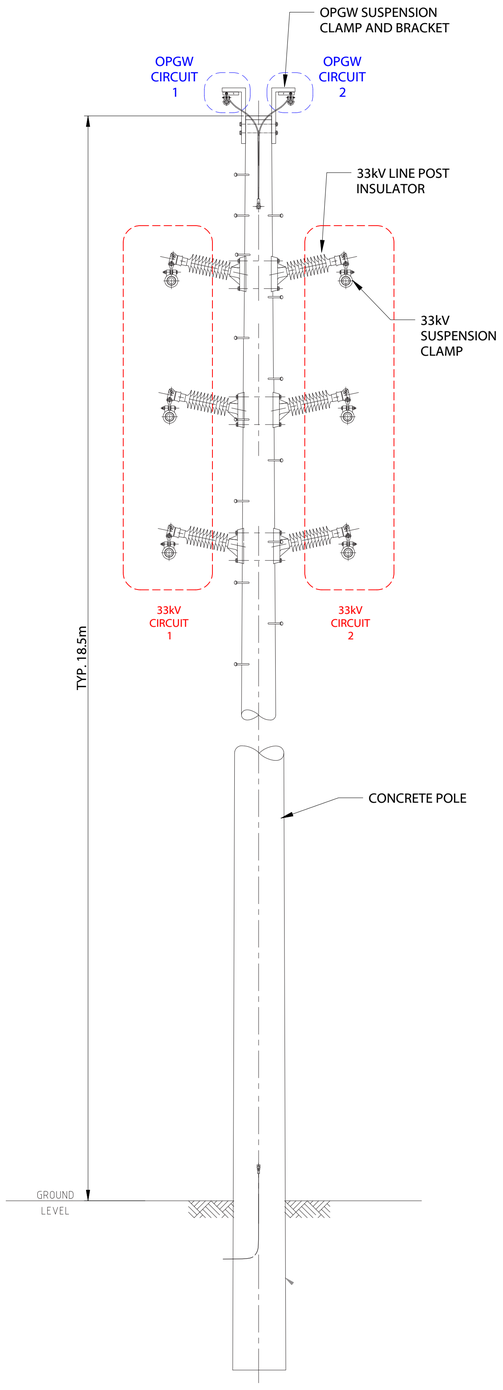
PROJECT: WEASEL SOLAR FARM AND BESS
TASMANIA, AUSTRALIA (42°17'20"S, 146°57'29"E)

TITLE: OPERATIONS AND MAINTENANCE BUILDING
ELEVATIONS

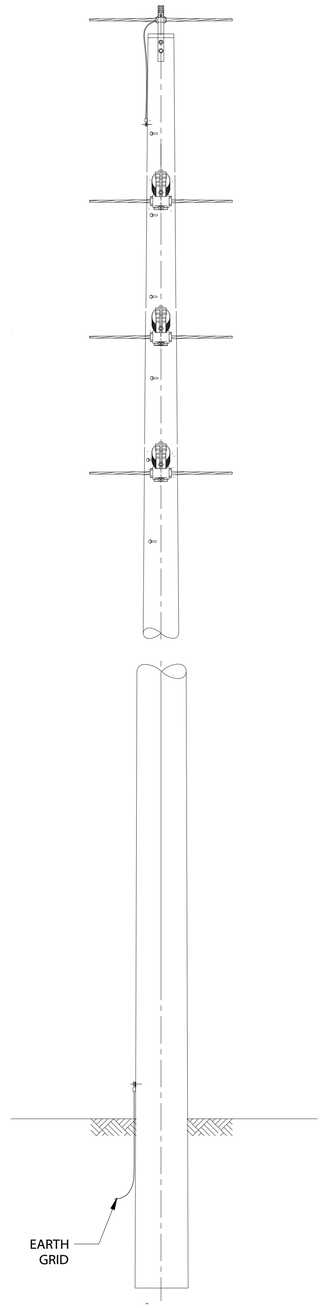
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FRONT ELEVATION
33kV DOUBLE CIRCUIT VERTICAL POST STRUCTURE



SIDE ELEVATION
33kV DOUBLE CIRCUIT VERTICAL POST STRUCTURE

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LANDSCAPE AND VISUAL IMPACT ASSESSMENT

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PREPARED FOR: WEASEL SOLAR FARM PTY LTD
C/O ROBERT LUXMOORE PTY LTD
DATE: 26 SEPTEMBER 2024

Human Habitats

Document Information

Issue Date	26 September 2024	**Prepared for**	Weasel Solar Farm Pty Ltd c/o Robert Luxmoore Pty Ltd
Prepared by	TA	**Reviewed by**	PH
Project No.	14296	**Project Name.**	3236, 3415 and 3759 Highland Lakes Road, Bothwell, Tasmania

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1 Introduction

1.1 Overview

Weasel Solar Farm Pty Ltd, the applicant, intends to lodge a Planning Application for the establishment of a solar energy generation facility on Highland Lakes Road in Bothwell, Tasmania. The Weasel Solar Farm, referred to as The Project, is situated approximately nine kilometres north/north-west of the town (refer to Figure 1).

The project encompasses the installation of individual solar panels and spread across approximately 435 hectares (ha) of a total site area of 3840 ha. The project includes the installation of internal transmission infrastructure, connection point and associated substation, a new access track, construction compound area and Battery Energy Storage System (BESS).

The site is situated on the following properties:

- 'The Weasel' – 3415 Highland Lakes Road, Bothwell TAS 7030
- 'Weasel Plains' – 3236 Highland Lakes Road, Bothwell TAS 7030 and
- 'Rockford' – 3759 Highland Lakes Road Bothwell TAS 7030

The development is planned to be located on the eastern side of Highland Lakes Road, on land designated entirely as Zone 21 (Agriculture).

This report, prepared by Human Habitats, provides a Landscape and Visual Impact Assessment (LVIA) to be included in the Planning Application



Figure 1 – Medium-range landscape view from Waddamana Road, looking across Highland Lakes Road toward north-central Project area.

1.2 The Proposal

The project is situated along the eastern side of Highland Lakes Road (A5) in the Central Highlands area of Tasmania, 9 kilometres north of Bothwell and 72 kilometres north of Hobart. Across three adjacent addresses, the total site spans 3,840 hectares.

The key components, and associated areas proposed comprise approximately 435 hectares of the total site.

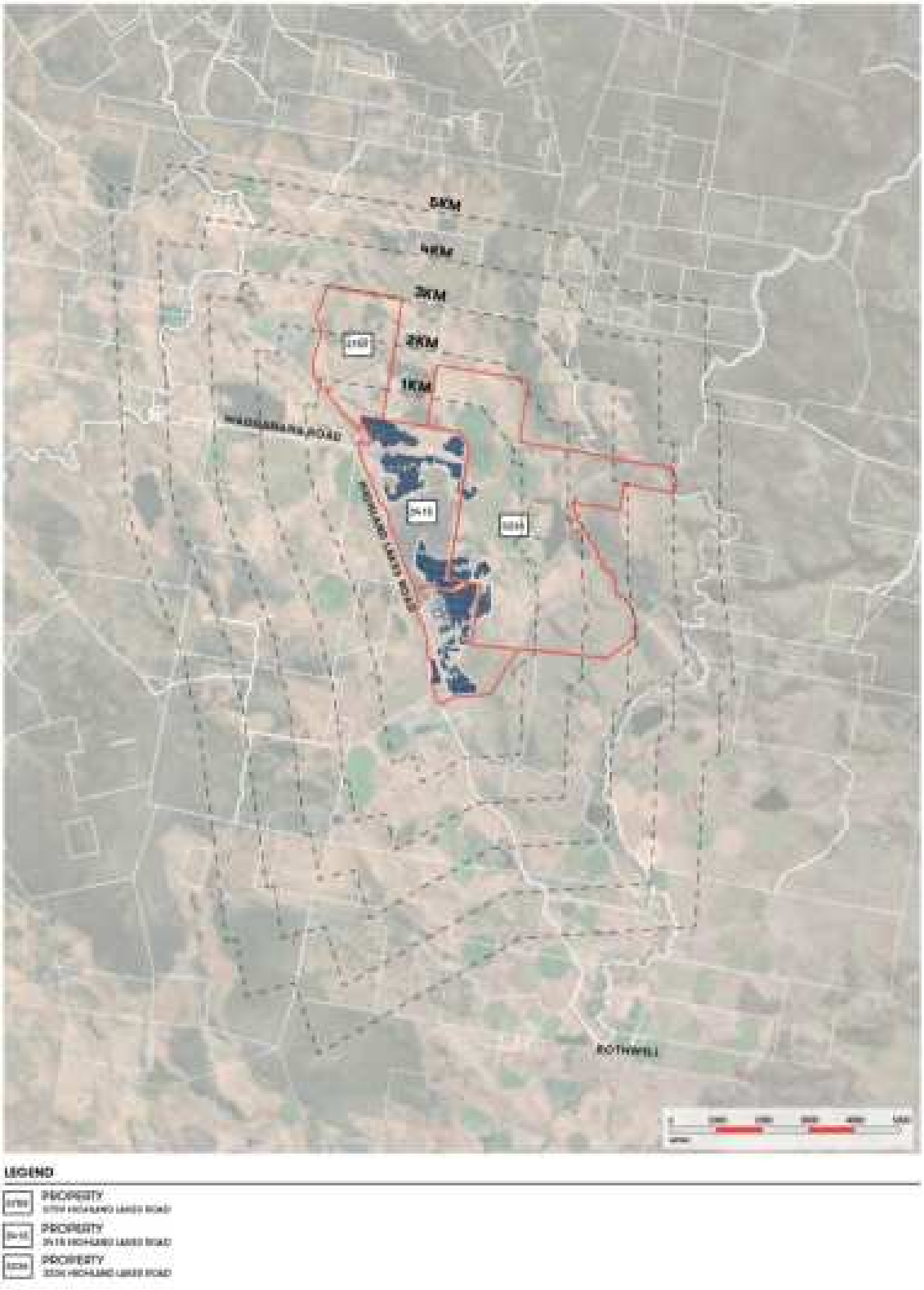


Figure 2 - High level context map showing property boundaries and main panel / infrastructure areas for reference

1.3 Purpose and Scope of this Report

The Landscape and Visual Impact Assessment (LVIA) encompasses both landscape and visual assessments within the study area:

Landscape Assessment:

- Focuses on the potential effects on the character and quality of the landscape setting.
- Considers the landscape as an environmental resource, independent of specific views.
- Examines how proposed changes may impact the overall landscape context.

Visual Impact Assessment:

- Addresses potential effects on visual resources within the setting.
- Considers changes in view composition and quality.
- Considers people's responses to likely alterations to the landscape of their setting.
- Evaluates the overall effect on visual amenity.

1.4 Structure of this report

Methodology – an overview of the methodology applied to the assessment of the project.

Description of the project – a description of the scale, form and materiality of the project.

Relevant planning considerations – a review of planning controls of relevance to landscape and visual matters

Site context and landscape appraisal – a description of the landscape attributes of the Subject Site and its surrounding context, and an assessment of landscape impacts.

Visual impact assessment – a detailed assessment of the visual impacts on key sensitive viewpoints.

Amelioration strategies – recommended actions to reduce the visual impact of the project.

Summary of findings – a brief summation of the key assessment findings

2 Methodology

The approach used to assess landscape and visual impacts of the existing landscape draws upon the principles outlined in the "Guidelines for Landscape and Visual Impact Assessment" (third edition) by The Landscape Institute and the Institute of Environmental Management & Assessment.

This comprehensive guide represents a "best practice" approach and has been extensively tested since 1995 across various project types, including extractive industry projects, wind farms, property developments, and road infrastructure. By adhering to these guidelines, practitioners can effectively evaluate the visual and environmental effects of proposed developments on the surrounding landscape.

2.1 Visual Impact

Visual assessment methodologies evaluate the viewer sensitivity of different land use types and their associated user groups. The level of sensitivity is considered in relation to the degree of visual change that a proposed development might bring to its setting. An impact level is then assigned based on this analysis.

This approach ensures a comprehensive understanding of how a development could alter the visual landscape and affect various stakeholders. It is a crucial step in planning and design, aiming to minimize negative visual impacts while enhancing the environment.

2.1.1 Viewer Sensitivity

The viewer sensitivity of a development depends on a range of visual characteristics. The primary characteristics used in this report includes:

- Land use;
- Distance of the development from viewers; and
- Level of visibility from visually sensitive land use areas

The assessment methodologies for visual impact consider the viewer sensitivity associated with different types of land use and their user groups. Uses that are considered to have higher viewer sensitivity include public parks, open spaces, residential areas, and major roadways, all of which are integral to the project area's setting.

The next consideration in rating the level of viewer sensitivity is the distance of the development from the identified visual use area. There are three viewing situations to consider:

- Foreground (0 - 1 km);
- Middleground (1 km – 4 km); and
- Background (> 4 km)

As the distance increases from a proposed development to a sensitive land use area, the level of viewer sensitivity decreases based on a perceptual dis-association based on a reduction in relative proximity.

High viewer sensitivity uses include:

- Rural residences/townships;
- Designated tourist routes and major highways;
- National Parks and recreational areas; and
- Tourist accommodation and attractions

Low sensitivity uses include:

- Agricultural land uses;
- Plantations and forestry;
- Mining; and
- Service infrastructure.

Visual Use Area	Foreground		Middleground		Background
	Local Setting		Sub-Regional Setting		Regional Setting
	0 - 0.5 km	0.5-1 km	1-2 km	2-4 km	> 4 km
Residences / Townships	H	H	H	M	L
Tourist Routes / Major Highways *i.e. Highland Lakes Road*	H	H	M	M	L
Secondary Roads	M	L	L	L	VL
Local Roads *i.e. Waddamanna Road*	L	L	L	VL	VL
Agricultural Areas	L	L	L	VL	VL
Forestry	VL	VL	VL	VL	VL

Table 1 - Typical viewer sensitivity

2.1.2 Magnitude of Change

The determination of visual impact is not just based on visibility but also on how well an element visually integrates with its surroundings and meets the expectations of viewers for that environment.

Visual impacts occur when sensitive viewers encounter proposed elements that starkly contrast with or are incompatible with the landscape character of the setting.

The magnitude of change to views and visual amenity depends on several factors:

Size or Scale of Change:

Consider the extent of change within the view. This includes:

- Loss or addition of features in the view.
- Alterations in the composition of the view.
- How well new features integrate with the existing landscape (consider form, scale, mass, line, height, colour, and texture).
- The nature of the view itself (e.g., whether it's experienced continuously or in glimpses).

Geographical Extent of Visual Effect:

Different viewpoints contribute to the overall impact:

Direction of View:

The direction from which viewers observe the proposed development. Consideration is given to how the view aligns with the main activity of the receptor (person observing).

Distance from the Viewpoint to the Proposed Development:

- Closer viewpoints may experience more pronounced effects.
- Distant viewpoints might perceive changes differently.

Visible Area:

- Evaluate the area over which the changes are visible.
- Some alterations may be localized, while others affect a broader landscape.

Duration of view:

- Static – long for residences, moderate for recreational uses.
- Dynamic/ Moving – moderate for walkers and cyclists, short for cars and public transport.

Speed of moving viewpoint

- As the speed of the viewer increases, visual concentration on a smaller fixed area increases and the extent of peripheral vision diminishes, effectively reducing the visual field of view. Additionally, the ability to discern foreground detail diminishes.

Magnitude ratings can vary from High (significant change) to Negligible (minimal change).

2.1.3 Determination of Visual Impact

Visual impacts are assessed and graded as High, Moderate, Low, or Negligible. A matrix combines sensitivity and magnitude ratings to determine an overall 'Significance of Visual Effects' rating. This rating is described as High, High to Moderate, Moderate, Moderate to Low, Low, or Negligible in relation to the existing environment (see Table 1).

High and High to Moderate ratings are considered significant. Importantly, the rating itself does not imply a value judgment regarding whether the visual change is positive or negative for the landscape character or the views seen by receptors.

		Magnitude			
		High	**Moderate**	**Low**	**Negligible**
Sensitivity	**High**	High	High to Moderate	Moderate	Negligible
	Moderate	High to Moderate	Moderate	Moderate to Low	Negligible
	Low	Moderate	Moderate to Low	Low	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

Table 2 - Visual impact determination matrix

2.1.4 Residual Visual Impact

The efficacy of the suggested mitigation strategies in lessening the landscape and visual consequences arising from the Project is illustrated by contrasting the visual effect during the initial operation with the remaining impact when the proposed landscape strategies have largely matured, typically a decade after the initial establishment. As a rule of thumb, residual impacts are likely to be diminished by a minimum of one level where landscape strategies have been suggested and matured, as they filter or obstruct views towards the Project.

2.1.5 Mitigation Measures and Landscape Strategy Response

Potential actions to mitigate visual impacts on key sensitive viewpoints are recommended, and a landscape concept plan has been prepared in response to identified landscape character and visual impacts. The proposed planting will be shown in the photomontages at varying stages of maturity. Note these measures are intended to ameliorate the Project, but this does not mean it must be completely hidden from view.

2.1.6 Viewshed analysis

In the context of assessing the visual impact of a proposed project, a technique called Zone of Visual Influence (ZVI) modelling was employed utilising a digital terrain model (DTM). This method helps identify the potential viewshed and visual receptors and areas that might be subject to views of the Project.

The ZVI analysis process provides mapping which is worst case with regards to visibility, as only the screening effects of topography are considered, and not vegetation.

2.2 Landscape Assessment

2.2.1 Landscape Character Zones

A Landscape Character Assessment was conducted. This process discerns the unique attributes of a location, without necessarily attributing a value to it. It takes into account how various elements of the environment - both natural (such as the influences of geology, soils, climate, flora and fauna) and cultural (like the historical and current impact of land use, settlement, enclosure and other human interventions) - interact and are perceived to create a unique pattern, which imparts its specific sense of place.

To establish a framework that allows for a more detailed description of the area and an assessment of how the Project would impact the elements that constitute the landscape, the aesthetic and perceptual aspects of the landscape, and its unique character, distinct sections of the overall landscape have been individually defined and mapped as 'Landscape Character Zones' (LCZs).

2.2.2 Landscape scenic quality/ values

A methodology for a prior investigation of Victorian landscapes, titled "Landscape character types of Victoria: with frames of reference for scenic quality assessment" (Leonard, 1984), has been utilized as a foundation for evaluating the scenic quality of the Site within the Study Area and the broader regional context. This study, grounded in the formal aesthetic model, characterizes landscape based on formal properties derived from expert evaluations. The descriptions are rooted in the diversity of landform, vegetation covers, and watercourses. A descriptive criterion for scenic values is developed for each landscape character type, outlining the relative range of scenic quality (high, moderate, and low) within each broad landscape character type.

According to the Visual Resource Management assumptions applied in this study (Leonard, 1984, p. 60), scenic quality escalates with:

- Increased uniqueness in rock outcropping, water, sub-alpine heathlands, and other natural features;
- Increased naturalness and decreased man-made alterations;
- Increased vegetative diversity and overall landscape variety;
- Increased vegetative diversity and green crop patchwork in agricultural landscapes; and
- Increased vegetative mixture and edge diversity in coniferous plantations.

This study provides a mapping of scenic quality and frames of reference for each character type and subtype. The high scenic quality classification is assigned where one or more of these elements (Landform, Vegetation, or Water form) are evaluated as high.

These same attributes are used to define landscape sensitivity and scenic quality values in the NSW Department of Planning and Environment, Solar Farm Technical Supplement - Landscape and Visual Impact Assessment (refer to Figure 3 and Figure 4).

Viewpoint type	Very low viewpoint sensitivity	Low viewpoint sensitivity	Moderate viewpoint sensitivity
Landform	Large expanses of flat or gently undulating terrain. Indistinct, dissected or unbroken landforms that provide little illusion of spatial definition or landmarks with which to orient.	Steep, hilly and undulating ranges that are not visually dominant Broad shallow valleys Moderately deep gorges or moderately steep valley walls Minor rock outcrops	Isolated peaks, steep rocky ridges, cones or escarpments with distinctive form and/or colour contrast that become focal points Large areas of distinctive rock outcrops or boulders Well defined, steep sided valley gorges
Vegetation	Extensively cleared and cropped areas with very limited variation in colour and texture Pastoral areas, human created paddocks, pastures or grasslands and associated buildings typical of grazing lands	Predominantly open forest or woodland combined with some natural openings in patterns that offer some visual relief Vegetative stands that exhibit a range of size, form, colour, texture and spacing including human influenced vegetation such as vineyards, and orchards	Strongly defined patterns with combinations of native forest, naturally appearing openings, streamside vegetation and/or scattered exotics Distinctive stands of vegetation that may create unusual forms, colours or textures in comparison to surrounding vegetation
Waterbodies	Absence of natural waterbody Farm dams, irrigation canals or stormwater infrastructure	Intermittent streams, lakes, rivers, swamps and reservoirs	Visually prominent lakes, reservoirs, rivers, streams, wetlands and swamps Presence of harbour, inlet, bay or open ocean
Social / cultural	Places of worship, cemeteries/memorial parks, private open spaces	Local heritage sites Distinguishable entry ways to a regional city identified in the Transport and Infrastructure SEPP	Culturally important sites, world heritage areas, national parks/reserves. Commonwealth and state heritage sites
Human presence	Dominating presence of infrastructure, human settlements, highly modified landscapes and higher density populations such as regional cities, industrial areas, agricultural transport or electricity infrastructure	Dispersed yet evident presence of human settlement such as villages, small towns, isolated pockets of production and industry, lower scale and trafficked transport infrastructure	Natural/undisturbed landscape Minimal evidence of human presence and production

Table 3 - Frame of reference for scenic quality values (Source: NSW Department of Planning and Environment Technical Supplement - Landscape and Visual Impact Assessment)



Table 4 - Visual reference for scenic quality values (Source: NSW Department of Planning and Environment Technical Supplement - Landscape and Visual Impact Assessment).

2.2.3 Glint and Glare Assessment

Photovoltaic (PV) panels are designed to absorb sunlight and convert it into electricity and therefore, a key goal in PV panel design, manufacturing, and installation is to minimize light reflection from the panels. The dark, non-reflective nature of solar arrays also helps to reduce their visual contrast with the surrounding landscape.

SLR Consulting have conducted a glare and glint assessment using *ForgeSolar's GlareGauge* software. The assessment focused on annual hours of green and yellow glare at identified observation points (typically roads and residences).

Green glare has a low potential to cause an after-image when observed before a typical blink response time.

Yellow glare, on the other hand, has the potential to cause an after-image when observed before a typical blink response time.

The analysis does not account for obstacles (such as trees, topography, or buildings) between observation points and the proposed solar array. Therefore, the assessment represents a worst-case scenario, assuming unobstructed views.

2.2.4 Lighting Impacts

The AS-NZS-4282-2019 standard is designed to control the intrusive effects of outdoor lighting by providing guidelines for assessing and limiting lighting impacts. This standard delineates four environmental zones for outdoor lighting, each categorised by the extent of artificial lighting present in the area. For instance, national parks, being intrinsically dark landscapes, fall under Category A1, while city centres with high levels of nocturnal activity are classified as high district brightness areas (Category A4).

The primary objective of this standard is to minimise light spill. It is a universally accepted principle that, irrespective of the existing brightness of a specific location, light spill, especially upward light spill, should be minimised as much as possible.

3 Description of the Project

The Weasel Solar Farm is a large-scale solar project, with a nameplate capacity of up to 250MWp. It will be accompanied by a battery energy storage system (BESS) and electricity infrastructure including inverters and a switchyard containing an electrical substation to feed into the existing 220kV transmission line. Total title area for the Subject site is approximately 3,840 Hectares.

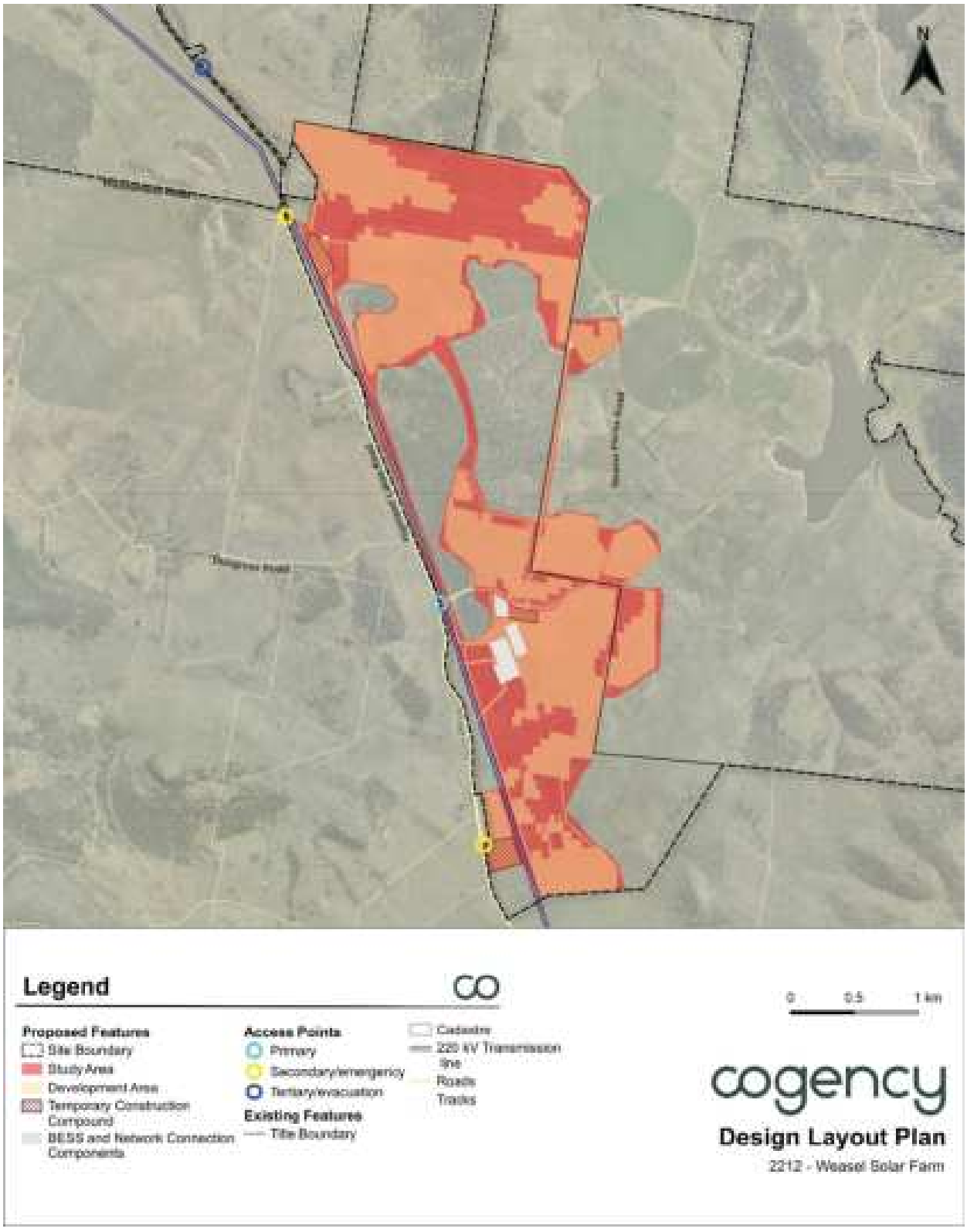


Figure 3 - Design Layout Plan provided by Cogency

The proposal includes land for construction, maintenance, and operation, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, and landscaping. Development area within the total site area is approximately 435 Hectares. The Proposal infrastructure occupies around 11 percent of total site area.

The works and components associated with the project include the following:

- Solar arrays: solar panels supported by a mounting system on piles, driven into the ground. The dimensions will be approximately 4.8 in width for the panel surface, 4m high when fully tilted, and around 3m when level (no tilt). The panel surface colour will be dark blue (refer Figure 1). The colour of any other supporting elements such as structural supports, structures and fencing will nominally be chosen to provide minimum colour contrast to their surroundings and reflectivity;

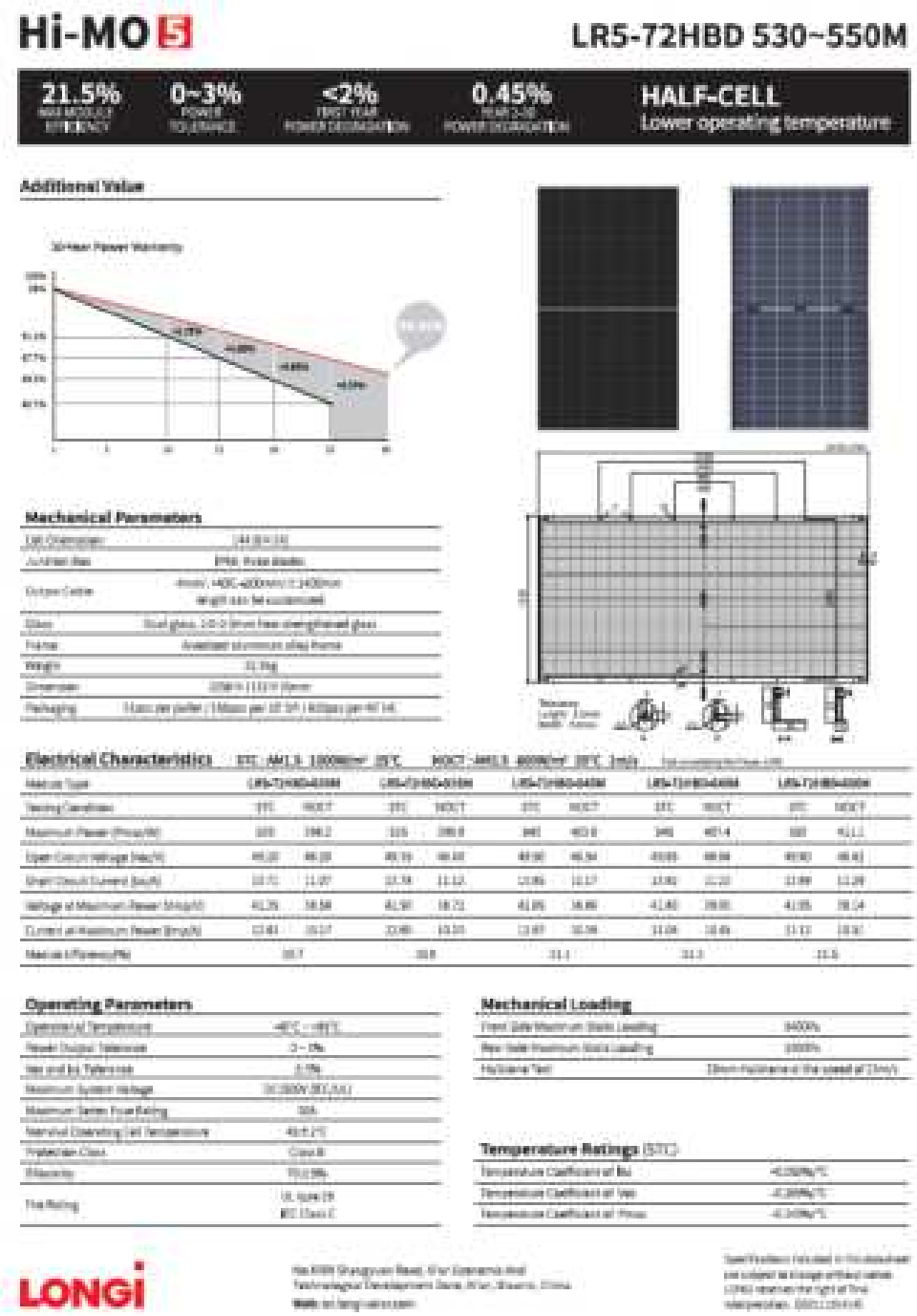


Figure 4 - Proposed Photovoltaic (PV) Module Datasheet

- The panels will be installed on a north to south orientated single axis tracking system that tilts the panels from east to west throughout the day. Maximum height is 4.5m when fully tilted.

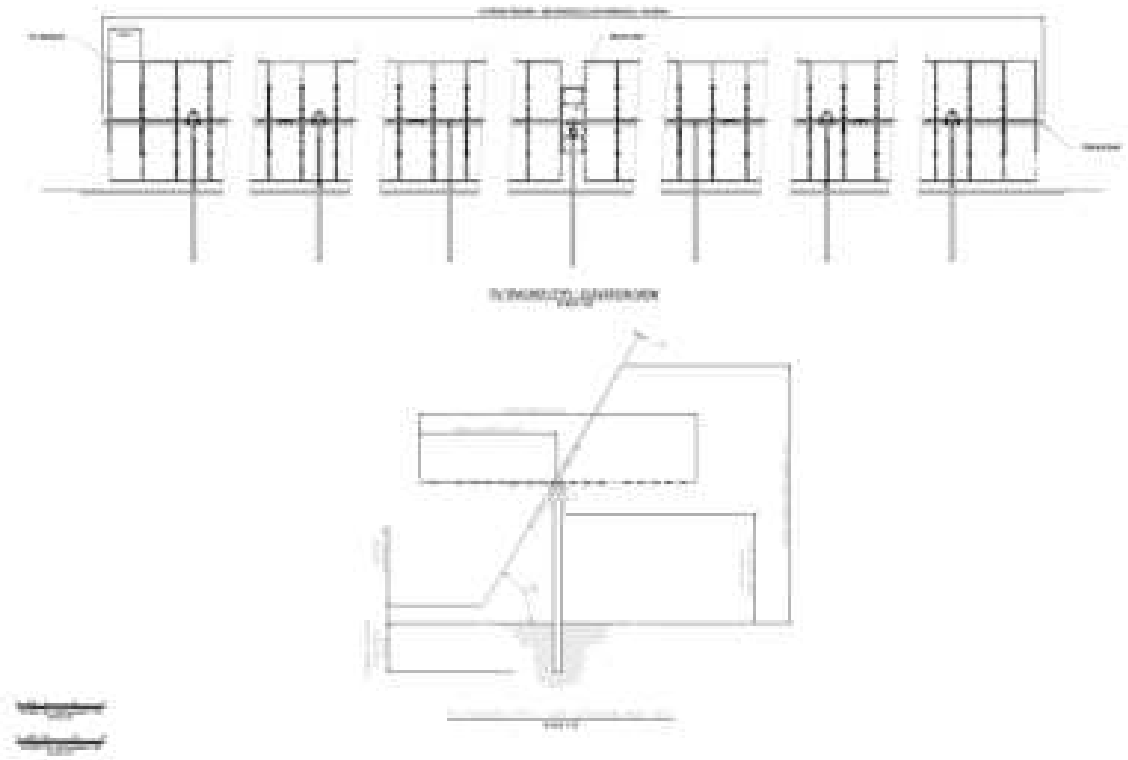


Figure 5 - Proposed tracking system specifications

- Central inverter units as required throughout the panel areas and associated with BESS infrastructure

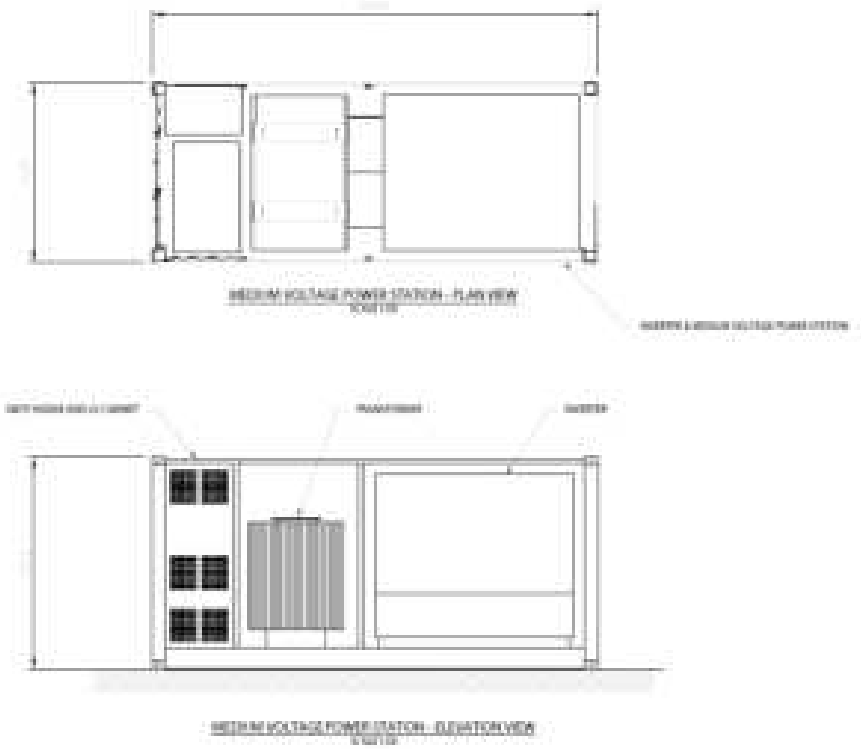


Figure 6 - Proposed inverter unit plan and elevation

- Cabling and electrical connections;
- Onsite access tracks (gravel) generally to 4m wide;
- A switchyard facility 122m long by 98m wide. Facility averages 10m in height

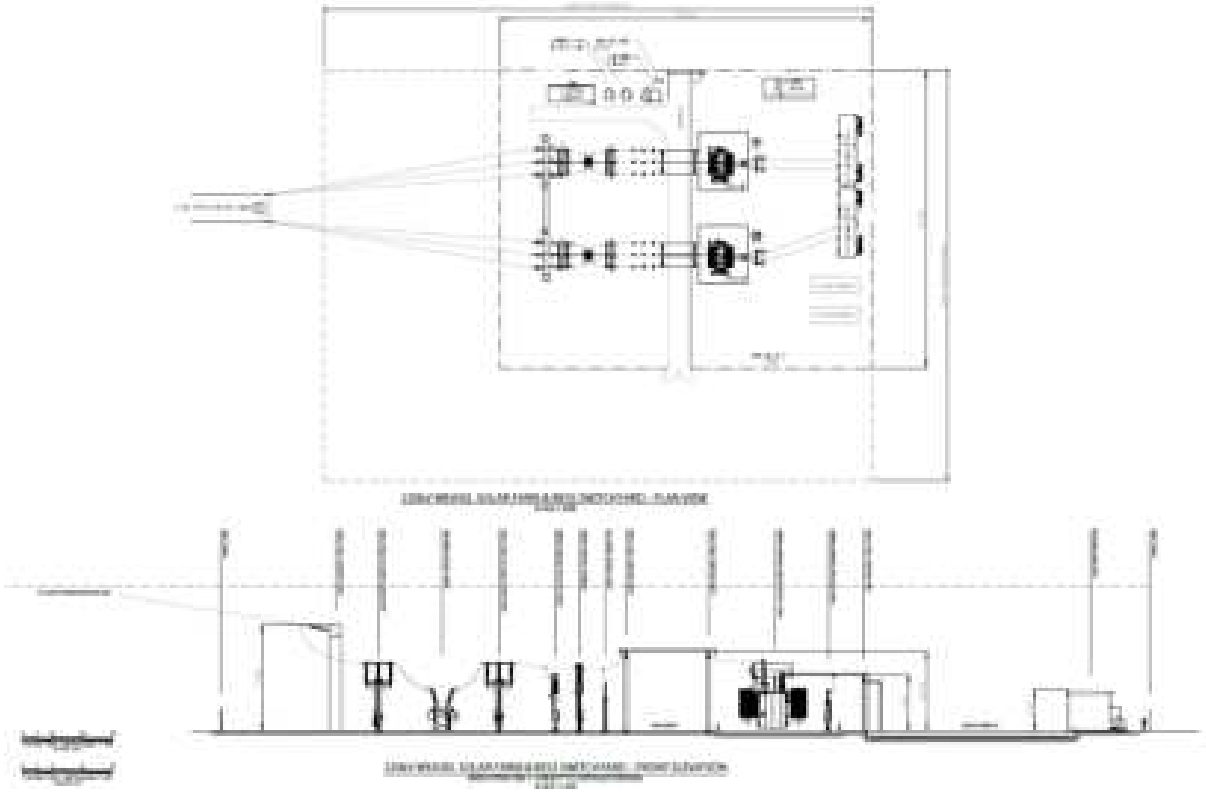


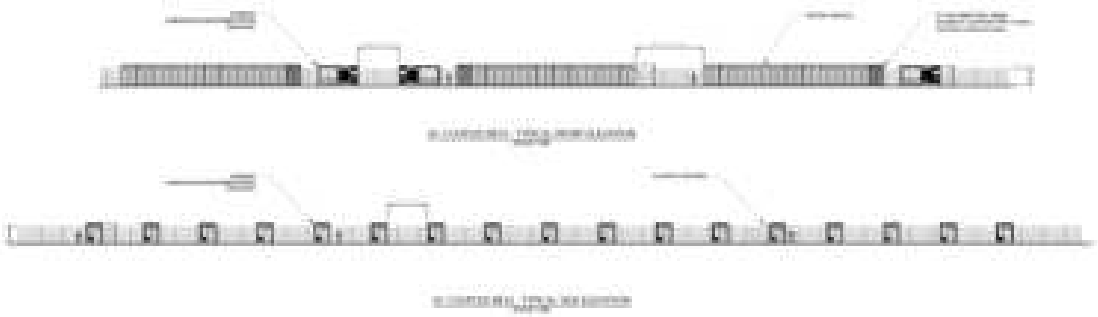
Figure 7 - Proposed switchyard facility

- A switch room and control room facility – approximately 9.5m long by 2.6m wide by 3m in height



Figure 8 - Proposed switch room and control facility

- A BESS facility occupying approximately 275m long by 115m wide by 3m in height



- Terminal structure and posts related to grid connection infrastructure. Typical height 18.5m

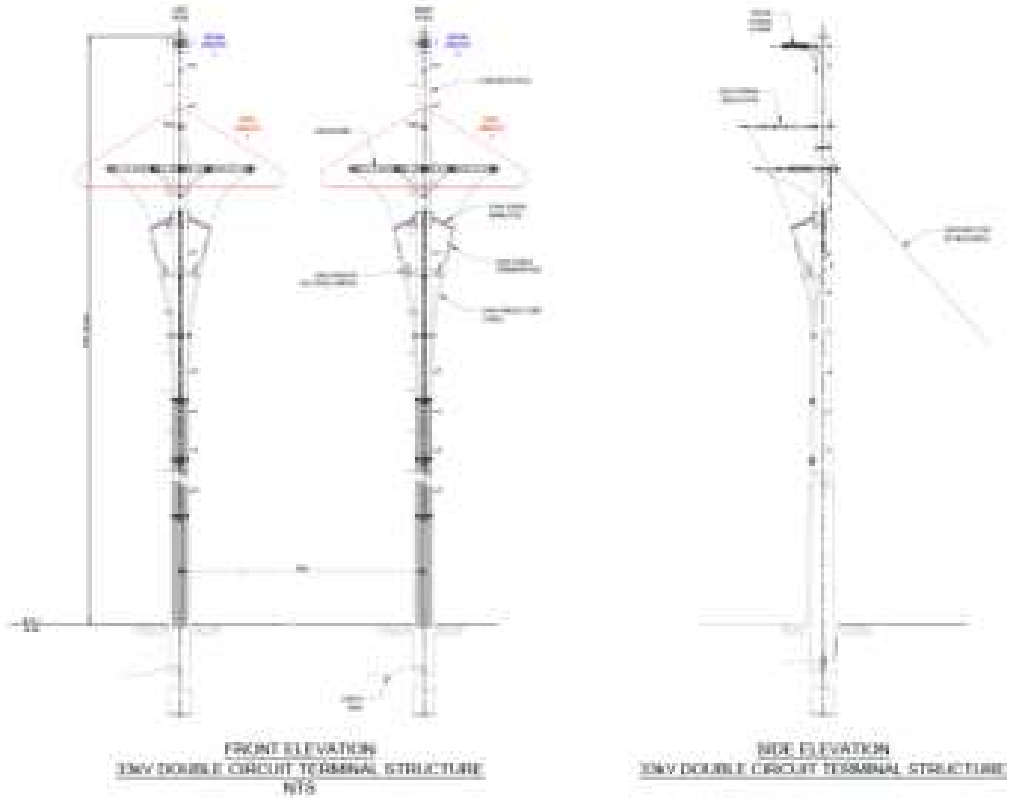


Figure 9 - Circuit terminal structure

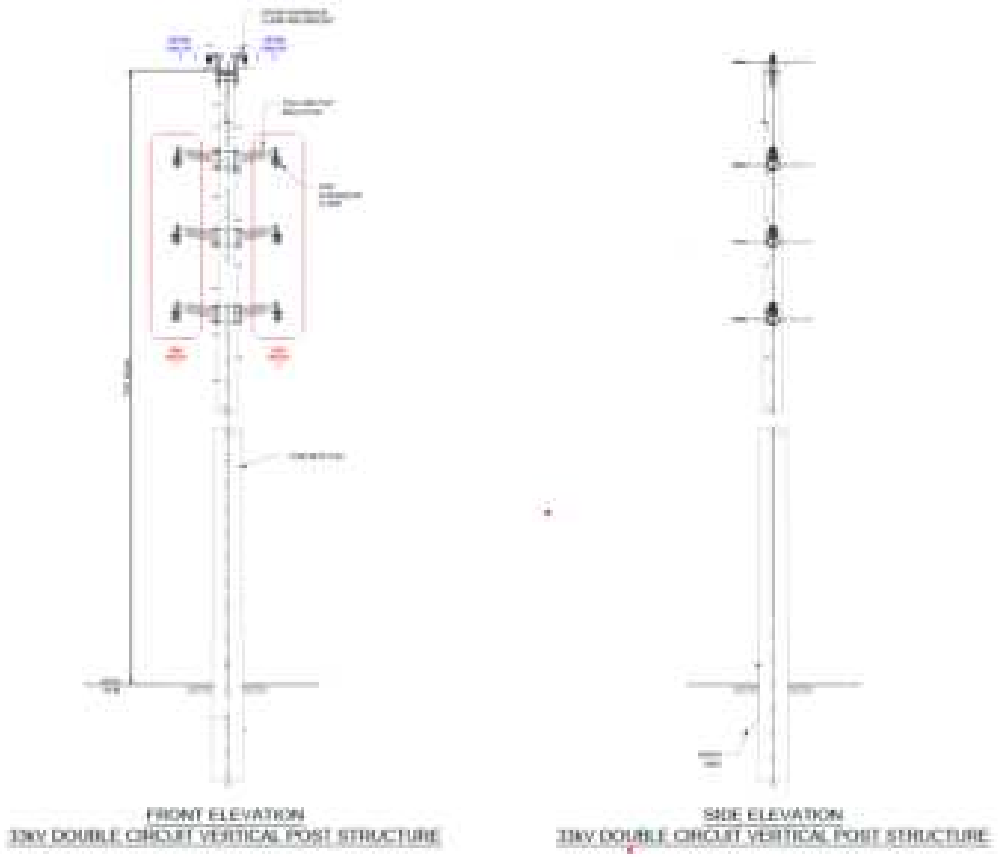


Figure 10 -33kv vertical post structures for grid connection

- Operations and Maintenance Building – 40m long by 20m wide, 9m in height

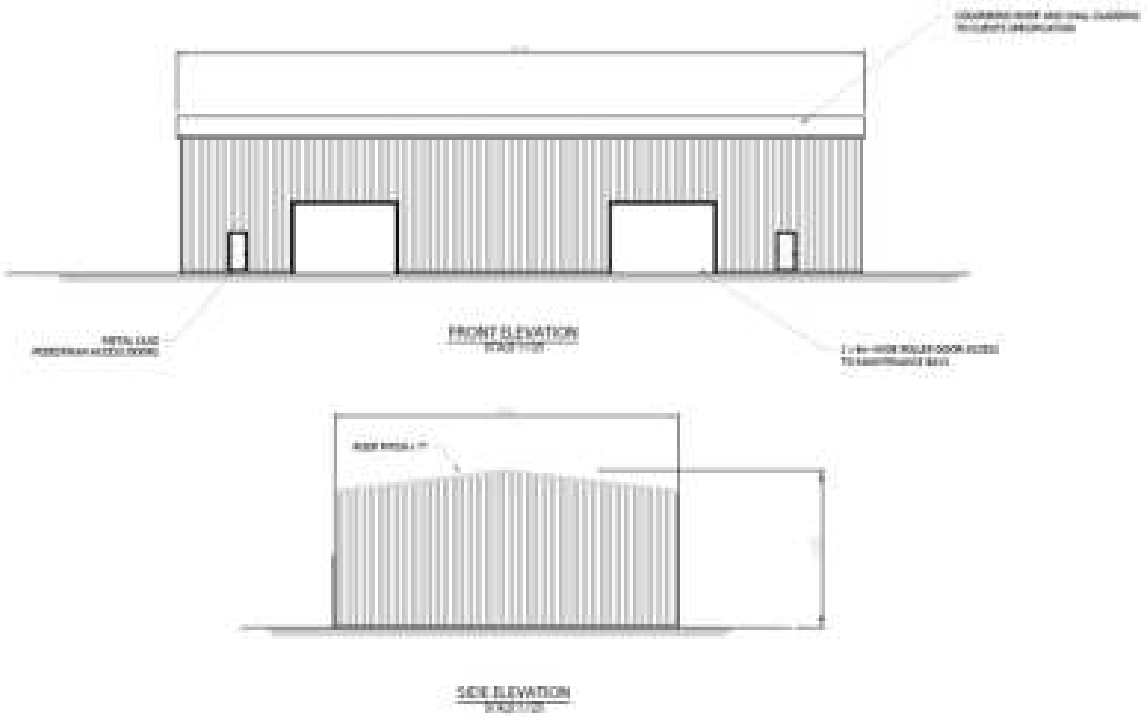


Figure 11 - Proposed Operations and Maintenance Building

- Chain mesh perimeter fence and gates (security fence up to approximately 2.5 m high with colour to be determined); and

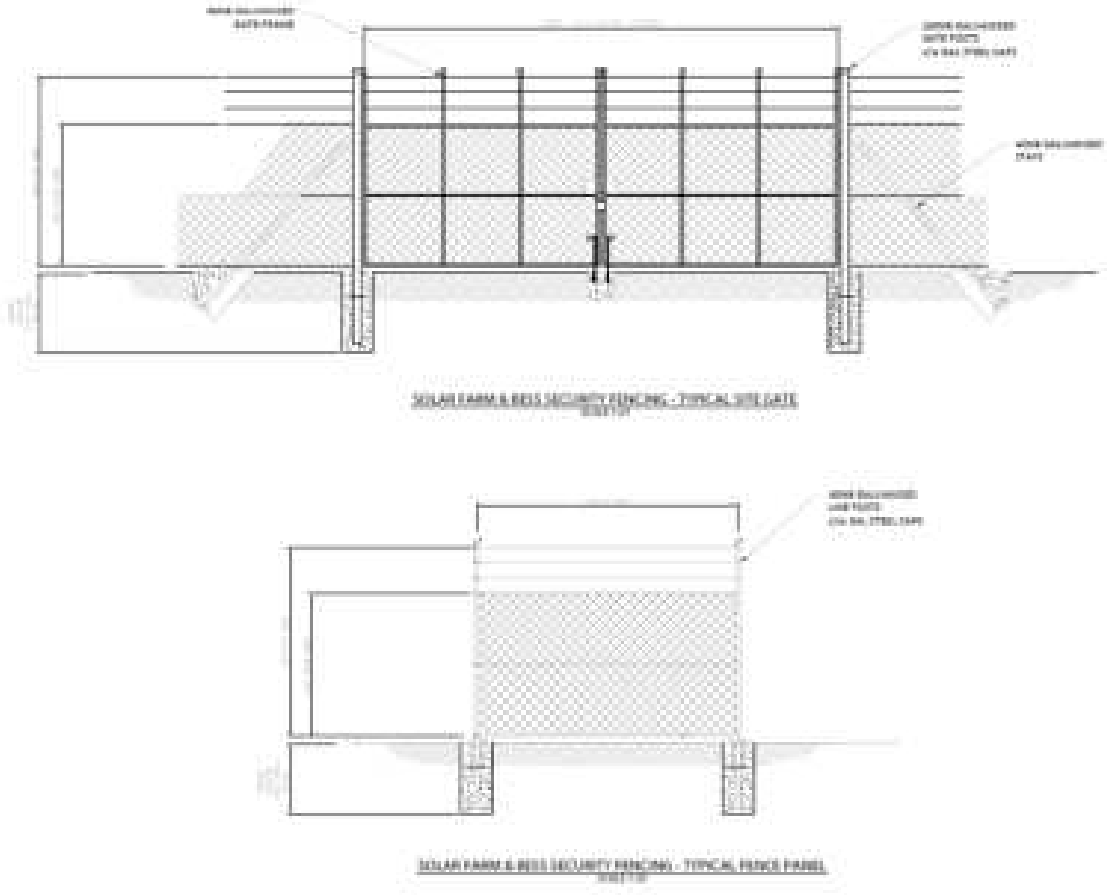


Figure 12 - Typical gate and fence diagrams

- Perimeter landscaping to sensitive frontages (refer Landscape Concept Plan provided in lodgement documentation)

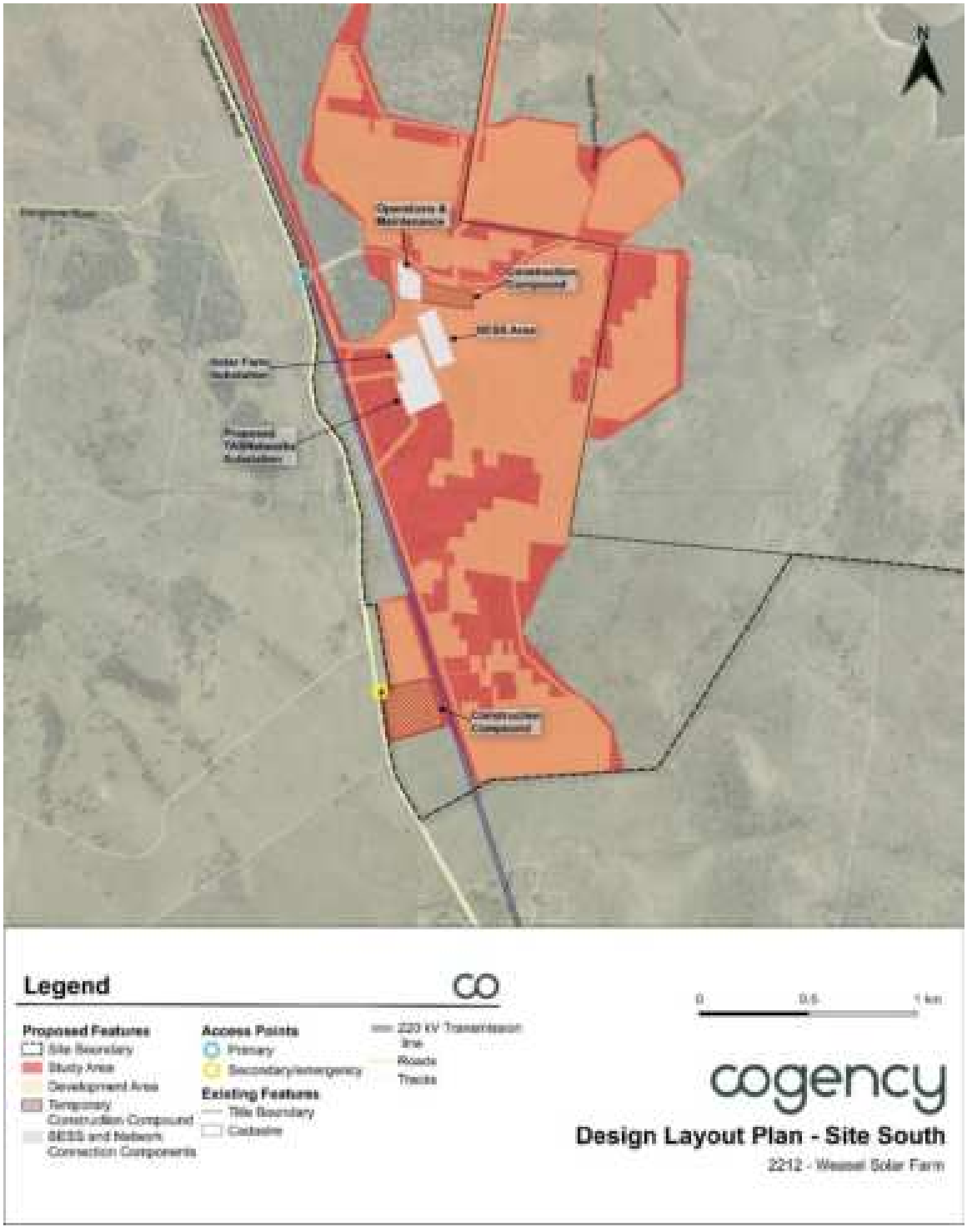


Figure 13 - South Site detailed layout plan, demonstrating particular infrastructure described and considered in report

4 Relevant Planning Considerations

4.1 State and Local Planning Policy

4.1.1 Zoning

The Project is located within the Central Highlands Council area. The entirety of the Subject Site is defined as Zone 21.0 – Agriculture Zone under the Tasmanian Planning Scheme. Highland Lakes Road is zoned Utilities. The site also sits within the Central Highlands Renewable Energy Zone (T3) AEMO.

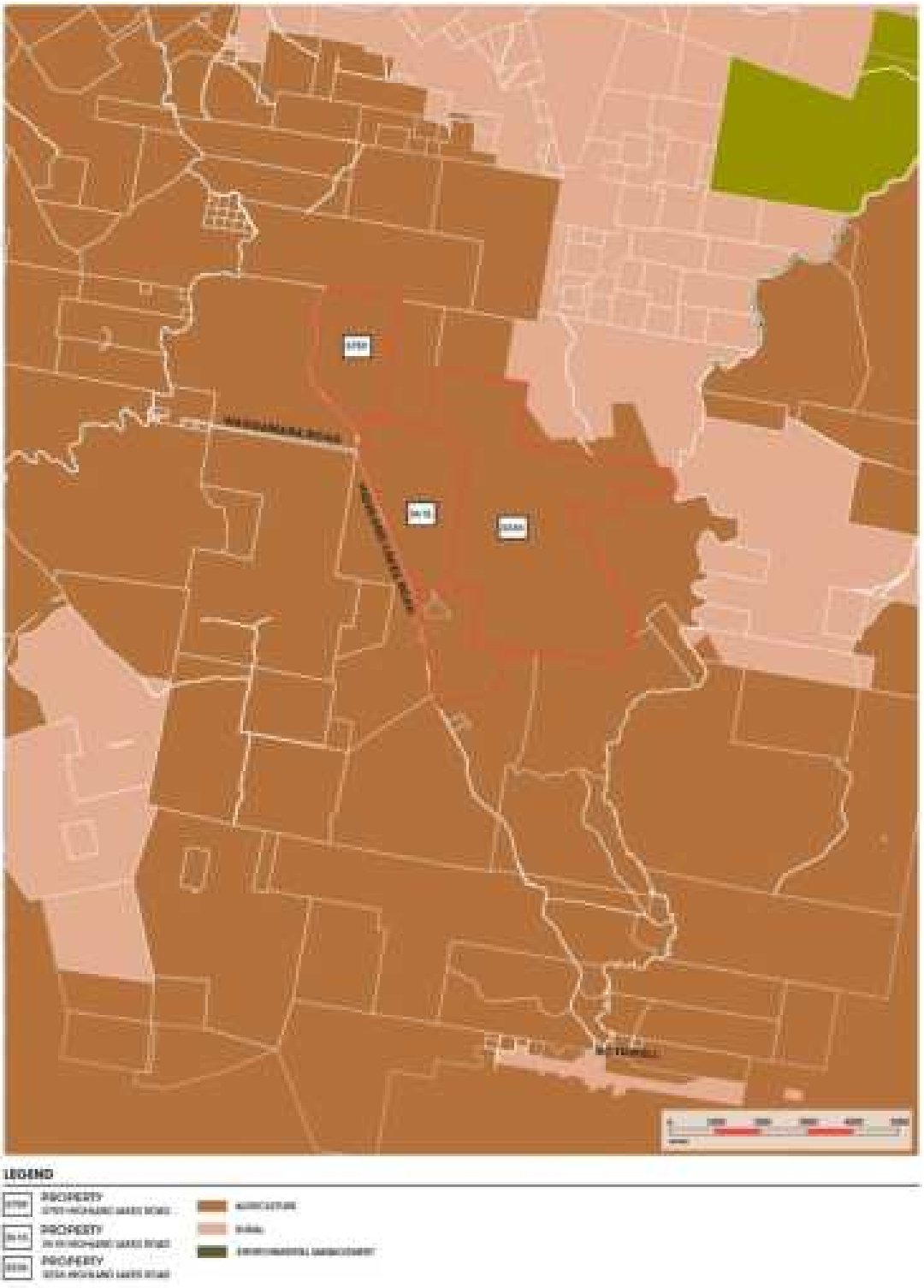


Figure 14 - Zoning Map (Source: Tasmanian Planning Scheme, via LISTMap)

4.1.2 Overlays

The site has several overlays which apply either in part or wholly across the site. These are as follows:

- C4.0 – Electricity Transmission Infrastructure Protection (partial)
- C7.0 – Natural Assets (partial)
- C10.0 – Bushfire-prone Area (whole)
- C15.0 – Landslip Hazard Code (partial)

Of these, only the Natural Assets overlay is relevant to landscape values as it's stated objectives for Priority Vegetation Areas (the only sub-category of overlay that is relevant to the properties) are to provide protection of:

- Threatened native vegetation communities listed under the Nature Conservation Act 2002;
- Threatened flora species
- Significant habitat for threatened fauna species; and
- Other locally important native vegetation

Note that the Project almost exclusively is to be constructed within the open grazing land areas of the site, and predominantly not within areas of native vegetation, as per the provided context and layout maps.



Figure 15 - View from Highland Lakes Road, looking south toward southern portion of Subject Site



Figure 16 - Photograph looking south-east toward southern portion of north region of Project



Figure 17 - View from Highland Lakes Road, looking north toward southern boundary of Subject Site

5 Site Context and Landscape Appraisal

5.1 Site Context

5.1.1 Land Use

The site, as with much of the surrounding area, is predominantly utilised for broadacre grazing purposes. Some areas of irrigated cropland are located to the east of the development area. The Project intends for agrisolar principles to be utilised within the development, allowing sheep grazing to be continued within the solar panel areas into the future.

As per Figure 6 below, there is a significant area of forestry located to the east and north-east of property 3236. The overall property area itself falls into the same categories prevalent throughout a large portion of the surrounding area, these being mainly grazing related, with smaller zones of pivot irrigated cropland. Some areas are noted as 'other minimal uses', and appear to align with areas observed on site and via aerial photography as being tracts of native vegetation.

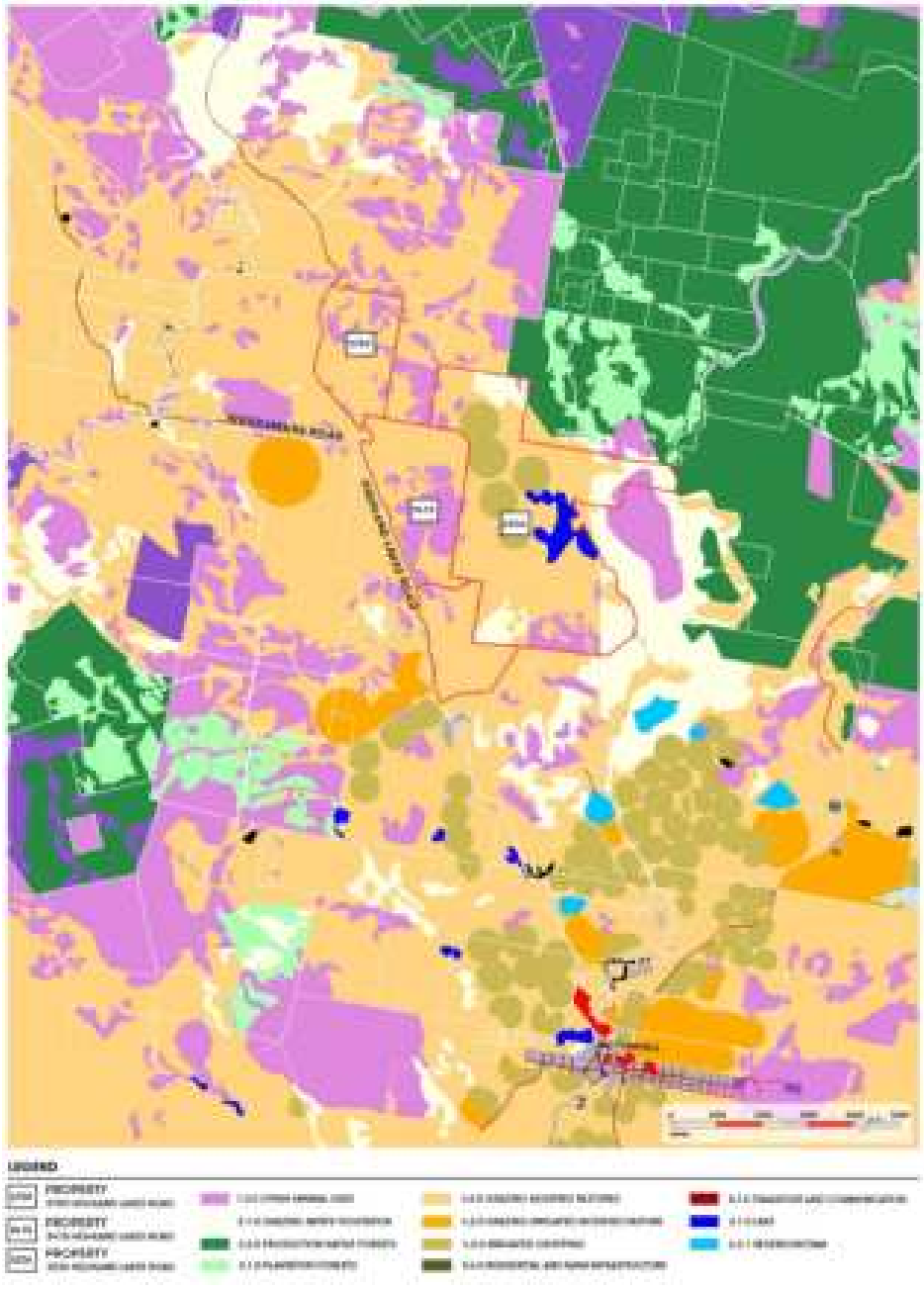


Figure 18 - Generalised Land Use 2021 (Source: Department of Natural Resources and Environment Tasmania, via LISTMap)

Existing electrical infrastructure elements are often visually prominent in the landscape. The largest elements within the area surrounding the site are the electrical transmission lines which cut across many properties, including two properties which are part of the Project site. There are also above-ground electrical distribution lines running along Highland Lakes Road itself. (refer to Figure 9 and 10)

Highland Lakes Road is classified Category 5 in the Tasmanian State Road Hierarchy, the lowest listed level in the hierarchy, denoting it as 'primarily access roads for private properties, low-frequency heavy vehicle transport such as logging or farm access'. Despite this, the road does have a role as part of a broader tourism route through the Central Highlands region. As such, it has been assessed with regular tourist driving usage in consideration.



Figure 19 - View from Highland Lakes Road, showing existing high voltage transmission lines transiting through the properties containing the Project



Figure 20 - View from Highland Lakes Road, showing existing high voltage transmission lines transiting through the properties containing the Project. Also visible along the right-hand side of Highland Lakes Road in the middleground of the photo are above-ground electrical distribution lines.

5.1.2 Landscape Character Zones (LCZ)

For the purposes of this report, we have referenced Chapter 7 of the document *'A Manual for Forest Landscape Management'* by the Forest Practices Authority (FPA), republished October 2006 by the Forest Practice Board, Tasmania. This document discusses very clearly the different landscape character zones across Tasmania and provides a clear and succinct methodology for ascertaining the various scenic qualities, and quality of such, across sites located within each zone.

As per Figure 6 below, the site is located within *Zone 5 - Eastern Hills and Plains* character zone, and we have used the analysis related to this zone as the basis for analysis and visual assessment.



Figure 21 - Landscape Character Types of Tasmania (p. 160, 'A Manual for Forest Landscape Management', FPA Tasmania, 2006)

As per page 163 of that document, in describing Zone 5 the author provides the following:

"This low-rainfall region includes most of the drier parts of the State. The dry grasslands of the extensive low plains to the north-west change to dry, regularly burnt woodlands and forests on mountain tiers and sugarloaves to the east and south. Forestry and wool growing are major industries. The broad river drainages of the Derwent and Tamar are flooded estuaries indented deeply into the coastline."

As a further measure and consideration of landscape character designation, we have reviewed the site and surrounding area as it pertains to classifications within the Interim Biogeographic Regionalisation Australia (IBRA) system. The system applies 89 subregions across Australia, with 9 of those subregions located within Tasmania. The site is situated within the Tasmanian South East Subregion, near the boundary with the adjacent

Tasmanian Central Highlands Subregion.



Figure 22 - Extract Map demonstrating Tasmanian biogeographic subregions. (from: A Surrogate Model for Rapidly Assessing the Size of a Wildfire, KC, Ujjwal & Aryal, Jagannath & Hilton, J.E. & Garg, Saurabh, 2021)

The description for this subregion is described as follows:

"The Tasmanian South East bioregion encompasses much of coastal eastern Tasmania, the Midlands, and the lower Derwent Valley. It has large areas of open slopes, plains and hills. Prominent features include a highly indented coastline, broad expanses of hilly country and mountain ranges capped with dolerite rock. The vegetation of the bioregion is dominated by eucalypt woodlands, eucalypt open forests, tall open forests and native grasslands, some of which have been derived from grassy woodland communities by tree clearing."

Between these two assessment methods, we can derive some commonalities which are representative of the local area of the site and reinforce the in-person observations made during our visit to the area. These include a predominance of gently rolling grassland ecosystem, with scattered patches of native woodland, especially clustered around the ridgelines and below rocky outcrops near the tops of hills.



Figure 23 - View from Highland Lakes Road to the north of the site, looking south-east. Representative of typical character of grazing pasture with gently rolling hills and scattered patches of trees



Figure 24 - Distant view from Waddamana Road, to the west of the Subject site, looking east. Note the native vegetation and open woodland character in the foreground – this is typical of the woodland character found in the area

5.2 The Subject Site

5.2.1 Topography and Hydrology

The landform of the Subject site is primarily made up of rolling hills divided by shallow downslope areas, with ephemeral creek lines capturing drainage from higher elevations.

When the topographic elevation map is analysed against the particulars of the Project, it is evident that the areas of infrastructure are located primarily in areas of either relatively flat ground or gently rolling landscape, avoiding steep embankments and sharp topographical features which would exaggerate or unduly highlight the Project, as can be seen in Figure 20.

There is less than 200 metres of topographic variation across the total site area, including land which is not being utilised for the Project.

Largely this variation is accommodated across significant distances and the site generally does not contain very precipitous or sharp inclines, apart from the more southerly and far eastern extents of property 3236 – an area of the Subject Site which is not included in the Project.



Figure 25 - General view of part of the Subject Site looking south along Highland Lakes Road

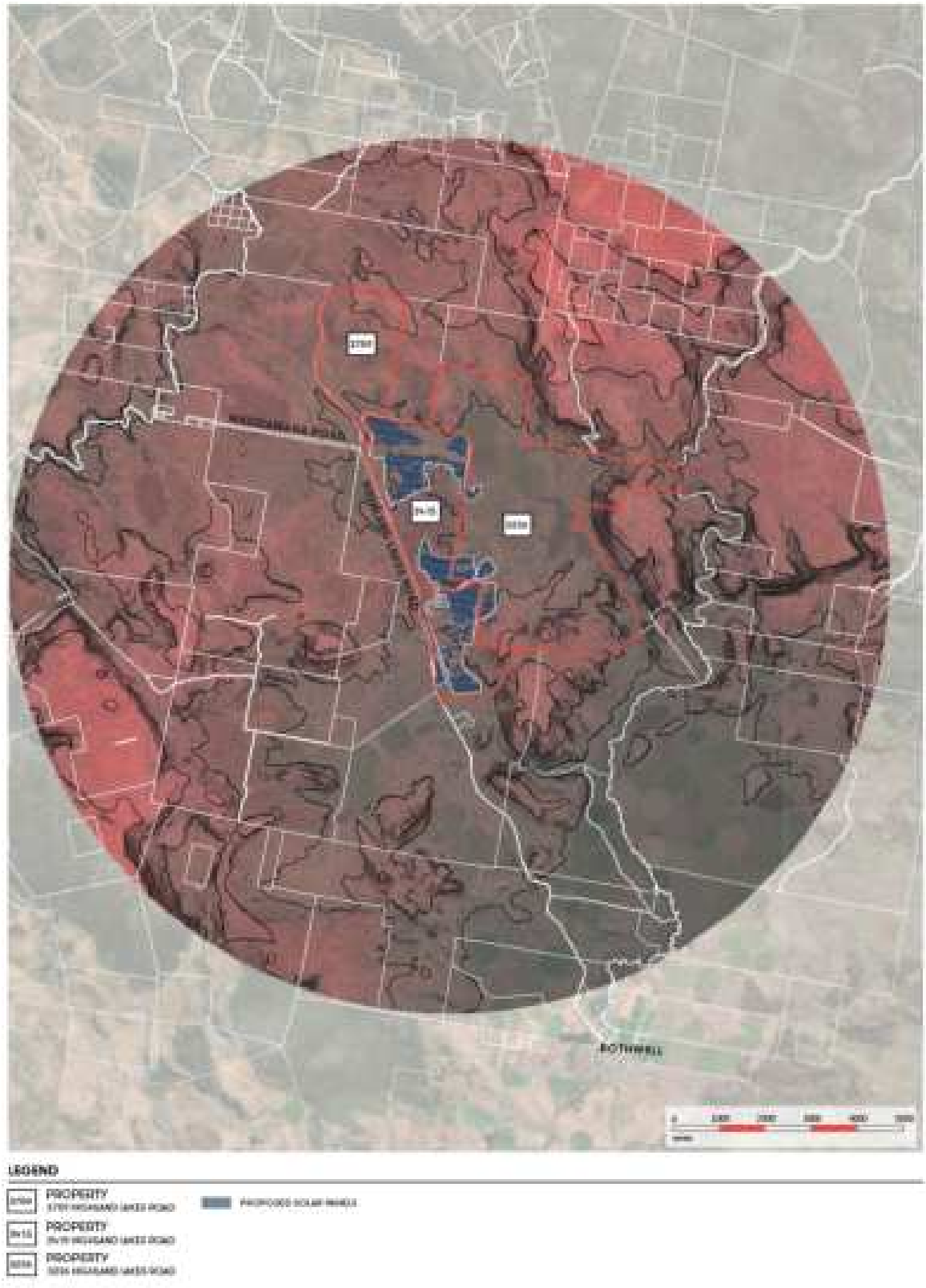


Figure 26 - Topography tint and Contour map for site and surrounding area.
Red tint – More intensity = higher elevation
Contours – Standard contours at 10m intervals, Bold contours at 100m

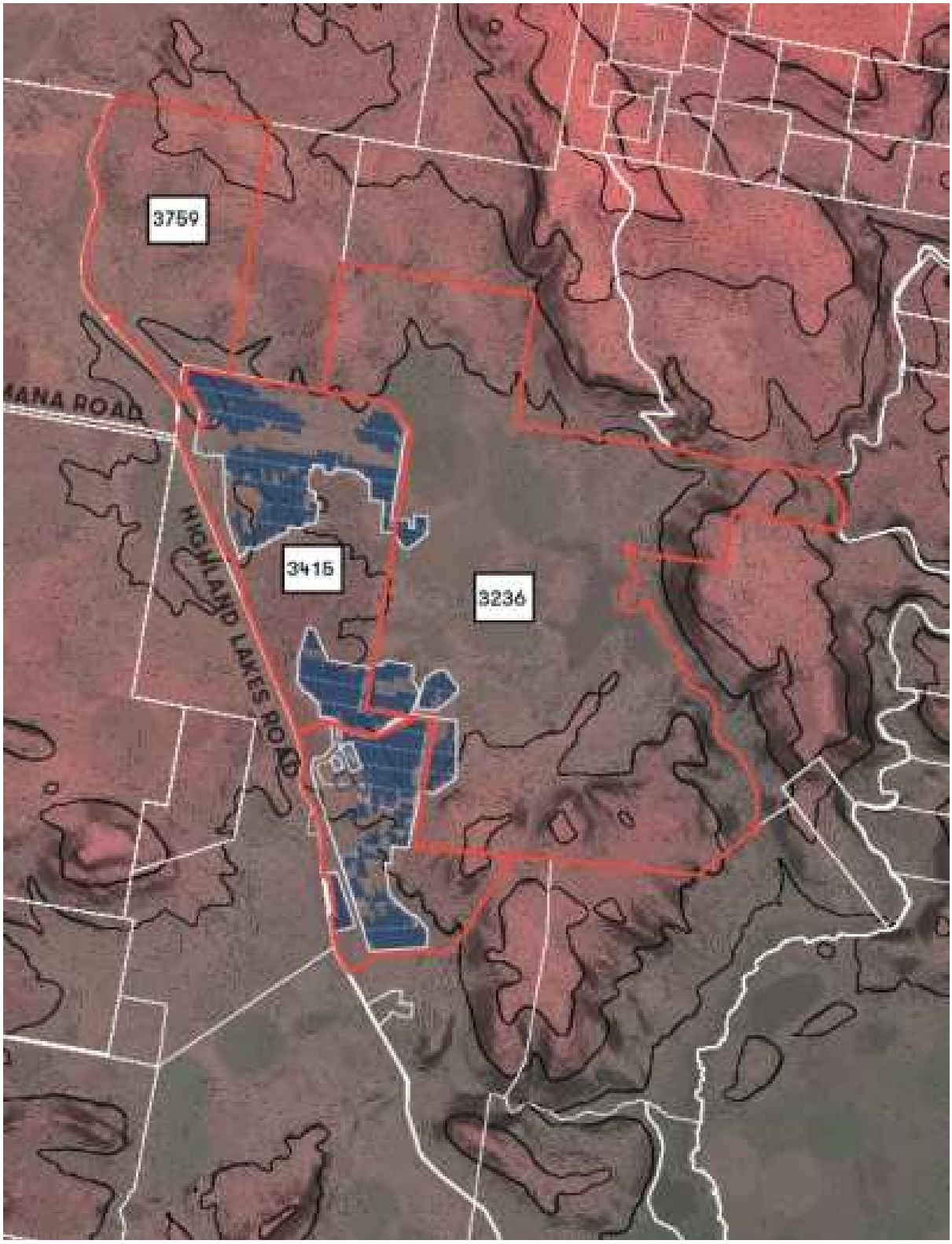


Figure 27 - Detail view of Subject Site and Project components with topography. From this, we can see the relatively smooth undulating land utilised for the arrays, and the avoidance of high elevation or particularly steep areas for the Project

5.2.2 Vegetation

A Flora and Fauna assessment has been undertaken for the Subject Site, including areas of remnant vegetation and agricultural land. The assessment identified three key vegetation types, each of which are summarised and described below.

Eucalyptus pauciflora Forest and Woodland Not on Dolerite: This vegetation category is dominated by a canopy of *Eucalyptus pauciflora* (Snow Gum) which is the key endemic tree species to this area. Generally growing less that 25m in height, this category consists of dry sclerophyll vegetation in an open canopy forest or woodland typology. *Eucalyptus rubida* (Candlebark) is also present within these forests, and listed as sub-dominant in the assessment. The midstorey is described as sparse with scattered smaller trees such as *Exocarpos cuppressiformis* (Native Cherry), *Acac ia melanoxylon* (Blackwood) and *Acacia dealbata* (Silver Wattle). *Banksia marginata* (Silver Banksia) and *Pittosporum bicolor* (Tallowwood) were also noted on site but scarce.



Figure 28 - Example of Open Forest / Woodland category to background of image, with areas of Agricultural Land, along with Regenerating Cleared Land along creek line and in the upper left area of the view

Agricultural Land: This category identifies land which has been used and managed for agricultural purposes. The Ecological Assessment notes the prevalence of pasture grasses across the site with a smaller proportion of other exotic grass species. Some native grasses and herbs were also observed in the Ecological consultant's site inspection.

Regenerating Cleared Land: The assessment notes some areas of Regenerating cleared land in the subject area, mainly confined to valley flats, along watercourses, depressions, agricultural drains and surrounding dams. This type of land often consists to a large extent of native pioneer species, including *Juncus* and *Carex* sp.

5.2.3 Landscape Scenic Quality

Landscape Scenic Quality can be somewhat subjective, but generally is derived by an analysis of a series of factors that contribute to the human appreciation of a landscape.

Agricultural landscapes are subject to diverse opinions about the constitution of scenic values for a landscape. In reviewing the subject area and its associated scenic quality, we can assess the site against the three key factors, comprising:

- **Topographic variation and ruggedness**
  Discussion: The subject area does contain significant topographic variation but not a high degree of ruggedness. The topography would best be described as rolling hills, rarely forming a mountainous element in the landscape. No observed landmarks or key features for orientation or scenic recognition.
  Outcome: Low – moderate

- **Strong patterning of vegetation**
  Discussion: Vegetation patterns are sparse and inconsistent across the subject area and surrounds. Minimal variation in texture and colour, extensive areas of pasture grass for broadacre grazing.
  Outcome: Low - moderate

- **The presence of water**
  Discussion: Waterforms largely absent, save for some ephemeral creek lines and small scattered farm dams across the Subject Site.
  Outcome: Low

Scenic Quality assessment – Low to moderate scenic quality. Land is broadly representative of much of the pasture grazing land in the region. Devoid of major landmarks which would attract the eye or be memorable to a passing viewer

5.3 Assessment of Landscape Impacts

Given the relatively low level of scenic quality, the low-profile form of the majority of the components, and the lack of opportunities for overlooking, the project will have a limited and relatively isolated impact on the landscape character of the broader setting.

Being a solar energy development, certain considerations with regard to aspect and layout must be taken into account when arranging the photovoltaic panels and tracker alignments, but in this case the proposed layout works naturally with the landforms and creates a largely unobtrusive effect within the landscape setting.

6 Assessment of Visual Impacts

6.1 Identification of Sensitive Receptors

The assessment includes viewpoints from receptors deemed to be of a higher level of visual sensitivity, such as Highland Lakes Road (refer to Figure 18). The majority of residences within the study area radius have not been assessed given their owners are involved with the Project. However, the few residences that are not involved in the Project have been assessed.

Given the Project's typically low-profile design, the detailed evaluation of viewpoints is limited to visually sensitive locations within a 2km radius of the Project that have a view. 2km is the distance within which receptors will be of a higher level of visual sensitivity and where the Project will be most noticeable.

The selected viewpoint for the closest non-involved property is located at the nearest publicly accessible location on Highland Lakes Road, at the driveway entrance to the property. No other non-involved dwellings are present within the study area.

The chosen locations for photography and assessment are in the public domain, close to either sensitive, privately-owned visual use areas, or key locations.

6.2 Visual catchment / Viewshed analysis

The viewshed refers to the area from which a proposed development might be visible. Given the relatively low height of the project's components above ground level, the visual catchment will be restricted.

Figure 17 shows the theoretical viewshed of the project and is solely based on topography and doesn't consider the screening effects of vegetation. Consequently, it essentially portrays a worst-case scenario.

Areas of vegetation across the landscape and surrounding rural residences will further aid in obscuring views towards the Project from most vantage points.

Viewshed analysis was undertaken for:

- Solar panels and BESS units, at a maximum height of 4.5m; and
- The substation and HV poles, at a maximum height of 18.5m.

See Figure 23 for the TZVI (Theoretical Zone of Visual Influence) analysis map for the Project based on this methodology.

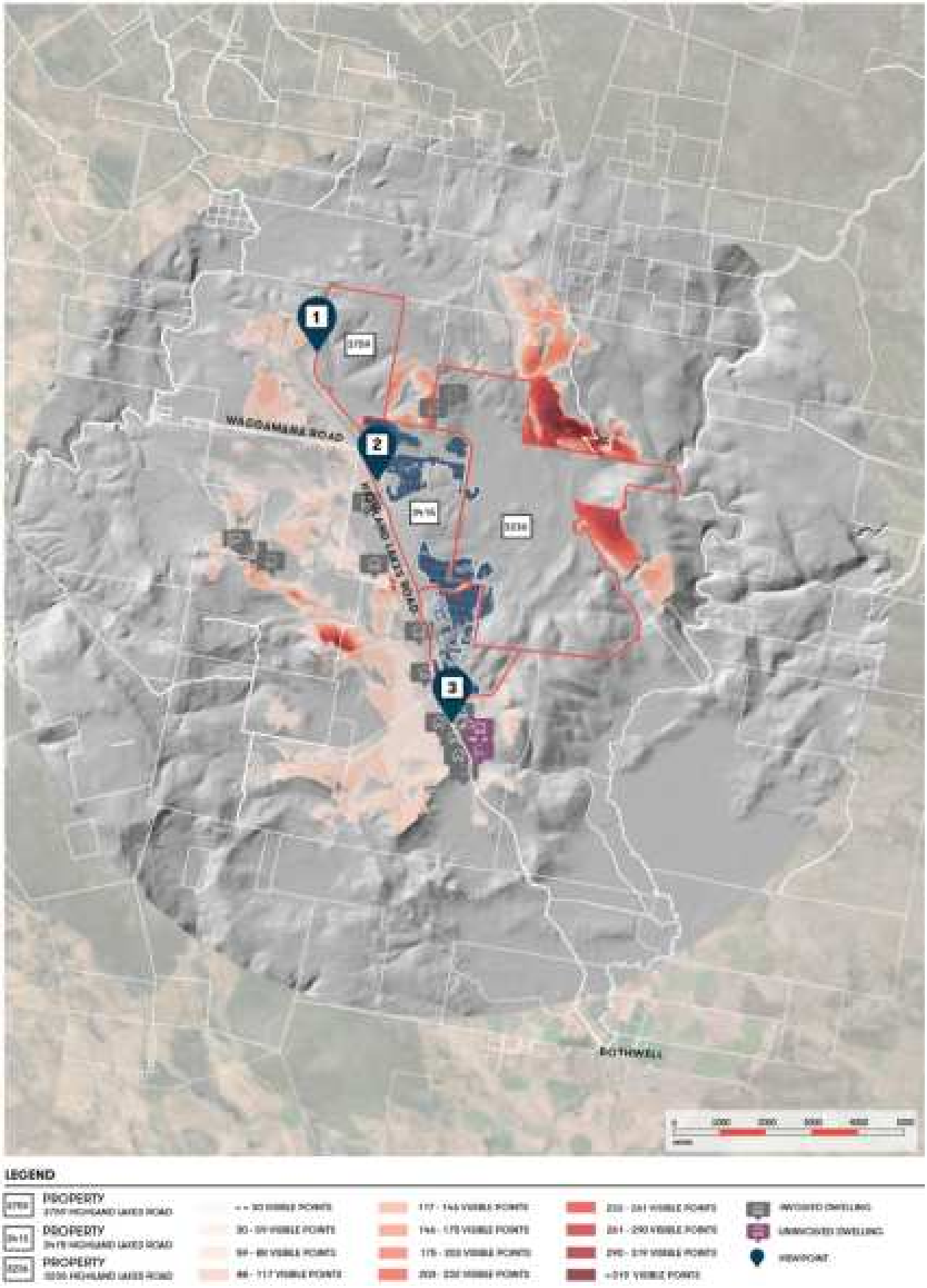


Figure 29 - Theoretical Zone of Influence (TZVI) for the Project, overlayed with context, key roads and property boundaries for reference. White = Project visible from given location gradually increasing in visibility up to the very dark red which indicates the maximum visibility of Project (extent of analysis 5km)

From the analysis it is evident that the locations from where the Project would be most visible are located at higher elevations, such as ridge lines and the upper slopes of high hills. However, these areas do not typically contain any public roads and are largely located within primary-industry land use areas including forestry and backcountry pasture for grazing.

To the western side of Highland Lakes Road, opposite the Project, visibility will be mostly limited with only some isolated areas of higher visibility, again restricted to the upper slopes of a small number of higher hills, none of which have residential dwellings present.

6.3 Viewpoint Selection

Highland Lakes Road (A5) traverses the full length of the Project, with the closest distance from the road to the Project components varying from approximately 50m to the powerlines, to approximately 150m to 200m to the solar array and BESS.

Despite the proximity, the TZVI shows the relatively limited degree of visibility which results due to intervening topography. With existing vegetation considered, the extent of visibility is further reduced.

However, there are a number of locations where the Project is visible and detailed viewpoint analysis is required, including onsite verification, reverse TZVI testing as well as visibility testing within a digital model.

Working from north to south, Viewpoint 1 was selected due to the relatively uninterrupted view (albeit in the middle-ground, sub-regional visual scale), of the far north-western area of the Project.

Viewpoint 2 represents the most visually exposed and/or proximate location along the road alignment.

Viewpoint 3 represents the nearest publicly accessible viewpoint location to the only non-involved dwelling within the study area.

6.4 Detailed Viewpoint Assessment

This section presents a comprehensive evaluation of the Project from the selected high visual sensitivity viewpoints. Each viewpoint is assigned a rating based on the level of visual magnitude and sensitivity. These two factors are then combined to determine the overall visual impact for each viewing location. Refer to Figure 24 for the location of each viewpoint.



Figure 30 - Detailed viewpoint location plan

VIEWPOINT 1

SUMMARY

Location	Northern approach toward the Project on Highland Lakes Road
Coordinates	42°14'39.42"S, 146°55'33.68"E
Distance to project	1.7km
Elevation	548m
Viewing direction to project	Southwest
Land use	Transportation (Roadway)
Duration	Moving (100km/h)
Viewer sensitivity	**MODERATE**
Visual magnitude	**LOW**
Relative visibility (Reverse TZVI)	**LIMITED EXTENT**
Visual impact	**MODERATE TO LOW**
Proposed Amelioration	**PERIMETER PLANTING –** along the north-western perimeter of the project.
Residual Impact	**LOW**

DESCRIPTION

The viewpoint is a location on Highland Lakes Road.

The surrounding landscape is generally undulating and comprised of open pasture with scattered trees along roadsides and paddock boundaries. An area of denser woodland type vegetation is located along Highland Lakes Road to the south-east of the viewpoint, between the viewpoint and the project, which provides partial screening of the Project.

There is, however, a clear view toward of the northwestern most edge of the Project, visible when a vehicle is travelling south along the roadway in this general location. The visibility of this northern edge of the solar panel arrays at an angle just to the side of the central field of view for a vehicle in this area makes it relevant for analysis, even at this location more distant from the subject area.

The viewer sensitivity is moderate, due to the distance from the Project. The level of visual magnitude is low given the relatively small field of view taken up with the infrastructure from this location.

POTENTIAL VISUAL IMPACT

Initial Visual Impact

From this viewpoint, the visible components of the project will be the solar panels. However, they will be partially screened by existing vegetation between the viewpoint and the Project and occupy a small area of the angle of view

The low level of visual magnitude, considered in the context of a moderate level of viewer sensitivity, will result in a moderate to low level of visual impact.

Residual Visual Impact

A strip of amelioration buffer planting along the security fence perimeter in front of the Project infrastructure will reduce the residual impact to low.



Figure 31 - Key Plan: Viewpoint 1



Figure 32 – Viewpoint 1 – Existing view south southeast from Highland Lakes Road to the Project, 1.7km distant.

VIEWPOINT 2

SUMMARY

Location	Central project area, looking north-northeast toward the Project on Highland Lakes Road
Coordinates	42°16'6.31"S, 146°56'28.32"E
Distance to project	300m
Elevation	485m
Viewing direction to project	North-northeast
Land use	Transportation (Roadway)
Duration	Moving (100km/h)
Viewer sensitivity	**HIGH TO MODERATE**
Visual magnitude	**MODERATE**
Relative Visibility (Reverse TZVI)	**LIMITED EXTENT**
Visual impact	**MODERATE**
Proposed Amelioration	**BUFFER PLANTING –** zones to western side of subject area in front of PV panel infrastructure
Residual Impact	**LOW**

DESCRIPTION

The viewpoint is located on Highland Lakes Road.

The surrounding landscape is relatively open in this area, with areas of open forest / woodland mainly restricted to the upper reaches of distant hills, and sparse individual trees on the gently undulating hills in the background. In the fore to midground, the landscape is mainly flat. Limited screening of the Project is present from this viewpoint as it is representative of the experience by a road user of the wide-open valley in this area.

There is a clear view of a section of panels in the north-western zone of the Project, visible when a vehicle is travelling north along the roadway in this general location. The low elevation of a proposed 33kv switchyard in the foreground means visibility will be low to negligible from the roadway.

The viewer sensitivity is considered moderate-high, due to the proximity and unimpeded view to the Project.

The level of visual magnitude is considered moderate given the limited amount of the Project visible. Additionally, viewers will be moving at 100km/h and the Project will be located offset to the direction of travel.

POTENTIAL VISUAL IMPACT

From this viewpoint, the main visible components of the project will be experienced at a slight angle, offset from the direction of travel, and at speed. While this reduces the duration that the view of the Project is experienced, the landscape of the setting is open and offers a relatively clear view of Project infrastructure from the roadway.

Given these considerations, the visual impact will be of a moderate level.

With amelioration buffer planting located between the road and the Project infrastructure, the residual visual impact will reduce to low.



Figure 33 - Key Plan: Viewpoint 2



Figure 34 – Viewpoint 2 - Existing view northeast from Highland Lakes Road to the Project, 300m distant.

VIEWPOINT 3

SUMMARY

Location	Southern approach, looking north toward the Project on Highland Lakes Road
Coordinates	42°19'2.70"S, 146°57'47.36"E
Distance to project	800m from viewpoint on road 600m from residence
Elevation	430m for both road and residence
Viewing direction to project	North-northeast
Land use	Transportation (Roadway) Residential
Duration	Moving (100 km/h) – Roadway Extended – Residence)
Viewer sensitivity	**MODERATE** (Roadway) **HIGH** (Residence)
Visual magnitude	**LOW** (Roadway) **NEGLIGIBLE TO LOW** (Residence)
Relative Visibility (Reverse TZVI)	**LIMITED EXTENT**
Visual impact	**LOW TO MODERATE**(Roadway) **LOW TO MODERATE** (Residence)
Proposed Amelioration	**BUFFER PLANTING –** zones to southern side of subject area in front of PV panel infrastructure
Residual Impact	**LOW** (Roadway and Residence)

DESCRIPTION

The viewpoint is located within the roadway, adjacent to the driveway for 'East Cluny', 2908 Highland Lakes Road and this assessment is representative of the view from both the roadway and the residence.

The surrounding landscape is highly undulating and is comprised of a mixture of scattered exotic trees located closer to and along the roadway. Higher up on the hillsides, the landscape opens up further, and transitions to an open pastural/grazing landscape with a small number of individual trees scattered across the grassland.

The residence is surrounded by large cypress trees which limit views towards the southern part of the Project.

Toward the top of the hill to the centre-left of the view, a section of solar panels is proposed (refer to Figure 31) which will be partly visible covering the upper slopes and extending along the ridgeline.

For road users, the level of visual magnitude is considered low given the limited amount of the Project visible. Additionally, viewers will be moving at 100km/h and the Project will be located offset to the direction of travel.

For residents, the level of visual magnitude will be negligible to low, given dense screening surrounding the residence and the limited amount of the Project visible on the upper slopes and ridgeline.

POTENTIAL VISUAL IMPACT

For road users, the visible components of the Project will be mostly screened by a combination of topography and roadside vegetation, offset from the direction of travel, and at speed. The moderate level of viewer sensitivity, combined with a low level of visual magnitude, will result in a low to moderate visual impact.

For residents, whose views of the Project are mostly screened, the negligible to low level of visual magnitude, combined with a high level of visual sensitivity will result in a low to moderate visual impact.

Amelioration buffer planting along the southwestern corner of the Project will reduce the residual visual impact to low.



Figure 35 - Key Plan: Viewpoint 3



Figure 36 - Google Earth aerial photograph showing significant screening trees to the dwelling at 2908 Highland Lakes Road



Figure 37 – Viewpoint 3 - Existing view north from Highland Lakes Road to the Project, 800m distant, from near the driveway entry to the property at 2908 Highland Lakes Road.

6.5 Cumulative impact

The Project is in an area without adjacent existing infrastructure. As a result, the sequential and simultaneous cumulative impacts will be negligible to very low.

6.6 Lighting Impacts

The applicable environmental lighting zone for the Project area based on AS-NZS-4282-2019 is Category A2, which is a low district lighting area, which applies to rural residential areas and areas with secondary and local roads.

It is likely that the batteries, switch room and substation will require security lighting. However, typically this will be shielded and directional. As a result, hot spots and light spill are likely to be minimised.

Within the Category A2 area the Project will result in a localised area of increased light intensity, but this will not result in adverse impacts to surrounding residential viewpoints.

6.7 Glint and Glare Assessment

6.7.1 Summary of Results

A Glint and Glare Assessment was undertaken for the Project, and after a process of modelling and refining the location and nature of the elements proposed, a result was achieved that meant no remaining potential glare conditions being present for the Project.

Further, SLR Consulting examined the topography and existing vegetation, finding that shielding would be enhanced by the large areas of natural bushland between the Project arrays and many of the surrounding roads and residential dwellings.

6.7.2 Recommendations

For light sources required for the Project, these should be shielded and directional, limiting light spill and adverse effects on surrounding areas.

Amelioration Strategies

6.8 Project Components

6.8.1 Colour and Materiality

Although most of the Project is low-profile with a partially reflective finish out of necessity, BESS units and taller elements such as transformers and switching substations should be clad with non-reflective materials and finished in natural or neutral colours, as found in the surrounding landscape.

6.9 Landscape

6.9.1 Onsite Amelioration

On-site actions involve initiatives within the Project area boundaries

Perimeter Screen Planting

While existing vegetation significantly screens views from most sensitive viewpoints, additional perimeter screen planting is proposed along the far north-west corner of the Project area (VP1 visibility area),a strip of vegetation proposed inboard of the security fence boundary in front of a bank of panel infrastructure facing south (VP2 visibility area), and some areas of perimeter screen planting to the southern south-western boundaries of site and panel infrastructure (VP3 visibility area and closest adjacency to Highland Lakes Road itself).

A 2.5m high chain mesh security fence will be installed inside the Project boundary perimeter. The low-profile form of most of the Project, primarily the solar array, which is approximately 4m in height at full tilt, will ensure that planting can provide screening within a relatively short period. Tubestock tree planting has been proposed for this purpose, as this form of installation has the best chance of successful establishment and healthy plant growth in such environments.

Please refer to the Landscape Concept Plan provided as an Appendix to this document, for reference and further information regarding the on-site amelioration proposal.

6.9.2 Off-Site Amelioration

These actions involve initiatives outside the Project area and require consent from relevant landowners, utilities, or authorities. However, the assessment has found that all necessary amelioration can be achieved on the Subject Site, and no off-site actions are required.

6.9.3 Powerlines

Given their relatively slim profile and low visibility, no amelioration is recommended for the powerlines.

7 Summary of Impacts

7.1 Landscape Impacts

The Project will have a limited, localised impact on the landscape character of the broader landscape setting. Due to the low profile form of the majority of proposed infrastructure, the limited overlooking opportunities and relatively low level of scenic quality for the Subject Site, the landscape impacts are projected to be low to negligible in nature.

7.2 Visual Impacts

Table 5 - Viewpoint Visual Impact Summary Table

Viewpoint No.	Distance from Project	Sensitivity	Visual Magnitude	Initial Impact	Residual Impact
Viewpoint 1 - Highland Lakes Road Northern Approach	1.65km	Moderate	Low	Moderate to Low	Low
Viewpoint 2 - Highland Lakes Road Central Project Area	300m	High to Moderate	Moderate	Moderate	Low
Viewpoint 3 - Highland Lakes Road Southern Approach (Roadway)	800m	Moderate	Low	Moderate to Low	Low
Viewpoint 3 - Highland Lakes Road Southern Approach (Residence)	800m	High	Negligible to Low	Moderate to Low	Low

7.2.1 Lighting Impacts

Minor, localised impacts with regard to lighting, restricted to areas associated with intensive infrastructure such as BESS, switchyard and substation. These light sources will be shielded and directional, minimising any impact to surrounding area.

7.2.2 Glint and Glare Impacts

The SLR Glint and Glare Assessment report conveys that there are 'no remaining potential glare conditions' for the Project, after a process of analysis and refinement to the Proposal. We are satisfied that Glint and Glare impacts are negligible as a result of this process being undertaken.

7.2.3 Amelioration Measures

Landscape plantings to perimeter in specific locations to ameliorate and soften particular moments within the Project and critical viewlines which are more sensitive to and affected by the Project visually.

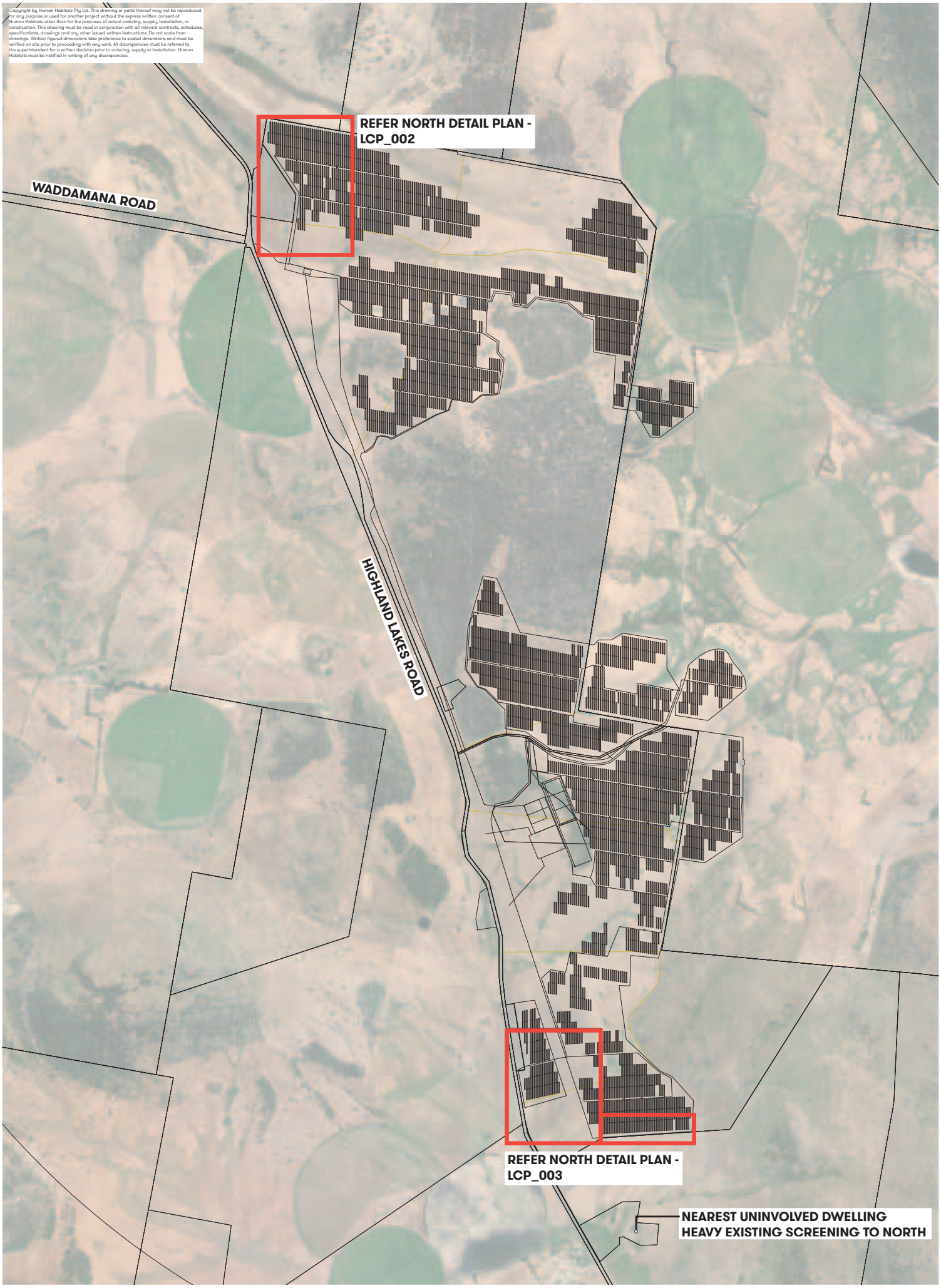
As discussed earlier in the report, the aim of this proposed landscape measures for amelioration is not to fully hide the Project from the surrounding landscape, but rather to soften and blend the Project with its context. A more recessive presentation is the preferred outcome, rather than an approach to fully hide the solar farm.

With the proposed strategies for Amelioration, we contend that the resultant Project will be recessive and comfortable within its surrounding landscape and will be an acceptable addition to the context of the area when experienced by road users on Highland Lakes Road – identified as the critical route of sensitivity for this project.

Refer to Landscape Concept Plan provided with submission for further information regarding landscape response to localised visual impacts.

APPENDIX A – Landscape Concept Plan

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3236 + 3415 HIGHLAND LAKES RD, BOTHWELL - WEASEL SOLAR FARM

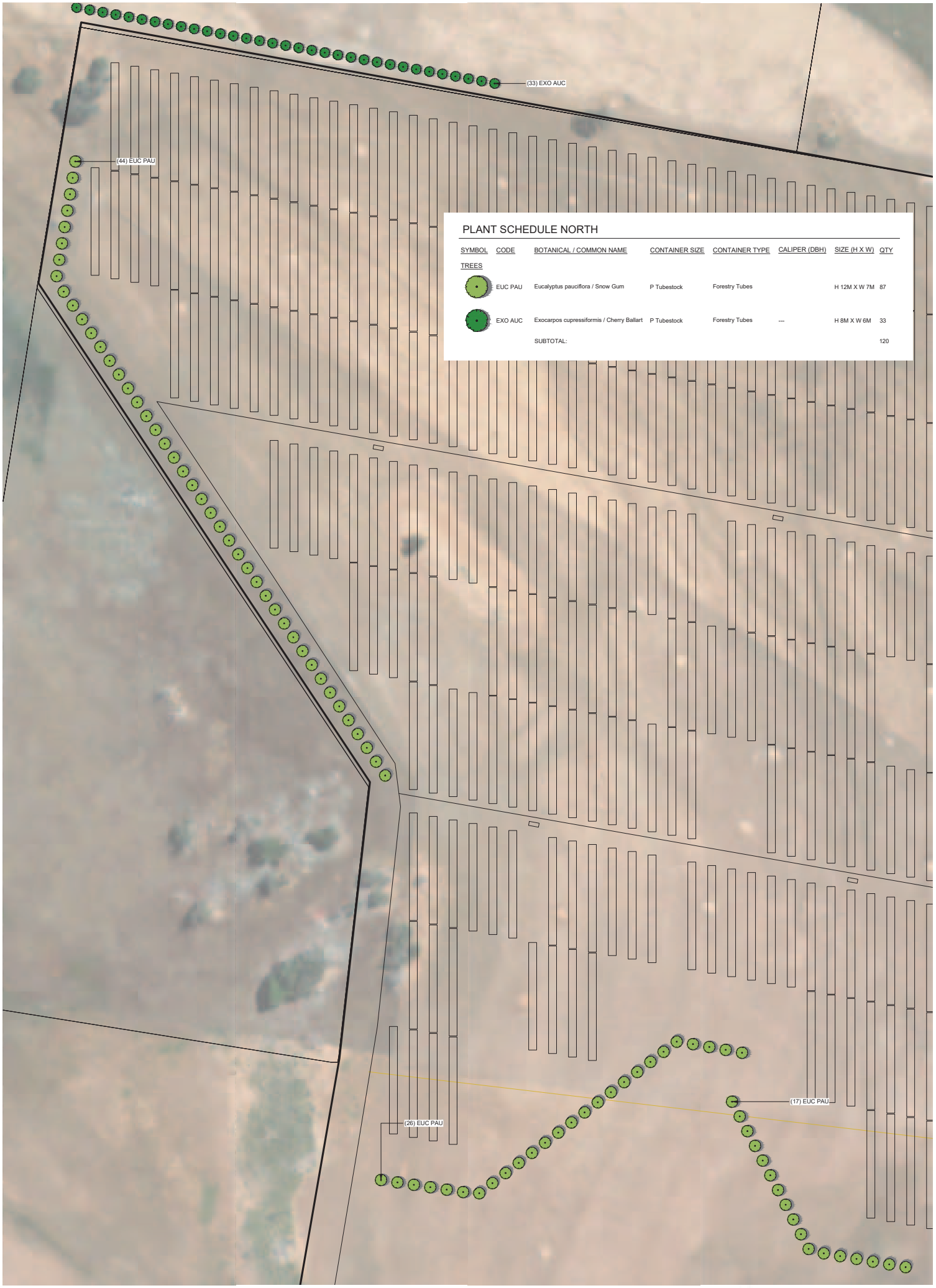
Landscape Key Plan - Overall

262

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DATE: 26.09.2024
JOB NO: 14296
DWG NO: LCP-001
REV: A



PLANT SCHEDULE NORTH

SYMBOL	CODE	BOTANICAL / COMMON NAME	CONTAINER SIZE	CONTAINER TYPE	CALIPER (DBH)	SIZE (H X W)	QTY
TREES							
	EUC PAU	Eucalyptus pauciflora / Snow Gum	P Tubestock	Forestry Tubes		H 12M X W 7M	87
	EXO AUC	Exocarpos cupressiformis / Cherry Ballart	P Tubestock	Forestry Tubes	---	H 8M X W 6M	33
		SUBTOTAL:					120

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Landscape Concept Plan - North Area

263

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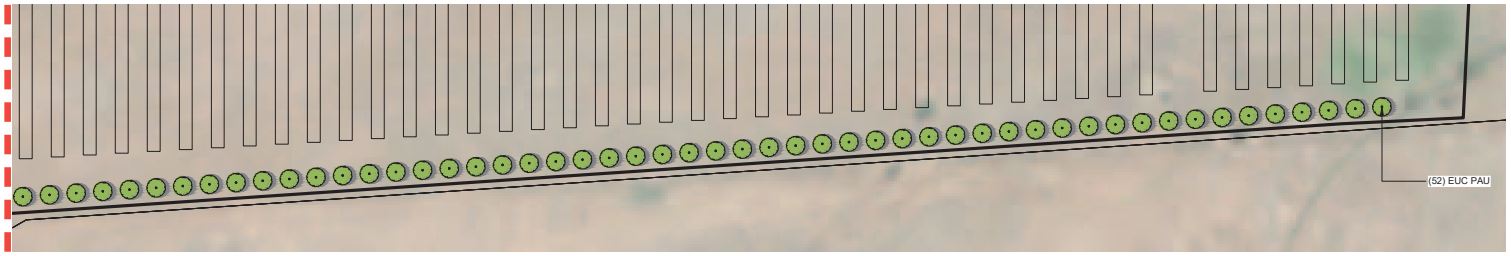
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JOB NO: 14296
DWG NO: LCP-002
REV: A



PLANT SCHEDULE SOUTH

SYMBOL	CODE	BOTANICAL / COMMON NAME	CONTAINER SIZE	CONTAINER TYPE	SIZE (H X W)	QTY
TREES						
	EUC PAU	Eucalyptus pauciflora / Snow Gum	P Tubestock	Forestry Tubes	H 12M X W 7M	126
		SUBTOTAL:				126

SEE BELOW FOR CONTINUATION



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Landscape Concept Plan - South Area

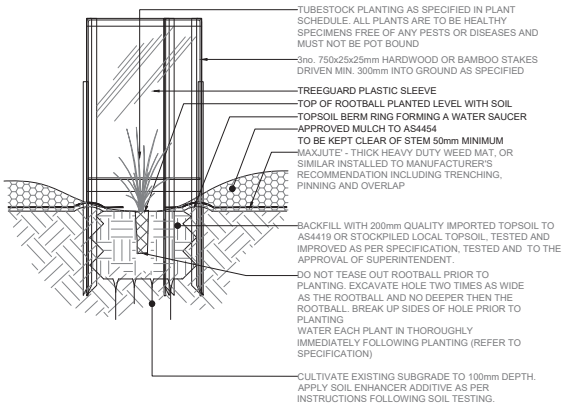
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DATE: 26.09.2024
JOB NO: 14296
DWG NO: LCP-003
REV: A

TUBESTOCK PLANTING NOTES:
TUBESTOCK SHALL BE SUPPLIED IN 90CC FORESTRY TUBES, OR AS SPECIFIED IN THE PLANT SCHEDULE, AND WHERE THE SPECIES ARE INDIGENOUS TO THE LOCAL REGION THEY SHALL BE PROPAGATED FROM LOCAL PROVENANCE SEED ONLY. SPECIES SHALL BE TRUE TO FORM AND SHALL NOT BE TALLER THAN 500mm ABOVE THE TUBE.



SOFT LANDSCAPE PLANTING TUBESTOCK - TYPICAL DETAIL
SCALE 1:10

LANDSCAPE GENERAL NOTES

PRELIMINARIES

NOTE: THIS LANDSCAPE PLAN MUST BE READ IN CONJUNCTION WITH THE APPROPRIATE STATUTORY APPROVALS AND AUSTRALIAN STANDARDS

GENERAL

- THE LANDSCAPE PLANS SHOULD BE READ IN CONJUNCTION WITH THE CIVIL PLANS, STRUCTURAL PLANS, SERVICE PLANS AND SURVEY PREPARED FOR THE PROPOSED DEVELOPMENT.
- ALL SERVICES INCLUDING EXISTING DRAINAGE SHOULD BE ACCURATELY LOCATED PRIOR TO THE COMMENCEMENT OF LANDSCAPE INSTALLATION. ANY PROPOSED TREE PLANTING WHICH FALLS CLOSE TO SERVICES WILL BE RELOCATED ON SITE UNDER THE INSTRUCTION OF THE LANDSCAPE ARCHITECT.
- INSTALLATION OF CONDUIT FOR REQUIRED IRRIGATION, ELECTRICAL AND OTHER SERVICES SHALL BE COMPLETED PRIOR TO THE COMMENCEMENT OF HARDSCAPE WORKS AND HARDSTAND POURS.
- ANOMALIES THAT OCCUR IN THESE PLANS SHOULD BE BROUGHT TO OUR IMMEDIATE ATTENTION.
- WHERE AN AUSTRALIAN STANDARD APPLIES FOR ANY LANDSCAPE MATERIAL TESTING OR INSTALLATION TECHNIQUE, THAT STANDARD SHALL BE FOLLOWED.
- PLANTING SHOWN REFLECTS THE DESIGN INTENT, EXACT NUMBERS AND LOCATIONS WILL REQUIRE CONFIRMATION ON SITE BY THE SUPERINTENDENT. ANY CHANGES TO BE MADE TO THE LANDSCAPE PLAN MUST BE APPROVED BY THE LANDSCAPE ARCHITECT AND SUPERINTENDENT.
- ALL LANDSCAPE PLANS PRESENTED ASSUME THAT ALL BASE AND SURVEY INFORMATION IS ACCURATE AND TO SCALE. THE CONTRACTOR SHALL CHECK LANDSCAPE PLANS PRESENTED FOR ANY DISCREPANCIES WITH THE EXISTING SITE CONDITIONS OR OTHER DRAWINGS PRESENTED PRIOR TO ANY CONSTRUCTION WORK TAKING PLACE. IF DISCREPANCIES DO OCCUR THESE SHALL BE HIGHLIGHTED AT ONCE TO THE SUPERINTENDENT PRIOR TO ANY CONSTRUCTION WORK TAKING PLACE. DIMENSIONS TAKE PRECEDENCE.

EROSION AND POLLUTION CONTROL
THE CONTRACTOR SHALL TAKE ALL PROPER PRECAUTIONS TO PREVENT THE EROSION OF SOIL FORM THE SUBJECT SITE. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL BARRIERS AND AS REQUIRED BY COUNCIL, AND MAINTAIN THESE BARRIERS THROUGHOUT THE CONSTRUCTION PERIOD. NOTE THAT THE SEDIMENT CONTROL MEASURES ADOPTED SHOULD REFLECT THE SOIL TYPE AND EROSION CHARACTERISTICS OF THE SITE.

EROSION & POLLUTION CONTROL MEASURES SHALL INCORPORATE THE FOLLOWING:

- CONSTRUCTION OF A SEDIMENT TRAP AT THE VEHICLE ACCESS POINT TO THE SUBJECT SITE
- SEDIMENT FENCING USING A GEOTEXTILE FILTER FABRIC IN THE LOCATION INDICATED ON THE EROSION CONTROL PLAN OR AS INSTRUCTED ON SITE BY THE LANDSCAPE ARCHITECT.
- EARTH BANKS TO PREVENT SCOUR OF STOCKPILES
- SANDBAG KERB SEDIMENT TRAPS
- STRAW BALE & GEOTEXTILE SEDIMENT FILTER
- EXPOSED BANKS SHALL BE PEGGED WITH AN APPROVED JUTE MATTING IN PREPARATION FOR MASS PLANTING

SOIL WORKS

MATERIALS
SPECIFIED SOIL CONDITIONER (GENERALLY TO IMPROVE SITE SOIL)
THE SPECIFIED SOIL CONDITIONER FOR SITE TOP-SOIL IMPROVEMENT SHALL BE AN ORGANIC MIX, EQUAL TO "BOTANY HUMUS", AS SUPPLIED BY AN APPROVED SUPPLIER. NOTE THAT FOR SITES WHERE SOIL TESTING INDICATES TOXINS OR EXTREMES IN PH, OR SOILS THAT ARE EXTREMELY POOR, ALLOW TO EXCAVATE AND SUPPLY 300MM OF IMPORTED SOIL MIX.

NEW GARDENS & PROPOSED PLANTING
NEW GARDEN AND PLANTING AREAS SHALL CONSIST OF A 50/50 MIX OF CLEAN SITE SOIL (REFER D) AND IMPORTED "ORGANIC GARDEN MIX" AS SUPPLIED BY AN APPROVED SUPPLIER. ALL MIXES ARE TO COMPLY WITH AS 4419 SOILS FOR LANDSCAPING & GARDEN USE, & AS 4454 COMPOSTS, SOIL CONDITIONERS & MULCHES.

SITE TOPSOIL
SITE TOPSOIL IS TO BE CLEAN AND FREE OF UNWANTED MATTER SUCH AS GRAVEL, CLAY LUMPS, GRASS, WEEDS, TREE ROOTS, STICKS, RUBBISH AND PLASTICS, AND ANY DELETERIOUS MATERIALS AND MATERIALS TOXIC TO PLANTS. THE TOPSOIL MUST HAVE A PH OF BETWEEN 5.5 AND 7. USE 100% IMPORTED SOIL MIX WHEN SITE WHEN SITE TOPSOIL RUNS OUT.

INSTALLATION
a) TESTING
ALL TESTING IS TO BE CONDUCTED IN ACCORDANCE WITH AS1289 METHODS FOR TESTING SOILS FOR ENGINEERING PURPOSES. SITE SOIL SHALL BE GIVEN A PH TEST PRIOR TO MODIFYING TO ENSURE CONDITIONS ARE APPROPRIATE FOR PLANTING AS STATED ABOVE. TESTS SHALL BE TAKEN IN SEVERAL AREAS WHERE PLANTING IS PROPOSED, AND THE PH SHALL BE ADJUSTED ACCORDINGLY WITH SULPHUR OR LIME TO SUIT.

b) SET OUT OF INDIVIDUAL TREES & MASS PLANTING AREAS
ALL INDIVIDUAL TREE PLANTING POSITIONS AND AREAS DESIGNATED FOR MASS PLANTING SHALL BE SET OUT WITH STAKES OR ANOTHER FORM OF MARKING, READY FOR INSPECTION AND APPROVAL. LOCATE ALL SERVICES.

c) ESTABLISHING SUBGRADE LEVELS
SUBGRADE LEVELS ARE DEFINED AS THE FINISHED BASE LEVELS PRIOR TO THE PLACEMENT OF THE SPECIFIED MATERIAL (I.E. SOIL CONDITIONER). THE FOLLOWING SUBGRADE LEVELS SHALL APPLY:

- MASS PLANTING BEDS - 300MM BELOW EXISTING LEVELS WITH SPECIFIED IMPORTED SOIL MIX.
- TURF AREAS - 150MM BELOW FINISHED SURFACE LEVEL.

NOTE THAT ALL SUBGRADES SHALL CONSIST OF A RELATIVELY FREE DRAINING NATURAL MATERIAL, CONSISTING OF SITE TOPSOIL PLACED PREVIOUSLY BY THE CIVIL CONTRACTOR. NO BUILDERS WASTE MATERIAL SHALL BE ACCEPTABLE.

d) SUBGRADE CULTIVATION
CULTIVATE ALL SUBGRADES TO A MINIMUM DEPTH OF 150MM IN ALL PLANTING BEDS AND ALL TURF AREAS, ENSURING A THOROUGH BREAKUP OF THE SUBGRADE INTO A REASONABLY COARSE TILTH. GRADE SUBGRADES TO PROVIDE FALLS TO SURFACE AND SUBSURFACE DRAINS, PRIOR TO THE PLACEMENT OF THE FINAL SPECIFIED SOIL MIX.

e) DRAINAGE WORKS
INSTALL SURFACE AND SUBSURFACE DRAINAGE WHERE REQUIRED AND AS DETAILED ON THE DRAWING. DRAIN SUBSURFACE DRAINS TO OUTLETS PROVIDED, WITH A MINIMUM FALL OF 1:100 TO OUTLETS AND / OR SERVICE PITS.

f) PLACEMENT AND PREPARATION OF SPECIFIED SOIL CONDITIONER & MIXES.

- TREES IN TURF & BEDS - HOLES SHALL BE TWICE AS WIDE AS ROOT BALL AND MINIMUM 100MM DEEPER - BACKFILL HOLE WITH 50/50 MIX OF CLEAN SITE SOIL AND IMPORTED "ORGANIC GARDEN MIX" BY AN APPROVED SUPPLIER.
- MASS PLANTING BEDS - INSTALL SPECIFIED SOIL CONDITIONER TO A COMPACTED DEPTH OF 100MM

PLACE THE SPECIFIED SOIL CONDITIONER TO THE REQUIRED COMPACTED DEPTH AND USE A ROTARY HOE TO THOROUGHLY MIX THE CONDITIONER INTO THE TOP 300MM OF GARDEN BED SOIL. ENSURE THOROUGH MIXING AND THE PREPARATION OF A REASONABLY FINE TILTH AND GOOD GROWING MEDIUM IN PREPARATION FOR PLANTING.

- TURF AREAS - INSTALL SPECIFIED SOIL MIX TO A MINIMUM COMPACTED DEPTH OF 50-150MM. PLACE THE SPECIFIED SOIL MIX TO THE REQUIRED COMPACTED DEPTH AND GRADE TO REQUIRED FINISHED SOIL LEVELS, IN PREPARATION FOR PLANTING AND TURFING.

PLANTING

GRASS

KIKUYU SHALL BE USED WHERE EVER NEW TURF IS NEEDED, UNLESS OTHERWISE ADVISED BY LANDSCAPE ARCHITECT.

TURF SHALL BE 'A' GRADE, TYPICAL OF SPECIES, FREE FROM All PESTS, DISEASES, WEEDS AND OTHER PLANT MATTER.

GRASS NOTES:

1. PREPARATION - REMOVE ANY EXISTING TURF, WEEDS, RUBBISH STONES OR DEBRIS FROM AREA TO BE TURFED.
2. FERTILISER IS TO BE APPLIED AS PER MANUFACTURER'S SPECIFICATION TO ENSURE HEALTHY LONG TERM GROWTH.
3. A TURF ROLL HAS A MINIMUM SOIL THICKNESS OF 20MM.
4. THE TURF IS DELIVERED TO THE PREMISES WITHIN 24 HOURS OF BEING CUT.
5. THE TURF IS LAID WITHIN 36 HOURS OF BEING CUT.
6. WHERE THE LAYING OF THE TURF IS DELAYED, THE TURF IS:
   - A - PROTECTED AND WATERED TO MAINTAIN ITS CONDITION;
   - B - NOT ALLOWED TO DRY OUT AT ANY STAGE FROM CUTTING TO LAYING.
7. THE TURF IS LAID ALONG THE CONTOURS OF THE PREMISES IN STAGGERED ROWS WITH THE BUTT ENDS OF THE TURF ROLLED TOGETHER.
8. LAY TURF EVEN WITH GRADIENT, FREE FROM LUMPS AND DEPRESSIONS AND ABILITY TO POND WATER.
9. THE EDGES OF THE FINISHED GRADE OF THE TURF ARE BEVELLED DOWN A MAXIMUM 15mm BELOW AN ABUTTING HARD SURFACE SUCH AS A KERB, A PATH, A MOWING STRIP OR OTHER HARD PAVED SURFACE.
10. THE TURF IS ROLLED TO ENSURE CONTACT BETWEEN THE ROOTS OF THE TURF AND THE TOPSOIL BED.
11. LOAMY SAND IS WORKED INTO THE JOINTS AND DEPRESSIONS IN A TURFED AREA TO CORRECT ANY UNEVENNESS IN THE SURFACE OF THE TURFED AREA.
12. THE TURF IS NOT PROVIDED ON A SLOPE STEEPER THAN 1 IN 4.
13. A NEWLY TURFED AREA IS PROTECTED FROM TRAFFIC BY THE ERECTION OF BARRIERS.
14. A FAILED TURFED AREA IS IMMEDIATELY REPAIRED BY RAKING, THE RELAYING OF TURF AND WATERING.
15. TOP DRESSING - WHEN TURFED AREAS HAVE BECOME ESTABLISHED AND IMMEDIATELY AFTER FIRST CUT, TOP DRESS WITH 10mm LAYER OF TOP DRESSING TO AS 4419. DO NOT TOP DRESS DURING WINTER MONTHS UNLESS DIRECTED BY LANDSCAPE ARCHITECT.

TREES:

CULTIVATE AREA TO 200mm DEPTH.

APPLY 300mm DEPTH ORGANIC TOPSOIL, AS SPECIFIED TO ALL PLANTING AREAS. CENTRALLY MOUNDED TO ALLOW RUNOFF. MOUND SOIL IN GARDEN BED TO ENABLE WATER RUNOFF. ENSURE MOUNDING TRANSITIONS ARE SMOOTH.

WHERE REQUIRED, INSTALL ROOT BARRIER TO MANUFACTURER'S SPECIFICATION.

APPLY 500glm' OF GRANULAR DYNAMIC LIFTER (OR APPROVED EQUIVALENT). THOROUGHLY MIX TO A DEPTH OF 200mm.

EXCAVATE PLANT HOLE TO 300mm DEPTH. FILL PLANT HOLES WITH WATER AND LET DRAIN THOROUGHLY PRIOR TO PLANTING.

APPLY A SLOW RELEASE FERTILISER SUCH AS MULTICOTE 8 (OR APPROVED EQUIVALENT) AT THE RATE OF 30g/PLANT TO MANUFACTURERS SPECIFICATIONS. DO NOT APPLY FERTILSER TO DRY SOIL.

SET SHRUB OR GROUNDCOVER VERTICALLY ON MOUNDED SOIL WITH SMALL WELL AROUND STEM.

SPREAD 100mm DEPTH ORGANIC MULCH AS SPECIFIED. ENSURE MULCH STAYS 25mm CLEAR OF PLANT STEM.

REQUIRED STANDARDS

AS 2303:2018 • TREE STOCK FOR LANDSCAPE USE.
AS 4970, 2009. PROTECTION OF TREES ON DEVELOPMENT SITES.
AS 4419:2003 • SOILS FOR LANDSCAPING AND GARDEN USE.
AS 1289.0:2014 • METHODS OF TESTING SOILS FOR ENGINEERING PURPOSES DEFINITIONS AND GENERAL REQUIREMENTS.
AS 4454:2012 • COMPOSTS, SOIL CONDITIONERS AND MULCHES

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3236 + 3415 HIGHLAND LAKES RD, BOTHWELL - WEASEL SOLAR FARM

Typical Details and General Notes

265

REV	DESCRIPTION	DATE
A	FOR LODGEMENT	26.09.24
.	.	.
.	.	.
.	.	.

DATE: 26.09.2024
JOB NO: 14296
DWG NO: LCP-004
REV: A


Human
Habitats

WEASEL SOLAR FARM, BOTHWELL

Photosimulations

Human Habitats:
Urban Planning and
Design Studio

Revision: V01

Date: October 2024



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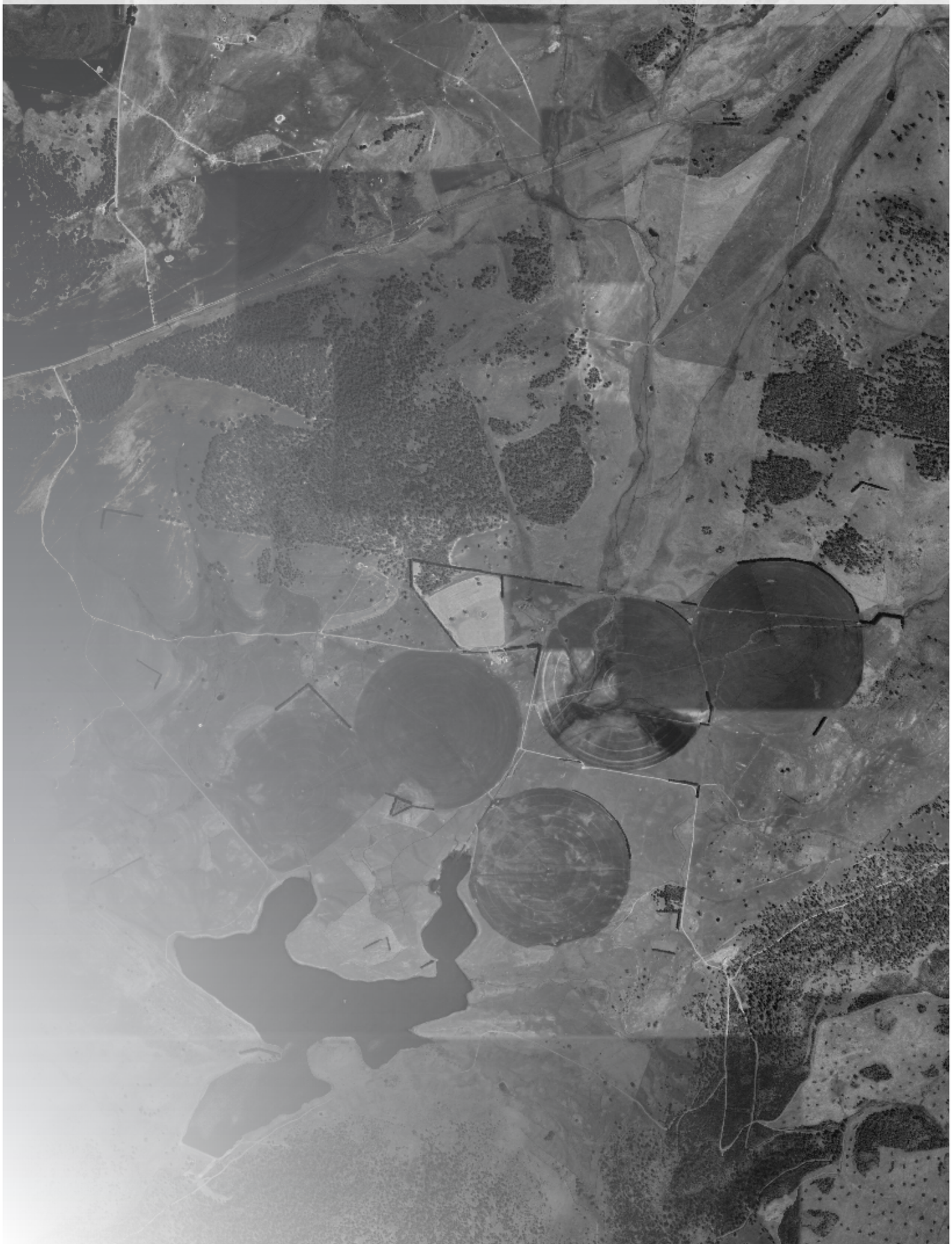


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NOTE: THIS DOCUMENT IS TO BE READ IN CONJUNCTION WITH AND IS AN APPENDIX OF 'LANDSCAPE AND VISUAL IMPACT ASSESSMENT', REVISION A DATED 26 SEPTEMBER 2024

03

VIEW LOCATIONS

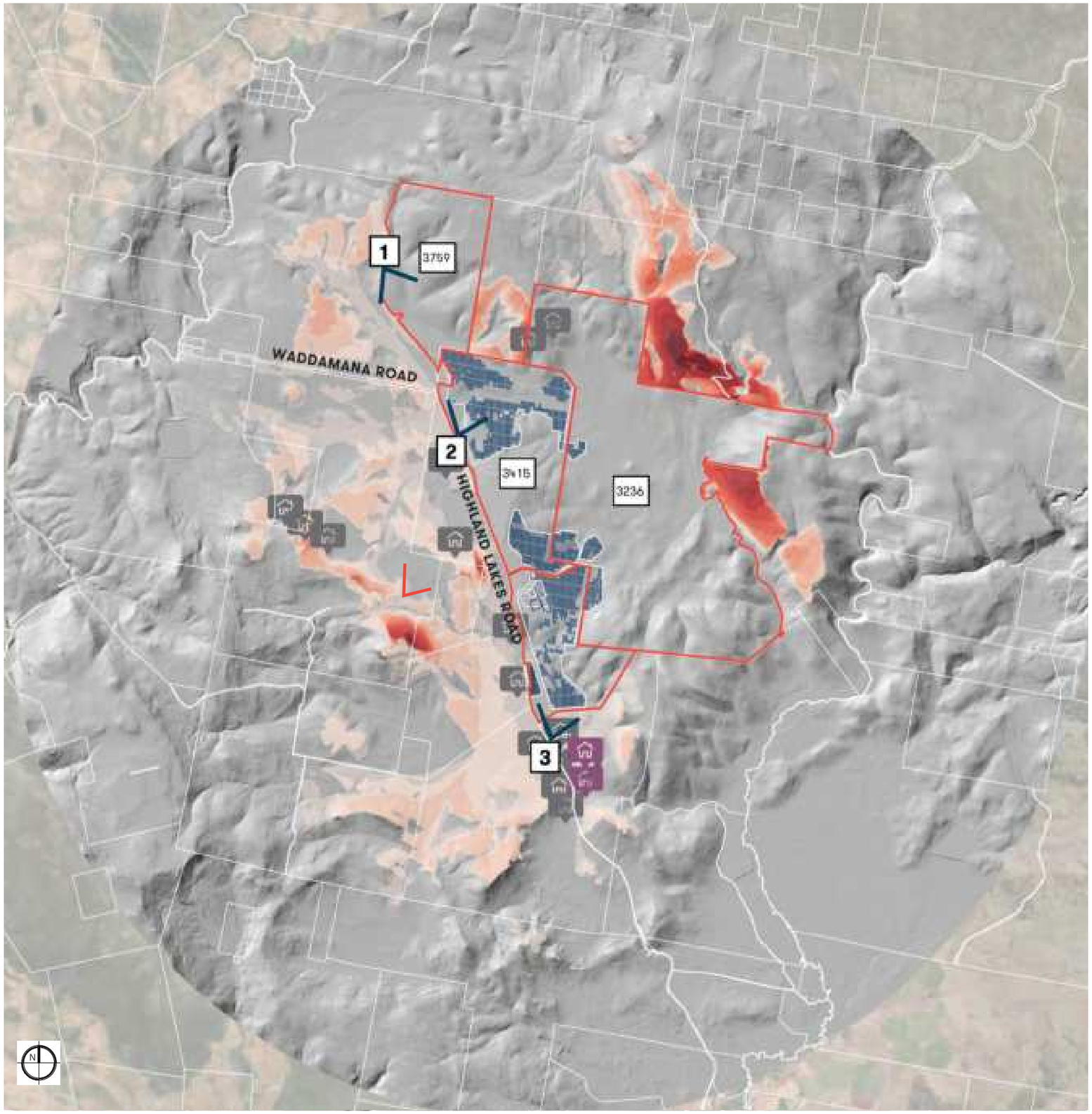
Highland Lakes Road (A5) traverses the full length of the Project, with the closest distance from the road to the Project components varying from approximately 50m to the powerlines, to approximately 150m to 200m to the solar array and BESS.

Despite the proximity, the TZVI shows the relatively limited degree of visibility which results due to intervening topography. With existing vegetation considered, the extent of visibility is further reduced. However, there are a number of locations where the Project is visible and detailed viewpoint analysis is required, including onsite verification, reverse TZVI testing as well as visibility testing within a digital model.

Working from north to south, Viewpoint 1 was selected due to the relatively uninterrupted view (albeit in the middle-ground, sub-regional visual scale), of the far north-western area of the Project.

Viewpoint 2 represents the most visually exposed and/or proximate location along the road alignment.

Viewpoint 3 represents the nearest publicly accessible viewpoint location to the only non-involved dwelling within the study area.



LEGEND	
1.	VIEWPOINT 1 (VP1)
2.	VIEWPOINT 2 (VP2)
3.	VIEWPOINT 3 (VP3)

04

PHOTOMONTAGES

The potential viewpoints identified within this study and represented within the photo images were identified through the preliminary ZVI modelling process, and confirmed through the site visit, as being the most likely areas of possible visual impact, the most representative visual impact locations and the likely 'worst case' visual impact scenarios. Access to private properties during the LVIA process was not possible, therefore representative views from publicly accessible locations have been selected. The criteria and rationale for selection of viewpoints are further explained in the Accompanying Landscape and Visual Impact Assessment document, with which this document is to be read in conjunction.

As the initial step in the process, several photo locations were recorded during the site visit, specifically related to sensitive viewpoints. Images were captured using a full-frame DSLR camera (Canon 6D) with a 50mm lens focal length at an aperture value of f8. The camera's internal GPS receiver provided the viewpoint locations, which were then utilized in 3D software to align the virtual camera with the on-site photos.

Next, a 3D virtual model was created, incorporating the 3D model of the proposed design. The photo point locations were added to this base model, configuring virtual cameras for camera matching. Once the views were aligned, two output variations were generated: wireframe/point cloud and rendered images.

These outputs were then superimposed onto existing condition photos. Finally, the rendered 3D software outputs showing the material proposal were overlaid with the photos to create before-and-after visualizations.

Additionally, any visual amelioration measures considered during the design process (such as buffer planting) were incorporated into the views to demonstrate their effects.

The following pages display and provide high level assessment and analysis of the visual modification for the chosen viewpoints and are ordered as follows:

- Original Photo - demonstrating existing conditions
- Original with proposal rendered into scene - demonstrating proposed built form within the view
- Original with proposal rendered into scene with screening vegetation (Amelioration depicted at two-thirds mature size)
- This Sequence will continue for all viewpoints.

DOCUMENTS REFERENCED IN ASSEMBLY OF PHOTOMONTAGES:

- Engineering Plans by DNV (REV C, DATED 21/08/2024)
- Landscape and Visual Impact Assessment by Human Habitats (REV A, DATED 26/09/2024)
- Landscape Concept Plan (REV A, DATED 26/09/2024)

SOFTWARE UTILISED IN THE ASSEMBLY OF PHOTOMONTAGES:

- GeoSetter
- QGIS
- Google Earth
- Rhinoceros 3D
- Lumion 2023
- AutoCAD 2024
- Adobe Photoshop 2024

VIEWPOINT 1

ORIGINAL PHOTO



NOTE: Please refer to Landscape and Visual Impact Assessment, Revision A dated 26 September 2024 (Page 37) for further information and discussion of Project and Viewpoint

TECHNICAL DETAILS	
LOCATION DESCRIPTION	NORTHERN APPROACH TOWARD THE PROJECT ON HIGHLAND LAKES ROAD
DATE & TIME TAKEN	19/04/2024, 11:22 AM LOCAL TIME
HEIGHT FROM GROUND	APPROXIMATELY 1.7M
DISTANCE TO SITE	APPROXIMATELY 1.7KM
FOCAL LENGTH	50MM
ASPECT RATIO	CAMERA NATIVE 3:2



ORIGINAL WITH PROPOSAL RENDERED INTO SCENE



ORIGINAL WITH PROPOSAL RENDERED + SCREENING VEGETATION (YEAR 10)



Vegetation Size: Depicted at generally two-thirds of mature size
(10 year timeframe estimate)
Vegetation Species: Exocarpus cuppressiformis and Eucalyptus pauciflora, as per current Landscape Concept Plan Revision A (Appendix A in Landscape and Visual Impact Assessment Revision A, Dated 26 September by Human Habitats)

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VIEWPOINT 2

ORIGINAL PHOTO



TECHNICAL DETAILS	
LOCATION DESCRIPTION	CENTRAL PROJECT AREA, LOOKING NORTH-NORTHEAST TOWARD THE PROJECT ON HIGHLAND LAKES ROAD
DATE & TIME TAKEN	19/04/2024, 11:08 AM LOCAL TIME
HEIGHT FROM GROUND	APPROXIMATELY 1.7M
DISTANCE TO SITE	APPROXIMATELY 300M
FOCAL LENGTH	50MM
ASPECT RATIO	CAMERA NATIVE 3:2

NOTE: Please refer to Landscape and Visual Impact Assessment, Revision A dated 26 September 2024 (Page 39) for further information and discussion of Project and Viewpoint



ORIGINAL WITH PROPOSAL RENDERED INTO SCENE



ORIGINAL WITH PROPOSAL RENDERED + SCREENING VEGETATION



Vegetation Size: Depicted at generally two-thirds of mature size
(10 year timeframe estimate)
Vegetation Species: Eucalyptus pauciflora, as per current Landscape Concept Plan Revision A (Appendix A in Landscape and Visual Impact Assessment Revision A, Dated 26 September by Human Habitats)

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VIEWPOINT 3

ORIGINAL PHOTO



TECHNICAL DETAILS	
LOCATION DESCRIPTION	SOUTHERN APPROACH, LOOKING NORTH TOWARD THE PROJECT ON HIGHLAND LAKES ROAD
DATE & TIME TAKEN	19/04/2024, 2:11 PM LOCAL TIME
HEIGHT FROM GROUND	APPROXIMATELY 1.7M
DISTANCE TO SITE	APPROXIMATELY 800M - VIEWPOINT ON ROAD APPROXIMATELY600M FROM RESIDENCE
FOCAL LENGTH	50MM
ASPECT RATIO	CAMERA NATIVE 3:2

NOTE: Please refer to Landscape and Visual Impact Assessment, Revision A dated 26 September 2024 (Page 41) for further information and discussion of Project and Viewpoint



ORIGINAL WITH PROPOSAL RENDERED INTO SCENE



ORIGINAL WITH PROPOSAL RENDERED + SCREENING VEGETATION



Vegetation Size: Depicted at generally two-thirds of mature size
(10 year timeframe estimate)
Vegetation Species: Eucalyptus pauciflora, as per current Landscape Concept Plan Revision A (Appendix A in Landscape and Visual Impact Assessment Revision A, Dated 26 September by Human Habitats)

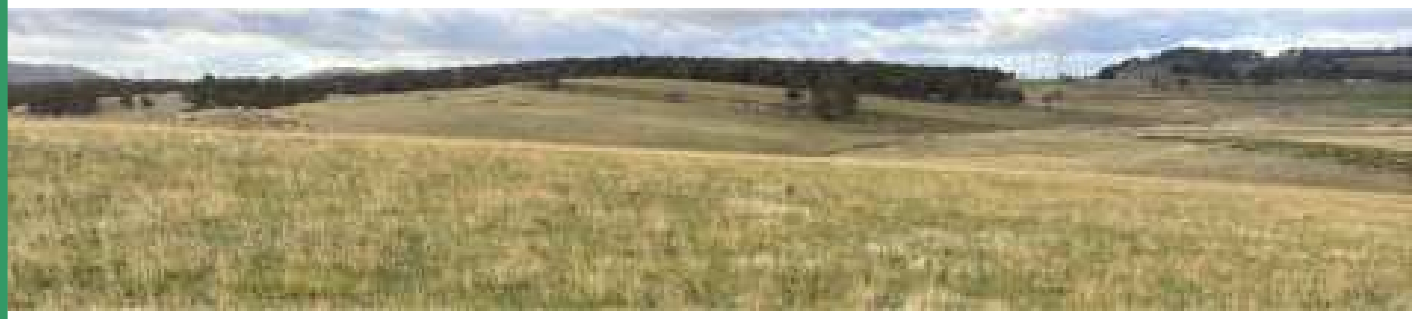
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WEASEL SOLAR FARM

ECOLOGICAL AND NATURAL ASSETS CODE ASSESSMENT

WEASEL SOLAR FARM PTY LTD



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Document Status

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EXECUTIVE SUMMARY

Three native vegetation types were observed and mapped in the Study Area in addition to several modified land categories such as agricultural land and regenerating cleared land.

The following natural values as summarised from the findings of the surveys and desktop assessment of existing information of the Study Area.

Threatened native vegetation communities	
Threatened Ecological Communities (EPBC Act)	None are present in the Study Area.
Threatened Native Vegetation Communities (NCA)	One is present in the Study Area: • *Eucalyptus tenuiramis* forest and woodland not on dolerite (DTO). The vegetation community is limited in the Study Area to a narrow north-south oriented corridor in the central region of the proposed Development. Other than for small-scale temporary surface disturbances such as cable trenching which can be rehabilitated, it is recommended that this vegetation community be avoided by the works.
Threatened Flora Species	
Three species listed on the *Threatened Species Protection Act 1995* were observed in or adjacent to the Study Area: • *Ranunculus pumilio* var*. pumilio* – new location for the species, associated with modified channel formation in Weasel Plains Creek. None are proposed to be taken or disturbed by the Development. • *Acacia siculiformis* (dagger wattle) – located on gravels and stony ground at the eastern side of the Study Area, none are proposed to be taken or disturbed by the Development. • *Scleranthus fasciculatus* (spreading knawel) – located on gravels and stony ground at the eastern side of the Study Area, none are proposed to be taken or disturbed by the Development. No species listed on the *Environment Protection and Biodiversity Conservation Act 1999* were observed in the Study Area.	
Threatened Fauna Species	
No fauna species listed on the *Threatened Species Protection Act 1995* or *Environment Protection and Biodiversity Conservation Act 1999* were observed in the Study Area during the surveys. No maternal dens or nests of terrestrial mammal species were observed during the surveys. No nests of masked owl, or blue winged parrot were observed in the Study Area but trees with hollows suitable for occupation by masked owl and blue winged parrot for breeding purposes are present; predominantly located in agricultural land as 'paddock trees' (most are dead or have a significant proportion of the tree as dead).	

Weeds and Diseases

Declared Weed species listed on the *Biosecurity Act 2019* were observed in the Study Area; these include for example blackberry (*Rubus anglocandicans*), Californian thistle (*Cirsium arvense*), Gorse (*Ulex europaeus*), and Californian thistle (*Cirsium arvense*). Several others occur there, as well as environmental and pasture weeds.

No plants with PC symptoms were observed in the Study Area. The summer dry environment present, and paucity of PC susceptible species (and host species) makes it very unlikely that this water mould would be present or become established in the Study Area.

Natural Assets Code (Tasmanian Planning Scheme – Central Highlands)

The Study Area intersects the waterway and coastal protection area overlay (the 'Overlay') mapped in the Tasmanian Planning Scheme – Central Highlands. Hence, an assessment against the Acceptable Standard/Performance Criteria of Clause C7.6.1 is required.

Clause C7.6.1 P1.1 is an applicable standard to the Development because buildings and works are proposed within a waterway and coastal protection area. The buildings are watercourse crossing points (e.g., culvert-based structures with a trafficable surface), where they don't already exist, to enable equipment and machinery to access installation areas for the solar panels and other structures. Works include the installation of the structures through earthworks (soil removal and excavation) and rehabilitation, and the installation of cabling through trench excavation and closure.

P1.1 requires that the works and buildings avoid or minimise adverse impacts on natural assets.

On balance, the areas intersected by the Overlay are primarily agricultural land or areas where there has been the regeneration of some native species such as rushes, grasses and sedges. Only small areas of native vegetation (i.e. vegetation that can be identified and mapped at a scale following TASVEG vegetation mapping units) are intersected by the Overlay; these could be avoided through careful planning and design of watercourse crossing points.

The implementation of construction management measures as described in section D.4. can further mitigate the risk of adverse impacts to natural assets where the Overlay intersects the Study Area.

P1.2 is not relevant to the Development because no buildings and works are proposed within the spatial extent of tidal waters.

DEFINITIONS	
Declared Weed	means a plant species listed on the *Biosecurity Act 2019*
(the) Development	The Weasel Solar Farm is a large-scale solar project, with a nameplate capacity up to 250MWp. It will be accompanied by a battery energy storage system (BESS) and electricity infrastructure including inverters and a switchyard containing an electrical substation to feed into the existing 220kV transmission line. The proposal includes land for the construction, maintenance, and operation of the solar farm, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, and landscaping.
Natural Values	The Natural and Cultural Heritage Division (2015) Guidelines define this as 'biological and geodiversity values of conservation significance, being those species, vegetation communities and other values that have significance and/or statutory protection under the Tasmanian *Threatened Species Protection Act 1995* (TSPA), *Nature Conservation Act 2002* (NCA) and other relevant policies and regulations.
(the) Planning Scheme	Tasmanian Planning Scheme – Central Highlands
Report	means this report
Study Area	means the area identified as 'Study Area' in **Figures 1 and 2.**
TASVEG	A comprehensive digital map of Tasmania's vegetation, including sub-Antarctic Macquarie Island. The map depicts the extent of more than 150 vegetation communities, including coastal heathlands, eucalypt forest and alpine communities. To assist with using the map, these communities are fully described in the accompanying technical manual - *From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation* (Edition 2). Available to the public via LISTmap and can be requested as a standalone file for use within a Geographic Information System (GIS).
Threatened fauna	means species of fauna listed on the – • Tasmanian *Threatened Species Protection Act 1995,* or the • Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
Threatened flora	means species of flora listed on the – • Tasmanian *Threatened Species Protection Act 1995,* or the • Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
Threatened Ecological Communities	means ecological communities listed under s 181 of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
Threatened Native Vegetation Communities	means native vegetation communities listed under Schedule 3A of the Tasmanian *Nature Conservation Act 2002*.

ACRONYMS	
BESS	battery energy storage system
DPIPWE (now NRE Tas)	Department of Primary Industries, Parks, Water and Environment
(the) EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
NRE Tas (was DPIPWE)	Department of Natural Resources and Environment Tasmania
NVA	Natural Values Atlas (natural values database maintained by NRE Tas)
(the) TSP Act	*Threatened Species Protection Act 1995*

PART A – BACKGROUND

A.1 SCOPE

A.1.1 The Development and Proponent

The Weasel Solar Farm is a large-scale solar project, with a nameplate capacity up to 250MWp. It will be accompanied by a battery energy storage system (BESS) and electricity infrastructure including inverters and a switchyard containing an electrical substation to feed into the existing 220kV transmission line.

The proposal includes land for the construction, maintenance, and operation of the solar farm, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, and landscaping.

The Proponent is Weasel Solar Farm Pty Ltd (ACN 675 406 649) which has its registered office at Level 2, 33 George Street, Launceston, TAS 7250.

A.1.2 Study Area

The Study Area includes parts of the following Certificates of Title (see **Figures 1 and 2**):

- 140433/1 (PID 2538314; 'The Weasel' – 3415 Highland Lakes Road, Bothwell TAS 7030),
- 40581/1 (PID 2538322; 'Weasel Plains' – 3236 Highlands Lakes Road, Bothwell TAS 7030), and
- 104298/1 (PID5014022); 'Rockford' – 3759 Highlands Lakes Road, Bothwell TAS 7030).

A.1.3 Natural Values Assessment

Weasel Solar Farm Pty Ltd engaged VDC to conduct a Natural Values assessment with a focus on the terrestrial biodiversity values present the Study Area and the assessment of those relative to the Planning Scheme. The task included field surveys of the Study Area to record the Natural Values present and the subsequent compilation of this Report.

Geodiversity, which is a component of Natural Values, is not specifically considered in the Report but is referenced in terms of soils and geology that may influence the distribution and occurrence of biodiversity values such as vegetation types and threatened flora species.

The following tasks were undertaken as part of the assessment:

1. A review of biodiversity values recorded previously within and adjacent to the Study Area including Natural Values Atlas held data, and available reports and maps,

2. The potential for the occurrence of threatened fauna species listed under the TSP Act and EPBC Act in the Study Area was evaluated using the Natural Values Atlas Database (NVA, Department of Natural Resources and Environment Tasmania),

3. Field surveys were undertaken to investigate and verify the potential biodiversity values identified in the desktop assessment. The field surveys included:

    (a) The ground-truthing and mapping of vegetation communities at an appropriate geographic scale in the Study Area using TASVEG 4.0 mapping units (and ecological communities listed under the EPBC Act);

(b) Targeted searches of areas for terrestrial and riparian flowering annual and perennial plants and aquatic flora[1], including potential habitat for conservation significant species;

(c) Habitat assessment for threatened raptor and mammal species; and

(d) The identification and mapping of declared and weeds listed on the schedules of the *Biosecurity Act 2019* within the Study Area, and

4. Document the findings of the field-based surveys and relevant aspects of other biodiversity related background reports for the Study Area, including an assessment against the relevant provisions of the Natural Assets Code in the Planning Scheme.

A.2 LOCATION

The Study Area is approximately 9 km north of the town centre of Bothwell and 72 km north of Hobart (**Figures 1 and 2**). It is accessed via Weasel Plains Road which is an unsealed road that directly connects to Highland Lakes Road. There are two additional construction and emergency access points and an evacuation route.

A.3 EXISTING SITE CONDITIONS

A.3.1 Topography and Landforms

The potential infrastructure areas of the solar farm are relatively flat; however, the surrounding area is undulating to gentle slopes. The Study Area topography as shown by the contours in **Figure 3.**

A.3.2 Watercourses and dams

Weasel Plains Creek transects the northern portion of the Study Area. Other minor creeks, minor tributaries and drainage lines exist across the Study Area, but they are significantly modified through past farming related activities. Watercourses are marked by the 'waterway and coastal protection area' overlay contained within the Scheme; this is spatially shown relative to the Study Area on **Figure 5.**

A.3.3 Land Use

The Study Area is largely cleared of native vegetation with some adjoining large patches of remnant native forest and woodland vegetation. Agricultural land (improved pastures in various condition classes and species composition and coverage) and associated regrowth areas of pinrush and sagg dominate the Study Area.

Most of the Study Area is currently used for broadacre grazing, with some irrigated cropping to the east of the Development Area. The Study Area is predominantly surrounded by other large farming properties and some forestry plantations to the west.

[1] Excluding micro-flora such as algae, lichen, fungi.

There are several rural residential properties within the vicinity of the site, varying in distance to the different PV area boundaries. Most of those dwellings are owned by landowners involved in the project (including the nearest dwelling, approximately 150m east of the 'North' PV area. Excluding dwellings located within properties of involved landowners (Dungrove, Cluny and Weasel Plains), there are only two dwellings within 2km of the Development Area that are owned by a non-involved person.

The existing 220 kV transmission line (Waddamana to Lindisfarne) runs within the western boundary of the Study Area, adjacent to Highland Lakes Road.

A.3.4 Geology and Soils

The mapped geology[2] of the Study Area and surrounds is shown in **Figure 4**.

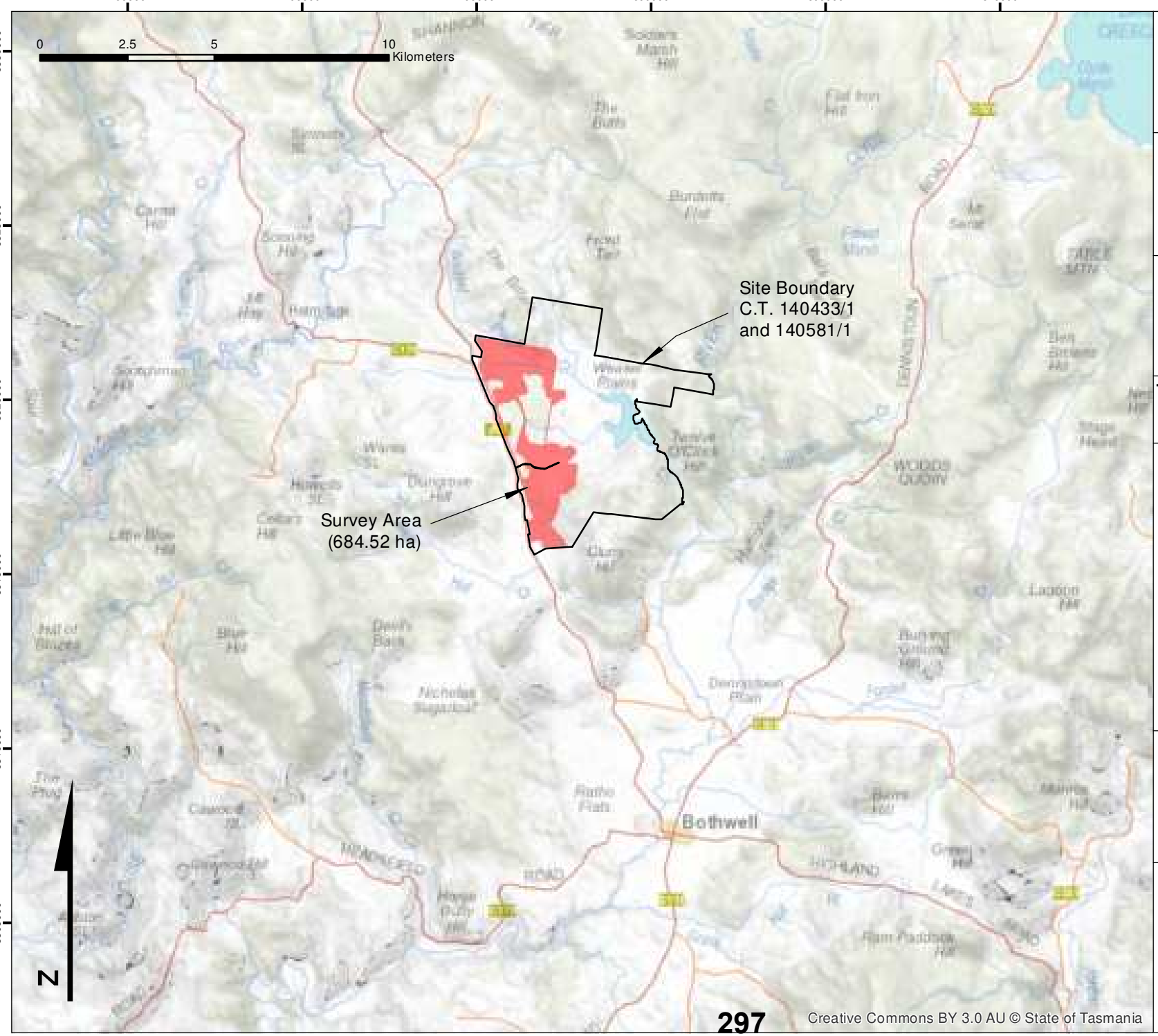
The Study Area is in the *Hermitage* component of the Land Systems Surveys of Tasmania Region 6: South, East and Midlands (see **Attachment 3**).

Pinion Advisory[3] provides the following commentary around the geology and soils of the Study Area:

> 'The geology present on The Weasel property is dominated by glaciomarine sequences of pebbly mudstone and sandstone and limestone, with smaller areas of dolerite and quartz sandstone on the far south east area.
>
> The soils present on The Weasel property are dominated by grey/brown duplex soil consistent with the chromosol soil type, which features a sandy loam topsoil over a sandy clay subsoil, with small areas of brown clay loam soils consistent with the dermosol soil type on the far south eastern area and black cracking heavy clay soil which is consistent with the vertosol soil type on the far northern area associated with the land adjacent to the Weasel Plains Creek.
>
> The geology present on the Weasel Plains property is a complex of glaciomarine sequences of pebbly mudstone and sandstone and limestone on the northern and western boundary area, dolerite on the central and eastern area and smaller areas of quartz and freshwater sandstone on the central and southern areas.
>
> The soil present on the Weasel Plains property associated with the WSF is a grey/brown duplex soil consistent with the chromosol soil type.
>
> The soils present on The Weasel and Weasel Plains property are suitable for pasture production albeit with productivity constraints relative to the associated land capability present.
>
> The WSF would be located on the lighter textured sandy/sandy loam soils.'

[2] MRT 1:250,000 mapped scale available through TheLIST (www.thelist.tas.gov.au).

[3] Pinion Advisory, May 2024, Agricultural assessment of the proposed Weasel Solar Farm development.



WEASEL SOLAR FARM

ECOLOGICAL AND NATURAL ASSETS CODE ASSESSMENT

Figure 1: Location of the Weasel Solar Farm Site Boundary and Survey Area

TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Site Boundary

Study Area

Base data by TASMAP. © State of Tasmania
Base image by TASMAP. © State of Tasmania

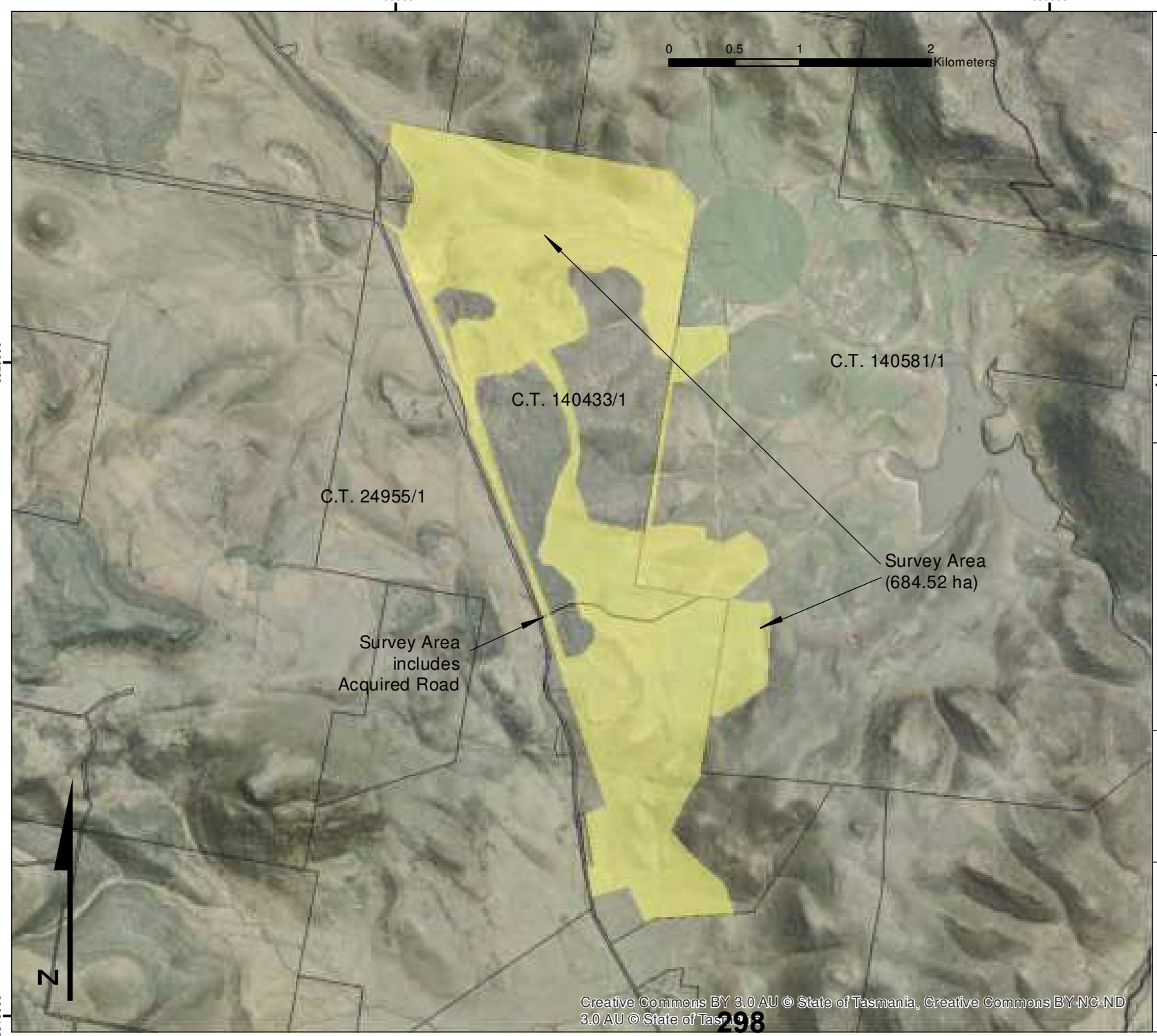
Van Diemen CONSULTING
PO Box 1 New Town TAS 7008

DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A4 - NA

CLIENT:
WEASEL SOLAR FARM PTY LTD

DATE: 8 JULY 2024

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WEASEL SOLAR FARM

ECOLOGICAL AND NATURAL ASSETS CODE ASSESSMENT

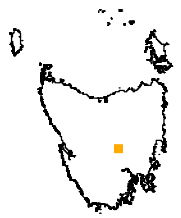
Figure 2: Location of the Weasel Solar Farm Study Area and Land Titles

TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Study Area

Base data by TASMAP. © State of Tasmania
Base image by TASMAP. © State of Tasmania

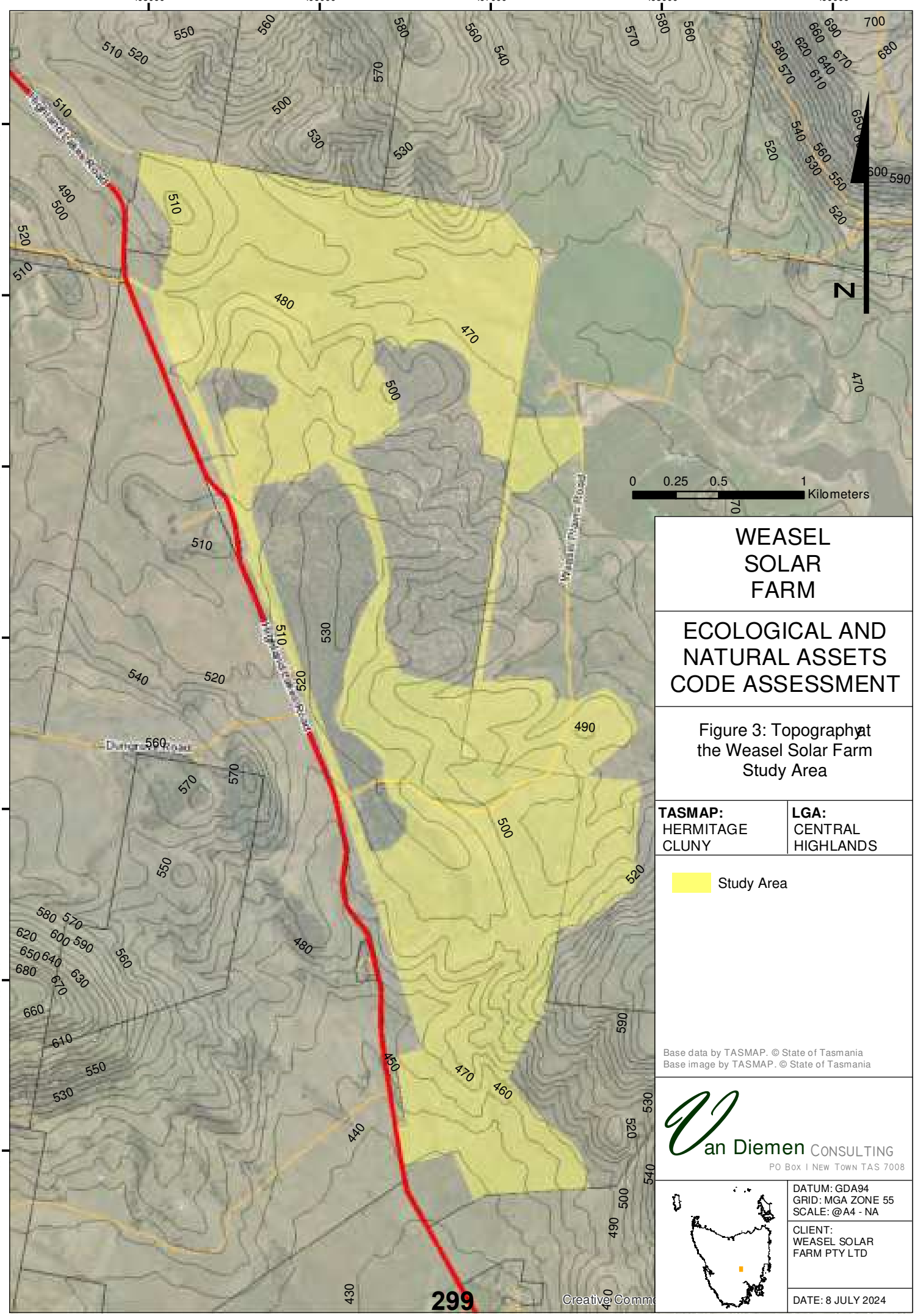
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WEASEL SOLAR FARM

ECOLOGICAL AND NATURAL ASSETS CODE ASSESSMENT

Figure 3: Topography at the Weasel Solar Farm Study Area

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Study Area

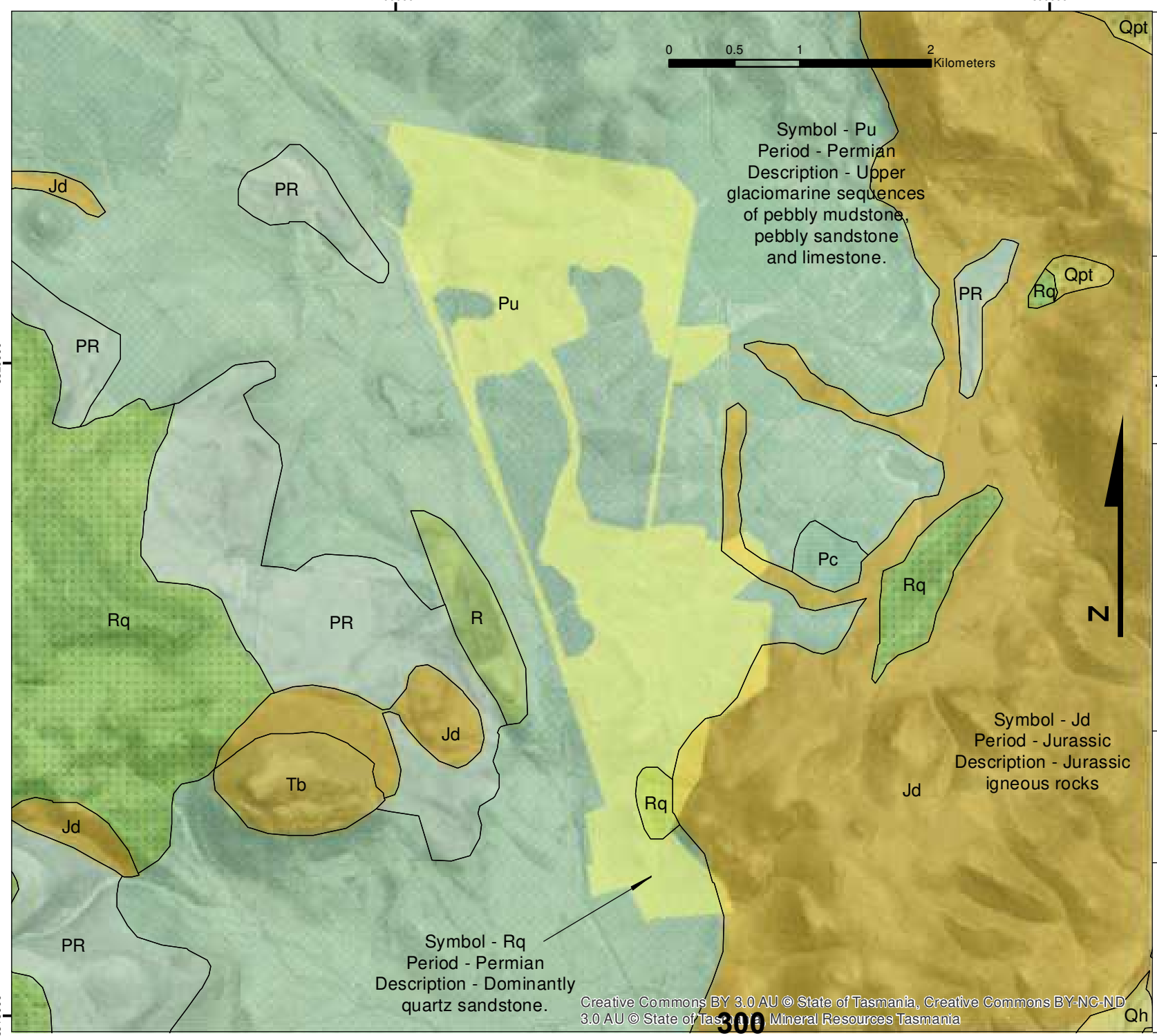
Base data by TASMAP. © State of Tasmania
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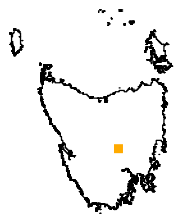
Figure 4: Geology (1:250,000- MRT) at the Weasel Solar Farm Study Area

TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Study Area

Base data by TASMAP. © State of Tasmania
Base image by TASMAP. © State of Tasmania

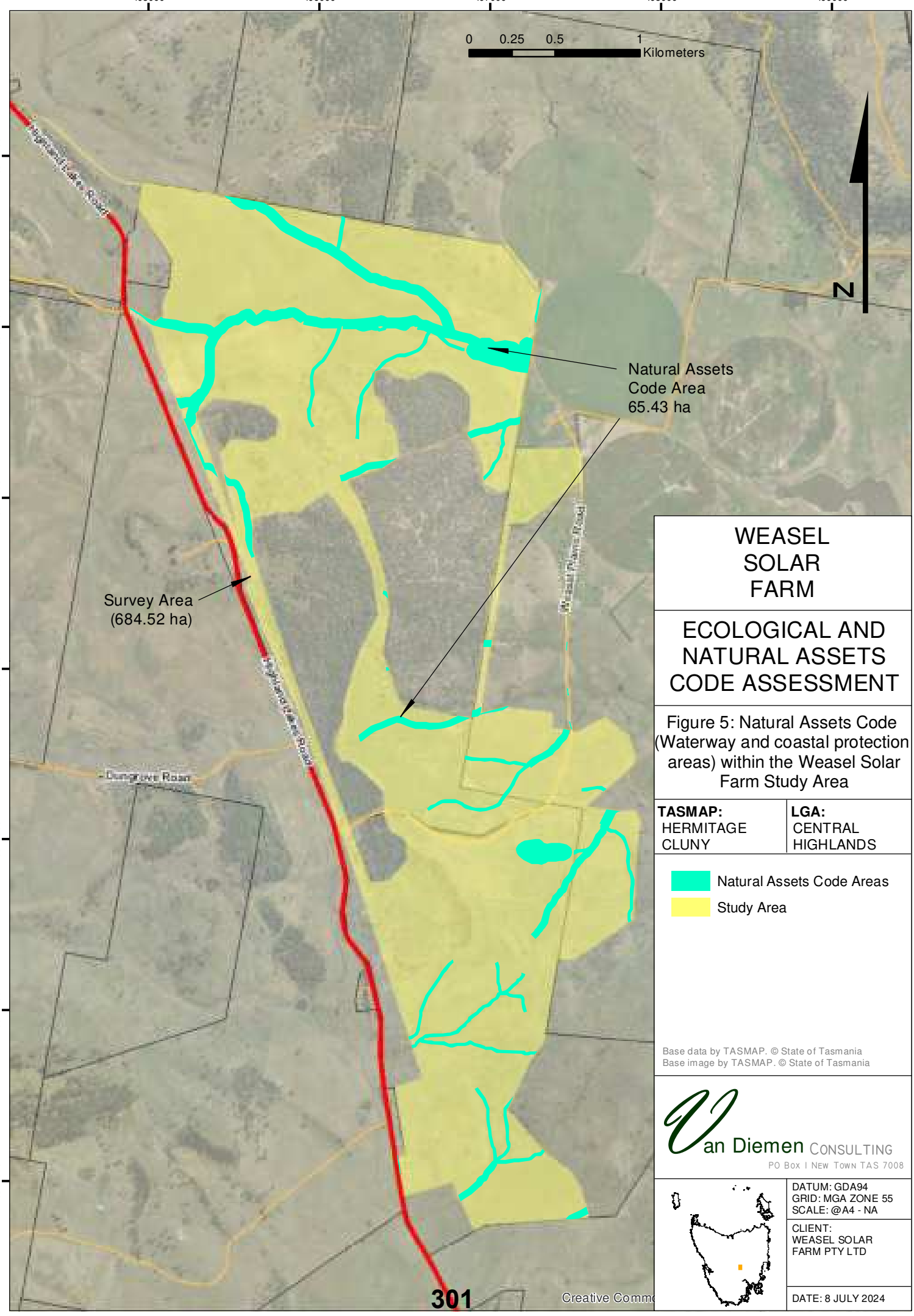
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WEASEL SOLAR FARM

ECOLOGICAL AND NATURAL ASSETS CODE ASSESSMENT

Figure 5: Natural Assets Code (Waterway and coastal protection areas) within the Weasel Solar Farm Study Area

TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Natural Assets Code Areas

Study Area

Base data by TASMAP. © State of Tasmania
Base image by TASMAP. © State of Tasmania

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PO Box 1 New Town TAS 7008

DATUM: GDA94
GRID: MGA ZONE 55
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DATE: 8 JULY 2024

PART B – SURVEY METHODS AND ASSESSMENT TOOLS

This section provides details of the survey techniques applied for the studies conducted in the Study Area, and the assessment tools/documents used to identify the Natural Values, if any, of significance.

B.1 QUALIFICATIONS OF PERSONNEL

The Natural and Cultural Heritage Division (2015[4]) note that -

> 'The proponent or their representative must ensure that the personnel undertaking surveys and preparing reports have appropriate skills, qualifications and experience in identification and documentation of all natural values of interest, including a knowledge of Tasmanian species, their habitat and other ecological requirements, and vegetation communities.'

In this case, the surveyors of the natural values each hold a PhD in a relevant field of science – zoology and botany – and over 60 years of combined field expertise in Natural Values assessment, identification, mapping, reporting and ecological impact assessment/mitigation.

B.2 VEGETATION CLASSIFICATION AND MAPPING

B.2.1 Classification and mapping

Vegetation communities were identified and attributed to Tasmanian Vegetation Mapping Units (Kitchener and Harris 2013, 2nd Edition and with revisions in April 2019). All vegetation types in the Study Area were assessed and the variation within each explored. Flora species were recorded as they were encountered in a meandering survey.

Species nomenclature follows de Salas and Baker (2023).

An iPhone was used to navigate and assist with the interpretation of vegetation types using Google Earth overlain with shapefiles of the Study Area. Aerial photography both in the field and in the office was used to further interpret and map vegetation boundaries.

B.2.2 Forest Structure Assessment

A Light Detection and Ranging (LIDAR) generated canopy height model was accessed from TheLIST to aid the identification and boundaries of native vegetation communities, the location (if any) of potential eagle nesting habitat, and the identification of structural elements within the canopy of forest types paddock trees for relevant threatened fauna species (e.g., masked owl).

[4] Natural and Cultural Heritage Division (2015). Guidelines for Natural Values Surveys - Terrestrial Development Proposals. Department of Primary Industries, Parks, Water and Environment. Version 1.1 – 13th August 2019 (minor updates to links in document).

B.3 THREATENED FLORA AND FAUNA SPECIES SURVEYS

A Natural Values Atlas Report (NVA, **Attachment 1**) was generated to identify previous recorded locations of conservation significant species (flora and fauna) and range boundaries for significant and/or threatened fauna species. A Protected Matters Search Tool Report (**Attachment 2**) was also generated through the DCCEEW portal to identify the threatened species and ecological communities listed as Matters of National Environmental Significance for the Study Area.

The surveys conducted directly assessed the full range of habitat types in the Study Area.

B.3.1 Conservation listings

The conservation status of threatened flora and fauna species follow the:

- Tasmanian *Threatened Species Protection Act 1995,* and the
- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

B.3.2 Flora species

Flora species of particular focus were those listed in the Natural Values Atlas report as having known records, or potential habitat, within and near the Study Area. Habitat descriptions were used from the FPA (2022a) to guide search effort on ground. The flora surveys were limited to the identification of vascular species: species of mosses, lichens and liverworts were not recorded unless they are a threatened flora species.

B.3.3 Fauna species – habitat assessment

Potential habitat for threatened fauna (based on the 5,000 m range boundary mapping of the NVA, **Attachment 1**) was assessed by reference to the vegetation communities present and the associated characteristics of the habitat values each provided to fauna species - assessments were made by comparing the characteristics of known fauna habitat with the habitat present in the Study Area.

Fauna species with potential or known habitat in the Study Area were considered in the context of habitat ranges/descriptions provided in **Table 1** (FPA 2022b).

Table 1. Threatened fauna species range boundary type and associated description

Range type	Description
Core Range	Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.
Potential Range	Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.
Known Range	is the area within which the species is most likely to occur, being the area of land within a minimum convex polygon of all known localities of the species. This term is synonymous with

	'extent of occurrence' as referred to in the *Guidelines for Eligibility for Listing under the* Threatened Species Protection Act 1995 (DPIW 2009).
Potential habitat	is all habitat types within the potential range of a species that are likely to support that species in the short and/or long term. It may not include habitats known to be occupied intermittently (e.g. occasional foraging habitat only). Potential habitat is determined from published and unpublished scientific literature and/or expert opinion, and is agreed by the Threatened Species Section (DPIPWE) in consultation with species' specialists.
Significant habitat	is habitat within the known or core range of a species that (1) is known to be of high priority for the maintenance of breeding populations throughout the species' range and/or (2) conversion of which to non-native vegetation is considered to result in a long-term negative impact on breeding populations of the species. It may include areas that do not currently support breeding populations of the species but that need to be maintained to ensure the long-term future of the species. Significant habitat is determined from published and unpublished scientific literature and/or expert opinion, and is agreed by the Threatened Species Section (DPIPWE) in consultation

The Scheme in the Natural Assets Code includes a definition of **significant habitat**:

> 'means the habitat within the known or core range of a threatened fauna species, where any of the following applies:
>
> (a) is known to be of high priority for the maintenance of breeding populations throughout the species' range; or
>
> (b) the conversion of it to non-priority vegetation is considered to result in a long-term negative impact on breeding populations of the threatened fauna species.'

The Scheme definition is directly comparable to the definition used and applied by the FPA (2022).

B.3.4 Targeted Fauna Species Surveys

Some species were considered in targeted searches of habitat, or components of habitat which is used by those species such as trees with hollows for nesting.

Eagle species

The Survey is within the potential range (foraging and breeding) of the Tasmanian wedge-tailed eagle (*Aquila audax fleayi*) and white-bellied sea eagle (*Haliaeetus leucogaster*). No nests of either species have been recorded within 1km of the Study Area (see **Attachment 1; Figure 12**) and there is only low and moderate quality habitat modelled by the FPA in the local area (accessible through TheLIST (Wedge-tailed eagle nesting habitat – Low (under 850m) Elevation Model), **Figure 12**).

Conservation Listed (threatened) Mammal Species

Four conservation significant ground-dwelling mammals were of relevance to the ecological assessment:

- spotted-tailed quoll (*Dasyurus maculatus maculatus*),
- eastern quoll (*Dasyurus viverrinus*),

- eastern barred bandicoot (*Perameles gunnii gunnii*), and
- Tasmanian devil (*Sarcophilus harrisii*).

All four mammals are habitat 'generalists' in that they will use and occupy native and non-native vegetation cover, as well as human-made structures including houses, sheds, huts, and culverts under roadways. Quolls and devils will also den in woodpiles created by land clearing practices and/or timber harvesting operations. Trapping was not conducted as it would have required the approval of the Tasmanian Animal Ethics Committee and was not considered warranted given the low impact of the proposed development.

A 'habitat suitability' assessment rather than trapping is justified in this case as there is enough anecdotal evidence and existing State Government data (e.g., Natural Values Atlas records and predicted habitat range boundaries) that all four species are present in the Bothwell region. A search for dens/nests/burrows in the Study Area was done on-foot, with particular focus on areas that are more likely to be used for denning (i.e., areas of soils conducive to digging, and are not likely to be inundated for some time of the year, areas of rock overhangs or shelters) or nesting (moderate to long grass dominated vegetation).

Masked owl

The Habitat Context Assessment Tool (Forest Practices Authority) was accessed from the FPA webpage to identify the areas which may support trees that could be of sufficient age and growth status to contain a hollow for breeding by masked owls. These areas were the focus of the surveys on foot, with additional areas checked in the Study Area to validate the Habitat Context Assessment Tool and to identify trees that may have hollows of potential size, form, and location on the tree/trunk to be possibly used as a nest for breeding; termed a 'tree that may provide a nesting opportunity'.

All trees that may provide a nesting opportunity were checked for signs of nesting (current and historic use) or roosting (e.g., regurgitated pellets, whitewash, feathers at the base of the tree within the tree's dripline). Lack of these signs does not indicate an absence of nest but the presence of any of these signs can strongly indicate a nest hollow. Hollows were not viewed by drone nor was any surveillance conducted with a wildlife camera or similar (e.g. constant recording camera, observations).

B.4 LIMITATIONS

B.4.1 Flora

Due to varying flowering times and seasonality of occurrence not all flora species that occur in the Site may have been recorded during the on-ground surveys. The site survey was done in March, April and July 2024.

Short lived annuals, orchids and lilies that may be present in the Study Area may have been missed because they were not able to be identified (they were not flowering) or they were not evident at this time of year (e.g., annual species that had died back or had not emerged at the time of survey). Overall, it is unlikely that species of conservation significance were not appropriately considered in the survey/assessment.

B.4.2 Fauna

The fauna assessment (except for direct searches of nests and dens etc as outlined above) was limited to a habitat assessment for fauna species, including the ground truthing of potential habitats for significant fauna species that were identified in database searches.

B.4.3 Micro Flora and Fauna

The flora and fauna surveys excluded micro-flora and micro-invertebrates such as algae, zooplankton, and cave-dwelling fauna.

PART C – SURVEY FINDINGS

C.1 VEGETATION COMMUNITY IDENTIFICATION, DESCRIPTIONS AND CONSERVATION STATUS

Three native vegetation types were observed and mapped in the Study Area (**Figure 6**) in addition to several modified land categories such as agricultural land and regenerating cleared land.

Table 2 provides a list of the TASVEG 4.0 codes mapped in the Study Area, and details of each mapping unit relative to the Study Area and Development Footprint. Comments are provided below for each vegetation type and mapping unit recorded in the Study Area.

The plant species observed within the Study Area during surveys are listed in **Attachment 4.**

C.1.1 Eucalypt forest and woodland categories

<u>*Eucalyptus pauciflora* forest and woodland not on dolerite (DPO)</u>

Eucalyptus pauciflora forests and woodlands not on dolerite are dominated by a canopy of *E. pauciflora* trees rarely more than 25 m in height, and are often considerably shorter on highly insolated, nutrient poor sites. This dry sclerophyll community is often an open forest or woodland with a heathy understorey of generally low diversity.

In the Study Area, the native forest and woodlands are dominated by *E. pauciflora* (cabbage gum) with sub-dominant *E. rubida* (candlebark). Tree height ranges from 8 to 18m subject to the degree of exposure to prevailing winds, with the smaller trees generally occurring on northerly slopes and hill crests.

The midstorey is sparse and formed by scattered native cherry (*Exocarpos cupressiformis*), blackwood (*Acacia melanoxylon*) and silver wattle (*Acacia dealbata*). Honeysuckle (*Banksia marginata*) were observed but are infrequent. The ground layer varies from being comprised of only exotic species through to a sparse but native species dominated ground layer (low species diversity which is typical of the vegetation community) including small shrubs, herbs, heaths, grasses and sedges. Leaf litter is the dominant ground cover, with occasional patches of bare soil and exposed rock/gravel.

A condition rating was applied to the DPO in the Study Area based on the broad characteristics of canopy tree health, the presence (or lack) of regeneration of canopy tree species, floristic composition/dominance of the ground layer, and disturbance levels (e.g. weed infestation, livestock camps). No formal VCA condition benchmark[5] data were collected.

Table 3 provides details of each rating category developed specifically for this study, with each of the ratings explained in terms of species abundance and broad coverage. The VCA benchmark of the forest community is also listed in **Table 3** as a comparison to the three categories developed for this study. Images of this native

[5] The TASVEG VCA method was not applied; it requires a reference point or 'benchmark' so that the vegetation condition at specific sites can be assessed. Components of the vegetation at a site are scored against the benchmark to arrive at a condition value.

forest and woodland community in the Study Area grouped by condition rating are in **Plate 1.** The spatial location of each condition category is shown in **Figure 7.**

For Good condition forest and woodland, tussock grasses (mainly *Poa rodwayi, P. labillardierei and P. sieberiana, Elymus scaber, Microlaena stipoides* var. *stipoides, Dichelachne crinita*), sagg (*Lomandra longifolia*), herbs (*Gonocarpus tetragynus, Stackhousia monogyna*) and small shrubs (e.g., *Acacia gunnii*, *Epacris impressa, Pultenaea gunnii, Bossiaea riparia, B. cinerea*) are common in the ground layer with very small and localised areas dominated by bracken-fern (*Pteridium esculentum*). Good condition forest, while variable in its species diversity across its mapped range in the Study Area, exceeded the number of native species prescribed in the VCA benchmark (**Table 3**).

Good condition forest and woodland stands were limited in the Study Area to the very western edge of the forest margin that is nearest the Highland Lakes Road. A small patch of DPO was also mapped in a central laneway location where it is part of a larger patch of forest that is also in Good condition.

Plate 1. Images of *Eucalyptus pauciflora* forest and woodland not on dolerite in the Study Area

Good Condition



Medium Condition






Low Condition



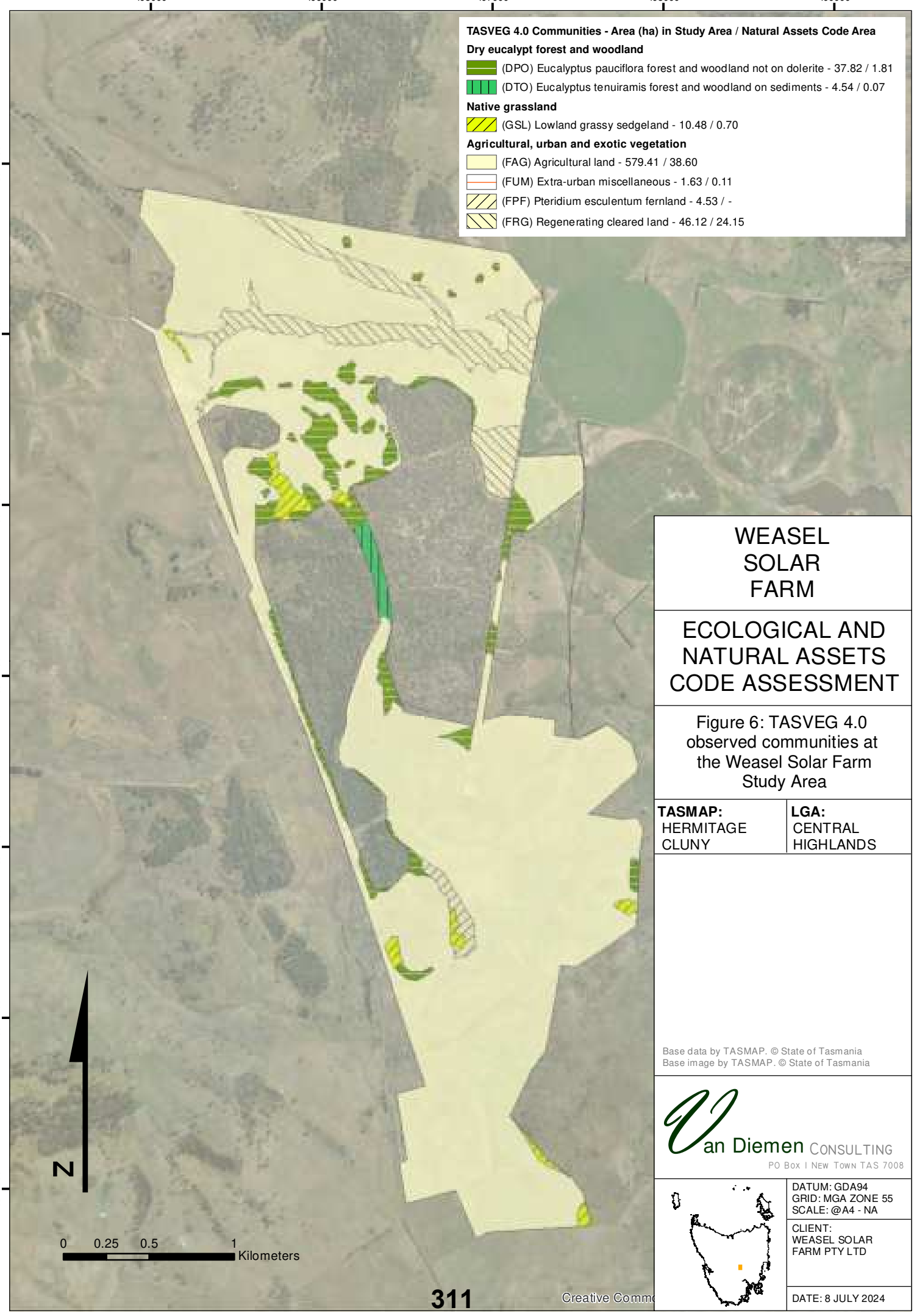



Medium and Low condition DPO patches are in effect degraded Good condition forest and woodland patches. The degree of degradation from Medium through to Low is characterised by a decreasing number and coverage of native species with an increasing number and/or coverage of exotic species. Patch size, shape, and contiguity with other patches all seem to have played a role as to patch condition, being Medium or Low.

Medium condition forest and woodland areas are often –

- unfenced but are larger and contiguous with stock excluded forest areas (which themselves are for the most part in Good condition),
- long but thin retained areas of native forest and woodland where the patch size seems to be sufficient to support native grass, herb and shrub species in the ground layer, and
- support a high density of younger living trees (younger in the context of the greater age of paddock remnant trees).

Low condition forest and woodland patches are (i) broadly unfenced small remnants within agricultural land or are (ii) the livestock frequented edges of forest remnants. In all cases, the quality of the forest and woodland has been negatively impacted by livestock, and edge effects (i.e. encroachment by pasture grasses, herbs and weeds). Consequently, Low condition forest and woodland patches have very few native species in the ground layer, and with pasture grasses and pasture weeds (e.g., deadly nightshade, thistles) common to abundant.



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Figure 6: TASVEG 4.0 observed communities at the Weasel Solar Farm Study Area

TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

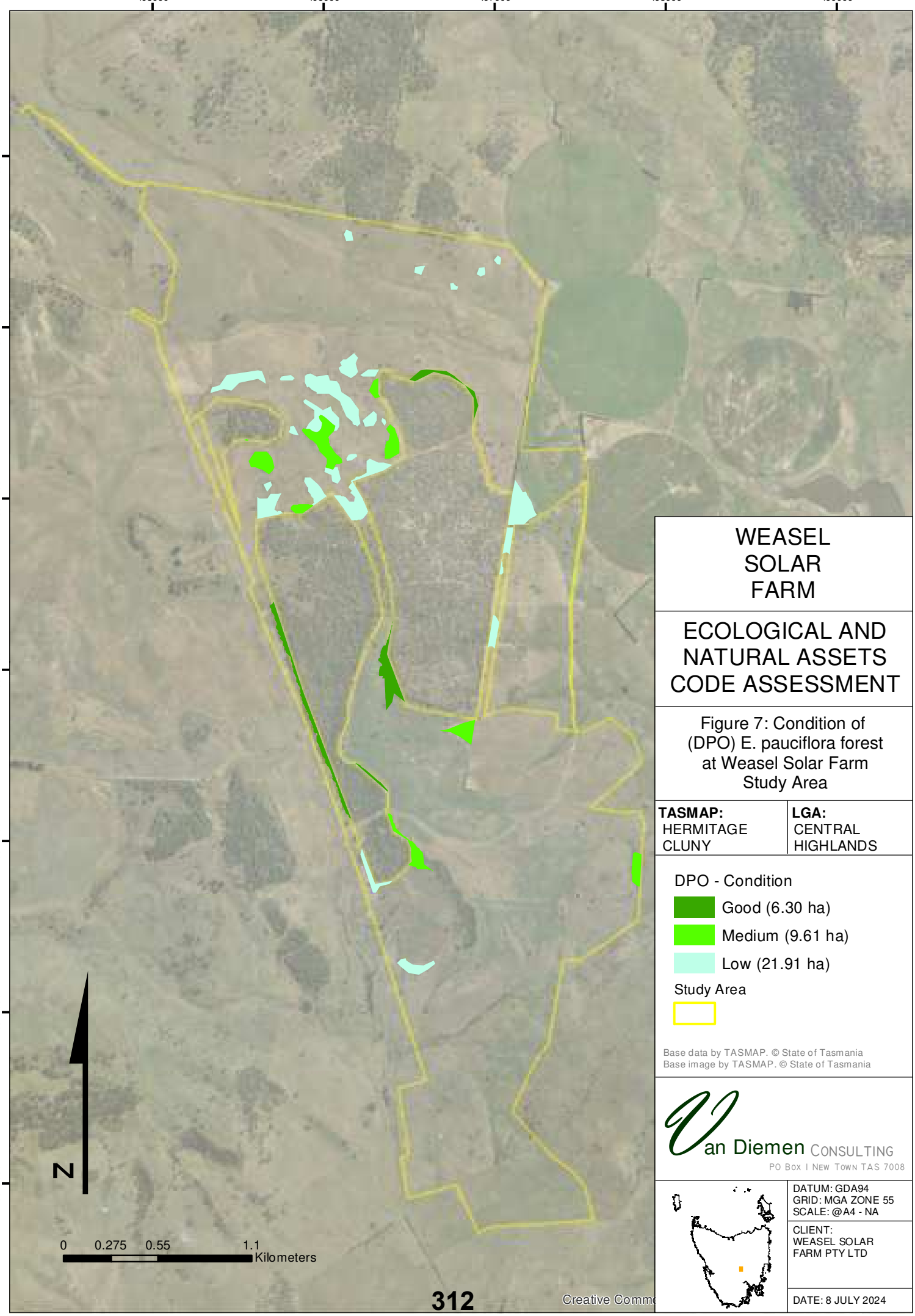
Base data by TASMAP. © State of Tasmania
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WEASEL SOLAR FARM

ECOLOGICAL AND NATURAL ASSETS CODE ASSESSMENT

Figure 7: Condition of (DPO) E. pauciflora forest at Weasel Solar Farm Study Area

TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

DPO - Condition

- Good (6.30 ha)
- Medium (9.61 ha)
- Low (21.91 ha)

Study Area

Base data by TASMAP. © State of Tasmania
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Table 2. TASVEG 4.0 mapping categories recorded in the Study Area

TASVEG CODE	TASVEG COMMUNITY	Threatened native vegetation community#	Extent in the Study Area (hectares)	Extent in the Waterway and coastal protection area overlay (hectares)	PNFE Policy[6] extent in Central Highlands Bioregion
DPO	*Eucalyptus pauciflora* forest and woodland not on dolerite	No	37.83	1.81	16,643.1 (a 0.7% decrease since 1996)
DTO	***Eucalyptus tenuiramis* forest and woodland not on dolerite**	**Yes**	**4.54**	**0.07**	**17,461.1 (a 0.2% decrease since 1996)**
GSL	Lowland grassy sedgeland	No	10.48	0.70	
FAG	Agricultural land		579.41	38.60	
FUM	Extra urban miscellaneous		1.63	0.11	
FPF	*Pteridium esculentum* fernland		4.53	0	
FRG	Regenerating cleared land		46.12	24.15	

Threatened native vegetation communities are those listed in Schedule 3A of the *Nature Conservation Act 2002*

[6] Figures from the MONITORING OF THE MAINTENANCE OF THE PERMANENT NATIVE FOREST ESTATE POLICY issued by the Forest Practices Authority (December 2023)

Table 3. Condition ratings for *Eucalyptus pauciflora* forest and woodland not on dolerite in the Study Area

Understorey Life Forms	Benchmark native species number and coverage (%)	Condition Ratings and average native species number		
		Good (approx % cover)	Medium (approx % cover)	Low (approx % cover)
Immature Canopy Tree	1 (5)	1 (1)	0 (0)	0 (0)
Tree (sub-canopy)/Large Shrub	2 (5)	4 (<5)	1 (<1)	0 (0)
Medium Shrub/Small Shrub	6 (25)	7 (<5)	0 (0)	0 (0)
Prostrate and Mat Forming Shrubs (incl. cushion plants)	4 (5)	4 (<5)	2 (<1)	0 (0)
Herbs and Orchids	7 (5)	6 (<5)	Up to 4 (<1)	1 (<0.1)
Grasses	3 (10)	7 (<5)	Up to 4 (<1)	2 (<1)
Large Sedge/Rush/Sagg/Lily	2 (20)	4 (10-15)	Up to 4 (5)	1 (<2)
Medium to Small Sedge/Rush/Sagg/Lily	1 (5)	3 (5-10)	2 (5-10)	1 (<0.1)
Ground Ferns and fern allies	1 (15)	1 ()	1 ()	1 (<5 or 40)
Scramblers/Climbers/Epiphytes	1 (5)	1 (trace)	0 (0)	0 (0)
Mosses and Lichens	1 (10)	1 (<10)	0 (<5)	0 (0)
TOTAL species	**29**	**39**	**18**	**6**

<u>*Eucalyptus tenuiramis* forest and woodland not on dolerite (DTO)</u>

This forest/woodland occurs mainly on Triassic sandstone and Permian mudstone in dry parts of Tasmania's south-east, under 650 m elevation.

In the Study Area, this native forest and woodland is dominated by *E. tenuiramis* (cabbage gum) with sub-dominant *E. rubida* (candlebark) and *E. pauciflora* (cabbage gum). Tree height ranges from 8 to 12m subject to the degree of exposure to prevailing winds, with the smaller trees generally occurring on northerly slopes and hill crests.

The midstorey is sparse and formed by scattered native cherry (*Exocarpos cupressiformis*), blackwood (*Acacia melanoxylon*) and silver wattle (*Acacia dealbata*). Large shrub forms of honeysuckle (*Banksia marginata*) were observed but they are very infrequent. The ground layer is comprised of native species (low species diversity which is typical of the vegetation community) that includes small shrubs, herbs, heaths, grasses and sedges.

This vegetation community is listed on Schedule 3A of the *Nature Conservation Act 2002* as Eucalyptus tenuiramis *forest and woodland on sediments.* Based on the NRE notesheet[7], this vegetation community has an approximate Tasmania-wide extent of 46,900 hectares. Of this, 23% of the community is mapped within the secure National Reserve System increasing to 24% in the wider Tasmanian Reserve Estate, which also includes informal and fixed-term reserves. There is 4.66 hectares of this vegetation community in the Study Area (**Table 2**).

Images that depict the *Eucalyptus tenuiramis* forest and woodland not on dolerite in the Study Area are in **Plate 2.**

Plate 2. Images of *Eucalyptus tenuiramis* forest and woodland not on dolerite (DTO) in the Study Area



C.1.2 Native Grassland Categories

Lowland grassy sedgeland (GSL)

A native vegetation community dominated by sedges such as sagg (*Lomandra longifolia*) and *Lepidosperma* species interspersed with grasses This vegetation community is often 'derived' because for example, from incomplete clearing, stock grazing and burning of native forest and woodland.

The ground layer of this vegetation community is dominated by sagg (*Lomandra longifolia*), with occasional white flag iris (*Diplarrena moraea*). Scattered eucalypts such as *Eucalyptus pauciflora*, and *E. rubida* are present but have a canopy cover less than 1%. Silver wattle (*Acacia dealbata*), blackwood (*A. melanoxylon*) and prickly box (*Bursaria spinosa*) are very scarce emergent from the sedgeland.

[7] Tasmanian Threatened Native Vegetation Communities - Version 2 11 April 2022

Images that depict the Lowland grassy sedgeland in the Study Area are in **Plate 3.**

Plate 3. Images of Lowland grassy sedgeland (GSL) in the Study Area



C.1.3 Agricultural, Urban and Exotic Vegetation Categories

Agricultural land (FAG)

The mapping unit identifies that land which has been used and managed for agricultural purposes. This mapping unit occupies most of the Study Area and its occurrence is reflective of the historical agricultural land use of the peninsula.

Pasture grasses are dominant species however a range of other exotic grass species were observed including bent grasses (e.g., *Agrostis capillaris, A. stolonifera*), silvery hairgrass (*Aira caryophyllea*), and Yorkshire fog (*Holcus lanatus*). Some clover and trefoil species were observed, but they were young plants that lacked flowers and/or seed pods to aid their identification.

Common exotic herbs include buckshorn plantain (*Plantago coronopus*), sheep sorrel (*Acetosella vulgaris*), smooth cat's ear (*Hypochaeris glabra*), rough cats' ear (*Hypochaeris radicata*), common dandelion (*Taraxacum officinale*), hawkbit (*Leontodon saxatilis*), cranesbill (*Erodium* sp.), and capeweed (*Arctotheca calendula*).

There are sporadic but relatively small patches of spear thistle (*Cirsium vulgare*), wild mignonette (*Reseda luteola*), variegated thistle (*Silybum marianum*), and pasture grasses/herbs across the Study Area. Very localised and sparse patches of Declared Weeds such as Californian thistle (*Cirsium arvense*), slender thistle (*Carduus pycnocephalus*), blackberry (*Rubus anglocandicans*), and horehound (*Marrubium vulgare*).

Native grasses and herbs were also observed including silver tussock grass (*Poa labillardierei*), weeping grass (*Microlaena stipoides* var. *stipoides*), *Elymus scaber* (rough wheatgrass), *Austrodanthonia* species (wallaby grass) and *Austrostipa* species (speargrass).

Images that depict the various forms of agricultural land in the Study Area are in **Plate 4.**

Plate 4. Images of Agricultural land (FAG) in the Study Area





Regenerating cleared land (FRG)

This mapping unit is used to map abandoned farmland or other degraded land (e.g. abandoned mines, quarries etc.) where there has been significant natural recolonisation by native species of rushes and shrubs. Agricultural land is mapped as FRG where colonising native rushes or shrubs provide a cover of more than 50%. FRG is distinguished from other native vegetation mapping units by lacking a dominant cover of signature native species and often by the significant presence of native pioneer species.

In the Study Area, the mapping unit has been used to identify those areas of agricultural land where there is regrowth native and exotic sedges and rushes, including species of *Juncus* and *Carex*. Most occurrences are on the valley flats and in association with watercourses, depressions, agricultural drains and around dams.

Images that depict the various forms of Regenerating cleared land in the Study Area are in **Plate 5**.

Plate 5. Images of Regenerating cleared land (FRG) in the Study Area



Extra-urban miscellaneous (FRG)

A pine shelterbelt is included in this mapping unit.

Pteridium esculentum fernland (FPF)

This mapping unit is used to map areas dominated by bracken fern – *Pteridium esculentum* – with exotic and native grasses being sub-dominant. The ground layer species diversity is low with most of the ground having no cover. Common exotic herbs include buckshorn plantain (*Plantago coronopus*), sheep sorrel (*Acetosella vulgaris*), smooth cat's ear (*Hypochaeris glabra*), rough cats' ear (*Hypochaeris radicata*), common dandelion (*Taraxacum officinale*), hawkbit (*Leontodon saxatilis*), cranesbill (*Erodium* sp.) and capeweed. The ground is mostly devoid of vegetation. Native grasses and herbs were also sporadically observed.

C.2 THREATENED FLORA SPECIES

C.2.1 Overview

There are several threatened flora species recorded within 500 and 5,000m of the Survey based on data contained within the Natural Values Atlas (**Attachment 1**).

Table 4 provides a list of the State listed threatened flora species recorded near the Study Area.

C.2.2 Ferny buttercup (Ranunculus pumilio var. pumilio)

Description

Occurs mostly in wet places (e.g. broad floodplains of permanent creeks, "wet pastures") from sea level to altitudes of 800-900 m above sea level. The annual plant is tufted, with slender stems 5-30 cm long, spreading from the base of the plant, and often trailing across the ground. The light grass green leaves are small (only about 1 cm wide), shaggy with hairs and trifoliate, with each leaflet often trilobed. It has very small, yellow-green flowers.

The species has previously been recorded on un-named tributaries of Weasel Plains Creek, to the south-east of Weasel Plains Road and northwards of Bens Bottom just westward of the Highland Lakes Road (**Figure 8**).

The previously recorded locations on the un-named tributaries of Weasel Plains Creek, to the south-east of Weasel Plains Road were assessed in this survey, but no plants were observed. The species may still be present but given the very dry conditions for summer and autumn 2023-24 it may not have been in an identifiable life stage (it is an annual species).

The observed population is a new location for the species on Weasel Plains Creek. It is associated with spring mounds adjacent to the creek channel (just northwards from the large culvert that provides drainage to go under a farm road) and appears to be an area of poor drainage that is inaccessible to livestock because of fencing. It is estimated that the population exceeds 40 plants.

Plate 6. Photos of *Ranunculus pumilio* var. *pumilio* and its habitat in the Study Area



C.2.3 Dagger wattle (Acacia siculiformis)

Acacia siculiformis is a woody shrub to small tree found near watercourses (e.g. dense shrubby riparian scrubs along major rivers in the Midlands and surrounding uplands)and in dry sclerophyll forest. It is often associated with rocky dolerite sites, and in such locations, it is often prostrate to decumbent in form (**Plate 7**). The species has been recorded within the DPO forest community based on NVA records (**Figure 8**) but this location was not specifically re-assessed as it occurs outside the Study Area.

A new location for the species was recorded on the edge of Good condition forest at the eastern side of the Study Area upslope of Weasel Plains Creek. The ground conditions are rocky, exposed gravels and rocks with sparse soil (**Plate 7**) and leaf litter. The species was observed growing in association with the 'hairy' (pubescent) form of *Acacia gunnii* (the bright green decumbent plants in the bottom right image of **Plate 7**)

and the listed herb species *Scleranthus fasciculatus* (see Section C.2.4). Flower buds were present at the time the plants were observed.

The extent of the population was not exhaustively mapped within the Good condition native forest vegetation as none of that is proposed to be impacted by the Development. It is estimated that the population in the Study Area is 25 plants with 100+ plants in the area adjacent to the Study Area.

Plate 7. Photos of *Acacia siculiformis* and its habitat in the Study Area



Table 4. Threatened flora species recorded within 5km of the Study Area based on the NVA Report

Species name	Common name	TSPA/EPBC	Observation Count (NVA)	Last Recorded (NVA)	Observed in the Study Area?	Comments about habitat and likelihood of occurrence
Acacia siculiformis	dagger wattle	r / -	1	29-Sept-1999	**Yes**	Present in Study Area, also occurs outside the Study Area. See section *C.2.3 Dagger wattle (*Acacia siculiformis*).*
Asperula scoparia* subsp. *scoparia	prickly woodruff	r / -	10	20-Nov-2013	No	Widespread in Tasmania. Mainly found in native grasslands and grassy forests, often on fertile substrates such as dolerite-derived soils. Forested sites are usually dominated by *Eucalyptus globulus* and *E. viminalis* (lower elevations) and *E. delegatensis* (higher elevations). Some suitable habitat is present, but this distinctive species (can be identified all year from vegetative characteristics) was not observed, very unlikely to have been overlooked.
Barbarea australis	riverbed wintercress		2	219-Dec-2018	No	A riparian species found near river margins, creek beds and along flood channels. It tends to favour the slower reaches and has not been found on steeper sections of rivers. Some of the sites are a considerable distance from the river, in flood channels scoured by previous flood action, exposing river pebbles. Some of the sites are a considerable distance from the river, in flood channels scoured by previous flood action, exposing river pebbles. Known from the Shannon and Ouse Rivers to the west of the Study Area. There is no suitable habitat present for this species in the Study Area.
Baumea gunnii	slender twigsedge	r / -	8	30-Mar-2016	No	Inhabits wet moors, creeks and riverbanks (often in rocky sections) throughout the State. It can extend to poorly drained sedgy/grassy forest and woodland dominated by *Eucalyptus ovata* or *E. rodwayi.*

						Some suitable habitat is present (watercourses and drains) but distinctive species not observed, very unlikely to have been overlooked.
Brachyscome perpusilla	tiny daisy	v / -	1	31-Aug-1922	No	Found on rockplates and grassy herbfields, substrates including dolerite, sandstone and granite. The known location is historical and associated with rockplate grasslands on basalt near the property Hermitage. There is some suitable habitat is present for this species in the Study Area, but it is degraded, exotic grass and herb dominated and on sedimentary substrates. Unlikely to be present.
Brachyscome rigidula	cutleaf daisy	r / -	1	3-Jan-1912	No	Found in the Midlands, East Coast and in parts of the eastern Central Highlands of Tasmania, where it occurs in rough pasture, grassland and grassy woodland on dry rocky hills and flats. There is some suitable habitat is present for this species in the Study Area, but it is degraded, exotic grass and herb dominated and on sedimentary substrates. Unlikely to be present.
Calocephalus lacteus	milky beautyheads	r / -	13	21-Apr-2010	No	Occurs in open, dry sites in lowland areas of eastern and northern Tasmania and on lower altitudes of the Central Plateau. It requires bare ground for recruitment and may benefit from disturbance. It is often found on roadsides and beside tracks. Suitable habitat is present (dry north facing slopes, but livestock grazing present) but distinctive species not observed, very unlikely to have been overlooked.
Colobanthus curtisiae	grassland cupflower	r / VU	2	6-Jan-2009	No	Occurs in lowland grasslands and grassy woodlands but is also prevalent on rocky outcrops and margins of forest on dolerite on the Central Highlands (including disturbed sites such as log landings and snig tracks). There is some suitable habitat is present for this species in the Study Area, but it is degraded, exotic grass and herb dominated and on sedimentary substrates. Not observed. Unlikely to be present.

Cryptandra amara	pretty pearlflower	e / -	2	23-Mar-1994	No	Grows in some of the driest areas of the State and is typically associated with fertile rocky substrates (e.g. basalt). Its habitat ranges from near riparian rockplates to grasslands or grassy woodlands. Known locally from riparian, rock ledge and stock excluded areas of grassland, grassy woodland and forests near Front Tier and Hermitage. Some suitable habitat is present, but this distinctive species was not observed, very unlikely to have been overlooked. Unlikely to be present.
Discaria pubescens	spiky anchorplant	e / -	39	1-Aug-2016	No	Found sporadically in the Midlands and more abundantly in drier parts of the Central Highlands. It grows on sandy or gravelly soil, in basalt talus slopes and clefts amongst fractured dolerite rocks and flood channels. Many sites are in rough pasture, and it also grows on roadsides. Recent collections indicate the species is occasionally associated with sandstone outcrops. Known locally from basalt derived soils in riparian, rock ledge and stock excluded areas of grassland, grassy woodland and forests near Hermitage, Shannon River and Ouse River (especially near Waddamana). Some suitable habitat is present (but no basalt derived soils) but this distinctive species was not observed, very unlikely to have been overlooked. Unlikely to be present.
Lepidium hyssopifolium	soft peppercress	e / EN	14	7-Apr-2017	No	The native habitat of *Lepidium hyssopifolium* is the growth suppression zone beneath large trees in grassy woodlands and grasslands. Some suitable habitat is present (very small (<10 sq m) occasional areas of growth suppression under wattles) but this distinctive species was not observed, very unlikely to have been overlooked. Unlikely to be present.
Muehlenbeckia axillaris	matted lignum	r / -	1	19-Jan-2009	No	Predominantly found in moist gravely or rocky places on the Central Plateau, extending out to the west, north-west and lower reaches of the south Esk River. Nearby recorded locations occur at Christian Marsh and Hermitage.

						Some suitable habitat is present (rocky areas, but not riparian) but this distinctive species was not observed, very unlikely to have been overlooked. Unlikely to be present.
Pellaea calidirupium	hotrock fern	r / -	1	20-Aug-1998	No	Found in inland, rocky habitats in areas of low to moderate rainfall. It grows in crevices and on ledges on exposed or semi-exposed rock outcrops. Some suitable habitat is present (sedimentary rock ledges) but this distinctive species was not observed, very unlikely to have been overlooked. Unlikely to be present.
Ranunculus pumilio var. pumilio	ferny buttercup	r / -	9	20-Nov-2013	**Yes**	Present in Study Area. See section *C.2.2 Ferny buttercup (*Ranunculus pumilio *var*. pumilio*).*
Scleranthus fasciculatus	spreading knawel	v / -	5	30-Oct-2022	**Yes**	Present in Study Area, also occurs outside the Study Area. See section *C.2.4 Spreading knawel* (Scleranthus fasciculatus).

Key: TSP Act listings e = endangered, v = vulnerable, r = rare; EPBC Act listings CR = critically endangered, EN = endangered, VU = vulnerable

C.2.4 Spreading knawel (Scleranthus fasciculatus)

Recorded from the Midlands, Upper Derwent Valley and south-east this species appears to need gaps between the tussock spaces for its survival and both fire and stock grazing maintain open ground. It is often found in areas protected from grazing such as near fallen trees and branches. It can resemble a sprawling, overgrown version of the more widespread common knawel (*Scleranthus biflorus*), which is a tight green cushion plant. The species has previously been recorded on the western side of the Highland Lakes Road, and near the Shannon and Ouse Rivers.

In the Study Area, the species was solely observed in association with *Acacia siculiformis* on open gravel/bare ground at the southern end of a paddock at the eastern side of the Study Area (**Plate 8**). Flowers were present. Plants were observed growing adjacent to the widespread common knawel (see cushion plant in bottom right image in **Plate 8**).

It is estimated that the population in the Study Area is 30 plants, with possibly more plants occurring within the adjacent *Eucalyptus pauciflora* forest and woodland not on dolerite (DPO).

Plate 8. Photos of *Scleranthus fasciculatus* and its habitat in the Study Area



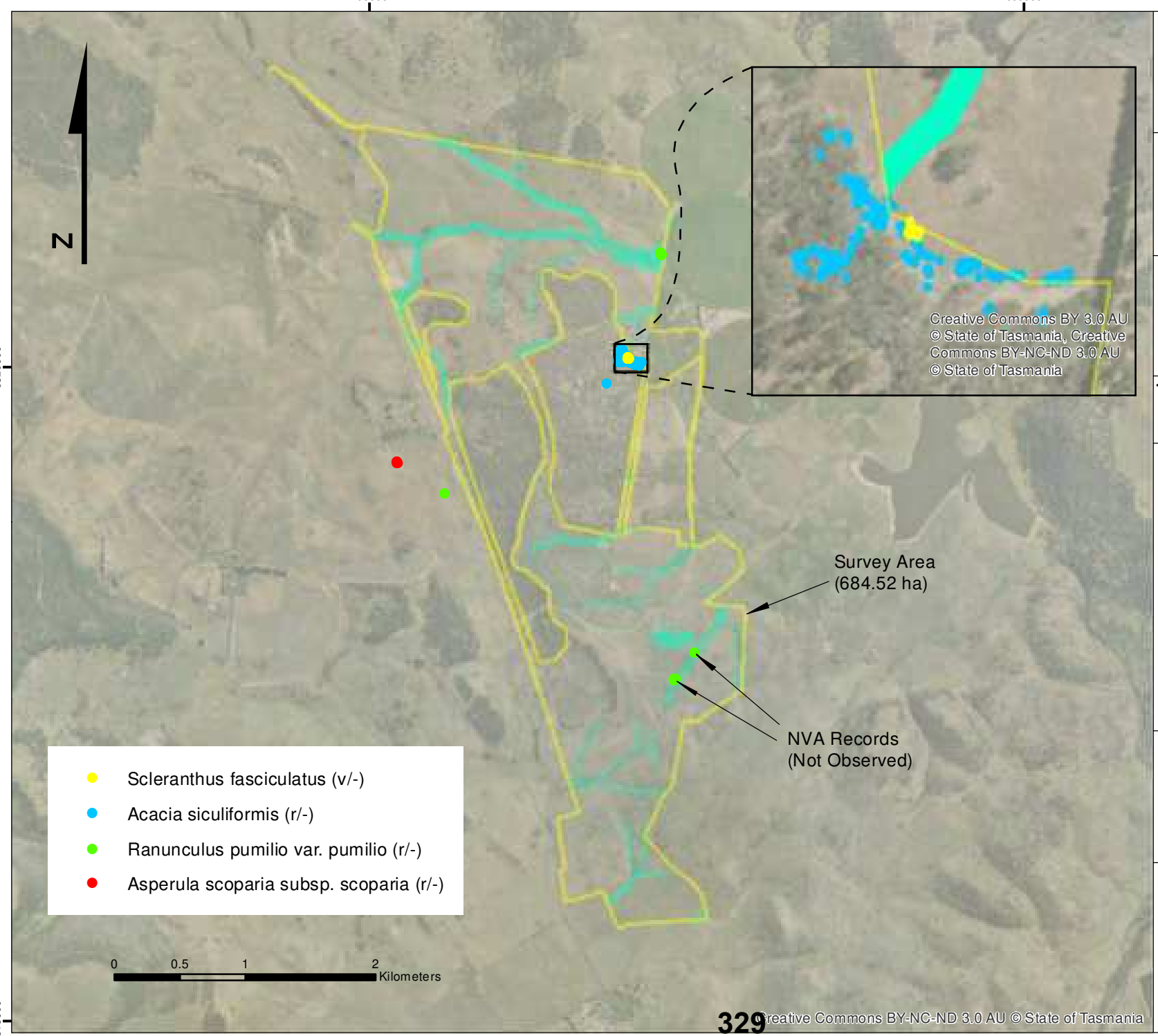
C.3 DECLARED AND ENVIRONMENTAL WEEDS

The survey and mapping of weeds was not exhaustive owing to the large size of the Study Area. Several plant species listed as a *Declared Weed* on the *Biosecurity Act 2019* were recorded in the Study Area (**Figure 9**);

- Californian thistle (*Cirsium arvense*), and
- gorse (*Ulex europaeus*).

Declared weeds, environmental weeds and/or exotic species present in the broader landscape and outside the Study Area include for example –

- briar rose (*Rosa rubiginosa*),
- blackberry (*Rubus anglocandicans*),
- horehound (*Marrubium vulgare*),
- slender thistle (*Carduus pycnocephalus*).
- spear thistle (*Cirsium vulgare*), and
- capeweed (*Arctotheca calendula*).



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Figure 8: Location of Threatend Flora (Observed and NVA) at the Weasel Solar Farm Study Area

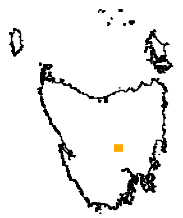
TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Natural Assets Code Areas

Study Area

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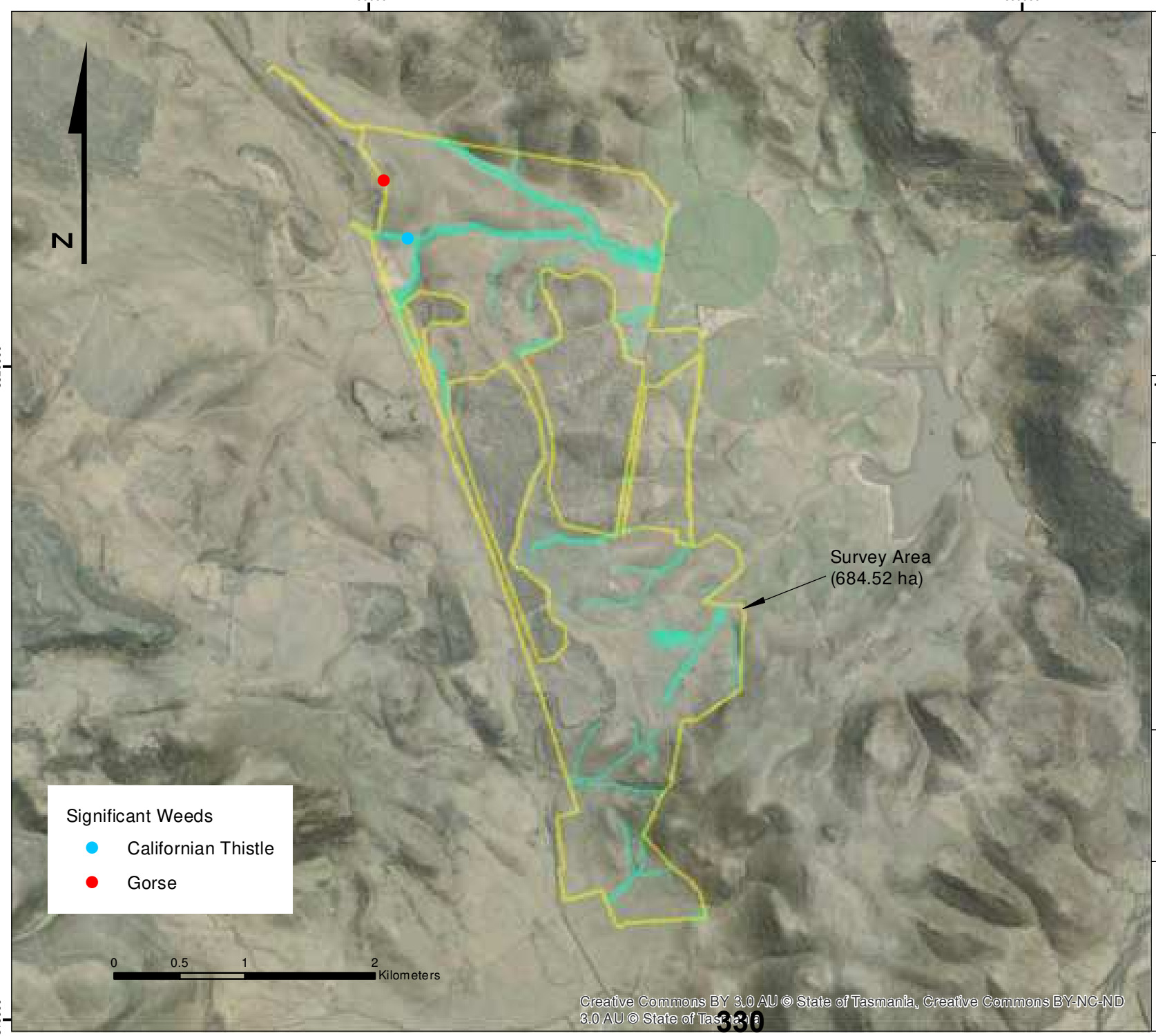
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Figure 9: Location of significant weed at the Weasel Solar Farm Study Area

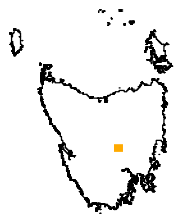
TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Natural Assets Code Areas

Study Area

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C.4 THREATENED FAUNA SPECIES

There are several threatened fauna species recorded within 500 and 5,000m of the Study Area based on data contained within the Natural Values Atlas (**Attachment 1; Figure 10**).

C.4.1 Overview assessment of threatened fauna species in the Study Area

Table 5 provides a list of the State listed threatened flora species recorded near the Study Area. No threatened fauna species were directly observed during the surveys in the Study Area.

Table 5. Threatened fauna species considered in the assessment based on the NVA Report

Common name *Species*	**Habitat present?** **Comments about presence.**
Mammals	
eastern quoll *Dasyurus viverrinus*	**No** dens observed. Denning habitat in the form of woodpiles is absent from the Development Footprint (sporadic in the Study Area, mainly in forested habitats), and soils are generally coarse to find gravels, rocks. **Foraging habitat present**.
spotted-tailed quoll *Dasyurus maculatus maculatus*	
Tasmania devil *Sarcophilus harrisii*	
eastern barred bandicoot *Perameles gunnii gunnii*	**No** nests observed. **Foraging and nesting habitat is present** and extensive, and includes agricultural pasture, grassy sedgeland, regenerating cleared land, and native forest and woodland (in various condition classes).
Birds	
blue-winged parrot *Neophema chrysostoma*	**Yes.** Eucalypt forest or woodland present, no recorded nest locations in the Study Area. Trees with hollows present, which are mainly present as isolated trees in agricultural land. Study Area only within the Potential Range (**Figure 18**).
grey goshawk *Accipiter novaehollandiae*	**No.** No blackwood/paperbark/wet sclerophyll forest associated with watercourses or swamps is present. Study Area only within the Potential Range (**Figure 19**).
masked owl *Tyto novaehollandiae* subsp. *castanops*	**Yes.** Five trees with hollows that could potentially be used for breeding purposes were observed in the Study Area. Foraging habitat is present, and the Study Area is within the species' Core Range (**Figure 17**).

Tasmanian wedge-tailed eagle *Aquila audax* subsp. *fleayi*	**Yes.** Foraging habitat is present in Study Area. Moderate to high quality nesting habitat absent. Nearest known nest more than 1km line-of-sight from the Study Area.
white-bellied sea-eagle *Haliaeetus leucogaster*	**Yes.** Foraging habitat is present in Study Area. No moderate to high quality nesting habitat present. Nearest known nest more than 1km line-of-sight from the Study Area.
Amphibians	
Green and gold frog *Litoria raniformis*	Study Area only intersects very small sections of the potential range of the species (**Figure 20**). 'Aquatic' habitat (i.e. freshwater dams) occurs in the Study Area, but the dams present lack macrophyte vegetation (at the time the surveys were conducted) so their suitability for habitation by this species is very unlikely. Over-wintering habitat is present in watercourse channels and drains – within the regenerating cleared land mapping unit category (large sedges and rushes where shelter is available at the base of larger plants).
Reptiles	
Tussock skink *Pseudemoia pagenstecheri*	**No.** No *Poa* tussock dominated grassland is present; the GSL community includes *Poa rodwayi* and occasional *P. labillardierei* <0.5% cover), but it is of low coverage and stature. Study Area only within the Potential Range (**Figure 21**).
Fish	
golden galaxias *Galaxias auratus*	**No.** The species is only found in Lakes Crescent and Sorell and nearby streams and wet areas. Study Area is not within the Potential Range (**Figure 22**).
Australian grayling *Prototroctes maraena*	**No.** A migratory freshwater and marine species. Habitat is absent from the Study Area. Study Area is not within the Potential Range (**Figure 23**).
Invertebrates	
Ptunarra brown butterfly *Oreixenica ptunarra*	**No.** No substantial food source (*Poa* species) is present in the Study Area; the GSL community includes *Poa rodwayi* and occasional *P. labillardierei* <0.5% cover), but it is of low coverage and stature. No *Poa* grasslands are present, and Poa forms a very small cover in the regenerating cleared land mapping unit (<1%). Study Area is within the Potential Range (**Figure 24**) not the Known Range.

C.4.2 Comments about species where there is suitable habitat in Study Area

Wedge-tailed eagle (*Aquila audax fleayi*)

This eagle subspecies is found only in Tasmania and occurs throughout the State including large offshore islands. It hunts over a wide range of habitats, but nests only in old-growth trees in native forests. Bird

densities are highest in areas with mosaics of forest, farmland, grassland, wetlands, and rivers. Eagles feed mainly on rabbits, hares, wallabies, possums, birds such as native hens and ravens and carrion.

Nests are usually in tall eucalypt trees in large tracts (more than 10 ha) of old-growth eucalypt or mixed forest. Nest trees are amongst the largest in a locality. They are in sheltered positions on leeward slopes, between the lower and mid slopes and with the top of the tree usually lower than the ground level of the top of the ridge. Nests are not constructed close to sources of disturbance such as quarries or houses. Nests are traditional, with some having been used for at least 50 years. More than one nest may occur within a territory but only one is used in any one year. Breeding failure often promotes a change of nest in the next year. The breeding season occurs between August and January inclusive with eagles being particularly sensitive to disturbance early in this period.

The Recovery Plan (2006-2010) states for this species:

> 'Habitat critical to the survival of the Tasmanian Wedge-tailed Eagle is defined by nesting habitat (see Mooney & Holdsworth 1991, Brown & Mooney 1997), as forests of predominantly old growth trees greater than 10ha in area and occurring on sites sheltered from prevailing strong winds. Trees selected for nesting are greater than 27 m in height, with few exceptions. Most nest sites have an eastern, south-eastern or southern aspect and the height of the nest is usually positioned below that of the ridge to the windward side.'

The Range and Habitat descriptors for the species (FPA 2020) are -

Core Range	N/A
Potential Range	The whole of Tasmania including islands.
Known Range	N/A
Potential habitat	Potential habitat for the wedge-tailed eagle comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is a wide variety of forest (including areas subject to native forest silviculture) and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Nests are usually not constructed close to sources of disturbance and nests close to disturbance are less productive. More than one nest may occur within a territory but only one is used for breeding in any one year. Breeding failure often promotes a change of nest in the next year. [see FPA's Fauna Technical Note 1 and FPA's Fauna Technical Note 6 for more information].
Significant Habitat	Is all native forest and native non-forest vegetation within 500m or 1 km line-of-sight of known nest sites (where the nest tree is still present).

Survey Results

No wedge-tailed eagle nests are known to occur on or near the Study Area. There are no nests within 1,000 m line-of-sight or 500 m of the Study Area. Significant habitat is therefore absent. Only very low, low and moderate eagle nest potential habitat has been modelled by NRE Tas in the Study Area (See **Figure 12**). No

nests were observed during the surveys. Foraging habitat is present, and the species would likely use the area for foraging, but not for nesting.

White-bellied sea eagle (Haliaeetus leucogaster)

The white-bellied sea eagle is widely distributed from India to Australia. Key sites in Tasmania include the Tamar River estuary, Tasman Peninsula, and the Bass Strait Islands. They nest and forage mainly near the coast but will also live near large rivers and lakes inland, often moving on a seasonal basis.

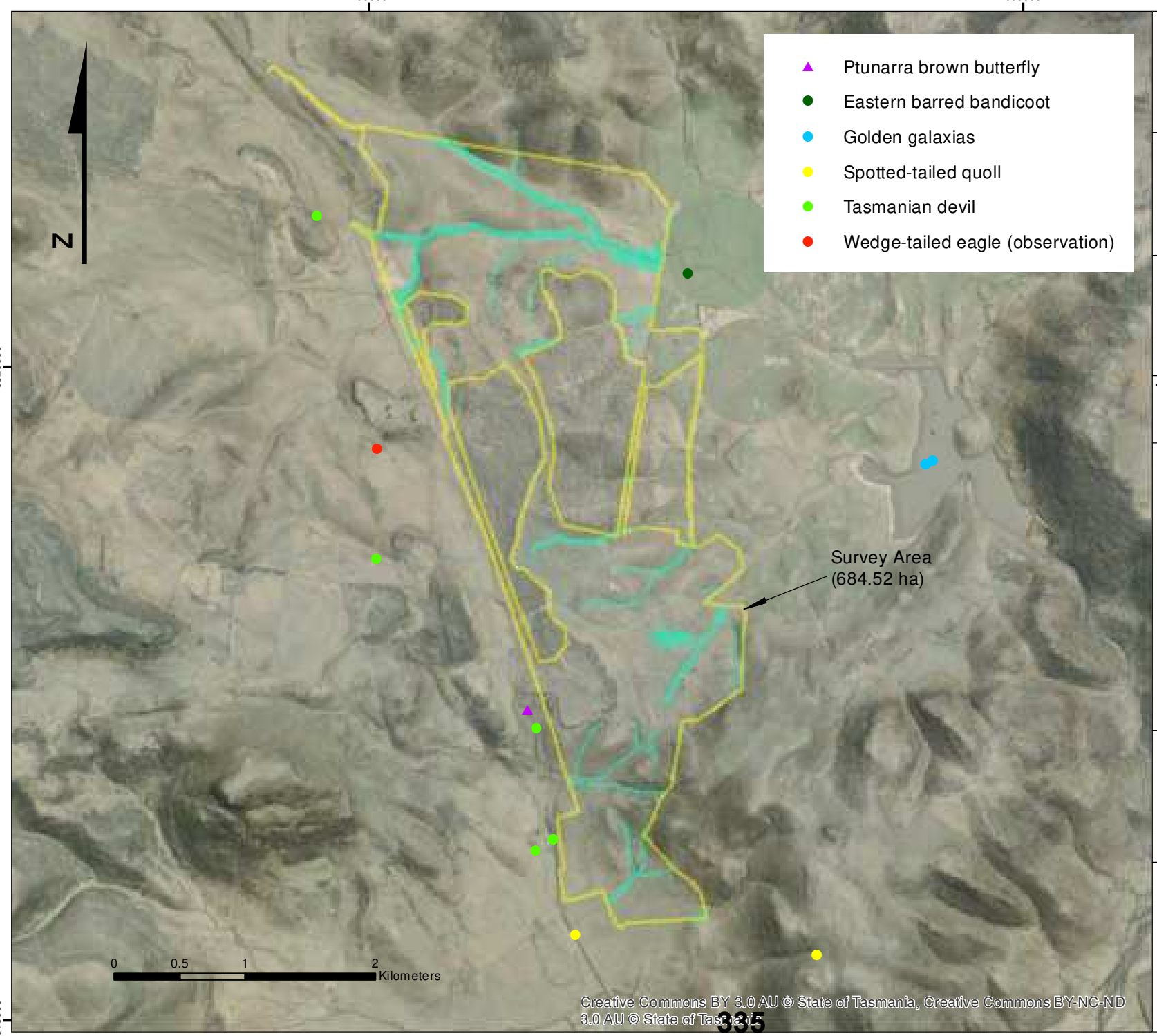
The nest of the white-bellied sea eagle is similar in construction to the wedge-tailed eagle and when resources are limited, competition for nest sites between the two species can occur. As with the wedge-tailed eagle, the white-bellied sea eagle nests are traditional. More than one nest may occur within a territory, but only one is used in any one year. The breeding season occurs between August and January inclusive with eagles being particularly sensitive to disturbance early in this period.

The Range and Habitat descriptors for the species (FPA 2020) are -

Core Range	N/A
Potential Range	The whole of Tasmania including islands.
Known Range	N/A
Potential habitat	Potential habitat for the white-bellied sea-eagle species comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (Class 1), lakes or complexes of large farm dams. Scattered trees along river banks or pasture land may also be used. The species nests and forages mainly near the coast but will also live near rivers, lakes and farm dams. Nest trees are amongst the largest in a locality. Nests are not usually constructed close to sources of disturbance and nests close to disturbance are less productive. More than one nest may occur within a territory but only one is used for breeding in any one year. Breeding failure often promotes a change of nest in the next year. [see Part I of the BVD, and FPA's Fauna Technical Note 1 for more information]
Significant Habitat	All native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where nest tree still present).

Survey Results

There are known nests within 1,000 m line-of-sight or 500 m of the Study Area. Significant habitat is therefore absent. Only very low, low and moderate eagle nest potential habitat has been modelled by NRE Tas in the Study Area (See **Figure 12**). No nests were observed during the surveys. Foraging habitat is present.



WEASEL SOLAR FARM

ECOLOGICAL AND NATURAL ASSETS CODE ASSESSMENT

Figure 10: Location of Threatened Fauna (NVA) at the Weasel Solar Farm Study Area

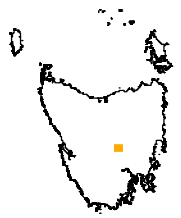
TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Natural Assets Code Areas

Study Area

Base data by TASMAP. © State of Tasmania
Base image by TASMAP. © State of Tasmania

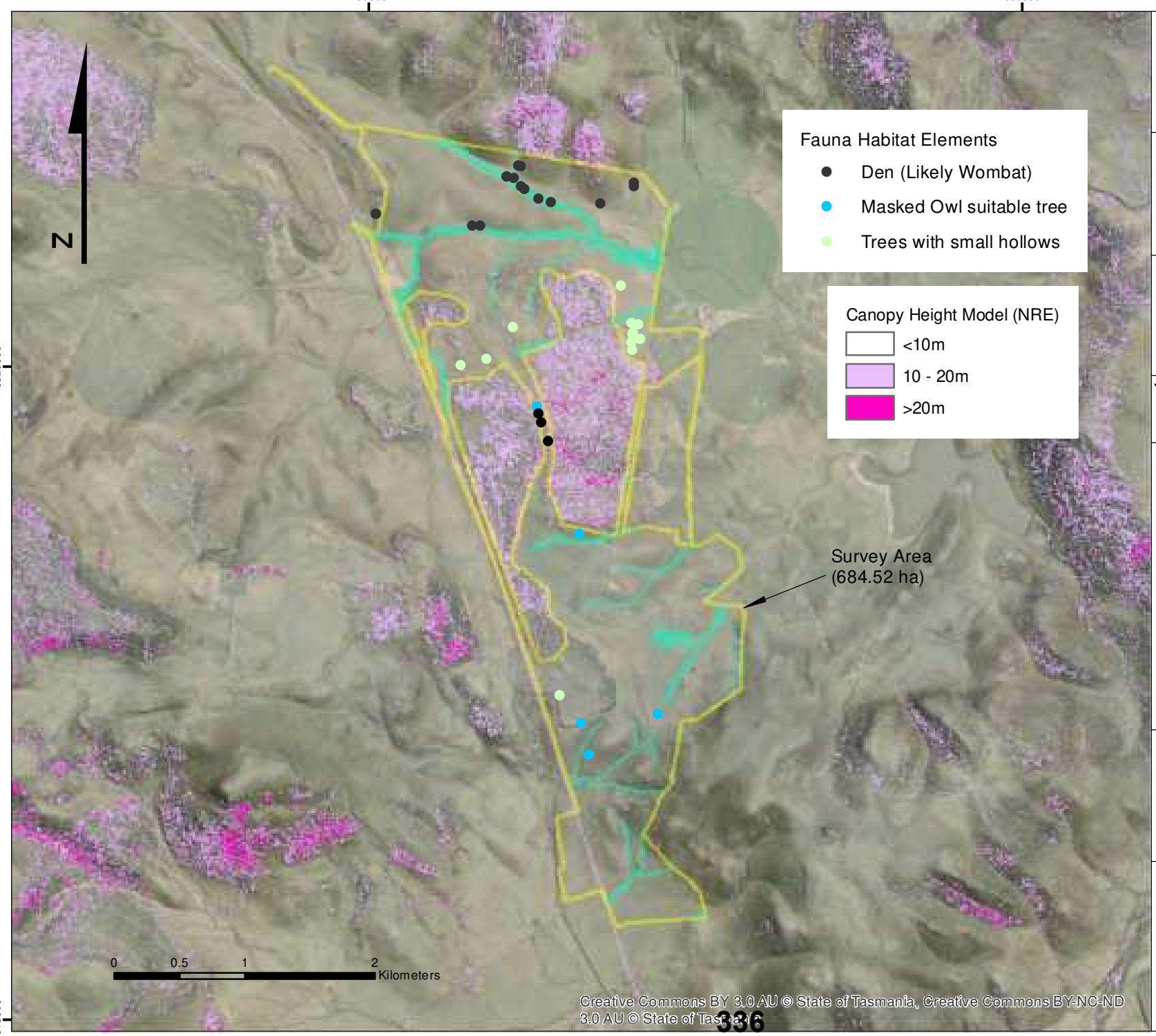
Van Diemen CONSULTING
PO Box 1 New Town TAS 7008



DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A4 - NA

CLIENT:
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DATE: 8 JULY 2024



WEASEL SOLAR FARM

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Figure 11: Location of Fauna Habitat Elements in the Weasel Solar Farm Study Area

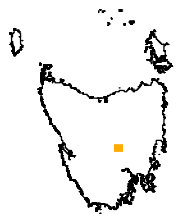
TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Natural Assets Code Areas

Study Area

Base data by TASMAP. © State of Tasmania
Base image by TASMAP. © State of Tasmania

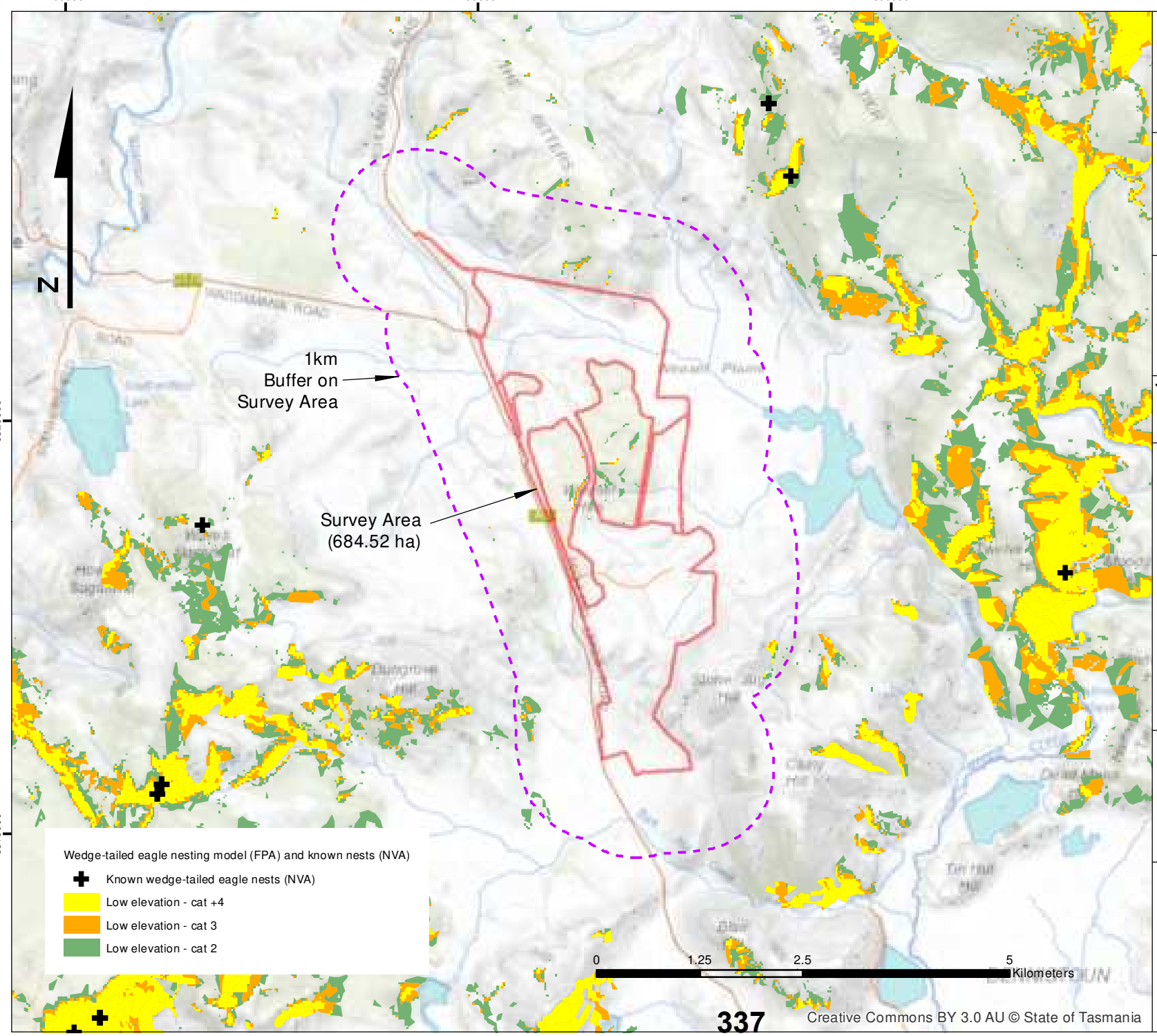
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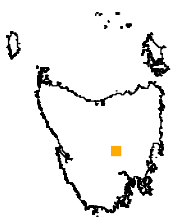
Figure 12: Known Eagle nests and nesting habitat surrounding the Weasel Solar Farm Study Area

TASMAP:	**LGA:**
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Study Area

Base data by TASMAP. © State of Tasmania
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Masked owl (*Tyto novaehollandiae castanops*)

The Tasmanian Masked Owl is endemic to Tasmania, including several near-shore islands, although it is absent from King Island and the Furneaux Group.

Masked owl is a nocturnal vertebrate predator that is most active at night and roosts during the day. It feeds predominately on introduced rodents and rabbits on agricultural land, and arboreal marsupials, terrestrial mammals, and native birds in less disturbed habitats. The Tasmanian Masked Owl hunts at night for small mammals and birds in a range of habitats which contain some mature forest, usually below 600 m altitude - these include native forests and woodlands as well as agricultural areas with a mosaic of native vegetation and pasture.

Densities of the subspecies vary across Tasmania. The highest densities are in the east and north (Bell *et al*. 1997; Bell and Mooney, 1997), and the lowest densities occur at elevations greater than 600 m and in the western half of the State (Bell *et al.* 1997). Nesting occurs in large tree hollows of living or dead trees, but sometimes in vertical spouts or limbs (Bell *et al.* 1997; Higgins 1999). Birds pair for life, occupying a permanent territory and relying on hollows in old-growth trees for nesting and roosting.

Habitat for the Tasmanian Masked Owl includes the following elements: foraging habitat - a diverse range of forest, woodland and non-forest vegetation including agricultural and forest mosaics; nesting habitat - eucalypt forests and woodlands containing old growth trees with suitable hollows for nesting/roosting but will also nest in isolated old growth trees with suitable hollows.

The Range and Habitat descriptors for the species (FPA 2022) are -

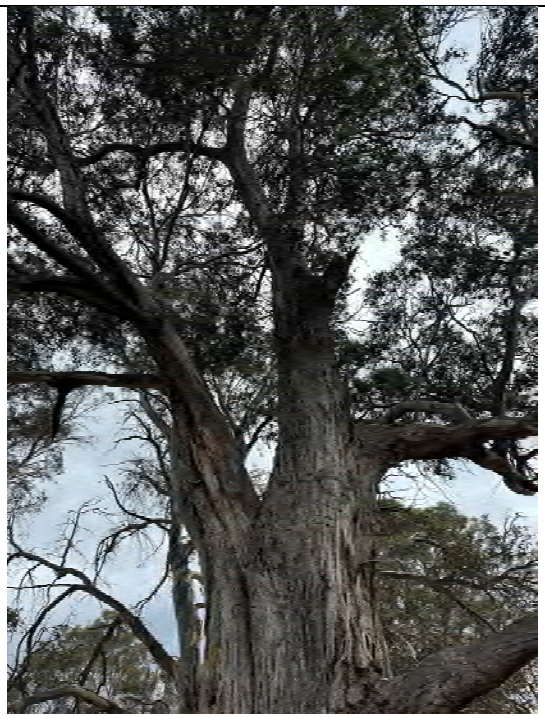
Core Range	The core range of the masked owl is forest that occurs at low elevation (<600 m a.s.l.).
Potential Range	The potential range of the masked owl is the whole state, except Bass Strait islands.
Known Range	N/A
Potential habitat	Potential habitat for the masked owl is all areas with trees with large hollows (≥15 cm entrance diameter). Remnants and paddock trees (in any dry or wet forest type) in agricultural areas may also constitute potential habitat. See FPA Fauna Technical Note 17 for guidance on assessing masked owl habitat using 'on-ground' and remote methods.
Significant Habitat	Significant habitat for the masked owl is any area of native dry forest, within the core range, with trees with large hollows (≥15 cm entrance diameter). Remnants and paddock trees (in any dry or wet forest type) in agricultural areas may also constitute significant habitat.

Survey Results

All trees that may provide a nesting opportunity for masked owl were checked for signs of nesting (current and historic use) or roosting (e.g., regurgitated pellets, whitewash, feathers at the base of the tree within the tree's dripline). A total of 5 trees were recorded which represent 'significant habitat' because they are trees with large hollows (≥15 cm entrance diameter); specifically, hollows of potential size, form, and location on the tree/trunk to be possibly used as a nest for breeding (termed a 'tree that may provide a nesting opportunity').

No masked owl nests or roosting sites were observed in the Study Area. Foraging habitat is present.

Table 6. Photos of trees with potential hollows for use by masked owl

	
Eucalyptus rubida, hollow formed between the two main stems. Brush-tailed possum present.	*Eucalyptus pauciflora*, hollow formed in dead side of the tree. Brush-tailed possum present.
	
Dead tree, fire scars. Hollows in both sides of split trunk. No animals observed within tree.	Tall (about 17m) dead stag, two side hollows and an apical hollow. No animals observed within tree, but brush-tailed possum scats were observed at the base of the stag.

Assessment of habitat and likely presence in the Study Area

There is masked owl foraging habitat in the Study Area. It is likely that masked owl would be present in the Study Area or surrounds given the high quality of the foraging opportunities, and roosting opportunities in the Study Area adjacent forest and woodland. Nesting opportunities exist in the Study Area (the 5 trees/stags spatially shown in **Figure 11**), but there was no evidence of masked owl occupation of any of the nest potential trees; either brush-tailed possum was present, or no animal was confirmed as present.

Management recommendations

The following management measures are recommended for the Development –

- trees that may provide a nesting opportunity (as identified in **Figure 11**) for masked owl should be checked by a suitably qualified ecologist using the most current techniques for assessing masked owl occupation before the tree is felled; and
- further specialist advice may need to be sought if a nest is found during the tree check assessments.

Blue winged parrot (*Neophema chrysostoma*)

Background

A slender parrot with an olive-green head and upper body. Its name comes from the large, dark blue patch on the wings. The main populations of Blue-winged Parrots are in Tasmania and Victoria, particularly in southern Victoria and the midlands and eastern areas of Tasmania. Sparser populations are found in western New South Wales and eastern South Australia, extending to south-west Queensland and occasionally into the Northern Territory. Inhabits a range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones. Throughout their range, they favour grasslands and grassy woodlands. They are often found near wetlands both near the coast and in semi-arid zones and can also be seen in altered environments such as airfields, golf courses and paddocks.

Blue-winged parrots breed in Tasmania, coastal south-eastern South Australia, and southern Victoria. During the breeding season (spring and summer), birds occupy eucalypt forests and woodlands (Higgins 1999). They form monogamous pairs and make their nests in a tree hollow or stump, preferably one with a vertical opening. Breeding season is from October to February.

Before migrating from Tasmania in autumn, many birds congregate on saltmarshes and agricultural land before departing north (Higgin 1999). While on the mainland, mobile flocks feed in saltmarsh and rough pasture in coastal Victoria. Birds are known to move more than 100 km inland during winter to feed in semi-arid chenopod shrubland and sparse grassland (Holdsworth *et al.* 2021).

This species is not included in the Range and Habitat descriptors for the species (FPA 2022).

A Recovery Plan is required by DCCEEW, but it is not yet completed or approved for implementation.

The Conservation Advice[8] for *Neophema chrysostoma* (blue-winged parrot) issued by DCCEEW states the following of this species:

'Habitat critical to the survival of the blue-winged parrot include areas that include (sic):

- Foraging and staging habitats found from coastal, sub-coastal and inland areas, right through to semi-arid zones including: grasslands, grassy woodlands and semi-arid chenopod shrubland with native and introduced grasses, herbs and shrubs.
- Wetlands both near the coast and in semi-arid zones used for foraging and staging.
- Eucalypt forests and woodlands within the breeding range in Tasmania, coastal southeastern South Australia and southern Victoria.
- Live and dead trees and stumps with suitable hollows within the breeding range.

Habitat critical to the survival should not be cleared, fragmented or degraded. Any known or likely habitat (Map 1) should be considered as habitat critical to the survival of the species. Additionally, areas that are not currently occupied by the species due to recent disturbance (e.g. fire, grazing or human activity), but should became suitable again in the future, should also be considered habitat critical to the survival of the species.'

The breeding range in Tasmania, on advice from DCCEEW is north-western, central and eastern parts of Tasmania; however, nests have only been recorded (based on NVA held data) in the central north and south-east of the State.

Survey Results

No blue-winged parrots were observed in the Study Area during the surveys (the surveys were conducted during the non-breeding period), and consequently no nests were observed. There are only sporadic trees with some nest potential locations (small holes and possible hollows <10cm in diameter) within their trunk or on secondary branches across the Study Area. The forest is otherwise regrowth trees. The trees depicted in **Table 6** could be used by blue-winged parrots to breed, as too could the other trees (mainly paddock trees) that were observed to have small hollows (not suitable for masked owl use) spatially shown in **Figure 11.**

Assessment of habitat and likely presence in the Study Area

There is foraging habitat in the Study Area, being forest and woodland, and open pastures. The species may occur in the area at some stage, even as a fly through or for foraging, and there are previous observations in the region (**Figure 18**). There are no recorded nest locations for this species in the region, but this may be due to historically low survey effort for nests of this species rather than reflecting the species' absence of breeding.

[8] Department of Climate Change, Energy, the Environment and Water (2023). Conservation Advice for *Neophema chrysostoma* (blue-winged parrot). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/726-conservation-advice-31032023.pdf. In effect under the EPBC Act from 31-Mar-2023.

Assessment of likely impact

The loss of potential nesting habitat (occasional 'paddock tree') is unlikely to cause the species to decline, or to cause a significant impact to the species because of its small scale relative to the extent of nest potential habitat retained adjacent to the Study Area and more broadly in the landscape.

Management recommendations and offsets

The retained 'eucalypt forest and woodland' foraging and roosting habitat adjacent to the Study Area is significant in extent, and the possible loss of some habitat in the Study Area is unlikely to cause a significant impact to *the species*.

Terrestrial mammals

The following habitat presence based on range boundaries (NVA report, **Attachment 1**) is listed for the four terrestrial mammal species known or predicted to be in the region.

Common name and species name	**Figure**	**Potential**	**Known**	**Core**
Tasmania devil, *Sarcophilus harrisii*	13	Yes	No	No
spotted-tailed quoll, *Dasyurus maculatus maculatus*	14	Yes	No	No
eastern quoll, *Dasyurus viverrinus*	15	No	No	Yes
eastern barred bandicoot, *Perameles gunnii gunnii*	16	Yes	No	Yes

Survey Results

The Study Area is in the core and/or potential range of these species and there are records of Tasmanian devil, eastern barred bandicoot and spotted-tailed quoll in vicinity of the Study Area (**Figures 13, 14 and 16**).

No active or maternal dens/nests of any terrestrial mammal were observed in the Study Area during the surveys and there are no woodpiles for den construction, nor are the soils 'diggable' to support a large den excavation (either by one of the conservation significant mammals, or a wombat). The soils tend to be skeletal in the forest and woodland vegetation, rocky and gravelly in those agricultural land areas on slopes. Within the watercourses and lower lying flat areas associated with watercourses (such as those areas within the Waterways and Coastal Protection Areas overlay, **Figure 5**) the soils are clay rich and very likely to be inundated during periods of water flow.

The 'den' features observed (which encompasses all potential dens, burrows and other ground excavations made by native animals – rabbit and/or hare diggings are distinctive and were excluded from this study) are mapped in **Figure 11.** Burrows/holes were observed in watercourse channels, but they were small, lacked multiple entrances, and were not well formed. They would be inundated during periods of even minor watercourse flow.

Management recommendations

The following management measures are recommended for the Development –

- areas to be excavated should first be checked to identify if dens (including burrow use) or nests are present. The pre-clearance surveys must be completed by a suitably qualified person(s) and any dens, nests or suspected dens/nests removed via a 'Den/Burrow Decommissioning Protocol' (**Attachment 6**) or similar method,
- If a den or potential den is observed or suspected during construction a 50 m no machinery buffer will be applied to the den/nest or suspected den/nest and expert advice sought, and
- Internal road speed during construction should be limited to 20 km/hr from sunset to sunrise.

Green and Gold Frog (*Litoria raniformis*)

Green and golden frogs are active during both day and night throughout the warmer months and can sometimes be seen basking out of the water amongst vegetation or on rocks and logs, the only Tasmanian frog to exhibit this behaviour. They have keen eyesight in daylight and as they are approached, they will jump into the water with a distinctive 'plop'. This is often the only way to know that they are there. At night, however, they can be approached with relative ease.

The breeding season in Tasmania spans September to January when males can be heard calling. The mating call of this species is a very distinctive and complex series of grunts and growls. Calling activity can be erratic, often being restricted to warm calm days and evenings. Choruses (many males calling) can reach peaks mid-morning and early evening. In breeding condition, the male frog exhibits a mottled black throat and develops black nuptial pads (hard calluses) on the back of each thumb with which he grasps the female when mating.

Green and golden frogs' occurrence is dependent upon permanent freshwater lagoons for breeding. Ideal breeding habitat is the shallow part of lagoons (to approx. 1.5m) where there is generally a complex vegetation structure. Breeding sites often contain vegetation communities dominated by emergent plants such as water ribbons (*Triglochin*) and spike-rush (*Eleocharis*), and submerged plants such as (*Myriophyllum*), marsh-flower (*Villarsia*) and pondweed (*Potamogeton*). However, other plant communities can form equally suitable habitat.

The range of the green and golden frog is restricted to lowland areas, mainly in coastal zones except for the Deloraine-Longford-Launceston region, and historically it was common in the Midlands region. This frog was once common on King Island and Flinders Island but is now rare on these islands.

The Range and Habitat descriptors for the species (FPA 2022) are -

Core Range	An arbitrary 2 km (radius) buffer centred on the known sites (with an accuracy of 2km or less). This range is also referred to as "important areas", which can include point locations for low precision records and polygons for known habitat patches such as named lagoons.
Potential Range	Is based on models of the current and historic distribution of the species.
Known Range	N/A

Potential habitat	Permanent and temporary waterbodies, usually with vegetation in or around them. Potential habitat includes features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water-holding sites such as old quarries, slow-flowing stretches of streams and rivers and drainage features.
Significant Habitat	Is still or very slow flowing water bodies, with at least some vegetation, and a lack of obvious pollutants (oils, chemicals, etc). See FPA Fauna Technical Note 18 for further guidance on assessing significant habitat for the green and gold frog.

Survey Results

The green and gold frog was not heard during the site surveys. Some very small farm dams are present, with most adjacent to the modified channel of Weasel Plains Creek or other smaller tributaries of this watercourse. The surveys were however done in March and April when the frog is not expected to be heard calling.

Significant habitat is absent because there is no to very little aquatic vegetation around the edge of the very small dams and adjacent shallows; it is dominated by *Juncus* species. There is no floating or emergent macrophyte vegetation within the dams outside the immediate perimeter of the dams.

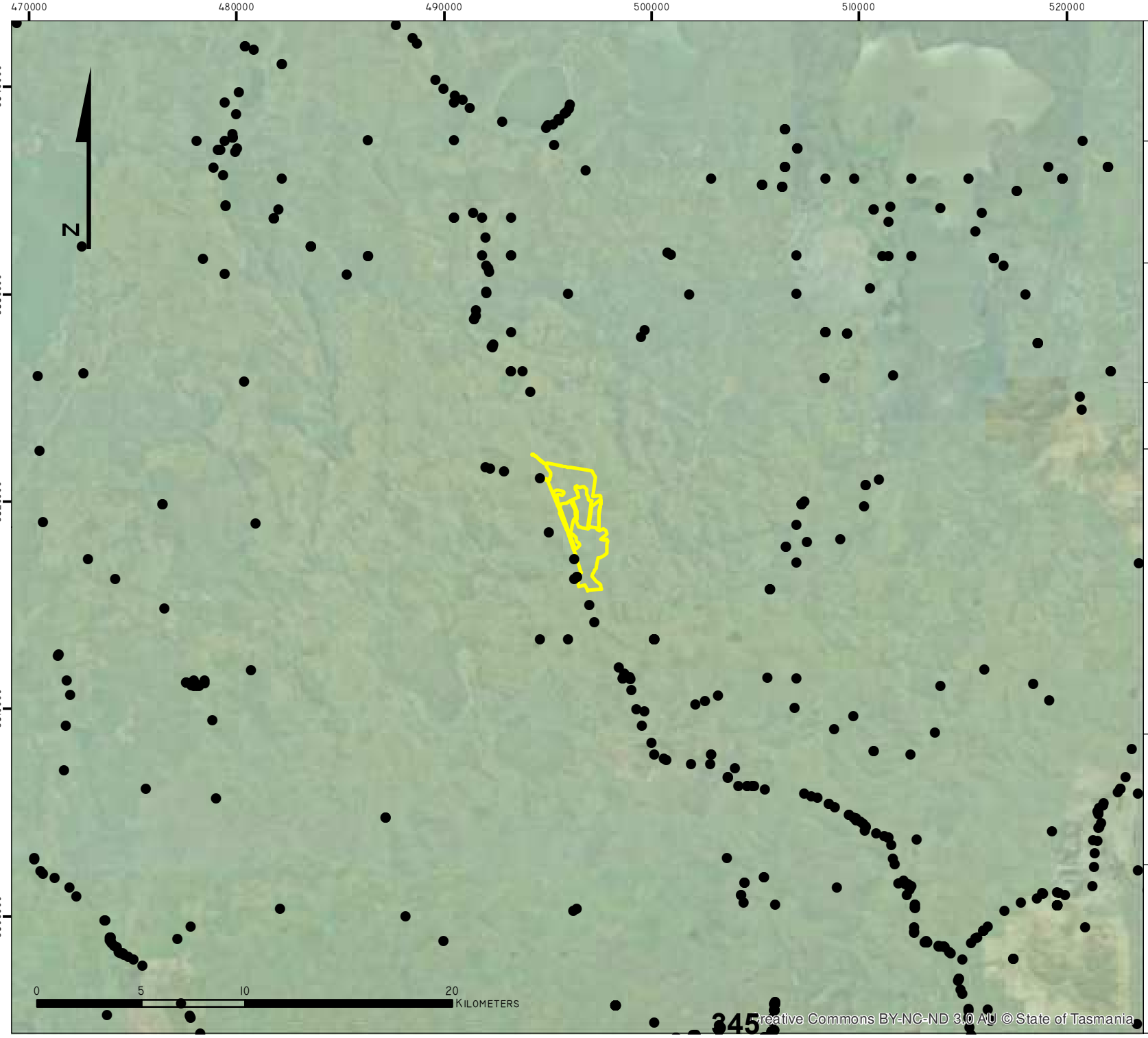
The grassy – rush dominated vegetation (regenerating cleared land mapping unit associated with watercourse, drains and channels) is potential over-wintering habitat for the species if it is present.

Assessment of habitat and likely presence in Study Area

It is very unlikely that green and gold frog is present in the Study Area (specifically the farm dams) because the dams are very small and lack macrophyte vegetation.

Management recommendations

The works associated with watercourses, such as crossing points for roads and cable, should adopt erosion and sediment control construction measures to limit the risk of sediment release into the water column.



WEASEL SOLAR FARM

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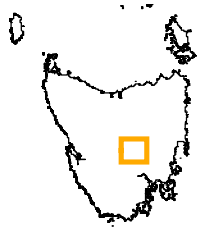
FIGURE 13: REGIONAL TASMANIAN DEVIL (SARCOPHILUS HARRISII) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Tasmanian Devil Observations
- Study Area
- Potential Range

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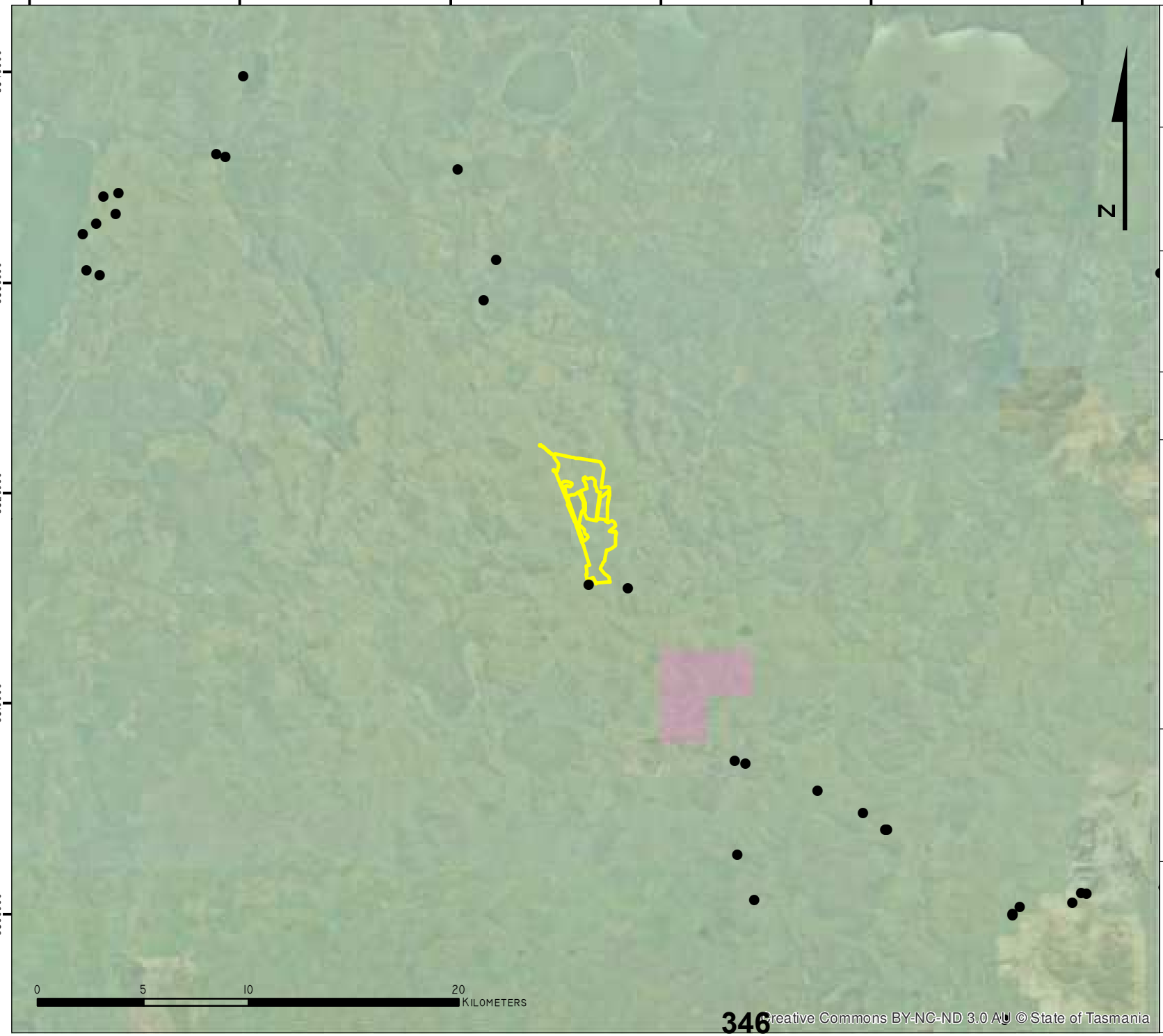


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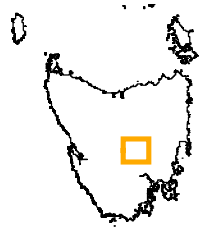
FIGURE 14: REGIONAL SPOTTED-TAILED QUOLL (DASYURUS MACULATUS SUBSP. MACULATUS) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Spotted-Tailed Quoll Observations
- Study Area
- Core Range (NVA)
- Potential Range (NVA)

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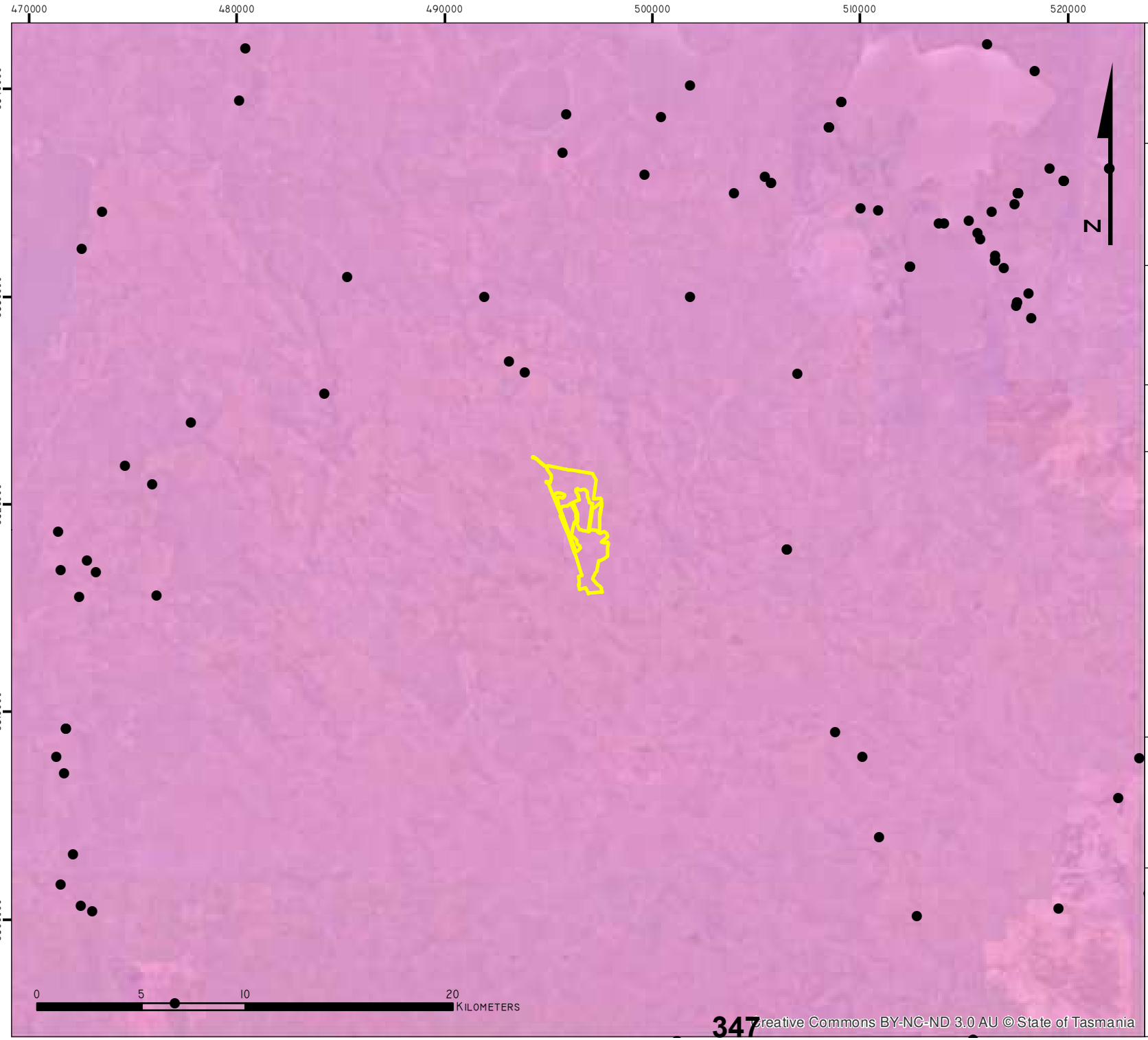


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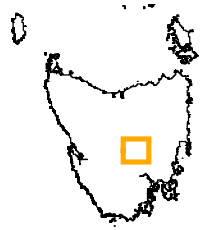
FIGURE 15: REGIONAL EASTERN QUOLL (DASYURUS VIVERRINUS) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Eastern Quoll Observations
- Study Area
- Core Range (NVA)

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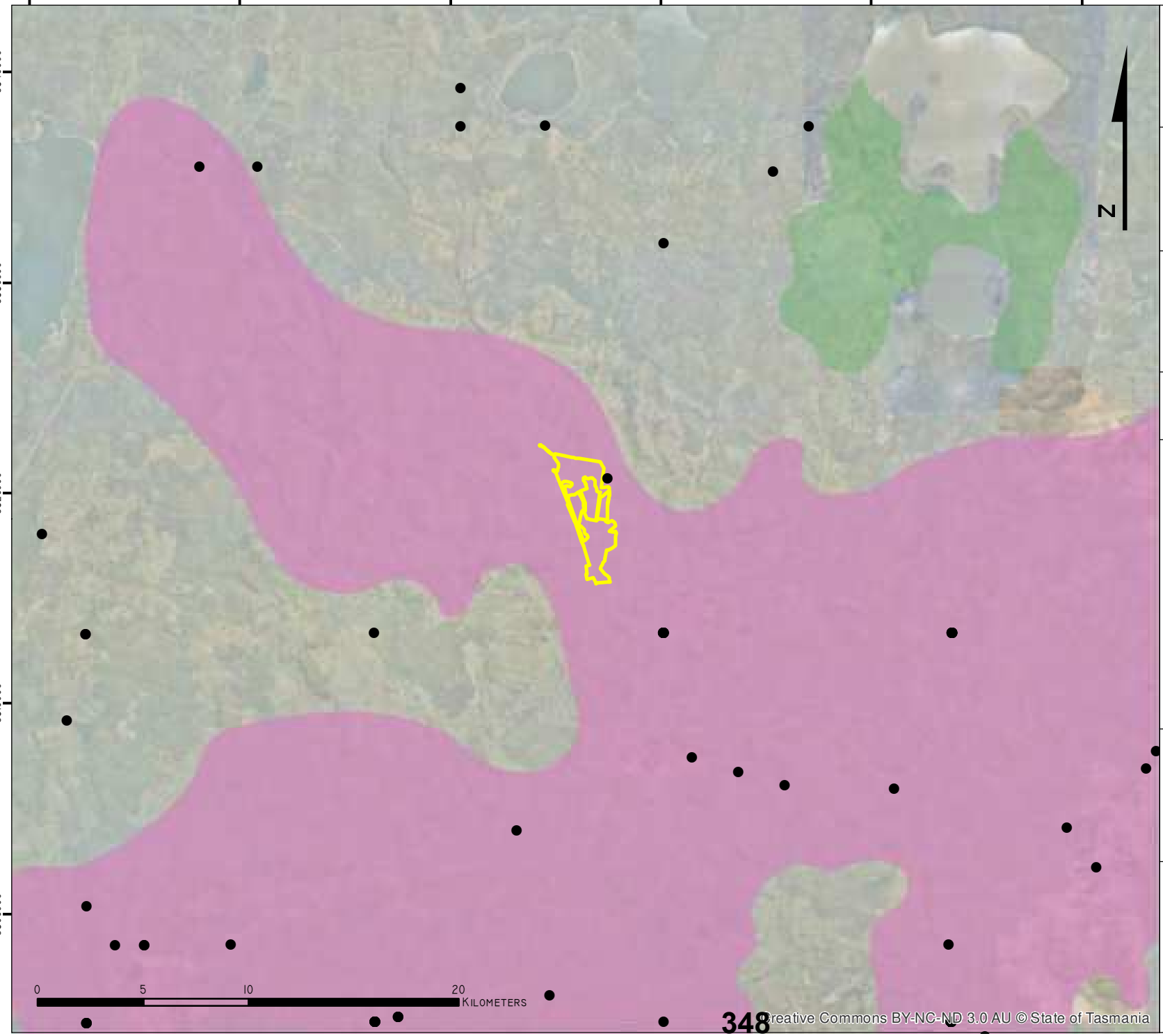


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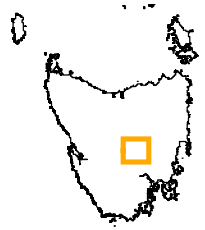
FIGURE 16: REGIONAL EASTERN BARRED BANDICOOT (PERAMELES GUNNII SUBSP. GUNNII) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Eastern Barred Bandicoot Observations
- Study Area
- Core Range (NVA)
- Potential Range (NVA)

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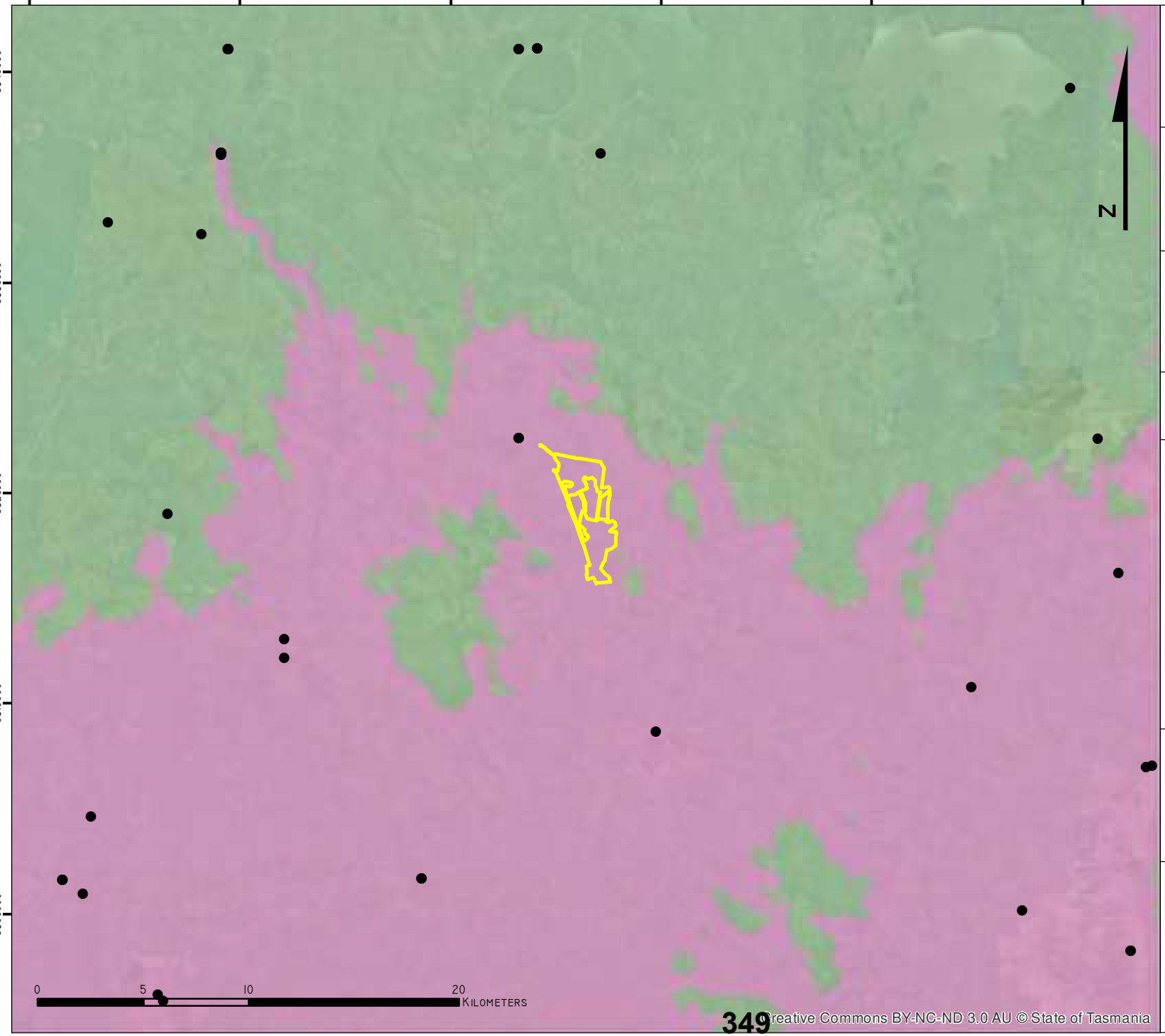


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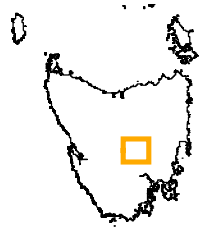
FIGURE 17: REGIONAL MASKED OWL (TYTO NOVAEHOLLANDIAE SUBSP. CASTANOPS) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Masked Owl Observations
- Study Area
- Core Range (NVA)
- Potential Range (NVA)

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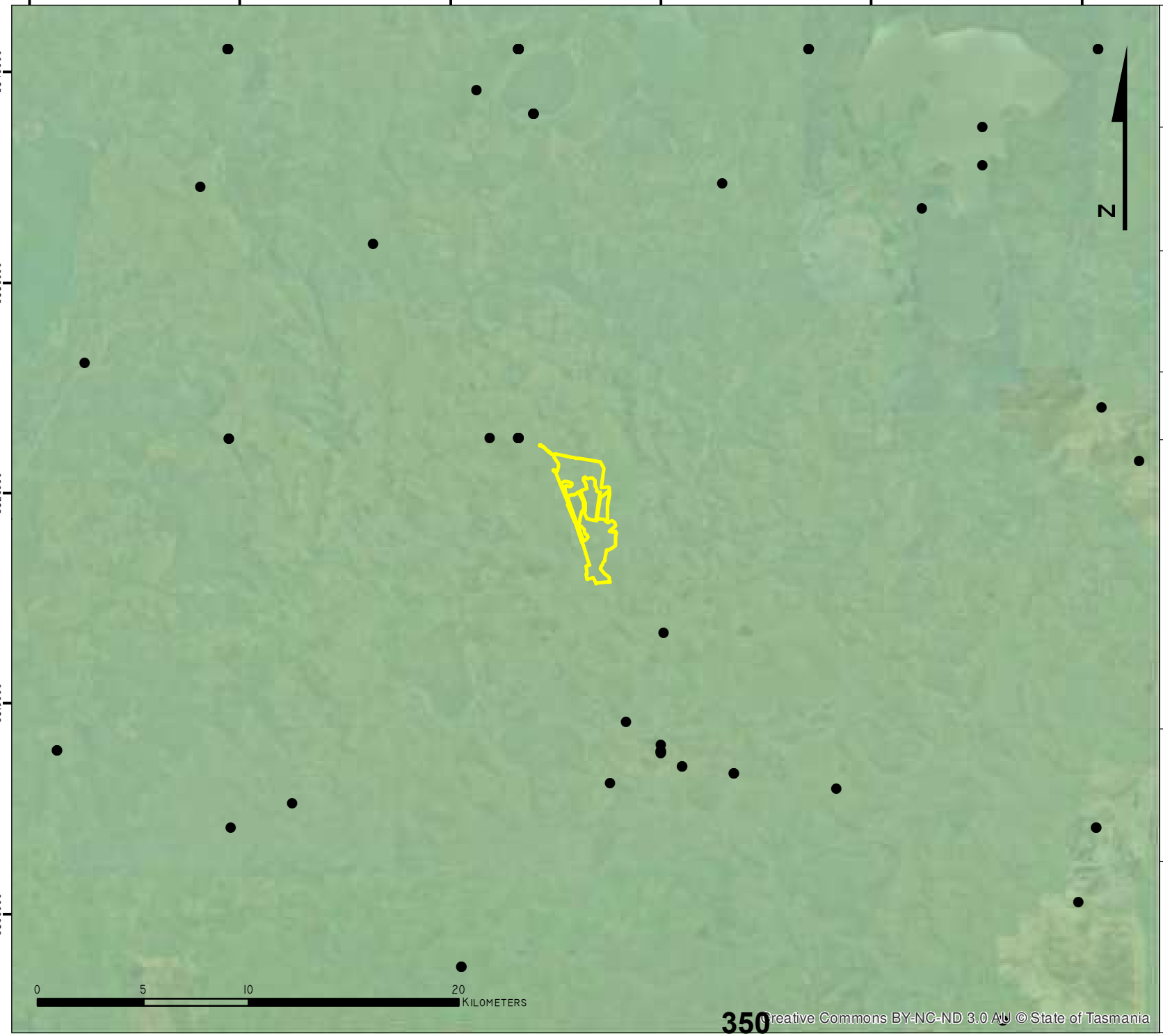


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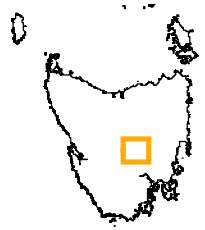
FIGURE 18: REGIONAL BLUE-WINGED PARROT (NEOPHEMA CHRYSOSTOMA) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Blue-Winged Parrot Observations
- Study Area
- Potential Range (NVA)

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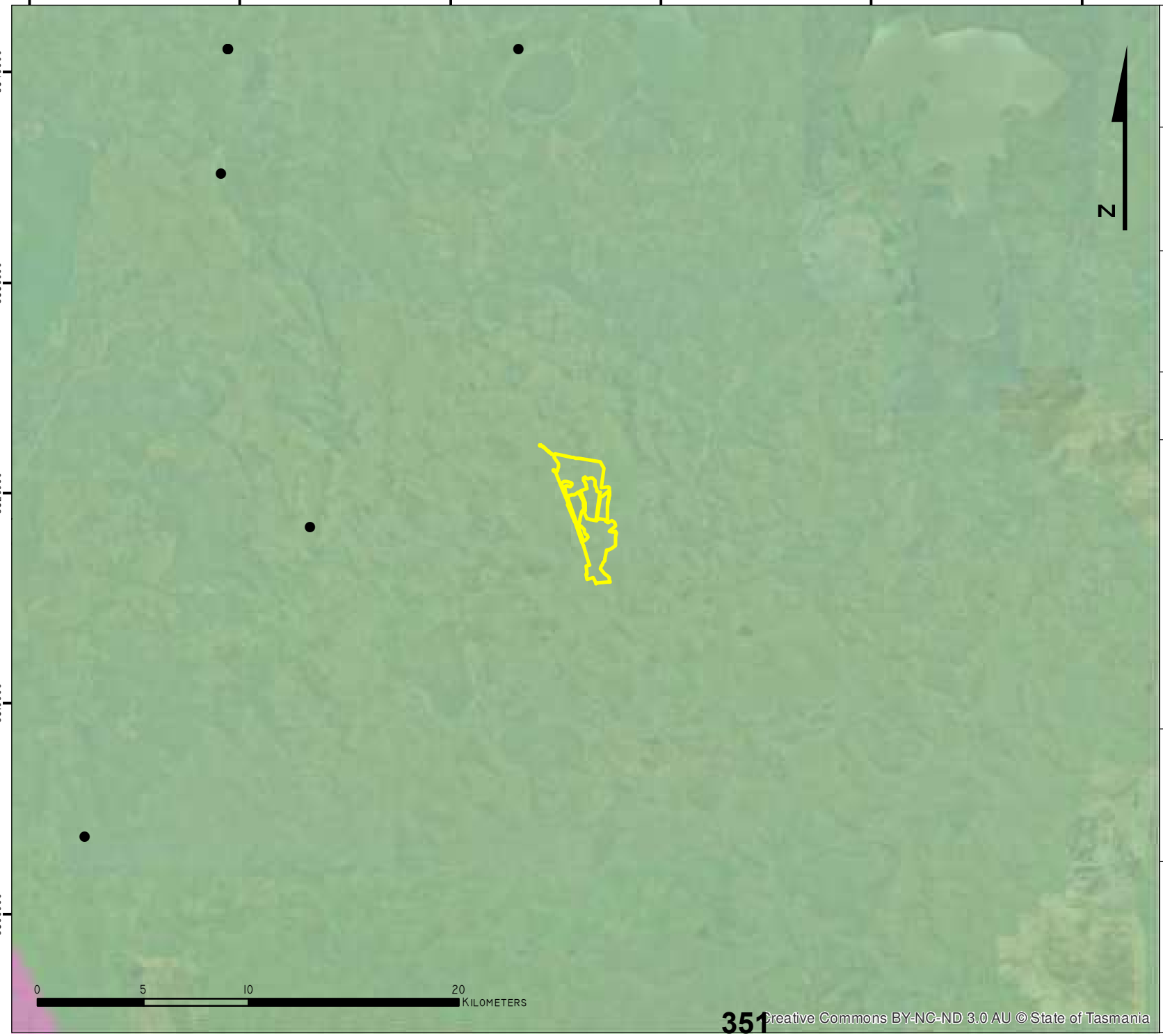


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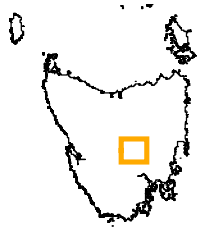
FIGURE 19: REGIONAL GREY GOSHAWK (ACCIPITER NOVAEHOLLANDIAE) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Grey Goshawk Observations
- Study Area
- Core Range (NVA)
- Potential Range (NVA)

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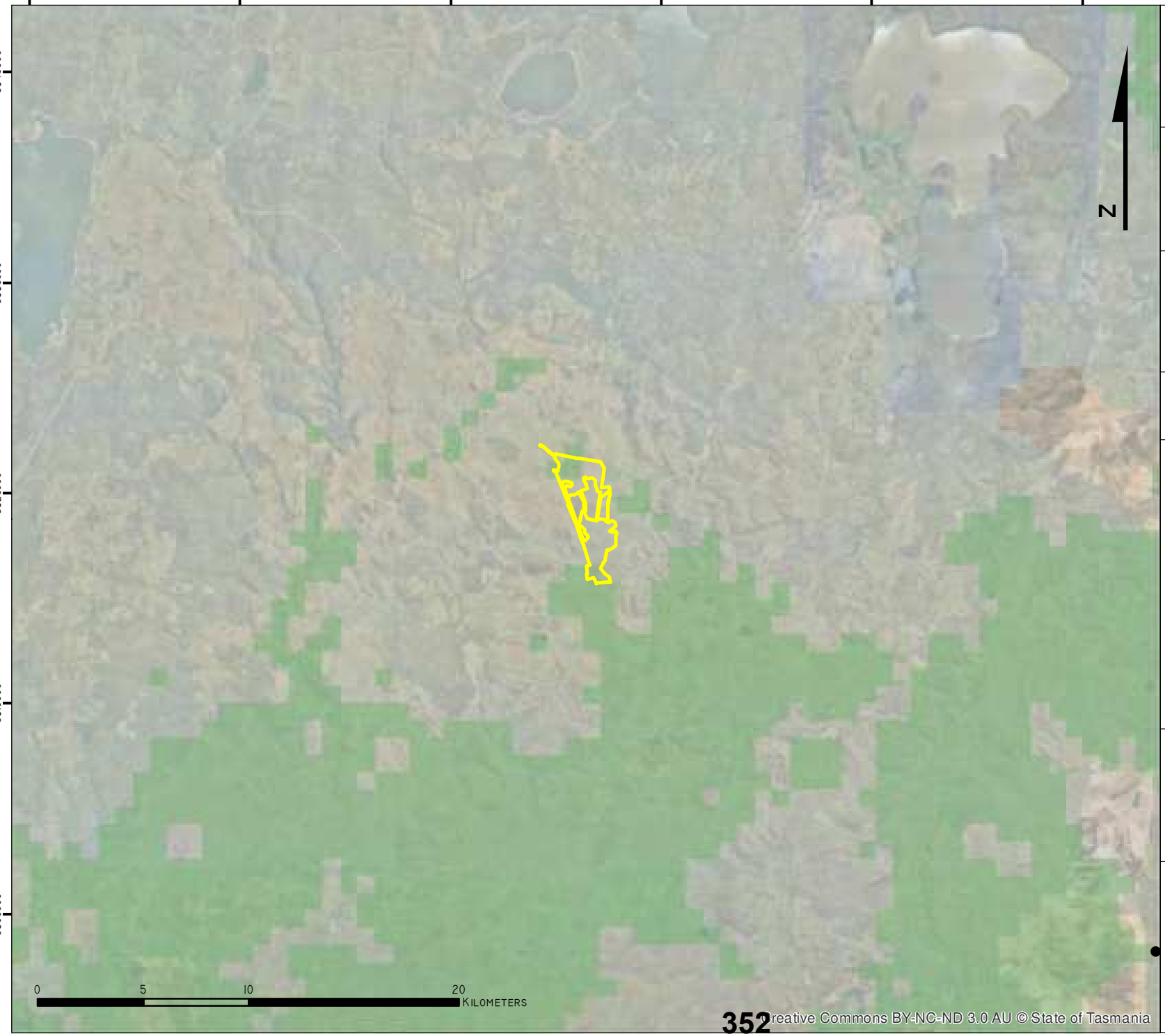


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FIGURE 20: REGIONAL GREEN AND GOLD FROG (LITORIA RANIFORMIS) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Green and Gold Frog Observations
- Study Area
- Potential Range (NVA)

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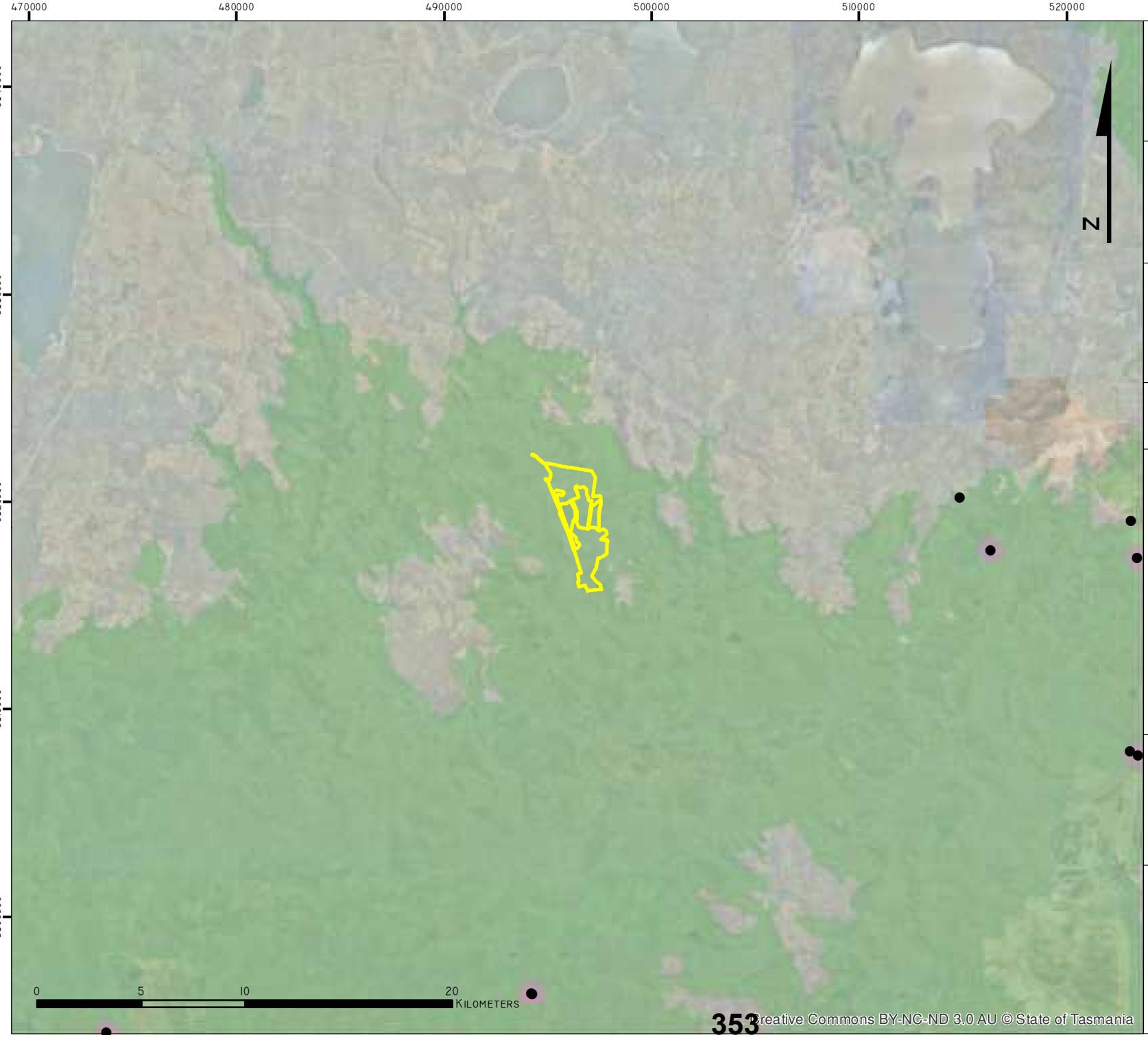


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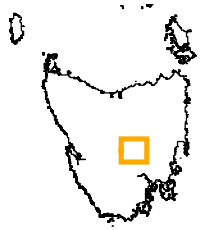
FIGURE 21: REGIONAL TUSSOCK SKINK (PSEUDEMOIA PAGENSTECHERI) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Tussock Skink Observations
- Study Area
- Core Range (NVA)
- Potential Range (NVA)

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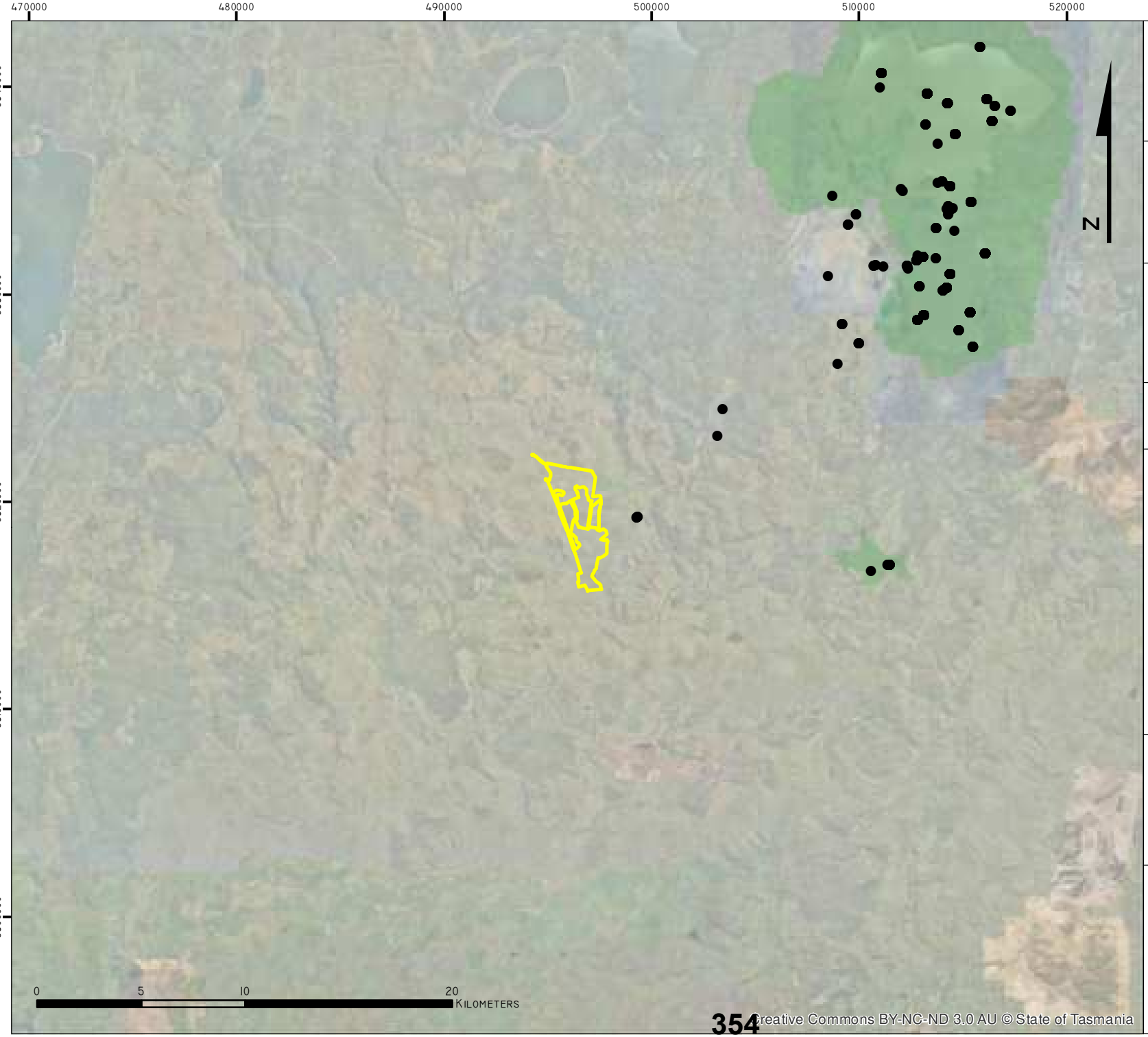


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FIGURE 22: REGIONAL GOLDEN GALAXIAS (GALAXIAS AURATUS) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Golden Galaxias Observations
- Study Area
- Potential Range (NVA)

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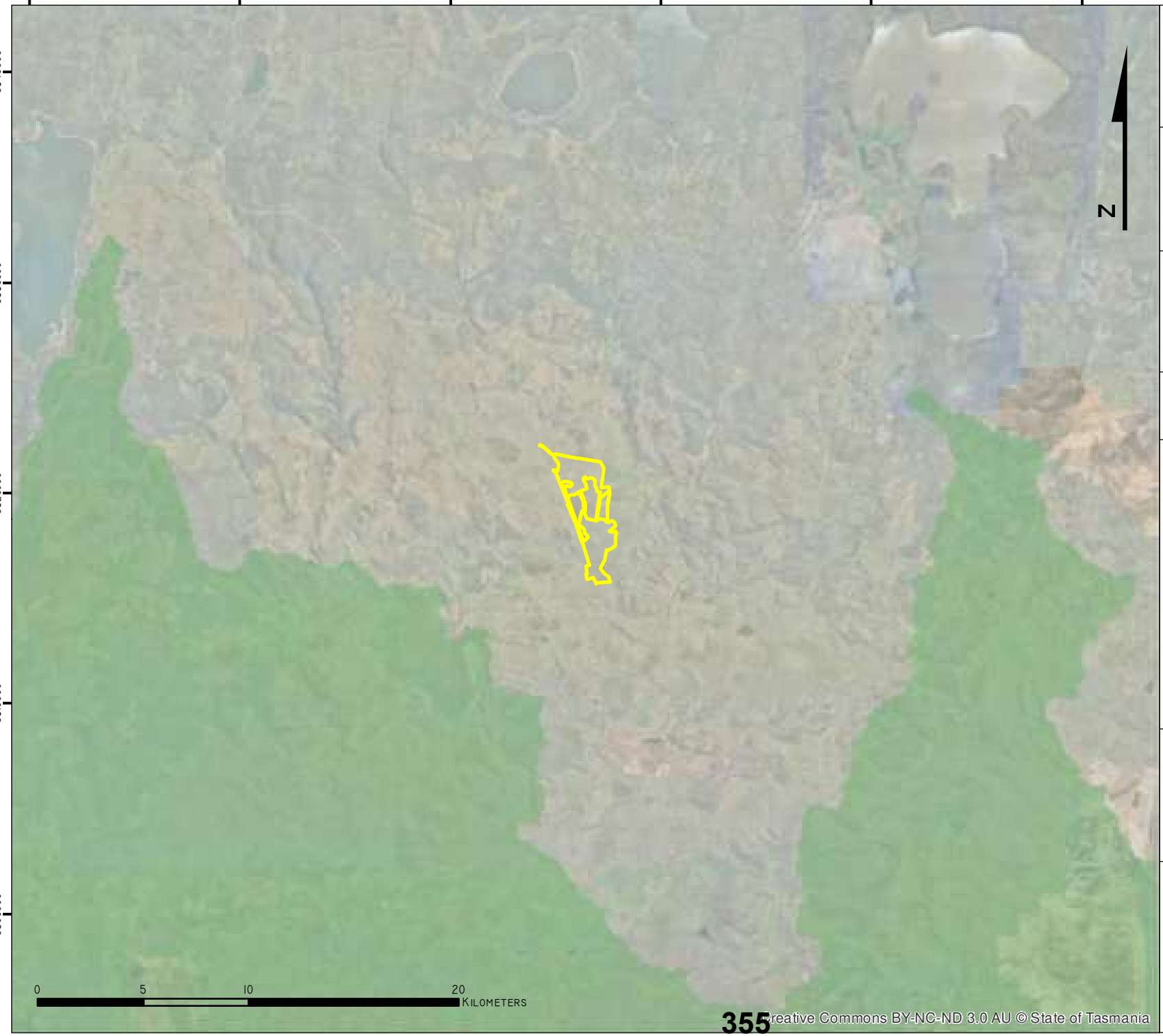


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FIGURE 23: REGIONAL AUSTRALIAN GRAYLING (PROTOTROCTES MARAENA) OBSERVATIONS AND RANGE

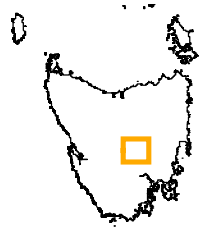
TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

Study Area

Potential Range (NVA)

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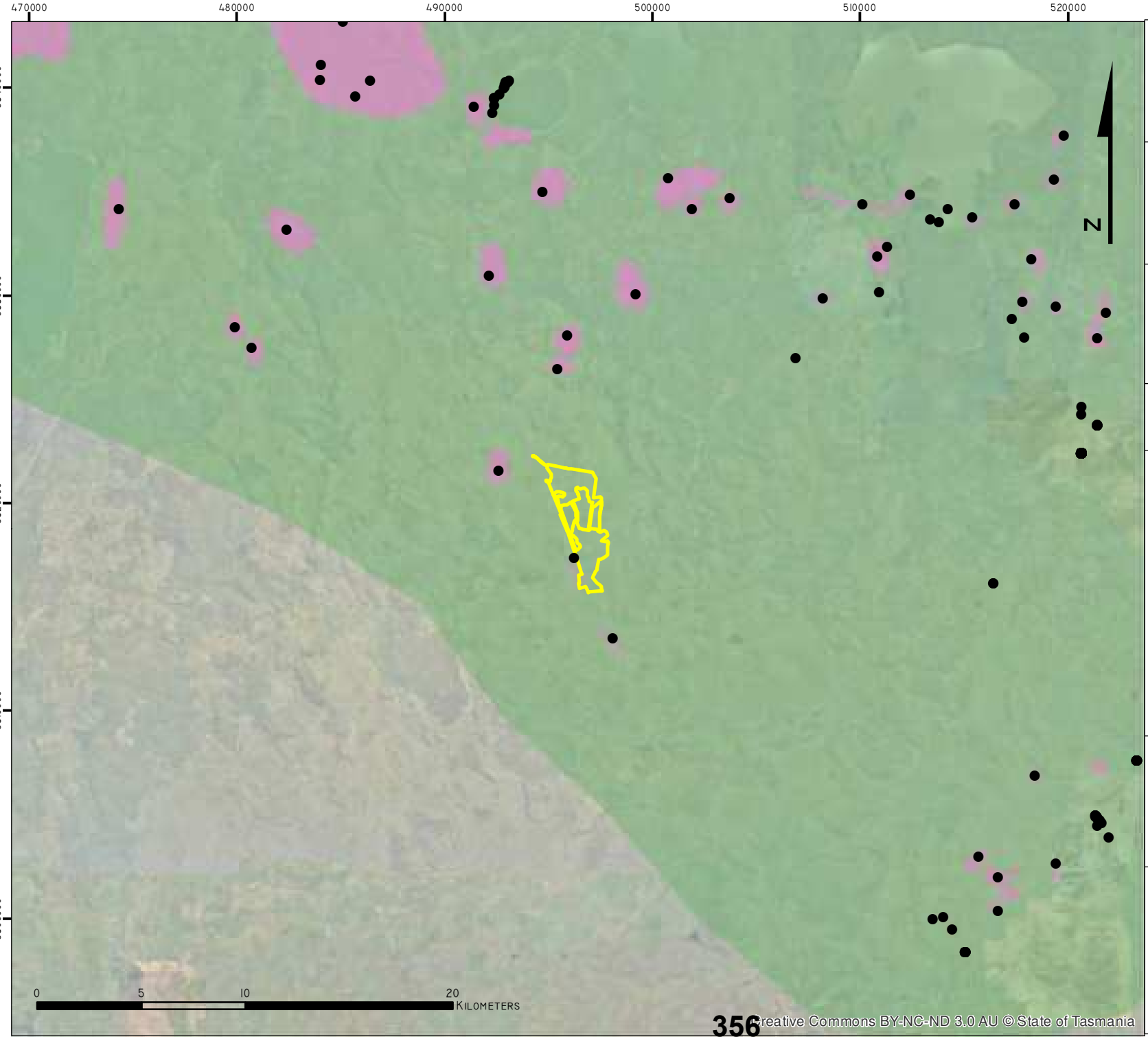


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FIGURE 24: REGIONAL PTUNARRA BROWN BUTTERFLY (OREIXENICA PTUNARRA) OBSERVATIONS AND RANGE

TASMAP:	LGA:
HERMITAGE CLUNY	CENTRAL HIGHLANDS

- Ptunarra Brown Butterfly Observations
- Study Area
- Known Range (NVA)
- Potential Range (NVA)

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C.5 PHYTOPHTHORA CINNAMOMI (PC)

Root-rot fungus (*Phytophthora cinnamomi,* PC) is a soil borne pathogen that causes death in a wide range of native plant species often leading to floristic and structural changes in susceptible plant communities.

PC evolved in tropical areas and requires warm, as well as moist, soils for at least some time of the year to produce sporangia and release zoospores (Rudman 2005). Only those areas of the State that are below an altitude of about 700m above sea level have soils sufficiently warm for this to occur (Podger *et al* 1990). Vegetation types below 700m elevation may not be wholly or partly susceptible if closed canopies keep soil temperatures cool during the summer months, such as tall wet eucalypt forests over rainforest species, or rainforest communities.

PC can be spread through the movement of infected soil or plant material by people or animals and can even be transported by water percolating through soil or via surface water, such as in creeks and other drainage lines. Transport of PC to new areas is usually through soil/dirt adhering to vehicles and machinery. Transport into non-roaded areas of high human usage is mainly via bushwalking items such as tents or footwear but can also occur by bird activity.

The fungus is not always evident in the landscape as it attacks root systems of susceptible species, usually causing death in new growth or the yellowing of leaves followed by loss of vigour and, in most cases, death. The fungus can inhabit the root systems of resistant species without any visible signs of infection within the host plant.

Samples to directly survey for PC were not collected. No plants with PC symptoms were observed in the Study Area.

The seasonally very dry environment present (it is a summer dry climate when soil temperatures would be suitable for PC growth), and paucity of PC susceptible species (and host species) makes it very unlikely that this water mould would be present or become established in the Study Area.

PART D – NATURAL ASSETS CODE ASSESSMENT

D.1 BACKGROUND

The Study Area intersects the waterway and coastal protection area overlay (the 'Overlay') mapped in the Tasmanian Planning Scheme – Central Highlands.

The locations where the Study Area intersects the Overlay is shown in **Figure 5.** Hence, an assessment against the Acceptable Standard/Performance Criteria was used to assess compliance against the provisions of Clause C7.6.1 is required. The assessment is provided below.

D.2 TERMINOLOGY

The following terms are used in this section (extracted from Clause C7.3.1 in the Code).

littoral vegetation	means vegetation adjacent to a sea, lake or river that is close to the shore. It includes the intertidal zone to high water mark and can include wetlands.
natural streambank and streambed condition	means the natural rate of erosion or accretion of the bank and bed of a watercourse and natural hydrological processes, as determined using *The Tasmanian River Condition Index Book 2 Hydrology User's Manual and Book 3 Physical Form Field Manual*.
natural assets	means biodiversity, environmental flows, natural streambank and streambed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values.
residual impacts	means those environmental effects predicted to remain after the initial effects of development have been avoided or minimised through design.
riparian vegetation	means vegetation found within or adjacent to watercourses, wetlands, lakes and recharge basins.
river condition	means condition of a waterway as determined using the Tasmanian River Condition Index.
significant habitat	means the habitat within the known or core range of a threatened fauna species, where any of the following applies: (a) is known to be of high priority for the maintenance of breeding populations throughout the species' range; or (b) the conversion of it to non-priority vegetation is considered to result in a long-term negative impact on breeding populations of the threatened fauna species.
threatened fauna species	means listed under the *Threatened Species Protection Act 1995* or listed as threatened or migratory under the *Environment Protection and Biodiversity Conservation Act 1999*.
threatened flora species	means listed under the *Threatened Species Protection Act 1995* or as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*.

waterway values	means the values of watercourses and wetlands derived from their aquatic habitat and riparian vegetation, physical elements, landscape function, recreational function and economic function.

D.3 ASSESSMENT OF THE DEVELOPMENT PER CLAUSE 7.6.1

The contents of this report assisted with the assessment of the requirements prescribed in Clause C7.6.1.

Each of the performance criteria within Clause C7.6.1 is described below relative to the Study Area and characteristics of the Development where it would intersect the Overlay in the Study Area.

Performance Criterion P1.1

The is an applicable standard to the Development because buildings and works are proposed within a waterway and coastal protection area. The buildings are watercourse crossing points (e.g., culvert-based structures with a trafficable surface), where they don't already exist, to enable equipment and machinery to access installation areas for the solar panels and other structures. Works include the installation of the structures through earthworks (soil removal and excavation) and rehabilitation, and the installation of cabling through trench excavation and closure.

P1.1 requires that the works and buildings must avoid or minimise adverse impacts on natural assets, having regard to the matters reproduced in the table below.

On balance, the areas intersected by the Overlay are areas of agricultural land or areas where there has been the regeneration of some native species such as rushes, grasses and sedges.

Only small areas of native vegetation (i.e. vegetation that can be identified and mapped at a scale following TASVEG vegetation mapping units) are intersected by the Overlay; these could be avoided through careful planning and design of watercourse crossing points.

The implementation of construction management measures as described in section D.4. can further mitigate the risk of adverse impacts to natural assets where the Overlay intersects the Study Area.

Performance Criterion P1.2

Not relevant to the Development because no buildings and works are proposed within the spatial extent of tidal waters.

C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area

<table>
<tr><td>Objective</td><td colspan="2">That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.</td></tr>
<tr><td colspan="2">Performance Criterion (P)</td><td>Comments with reference to the Development</td></tr>
<tr><td colspan="2">P1.1
Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:</td><td></td></tr>
<tr><td>(a) impacts caused by erosion, siltation, sedimentation and runoff;</td><td colspan="2">The installation of crossing points associated with works in the Overlay could cause erosion, with subsequent siltation or sedimentation downstream of the works.

The location of crossings and cable trenching associated with the Development in the Overlay is unknown; however, there are only minor areas in the Study Area that intersect the Overlay which support significant biodiversity values.

The extent of native vegetation is very limited in the Overlay (see mapping units in bold in the below table and the extent of each that intersects the Overlay). One vegetation type is a threatened community (State listed community), which should be avoided if possible by works where it intersects the Overlay.

<table>
<tr><th>Vegetation Type/Name</th><th>Threatened?</th><th>Extent (hectares)</th></tr>
<tr><td>Eucalyptus pauciflora forest and woodland not on dolerite</td><td>No</td><td>0.85</td></tr>
<tr><td>Eucalyptus tenuiramis forest and woodland not on dolerite</td><td>Yes</td><td>0.07</td></tr>
<tr><td>Lowland grassy sedgeland</td><td>No</td><td>0.04</td></tr>
<tr><td>Agricultural land</td><td></td><td>19.72</td></tr>
</table>
</td></tr>
</table>

	<table><tr><td>Extra urban miscellaneous</td><td>[redacted]</td><td>0</td></tr><tr><td>*Pteridium esculentum* fernland</td><td></td><td>0</td></tr><tr><td>Regenerating cleared land</td><td></td><td>21.60</td></tr></table> The risk of adverse impacts can be further mitigated by the implementation of erosion and sediment control measures as described in section D.4.
(b) impacts on riparian or littoral vegetation;	*Littoral vegetation* is absent because no shore (marine or tidal waters) is present. *Riparian vegetation* is present (see discussion at (a)), but it is primarily dominated by exotic species with only minor occurrence of native species which is generally limited to some native grasses, sedges, rushes and herbs that are common species (it is the FRG mapping unit described at). The extent of clearing to install and/or modify watercourse crossing points and cable trenching and other activities associated with the Development is scheduled to be minimal and the one vegetation type that is a threatened community (State listed community) should be avoided by works where it intersects the Overlay.
(c) maintaining natural streambank and streambed condition, where it exists;	Streambank and streambed condition is generally not natural, it is primarily a channelised drainage system within agricultural land. There are natural drainage forms where the Overlay intersects native forest (DPO, DTO) and Lowland grassy sedgeland. Works should avoid the Overlay where it intersects any of the three native vegetation communities mapped in **Figure 6.**
(d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;	In-stream natural habitat such as fallen logs is absent except where the Overlay intersects native forest (DPO, DTO) and Lowland grassy sedgeland. Works should avoid, where possible, the Overlay where it intersects any of the three native vegetation communities mapped in **Figure 6.**
(e) the need to avoid significantly impeding natural flow and drainage;	The significant impeding of natural flow and drainage should be avoided by the installation of suitably sized culverts at crossing points (to allow a flow comparable to the undisturbed watercourse), and the rehabilitation of vegetation in those areas disturbed for trenching or associated works.
(f) the need to maintain fish passage, where known to exist;	No fish species are known to utilise the watercourse network, however if fish species are present or may be present when watercourses are flowing water, their passage can be maintained by the

	installation of suitable watercourse crossing structures (i.e. culverts sized to prevent the significant impeding of water flow).
(g) the need to avoid land filling of wetlands;	There is no filling of wetlands proposed.
(h) the need to group new facilities with existing facilities, where reasonably practical;	**Not applicable**, the new facilities/development do not need to be grouped with existing facilities.
(i) minimising cut and fill;	Cut and fill should be minimised when crossing the area (watercourse) within the Overlay.
(j) building design that responds to the particular size, shape, contours or slope of the land;	The design of watercourse crossing structures, and their location, should respond to the particular size, shape, contours or slope of the land. The design will be prepared by a suitably qualified engineer.
(k) minimising impacts on coastal processes, including sand movement and wave action;	**Not relevant,** not a coastal location.
(l) minimising the need for future works for the protection of natural assets, infrastructure and property;	The careful selection of watercourse crossing points and trenching alignments, design of the infrastructure to be installed for this purpose, and the materials to be used for the construction process should minimise the need for future works for the protection of natural assets, infrastructure and property.
(m) the environmental best practice guidelines in the *Wetlands and Waterways Works Manual*; and	The implementation of erosion and sediment control measures as described in section D.4 are in accordance with the *Wetlands and Waterways Works Manual*.
(n) the guidelines in the Tasmanian Coastal Works Manual.	**Not relevant,** not a coastal location.
P1.2	

Buildings and works within the spatial extent of tidal waters must be for a use that relies upon a coastal location to fulfil its purpose, having regard to:	
(a) the need to access a specific resource in a coastal location;	**Not relevant.** No buildings and works are proposed within the spatial extent of tidal waters.
(b) the need to operate a marine farming shore facility;	
(c) the need to access infrastructure available in a coastal location;	
(d) the need to service a marine or coastal related activity;	
(e) provision of essential utility or marine infrastructure; or	
(f) provisions of open space or for marine-related educational, research, or recreational facilities.	
A2 Buildings and works within a future coastal refugia area must be located within a building area on a sealed plan approved under this planning scheme.	**Not relevant.** No buildings and works within the spatial extent of tidal waters are proposed.
A3 Development within a waterway and coastal protection area or a future coastal refugia area must not involve a new stormwater point discharge into a watercourse, wetland or lake.	**Complies.** No new stormwater point discharge into a watercourse, wetland or lake is proposed.
A4 Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area.	**Not relevant.** No dredging or reclamation is proposed.
A5	**Not relevant.** No coastal protection works, or watercourse erosion or inundation protection works are proposed.

Coastal protection works or watercourse erosion or inundation protection works must not occur within a waterway and coastal protection area or a future coastal refugia area.	

D.4 MANAGEMENT RECOMMENDATIONS TO ENSURE COMPLIANCE WITH CLAUSE 7.6.1

Measures to manage the risks of erosion, sedimentation, and siltation from the construction works are provided in **Table 7.** These measures are provided here to compliment the comments made in **Section D.3**

Further information on the installation and use of sediment netting and fibre rolls to manage erosion and sedimentation risk is provided in **Attachment 7** (NRM South, Soil and Water Management on Building and Construction Sites; *sediment fencing and fibre rolls*).

Table 7. Recommended management measures during and after works that intersect the Overlay

Minimise soil disturbance and sediment release. Control erosion and sedimentation risk
The works should be scheduled appropriately. For example, works should be timed to coincide with periods of low flow and completed quickly, and works should be stopped if conditions are not suitable, such as during and after heavy rain.
Damage to the ground cover should be minimised and confined to the works site. Blading and grubbing of the banks and the area adjacent to the works site should be avoided.
Surface and sub-surface flows at the site should be managed to minimise erosion and sedimentation of the waterway or wetland. Geo-textile sediment fences should be used to stop sediment entering the water. They should be installed along the bases of fills and cuts, on the downhill side of soil stockpiles, and along stream banks and around wetlands adjacent to cleared areas. They should be installed along a contour and be entrenched and staked. They should extend the full width of a soil disturbed area.
Avoid contaminant spills
All workers should be trained and equipped to contain equipment spills and leaks. If a spill occurs, immediate steps should be taken to stop it polluting the water, including the ground water. The spill should be reported to the appropriate authorities as soon as possible.
A spill kit (or multiple if works are to be conducted concurrently across a large geographic area) is to be always located on the site during the construction phase of the Development.
Stabilise and rehabilitate banks
The disturbed ground within the Overlay intersected area should be progressively rehabilitated during the works. If practical, native vegetation or agricultural species (if the area is not native vegetation) should be allowed to establish on exposed soil surfaces. The re-establishment of vegetation may need to be assisted with seeding/planting, livestock exclusion, watering/irrigation, and/or weed control works.
Temporary erosion control measures, such as geo-textile silt fences, should be used to control erosion at the works site. These should remain in place until the long-term erosion control methods are established and functioning.

PART E – SUMMARY

E.1 VEGETATION

Three native vegetation types were observed and mapped in the Study Area in addition to several modified land categories such as agricultural land and regenerating cleared land.

The vegetation communities are:

- *Eucalyptus tenuiramis* forest and woodland not on dolerite (TASVEG Code – DTO) - This vegetation community is listed on Schedule 3A of the *Nature Conservation Act 2002* as Eucalyptus tenuiramis *forest and woodland on sediments*;
- *Eucalyptus pauciflora* forest and woodland not on dolerite (TASVEG Code – DPO); and
- Lowland grassy sedgeland (TASVEG Code – GSL).

Eucalyptus tenuiramis forest and woodland not on dolerite is limited in the Study Area to a narrow north-south oriented corridor in the central region of the proposed Development. Other than for small-scale temporary surface disturbances such as cable trenching which can be rehabilitated, it is recommended that this vegetation community be avoided by the works.

E.2 THREATENED FLORA SPECIES

No flora species listed on the *Environment Protection and Biodiversity Conservation Act 1999* were observed in the Study Area.

Three species listed on the *Threatened Species Protection Act 1995* was observed in the Study Area. Comments are summarised below for each of the three species:

*E.2.1 Ferny buttercup (*Ranunculus pumilio *var*. pumilio*)*

The previously recorded locations on the un-named tributaries of Weasel Plains Creek, to the south-east of Weasel Plains Road were assessed in this survey, but no plants were observed. The species may still be present but given the very dry conditions for summer and autumn 2023-24 it may not be in an identifiable life stage.

The observed population is a new location for the species on Weasel Plains Creek. It is associated with spring mounds adjacent to the creek channel (just northwards from the large culvert that provides drainage to go under a farm road) and appears to be an area of poor drainage that is inaccessible to livestock because of fencing.

No impact to the species is likely to occur from the Development.

*E.2.2 Dagger wattle (*Acacia siculiformis*)*

The species has previously been recorded in the Study Area (within the DPO forest community, **Figure 8**). This location was not specifically re-assessed because it occurs outside the Study Area but is likely to still be present in that location or vicinity of that location.

A new location for the species was recorded on the edge of Good condition forest at the eastern side of the Study Area upslope of Weasel Plains Creek. The ground conditions are rocky, exposed gravels and rocks with sparse soil (**Plate 7**) and leaf litter. The species was observed growing in association with the 'hairy'

(pubescent) form of *Acacia gunnii* (the bright green decumbent plants in the bottom right image of **Plate 7**) and the listed herb species *Scleranthus fasciculatus* (see Section C.2.4). Flower buds were present at the time the plants were observed.

No impact to the species is likely to occur from the Development.

*E.2.3 Spreading knawel (*Scleranthus fasciculatus*)*

In the Study Area, the species was solely observed in association with *Acacia siculiformis* on open gravel/bare ground at the southern end of a paddock at the eastern side of the Study Area (**Plate 8**). Flowers were present. Plants were observed growing adjacent to the widespread common knawel (see cushion plant in bottom right image in **Plate 8**). It is estimated that the population in the Study Area exceeds 30 plants, with possibly more plants sparsely occurring within the adjacent *Eucalyptus pauciflora* forest and woodland not on dolerite (DPO).

No impact to the species is likely to occur from the Development.

E.3 THREATENED FAUNA SPECIES

No fauna species listed on the *Threatened Species Protection Act 1995* or *Environment Protection and Biodiversity Conservation Act 1999* were observed in the Study Area during the surveys.

No maternal dens or nests of terrestrial mammal species were observed during the surveys.

No nests of the masked owl or blue winged parrot were observed in the Study Area.

Foraging habitat is present across the Study Area for several fauna species, including wedge-tailed eagle, white bellied sea eagle, terrestrial mammals (devil, quolls and bandicoot), and masked owl.

E.4 WEED AND DISEASE MANAGEMENT

The survey and mapping of weeds was not exhaustive owing to the large size of the Study Area. Several plant species listed as a *Declared Weed* on the *Biosecurity Act 2019* were recorded in or adjacent to the Study Area (**Figure 9**);

- Californian thistle (*Cirsium arvense*), and
- gorse (*Ulex europaeus*).

Declared weeds, environmental weeds and/or exotic species present in the broader landscape but are outside the Study Area include for example –

- briar rose (*Rosa rubiginosa*),
- blackberry (*Rubus anglocandicans*),
- horehound (*Marrubium vulgare*),
- slender thistle (*Carduus pycnocephalus*).
- spear thistle (*Cirsium vulgare*), and
- capeweed (*Arctotheca calendula*).

No plants with PC symptoms were observed in the Study Area. The water mould is very unlikely to be present, or potentially present, in the Study Area because of the very low rainfall of the region and paucity of susceptible plant species.

PART F – REFERENCES

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ATTACHMENTS

ATTACHMENT 1. NATURAL VALUES ATLAS (NVA) REPORT

Natural Values Atlas Report

Authoritative, comprehensive information on Tasmania's natural values.

Reference:
Requested For: Weasel Plains Solar Farm
Report Type: Summary Report
Timestamp: 04:53:12 PM Thursday 08 February 2024

Threatened Flora: buffers Min: 500m Max: 5000m
Threatened Fauna: buffers Min: 500m Max: 5000m
Raptors: buffers Min: 500m Max: 5000m
Tasmanian Weed Management Act Weeds: buffers Min: 500m Max: 5000m
Priority Weeds: buffers Min: 500m Max: 5000m
Geoconservation: buffer 1000m
Acid Sulfate Soils: buffer 1000m
TASVEG: buffer 1000m
Threatened Communities: buffer 1000m
Fire History: buffer 1000m
Tasmanian Reserve Estate: buffer 1000m
Biosecurity Risks: buffer 1000m

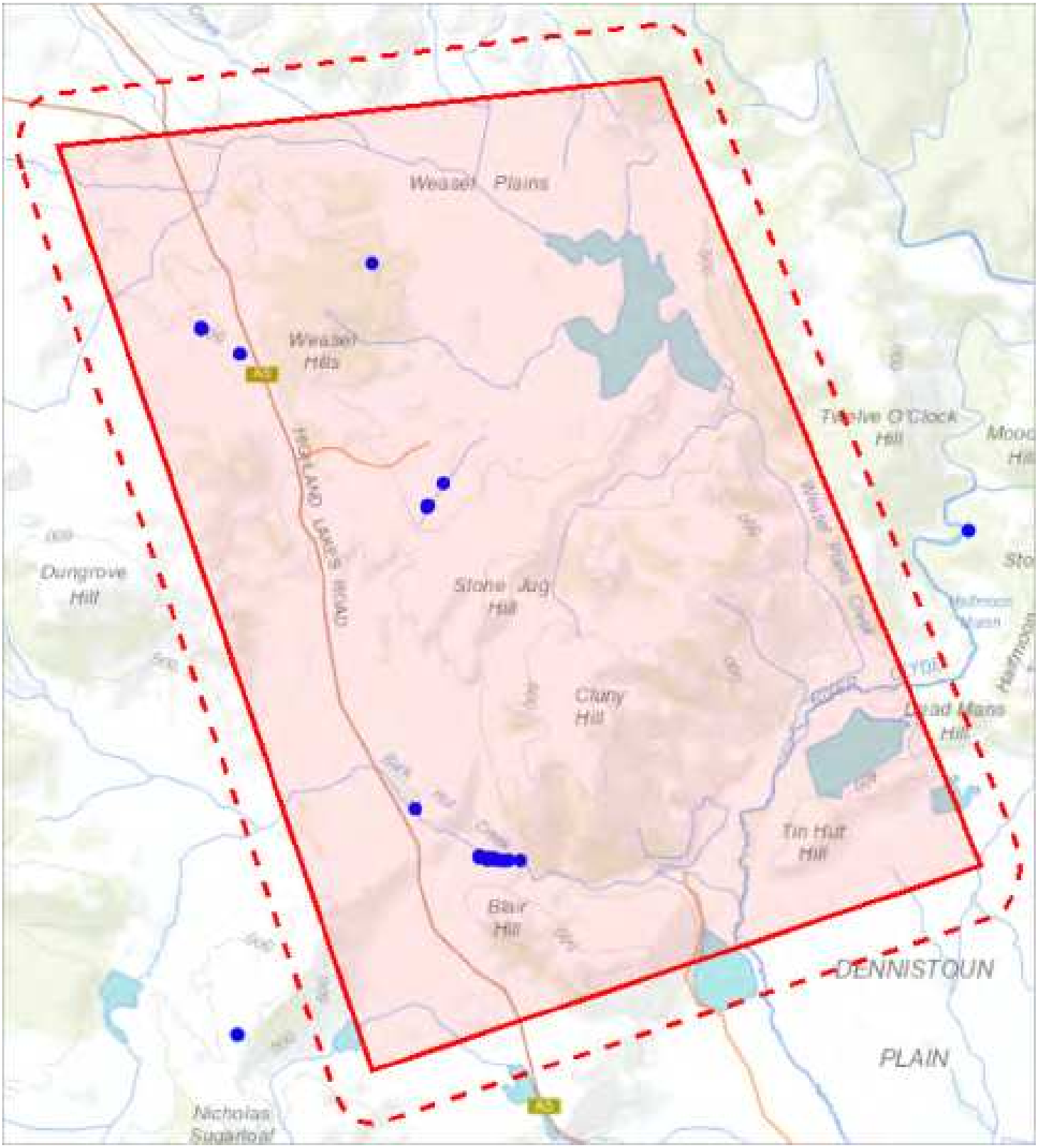


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Property: 2538322

Threatened flora within 500 metres

503042, 5322318

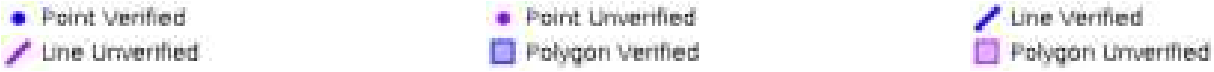


493338, 5311643

Please note that some layers may not display at all requested map scales

Threatened flora within 500 metres

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Threatened flora within 500 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Acacia siculiformis	dagger wattle	r		n	1	23-Sep-1999
Asperula scoparia subsp. scoparia	prickly woodruff	r		n	4	20-Nov-2013
Calocephalus lacteus	milky beautyheads	r		n	13	21-Apr-2010
Muehlenbeckia axillaris	matted lignum	r		n	1	19-Jan-2009
Ranunculus pumilio var. pumilio	ferny buttercup	r		n	8	20-Nov-2013

Unverified Records

No unverified records were found!

For more information about threatened species, please contact Threatened Species Enquiries.

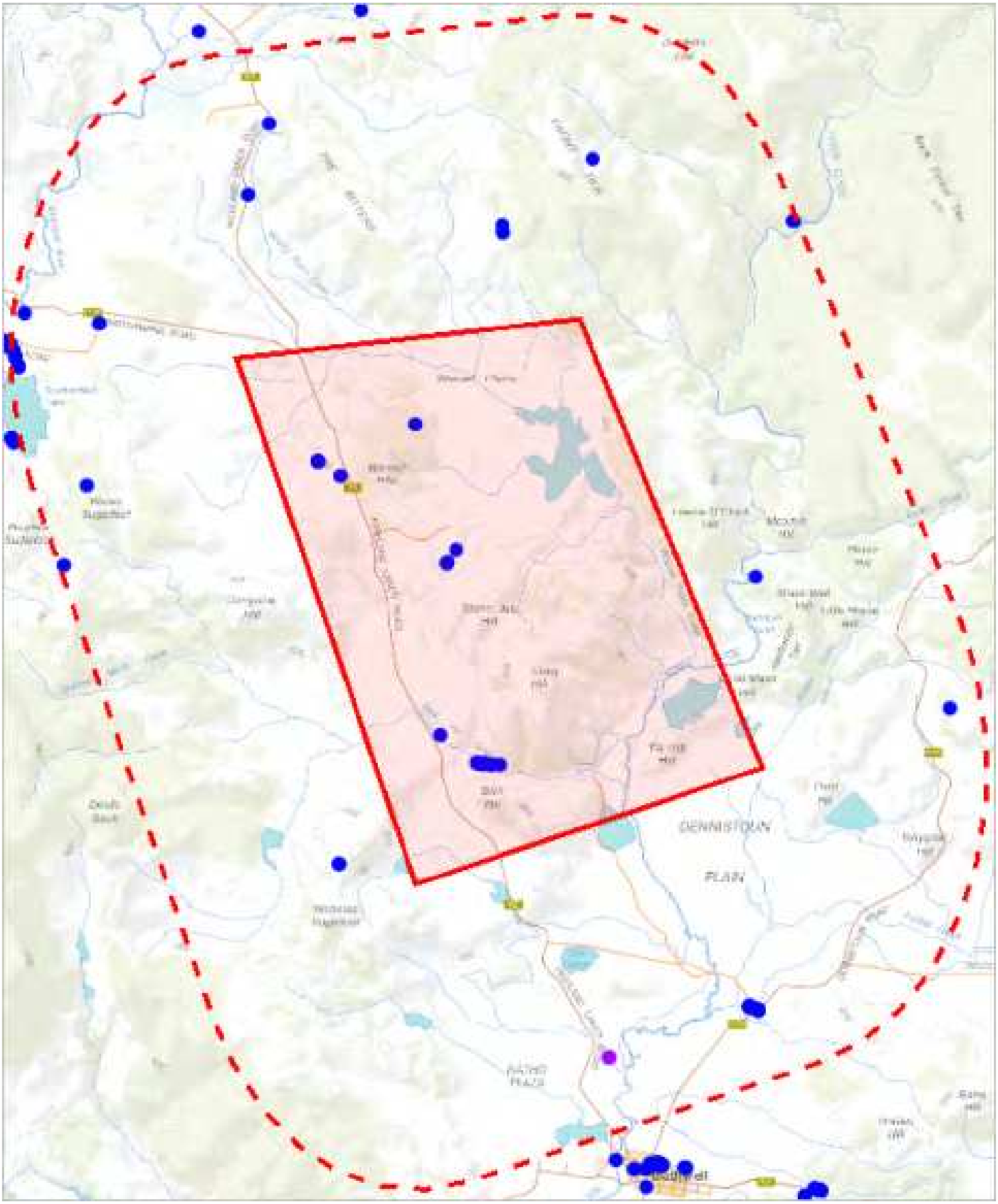
Telephone: 1300 368 550

Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened flora within 5000 metres

506373, 5326798

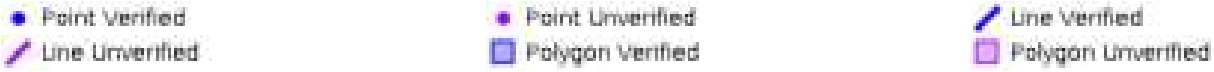


489994, 5307145

Please note that some layers may not display at all requested map scales

Threatened flora within 5000 metres

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Threatened flora within 5000 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Acacia siculiformis	dagger wattle	r		n	1	23-Sep-1999
Asperula scoparia subsp. scoparia	prickly woodruff	r		n	10	20-Nov-2013
Barbarea australis	riverbed wintercress	e	EN	e	2	19-Dec-2018
Baumea gunnii	slender twigsedge	r		n	8	30-Mar-2016
Brachyscome perpusilla	tiny daisy	r		n	1	31-Aug-1922
Brachyscome rigidula	cutleaf daisy	v		n	1	03-Jan-1912
Calocephalus lacteus	milky beautyheads	r		n	13	21-Apr-2010
Colobanthus curtisiae	grassland cupflower	r	VU	n	2	06-Jan-2009
Cryptandra amara	pretty pearlflower	e		n	2	23-Mar-1994
Discaria pubescens	spiky anchorplant	e		n	39	01-Aug-2016
Lepidium hyssopifolium	soft peppercress	e	EN	n	14	07-Apr-2017
Muehlenbeckia axillaris	matted lignum	r		n	1	19-Jan-2009
Pellaea calidirupium	hotrock fern	r		n	1	20-Aug-1998
Ranunculus pumilio var. pumilio	ferny buttercup	r		n	9	20-Nov-2013
Scleranthus fasciculatus	spreading knawel	v		n	5	30-Oct-2022

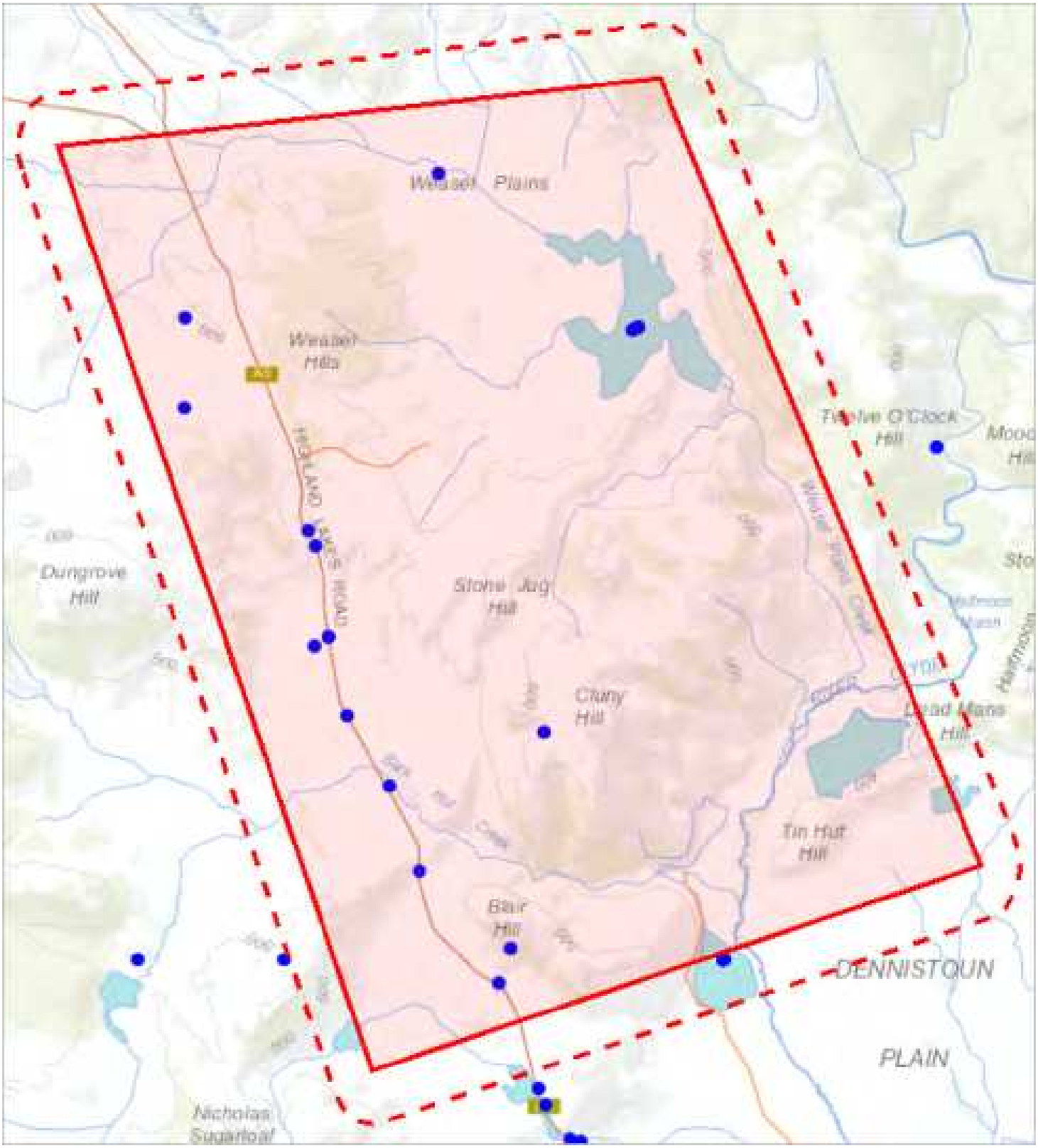
Unverified Records

Species	Common Name	SS	NS	Bio	Observation Count
Rhodanthe anthemoides	chamomile sunray	r		n	1

For more information about threatened species, please contact Threatened Species Enquiries.
Telephone: 1300 368 550
Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened fauna within 500 metres

503042, 5322318

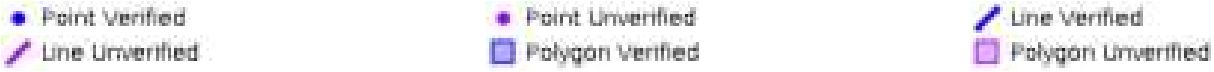


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Please note that some layers may not display at all requested map scales

Threatened fauna within 500 metres

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Threatened fauna within 500 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Aquila audax	wedge-tailed eagle	pe	PEN	n	2	25-Sep-2018
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	1	30-Oct-2020
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	1	13-Mar-2021
Galaxias auratus	golden galaxias	r	EN	e	4	14-Mar-2002
Neophema chrysostoma	blue-winged parrot		VU	n	1	18-Mar-1975
Oreixenica ptunarra subsp. roonina		pv	PEN	e	2	01-Jan-1992
Perameles gunnii	eastern barred bandicoot		VU	n	10	22-Jun-1979
Sarcophilus harrisii	tasmanian devil	e	EN	e	13	05-Jun-2021

Unverified Records

No unverified records were found!

Threatened fauna within 500 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
Astacopsis gouldi	lutaralipina or giant freshwater crayfish	v	VU	e	1	0	0
Litoria raniformis	green and gold frog	v	VU	n	1	0	0
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	2	0	0
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	1	0	1
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	1	0	0
Sarcophilus harrisii	tasmanian devil	e	EN	e	1	0	0
Accipiter novaehollandiae	grey goshawk	e		n	1	0	0
Oreixenica ptunarra	ptunarra brown butterfly	e	EN	e	1	2	0
Perameles gunnii	eastern barred bandicoot		VU	n	1	0	1
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
Dasyurus viverrinus	eastern quoll		EN	n	0	0	1

For more information about threatened species, please contact Threatened Species Enquiries.

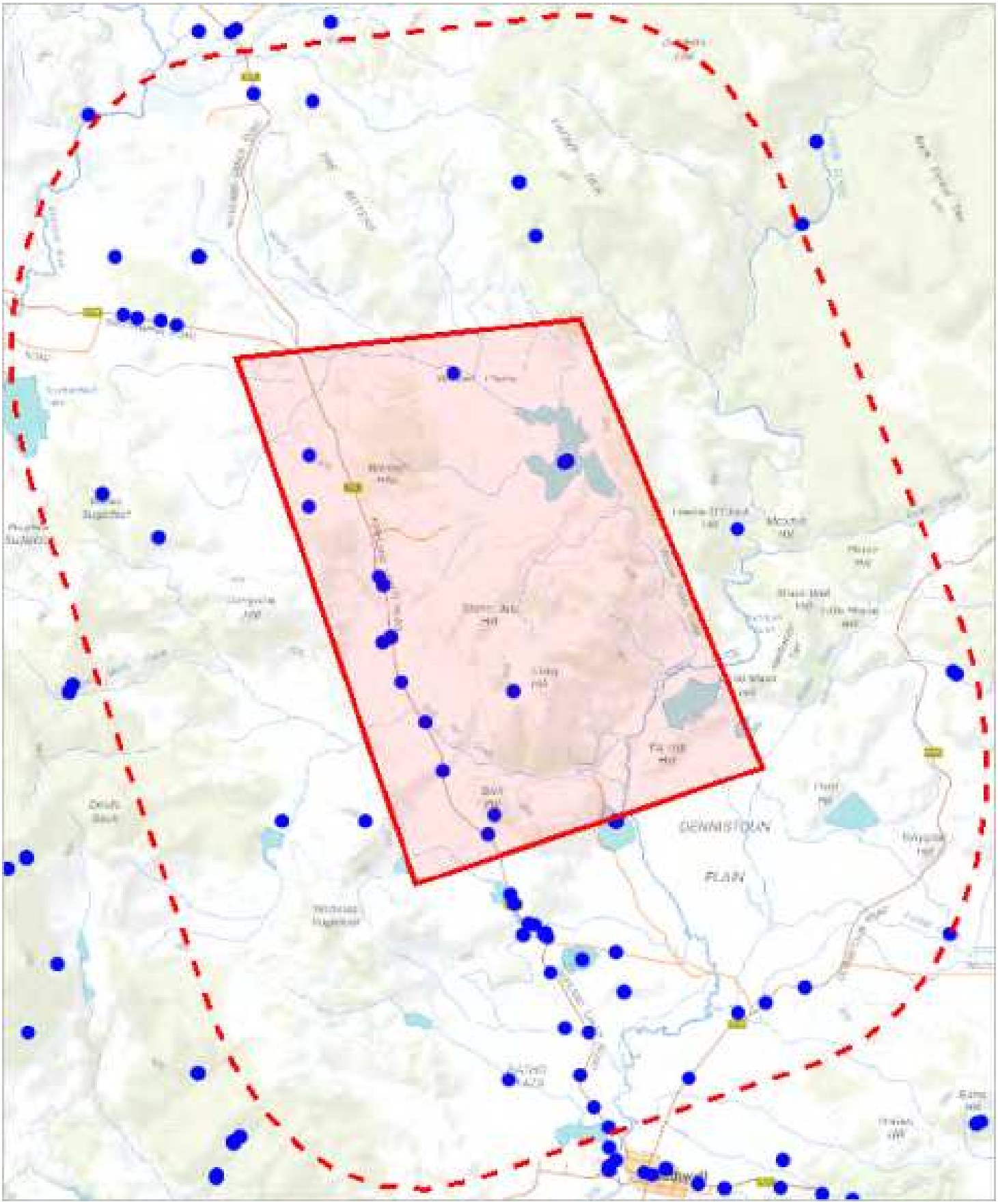
Telephone: 1300 368 550

Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened fauna within 5000 metres

506373, 5326798

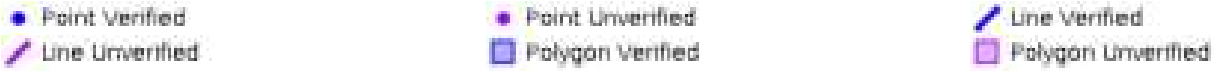


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Threatened fauna within 5000 metres

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Threatened fauna within 5000 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Aquila audax	wedge-tailed eagle	pe	PEN	n	8	16-Jan-2019
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	21	21-Jun-2022
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	1	30-Oct-2020
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	1	13-Mar-2021
Dasyurus viverrinus	eastern quoll		EN	n	2	30-Nov-1987
Galaxias auratus	golden galaxias	r	EN	e	6	14-Mar-2002
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	1	10-Jan-2019
Hirundapus caudacutus	white-throated needletail		VU	n	3	04-Mar-1981
Neophema chrysostoma	blue-winged parrot		VU	n	9	11-Jan-1981
Oreixenica ptunarra subsp. roonina		pv	PEN	e	3	01-Jan-1992
Perameles gunnii	eastern barred bandicoot		VU	n	10	22-Jun-1979
Sarcophilus harrisii	tasmanian devil	e	EN	e	39	14-Apr-2023
Tyto novaehollandiae	masked owl	pe	PVU	n	2	04-Mar-1981
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	1	06-Jan-2018

Unverified Records

No unverified records were found!

Threatened fauna within 5000 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
Astacopsis gouldi	lutaralipina or giant freshwater crayfish	v	VU	e	1	0	0
Litoria raniformis	green and gold frog	v	VU	n	1	0	0
Prototroctes maraena	australian grayling	v	VU	ae	1	0	0
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	2	0	0
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	1	0	1
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	1	0	1
Sarcophilus harrisii	tasmanian devil	e	EN	e	1	0	0
Accipiter novaehollandiae	grey goshawk	e		n	1	0	0
Oreixenica ptunarra	ptunarra brown butterfly	e	EN	e	1	3	0
Perameles gunnii	eastern barred bandicoot		VU	n	1	0	1
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
Dasyurus viverrinus	eastern quoll		EN	n	0	0	1

For more information about threatened species, please contact Threatened Species Enquiries.

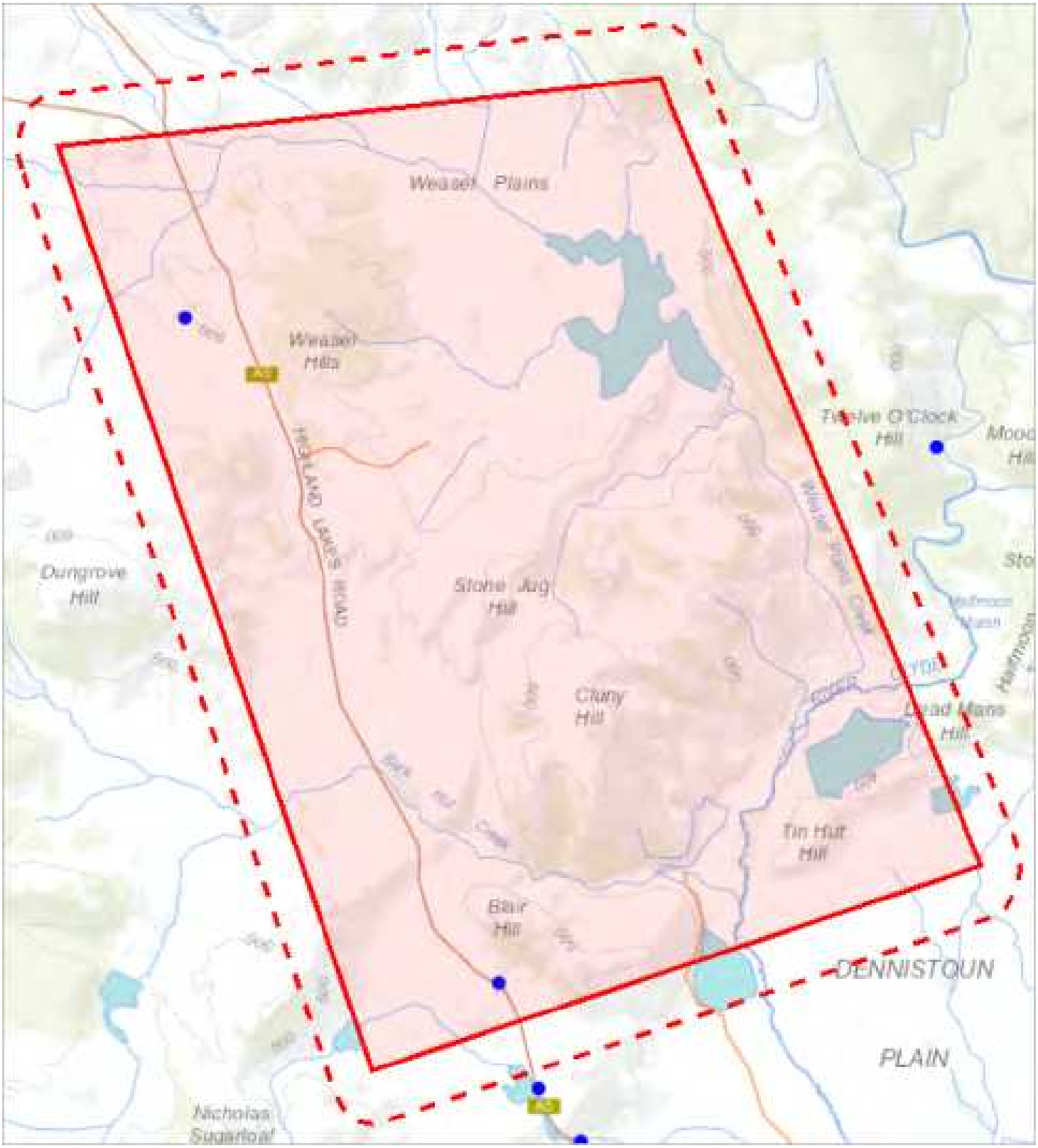
Telephone: 1300 368 550

Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Raptor nests and sightings within 500 metres

503042, 5322318

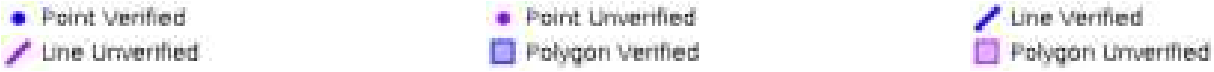


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Please note that some layers may not display at all requested map scales

Raptor nests and sightings within 500 metres

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Raptor nests and sightings within 500 metres

Verified Records

Nest Id/Location Foreign Id	Species	Common Name	Obs Type	Observation Count	Last Recorded
	Aquila audax	wedge-tailed eagle	Not Recorded	1	04-Dec-2016
	Aquila audax	wedge-tailed eagle	Sighting	1	25-Sep-2018
	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Carcass	1	13-May-2021

Unverified Records

No unverified records were found!

Raptor nests and sightings within 500 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	Potential	Known	Core
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	1	0	0
Accipiter novaehollandiae	grey goshawk	e		1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		2	0	0

For more information about raptor nests, please contact Threatened Species Enquiries.

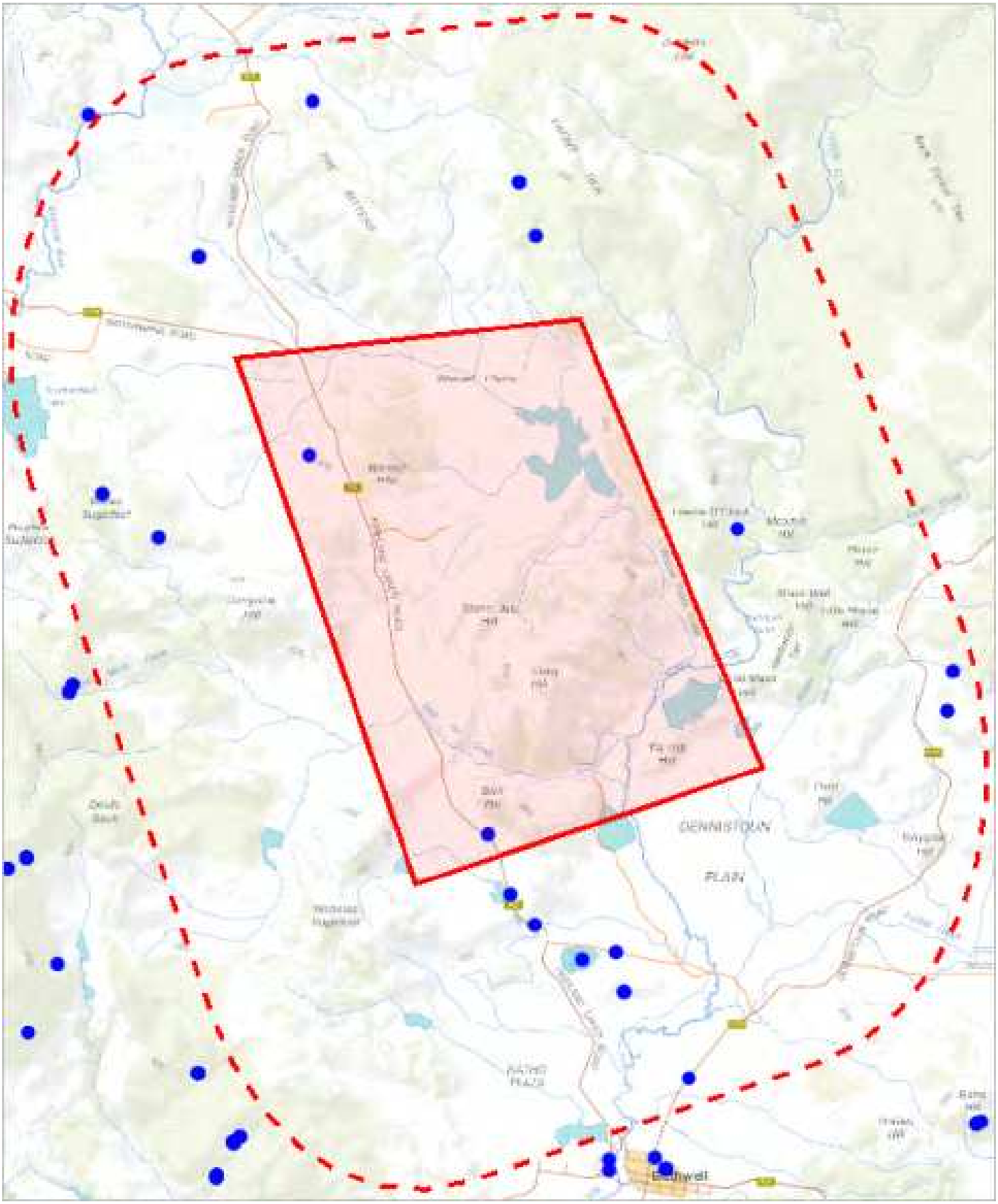
Telephone: 1300 368 550

Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Raptor nests and sightings within 5000 metres

506373, 5326798

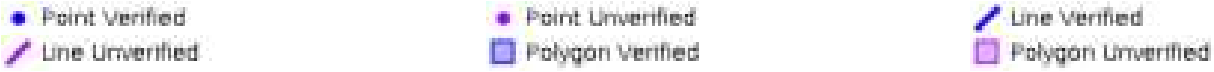


489994, 5307145

Please note that some layers may not display at all requested map scales

Raptor nests and sightings within 5000 metres

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Raptor nests and sightings within 5000 metres

Verified Records

Nest Id/Location Foreign Id	Species	Common Name	Obs Type	Observation Count	Last Recorded
2475	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	2	21-Jun-2022
2476	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	1	20-Feb-2018
2524	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	2	21-Jul-2017
268	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	1	01-Jan-1985
3091	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	1	21-Jun-2022
554	Falco peregrinus	peregrine falcon	Nest	1	01-Jan-1985
718	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	3	16-Sep-2009
764	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	3	19-Sep-2008
933	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	4	24-Sep-2008
	Aquila audax	wedge-tailed eagle	Not Recorded	5	25-Mar-2018
	Aquila audax	wedge-tailed eagle	Sighting	3	16-Jan-2019
	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Carcass	3	13-Feb-2022
	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Sighting	4	11-Jun-2020
	Haliaeetus leucogaster	white-bellied sea-eagle	Sighting	1	10-Jan-2019
	Tyto novaehollandiae	masked owl	Sighting	2	04-Mar-1981

Unverified Records

No unverified records were found!

Raptor nests and sightings within 5000 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	Potential	Known	Core
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	1	0	0
Accipiter novaehollandiae	grey goshawk	e		1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		2	0	0

For more information about raptor nests, please contact Threatened Species Enquiries.

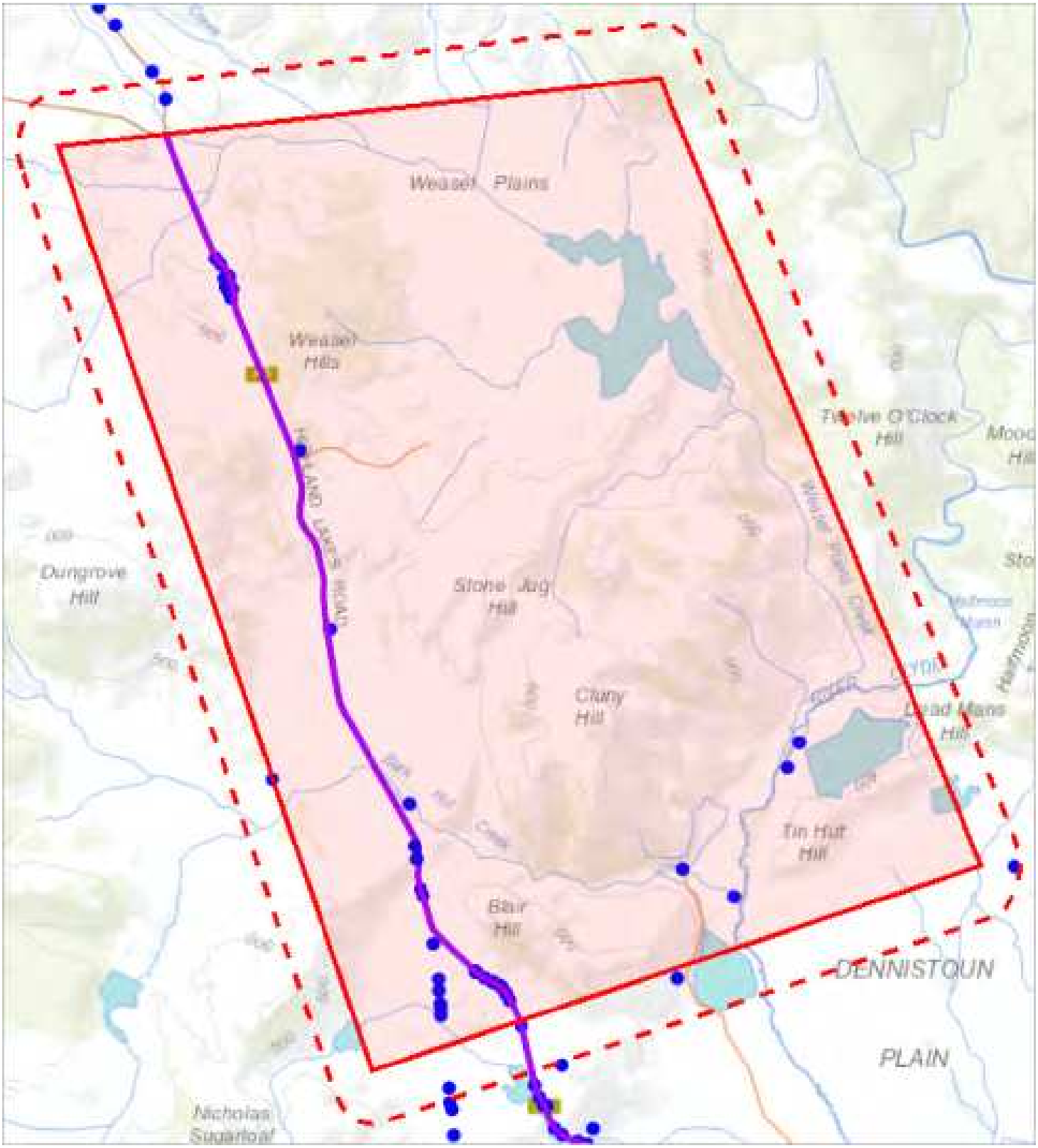
Telephone: 1300 368 550

Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Tas Management Act Weeds within 500 m

503042, 5322318

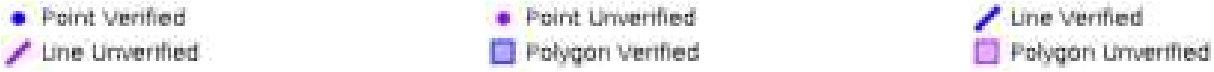


493338, 5311643

Please note that some layers may not display at all requested map scales

Tas Management Act Weeds within 500 m

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Tas Management Act Weeds within 500 m

Verified Records

Species	Common Name	Observation Count	Last Recorded
Carduus pycnocephalus	slender thistle	3	22-Nov-2013
Carduus tenuiflorus	winged thistle	7	22-Nov-2013
Pilosella aurantiaca subsp. aurantiaca	orange hawkweed	1	01-Jan-2015
Ulex europaeus	gorse	36	22-Nov-2013

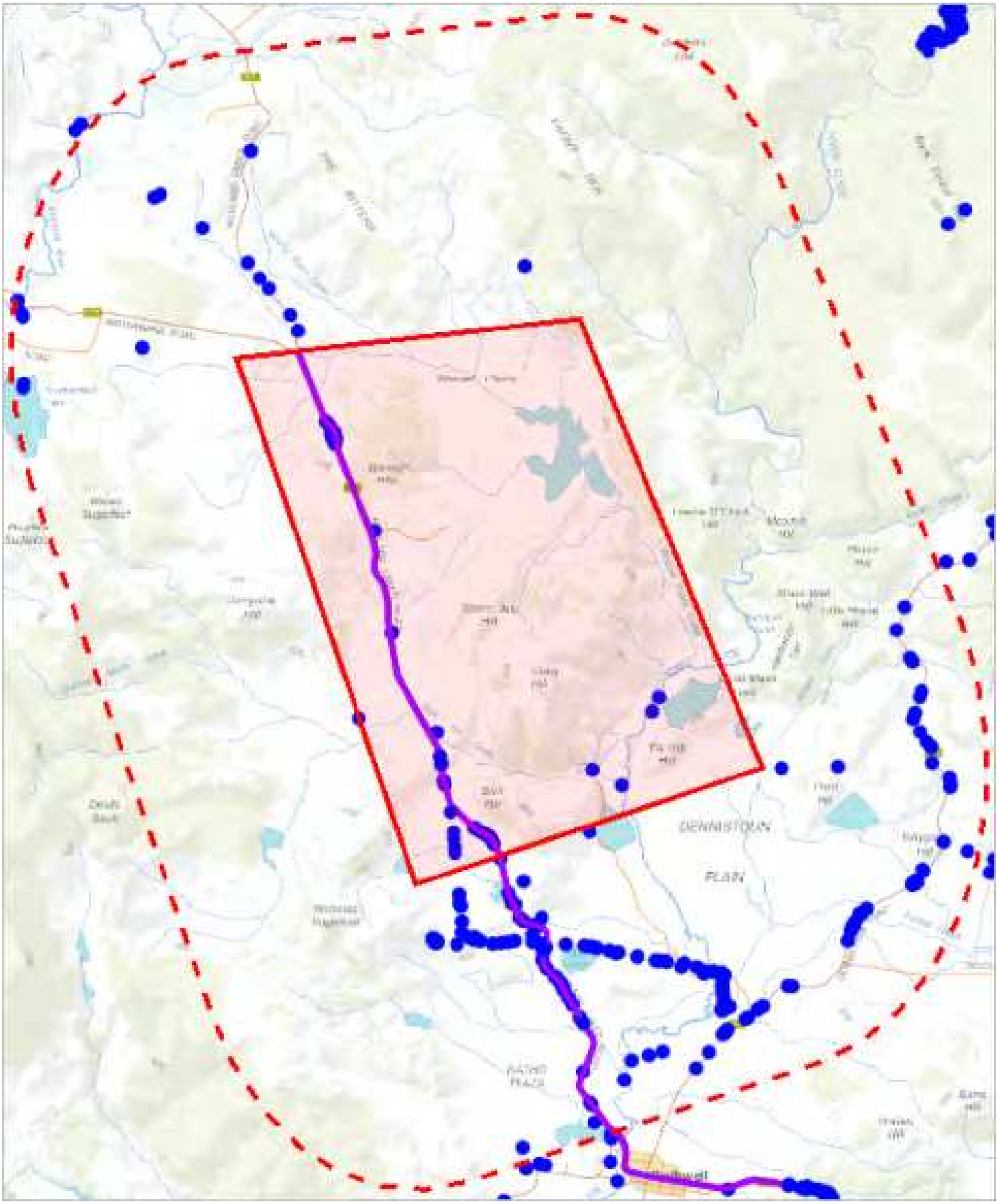
Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area:

https://www.nre.tas.gov.au/invasive-species/weeds

Tas Management Act Weeds within 5000 m

506373, 5326798

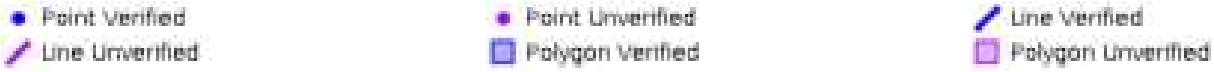


489994, 5307145

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Tas Management Act Weeds within 5000 m

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Tas Management Act Weeds within 5000 m

Verified Records

Species	Common Name	Observation Count	Last Recorded
Carduus pycnocephalus	slender thistle	13	22-Nov-2013
Carduus tenuiflorus	winged thistle	19	24-Jan-2014
Cirsium arvense var. arvense	creeping thistle	84	17-Mar-2023
Cytisus scoparius	english broom	2	12-Nov-2013
Elodea canadensis	canadian pondweed	1	24-Jan-2014
Marrubium vulgare	white horehound	3	25-May-2006
Pilosella aurantiaca subsp. aurantiaca	orange hawkweed	1	01-Jan-2015
Salix x fragilis nothovar. fragilis	crack willow	4	24-Jan-2014
Salix x rubens	basket willow	1	01-Mar-1993
Ulex europaeus	gorse	201	06-Dec-2022

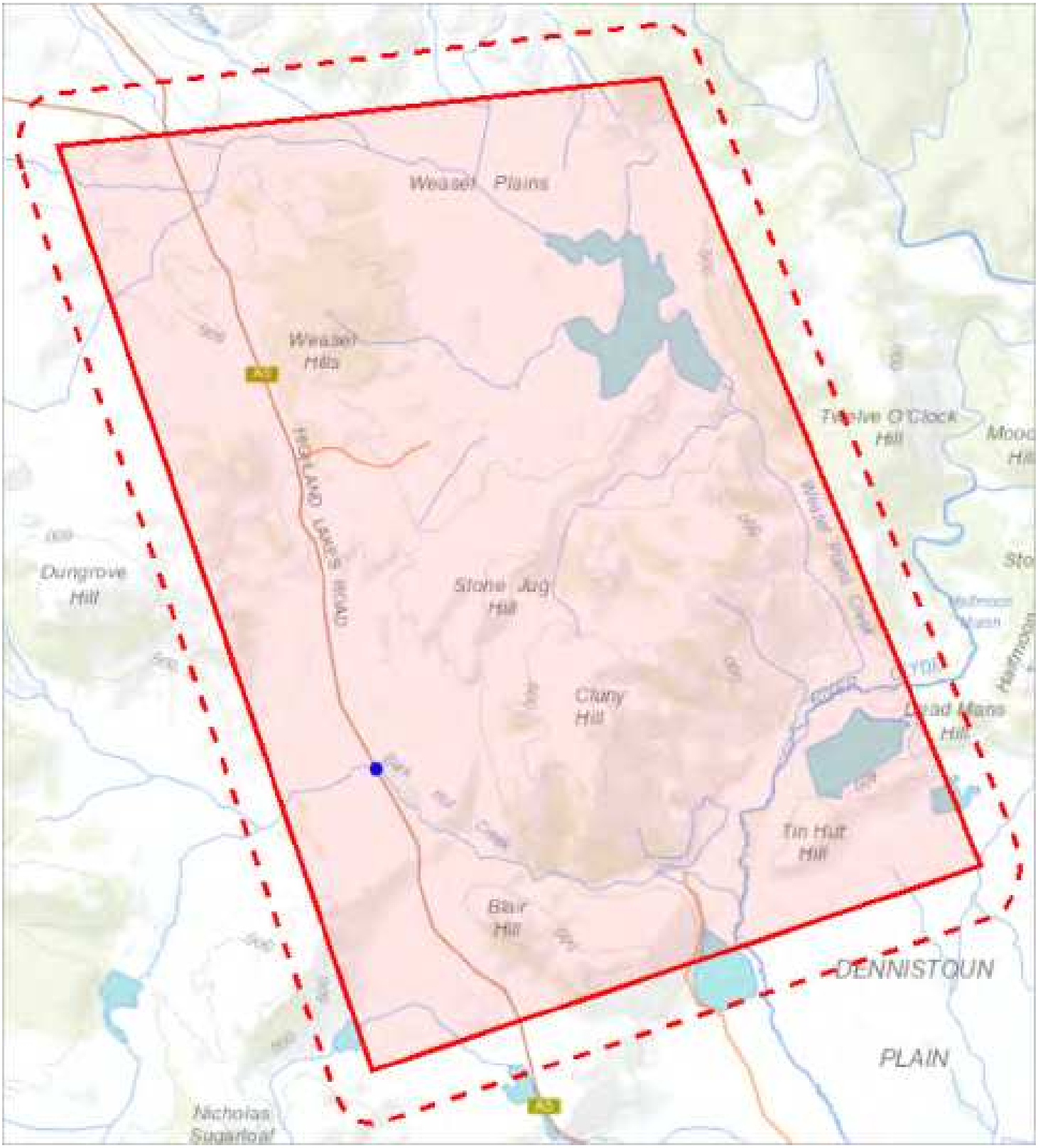
Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area:

https://www.nre.tas.gov.au/invasive-species/weeds

Priority Weeds within 500 m

503042, 5322318

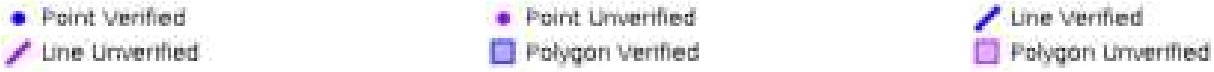


493338, 5311643

Please note that some layers may not display at all requested map scales

Priority Weeds within 500 m

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Priority Weeds within 500 m

Verified Records

Species	Common Name	Observation Count	Last Recorded
Verbascum thapsus	great mullein	1	11-Jan-2012

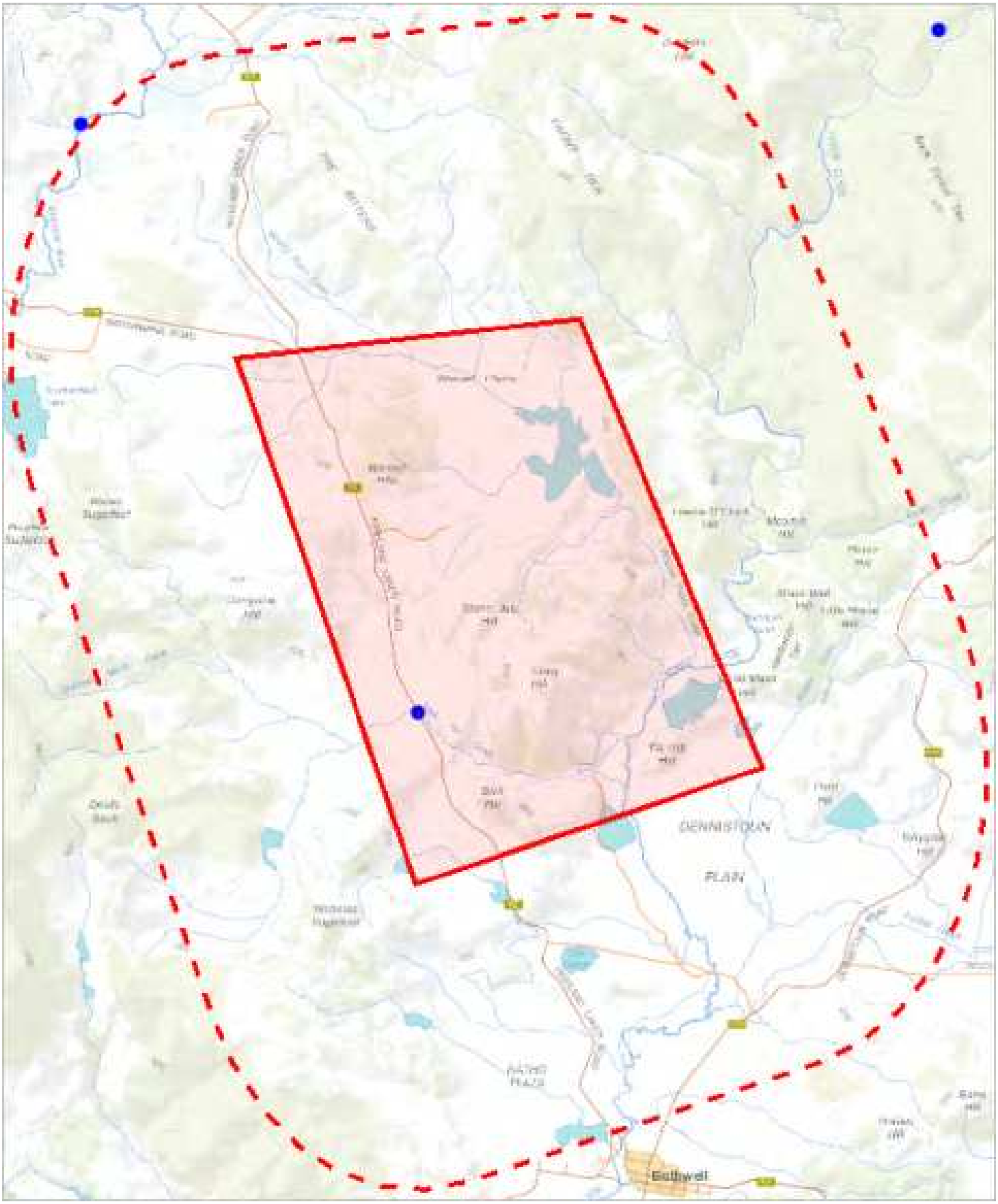
Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area:

https://www.nre.tas.gov.au/invasive-species/weeds

Priority Weeds within 5000 m

506373, 5326798

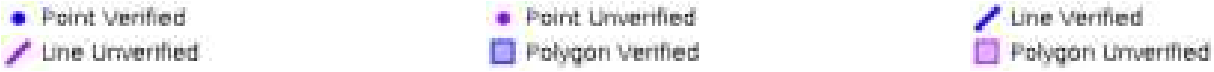


489994, 5307145

Please note that some layers may not display at all requested map scales

Priority Weeds within 5000 m

Legend: Verified and Unverified observations



Legend: Cadastral Parcels



Priority Weeds within 5000 m

Verified Records

Species	Common Name	Observation Count	Last Recorded
Verbascum thapsus	great mullein	2	11-Jan-2012

Unverified Records

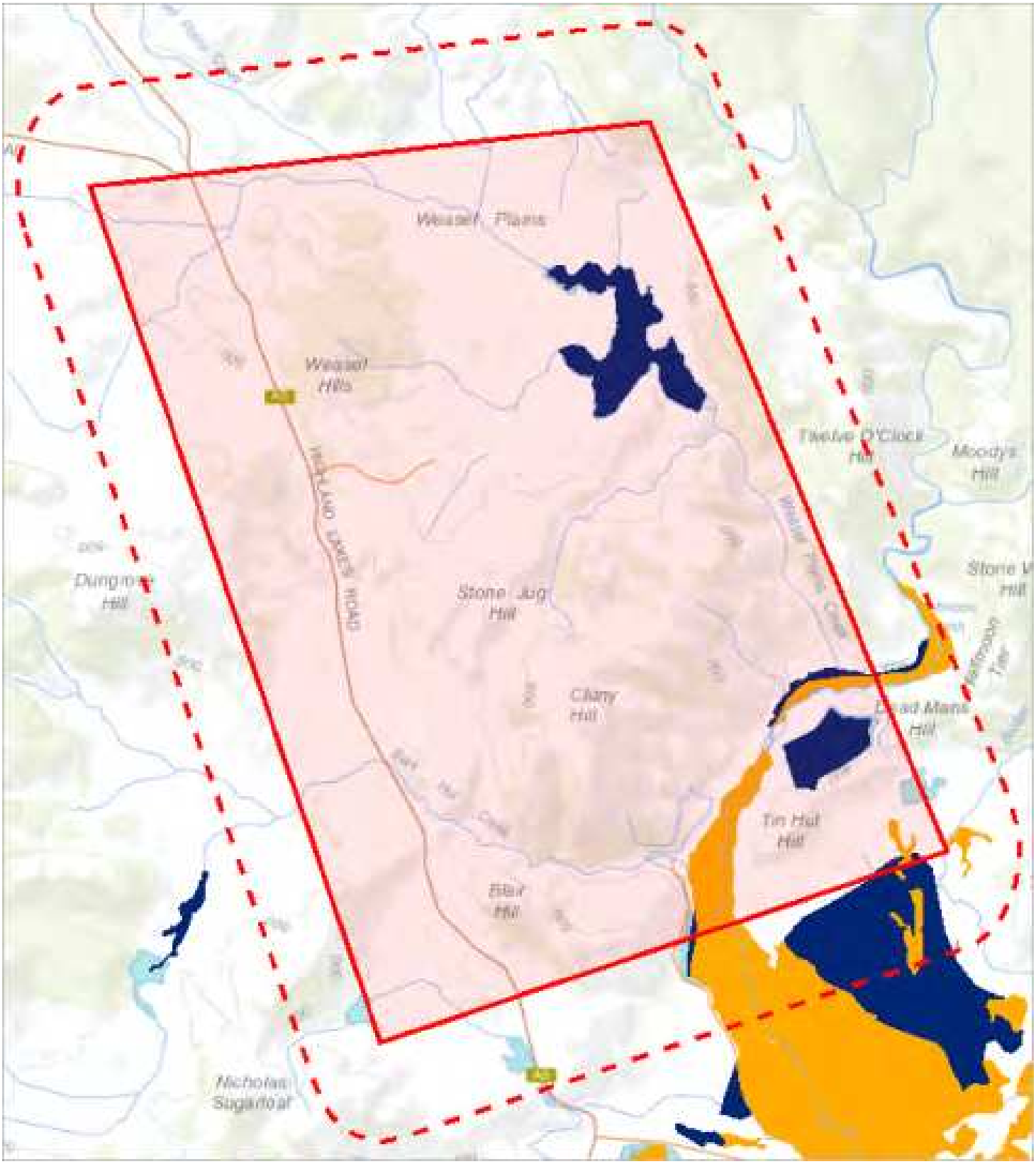
For more information about introduced weed species, please visit the following URL for contact details in your area:

https://www.nre.tas.gov.au/invasive-species/weeds

***** No Geoconservation sites found within 1000 metres. *****

Acid Sulfate Soils within 1000 metres

503412, 5322816



492967, 5311143

Please note that some layers may not display at all requested map scales

Acid Sulfate Soils within 1000 metres

Legend: Coastal Acid Sulfate Soils (0 - 20m AHD)

High | Low | Extremely Low

Legend: Inland Acid Sulfate Soils (>20m AHD)

High | Low | Extremely Low

Legend: Marine Subaqueous/Intertidal Acid Sulfate Soil

High (Intertidal) | High (Subtidal)

Legend: Cadastral Parcels

Acid Sulfate Soils within 1000 metres

Dataset Name	Acid Sulfate Soil Probability	Acid Sulfate Soil Atlas	Description
Inland Acid Sulfate Soils	Extremely Low	Cg(p4)	Extremely low probability of occurance (1-5% of mapping unit). with occurences in small areas. Floodplains >4m AHD, ASS generally below 3m from the surface.generally forests. Includes plains and levees. Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.
Inland Acid Sulfate Soils	Extremely Low	Ck(p4)	Extremely low probability of occurance (1-5% of mapping unit). with occurences in small areas. Subaqueous material in lakes, ASS material and/or MBO. Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.
Inland Acid Sulfate Soils	Extremely Low	Co(p4)	Extremely low probability of occurance (1-5% of mapping unit). with occurences in small areas. Vertosols, ASS generally within upper 1m in wet/riparian areas with Vertosols (Isbell 1996). Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.
Inland Acid Sulfate Soils	Low	Bg(p4)	Low probability of occurance (6-70% chance of occurrence in mapping unit). Floodplains >4m AHD, ASS generally below 3m from the surface.generally forests. Includes plains and levees. Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.
Inland Acid Sulfate Soils	Low	Bj(p4)	Low probability of occurance (6-70% chance of occurrence in mapping unit). Sandplains and dunes >10m AHD, ASS generally below 1m from the surface. Heath, forests. Mainly Pleistocene. Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.
Inland Acid Sulfate Soils	Low	Bm(p4)	Low probability of occurance (6-70% chance of occurrence in mapping unit). Hydrosols, ASS generally within upper 1m in wet/riparian areas with Hydrosols (Isbell 1996). Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.

For more information about Acid Sulfate Soils, please contact Land Management Enquiries.

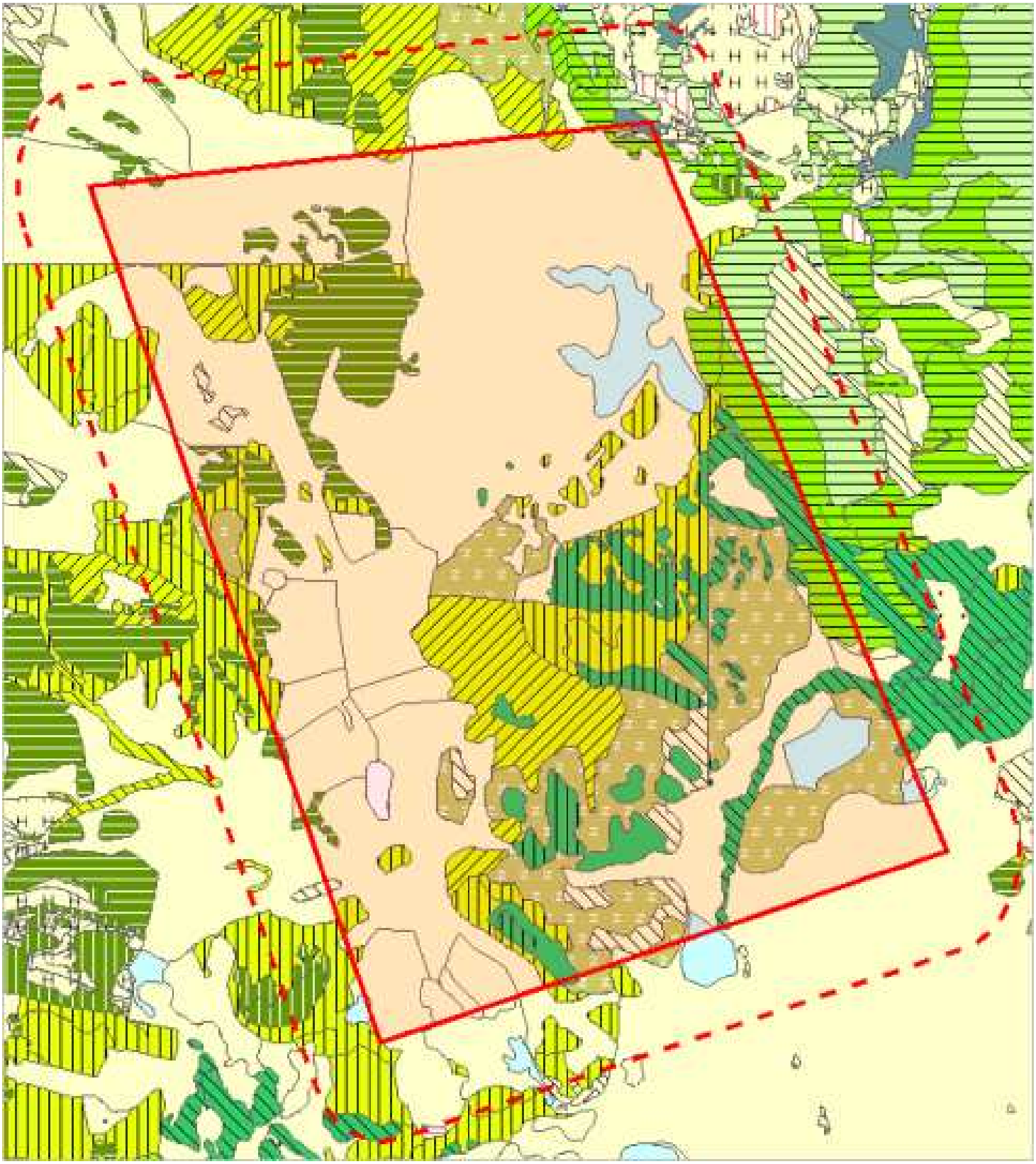
Telephone: (03) 6777 2227

Email: LandManagement.Enquiries@nre.tas.gov.au

Address: 171 Westbury Road, Prospect, Tasmania, Australia, 7250

TASVEG 4.0 Communities within 1000 metres

503412, 5322816



492967, 5311143

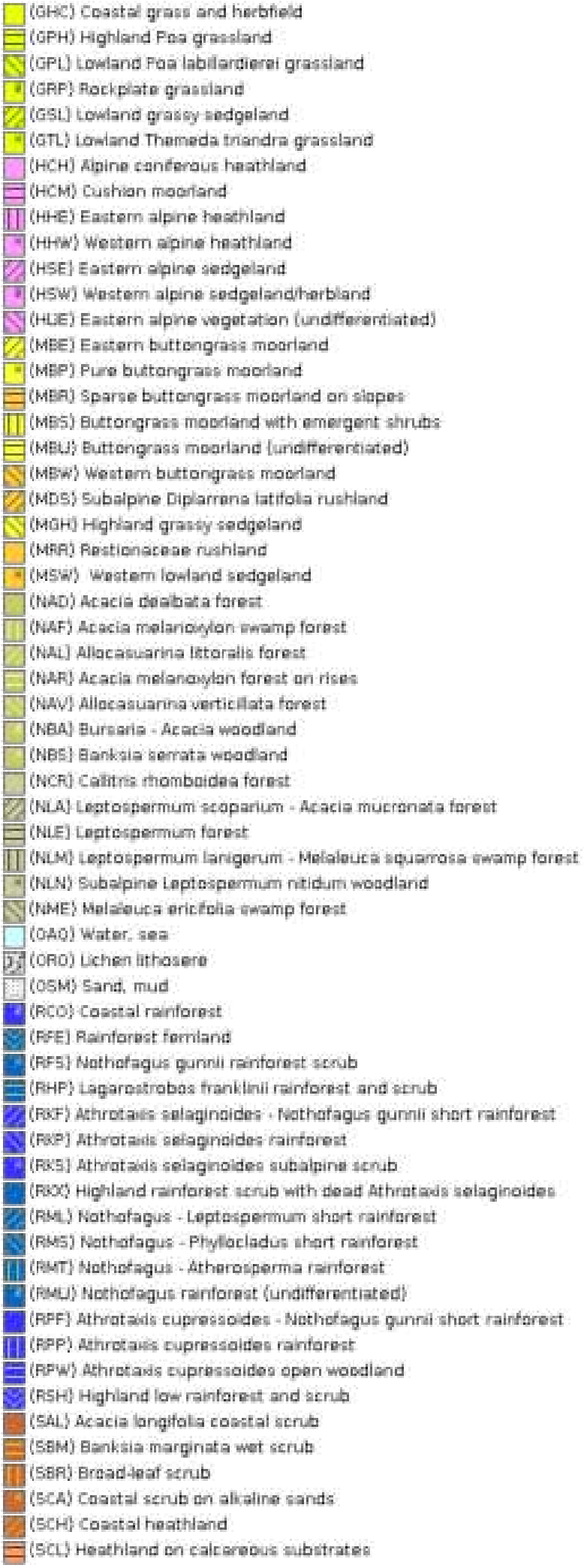
Please note that some layers may not display at all requested map scales

TASVEG 4.0 Communities within 1000 metres

Legend: TASVEG 4.0



TASVEG 4.0 Communities within 1000 metres





Legend: Cadastral Parcels



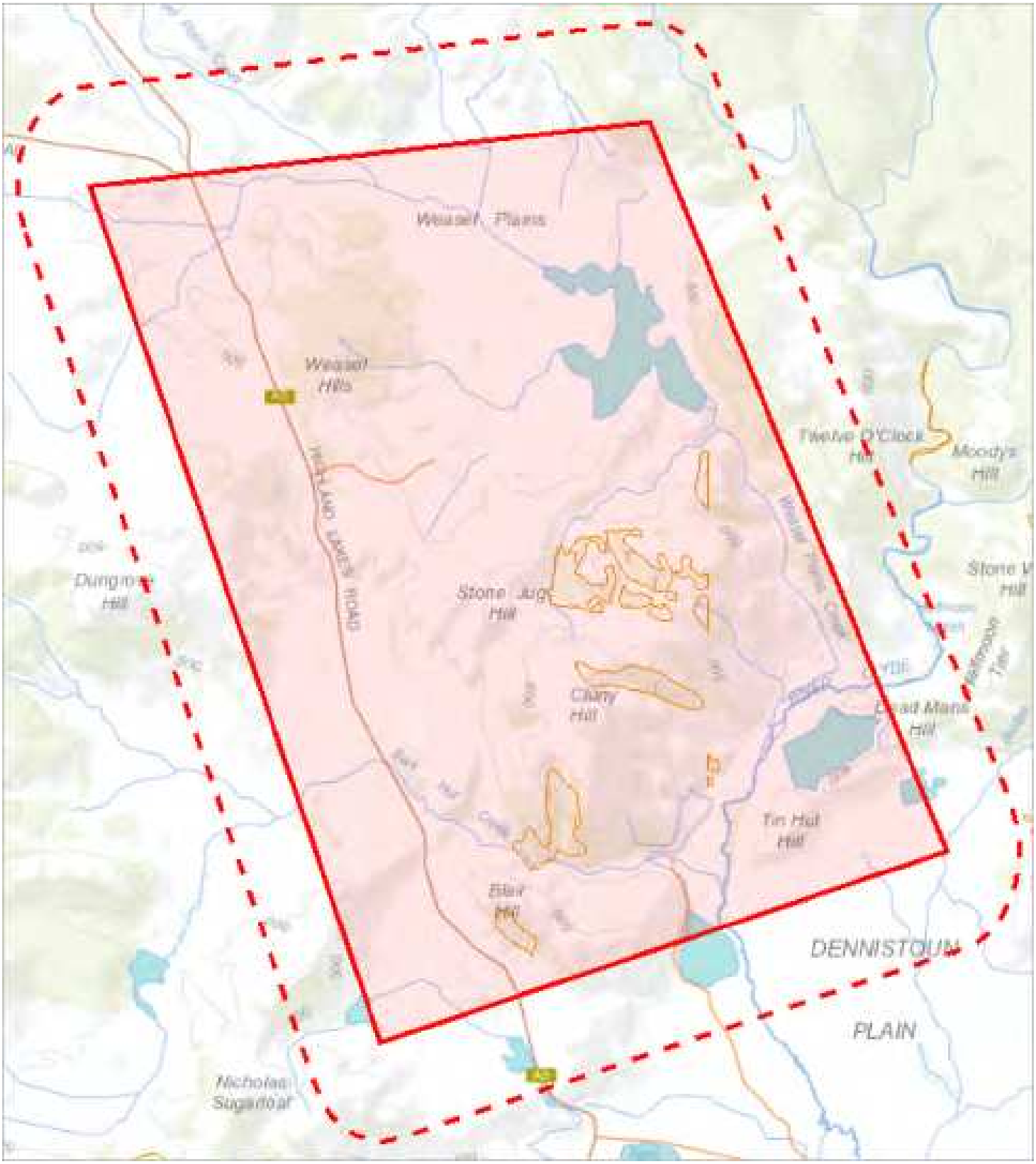
TASVEG 4.0 Communities within 1000 metres

Code	Community	Canopy Tree
DAD	(DAD) Eucalyptus amygdalina forest and woodland on dolerite	
DAM	(DAM) Eucalyptus amygdalina forest on mudstone	
DDE	(DDE) Eucalyptus delegatensis dry forest and woodland	
DPD	(DPD) Eucalyptus pauciflora forest and woodland on dolerite	
DPO	(DPO) Eucalyptus pauciflora forest and woodland not on dolerite	
DTD	(DTD) Eucalyptus tenuiramis forest and woodland on dolerite	
DTO	(DTO) Eucalyptus tenuiramis forest and woodland on sediments	
DVG	(DVG) Eucalyptus viminalis grassy forest and woodland	
FAC	(FAC) Improved pasture with native tree canopy	EV
FAG	(FAG) Agricultural land	ED
FAG	(FAG) Agricultural land	EP
FAG	(FAG) Agricultural land	ET
FAG	(FAG) Agricultural land	EV
FAG	(FAG) Agricultural land	
FPH	(FPH) Plantations for silviculture - hardwood	
FPU	(FPU) Unverified plantations for silviculture	
FRG	(FRG) Regenerating cleared land	EP
FRG	(FRG) Regenerating cleared land	
FUM	(FUM) Extra-urban miscellaneous	
FUR	(FUR) Urban areas	
FWU	(FWU) Weed infestation	
GCL	(GCL) Lowland grassland complex	EP
GCL	(GCL) Lowland grassland complex	ET
GCL	(GCL) Lowland grassland complex	EV
GCL	(GCL) Lowland grassland complex	
GPL	(GPL) Lowland Poa labillardierei grassland	
GSL	(GSL) Lowland grassy sedgeland	EP
GSL	(GSL) Lowland grassy sedgeland	
NBA	(NBA) Bursaria - Acacia woodland	
OAQ	(OAQ) Water, sea	
WDU	(WDU) Eucalyptus delegatensis wet forest (undifferentiated)	

For more information contact: Coordinator, Tasmanian Vegetation Monitoring and Mapping Program.
Telephone: (03) 6165 4320
Email: TVMMPSupport@nre.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened Communities (TNVC 2020) within 1000 metres

503412, 5322816



492967, 5311143

Please note that some layers may not display at all requested map scales

Threatened Communities (TNVC 2020) within 1000 metres

Legend: Threatened Communities

- 1 - Alkaline pans
- 2 - Allocasuarina littoralis forest
- 3 - Athrotaxis cupressoides/Nothofagus gunnii short rainforest
- 4 - Athrotaxis cupressoides open woodland
- 5 - Athrotaxis cupressoides rainforest
- 6 - Athrotaxis selaginoides/Nothofagus gunnii short rainforest
- 7 - Athrotaxis selaginoides rainforest
- 8 - Athrotaxis selaginoides subalpine scrub
- 9 - Banksia marginata wet scrub
- 10 - Banksia serrata woodland
- 11 - Callitris rhomboidea forest
- 13 - Cushion moorland
- 14 -Eucalyptus amygdalina forest and woodland on sandstone
- 15 - Eucalyptus amygdalina inland forest and woodland on cainozoic deposits
- 16 - Eucalyptus brookeriana wet forest
- 17 - Eucalyptus globulus dry forest and woodland
- 18 - Eucalyptus globulus King Island forest
- 19 - Eucalyptus morrisbyi forest and woodland
- 20 - Eucalyptus ovata forest and woodland
- 21 - Eucalyptus risdonii forest and woodland
- 22 - Eucalyptus tenuiramis forest and woodland on sediments
- 23 - Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland
- 24 - Eucalyptus viminalis Fumeaux forest and woodland
- 25 - Eucalyptus viminalis wet forest
- 26 - Heathland on calcareous substrates
- 27 - Heathland scrub complex at Wingaroo
- 28 - Highland grassy sedgeland
- 29 - Highland Poa grassland
- 30 - Melaleuca ericifolia swamp forest
- 31 - Melaleuca pustulata scrub
- 32 - Notelaea - Pomaderris - Beyeria forest
- 33 - Rainforest fernland
- 34 - Riparian scrub
- 35 - Seabird rookery complex
- 36 - Sphagnum peatland
- 36A - Spray zone coastal complex
- 37 - Subalpine Diplarrena latifolia rushland
- 38 - Subalpine Leptospermum nitidum woodland
- 39 - Wetlands

Legend: Cadastral Parcels

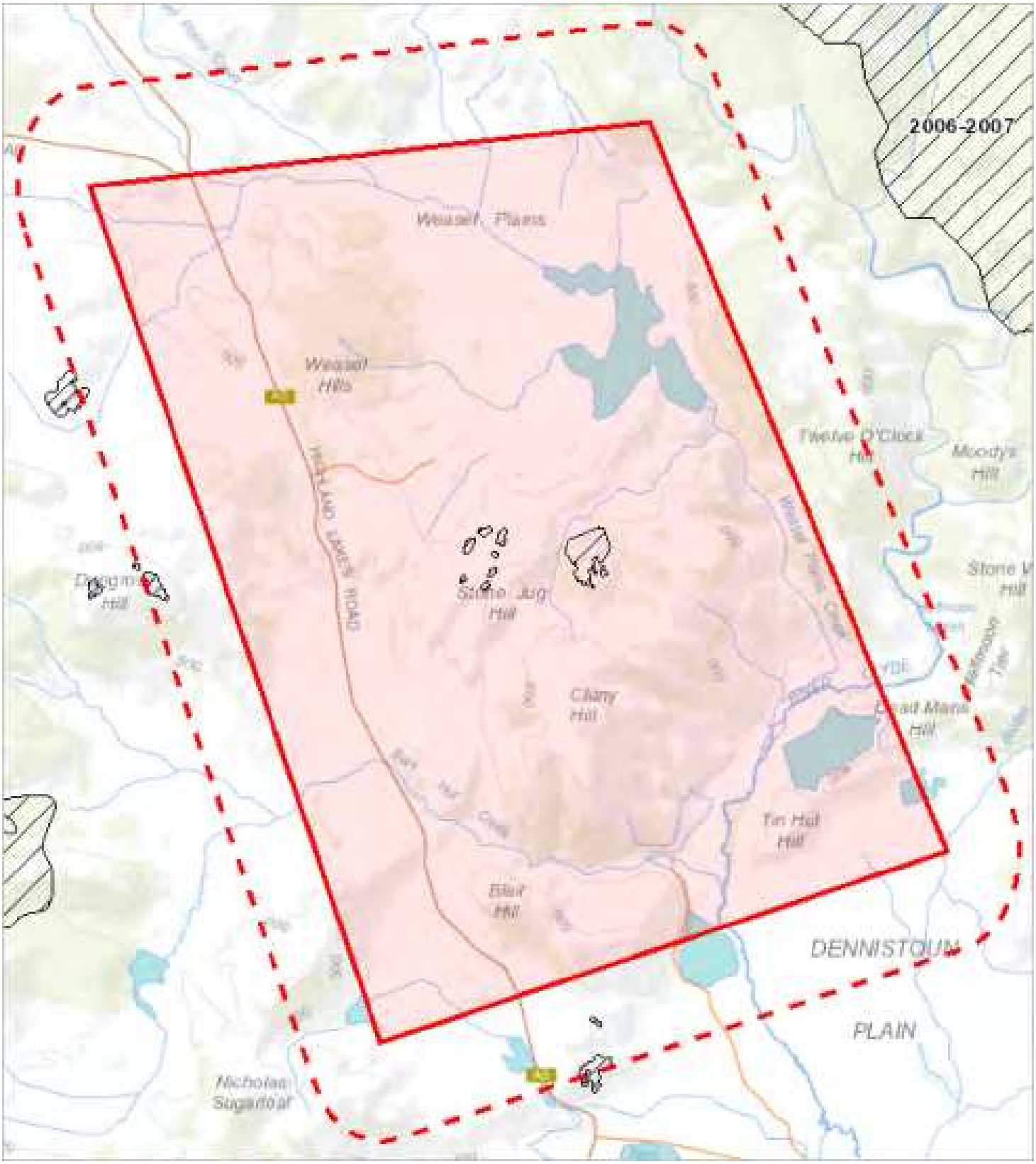
Threatened Communities (TNVC 2020) within 1000 metres

Scheduled Community Id	Scheduled Community Name
22	Eucalyptus tenuiramis forest and woodland on sediments

For more information contact: Coordinator, Tasmanian Vegetation Monitoring and Mapping Program.
Telephone: (03) 6165 4320
Email: TVMMPSupport@nre.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Fire History (All) within 1000 metres

503412, 5322816



492967, 5311143

Please note that some layers may not display at all requested map scales

Fire History (All) within 1000 metres

Legend: Fire History All



Legend: Cadastral Parcels



Fire History (All) within 1000 metres

Incident Number	Fire Name	Ignition Date	Fire Type	Ignition Cause	Fire Area (HA)
23004029	Highland Lakes Road	27-Jan-2023	Bushfire	Undetermined	15.4942539
		17-Oct-2017	Unknown	Undetermined	6.23536263
		16-Aug-2019	Unknown	Undetermined	4.97445069
		18-Aug-2019	Unknown	Undetermined	5.74739125
		22-Oct-2019	Unknown	Undetermined	10.90462122

For more information about Fire History, please contact the Manager Community Protection Planning, Tasmania Fire Service.

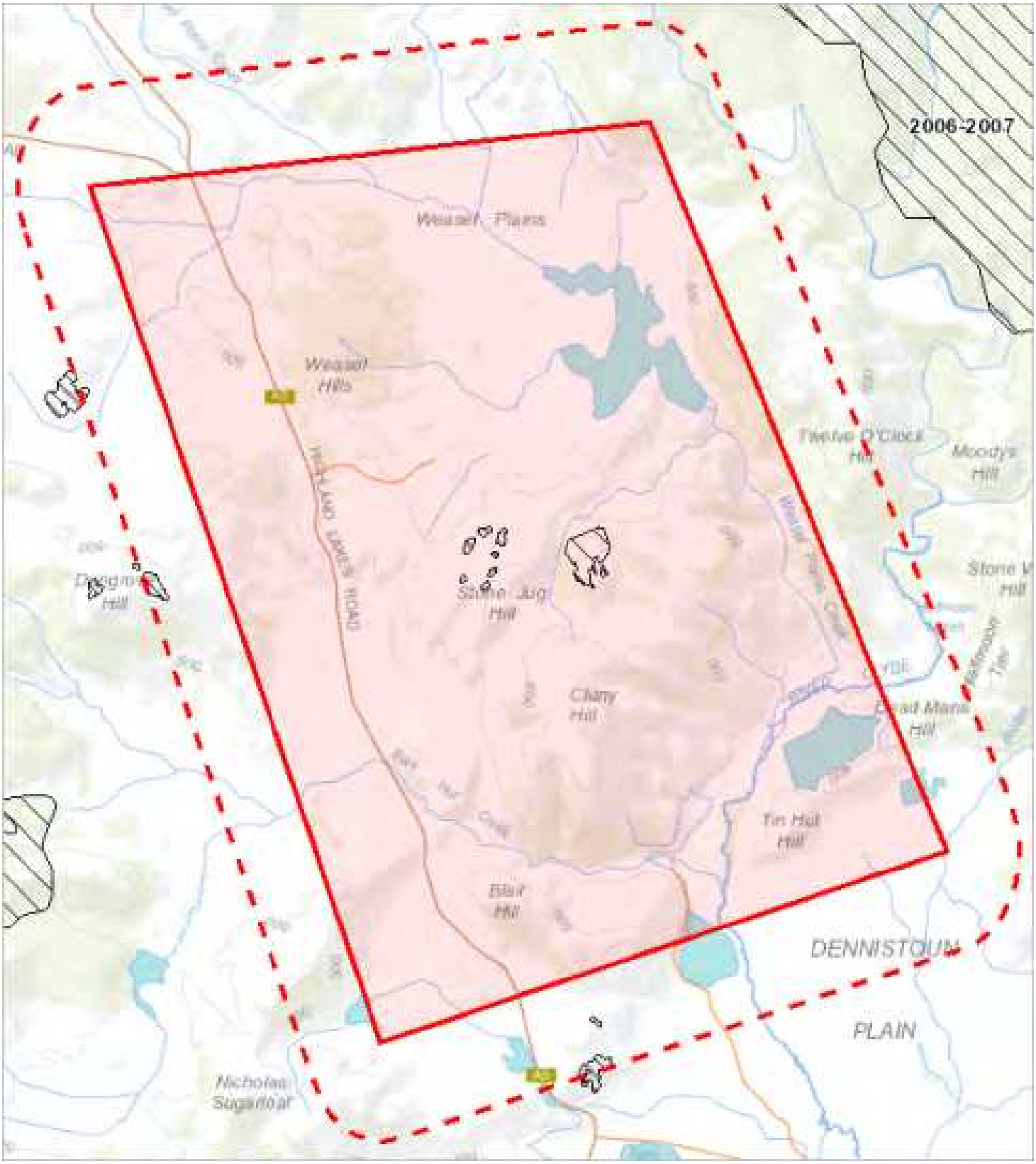
Telephone: 1800 000 699

Email: planning@fire.tas.gov.au

Address: cnr Argyle and Melville Streets, Hobart, Tasmania, Australia, 7000

Fire History (Last Burnt) within 1000 metres

503412, 5322816



492967, 5311143

Please note that some layers may not display at all requested map scales

Fire History (Last Burnt) within 1000 metres

Legend: Fire History Last

Bushfire-Unknown category

Bushfire

Completed Planned Burn

Legend: Cadastral Parcels

Fire History (Last Burnt) within 1000 metres

Incident Number	Fire Name	Ignition Date	Fire Type	Ignition Cause	Fire Area (HA)
23004029	Highland Lakes Road	27-Jan-2023	Bushfire	Undetermined	15.4942539
		17-Oct-2017	Unknown	Undetermined	6.23536263
		16-Aug-2019	Unknown	Undetermined	4.97445069
		18-Aug-2019	Unknown	Undetermined	5.74739125
		22-Oct-2019	Unknown	Undetermined	10.90462122

For more information about Fire History, please contact the Manager Community Protection Planning, Tasmania Fire Service.

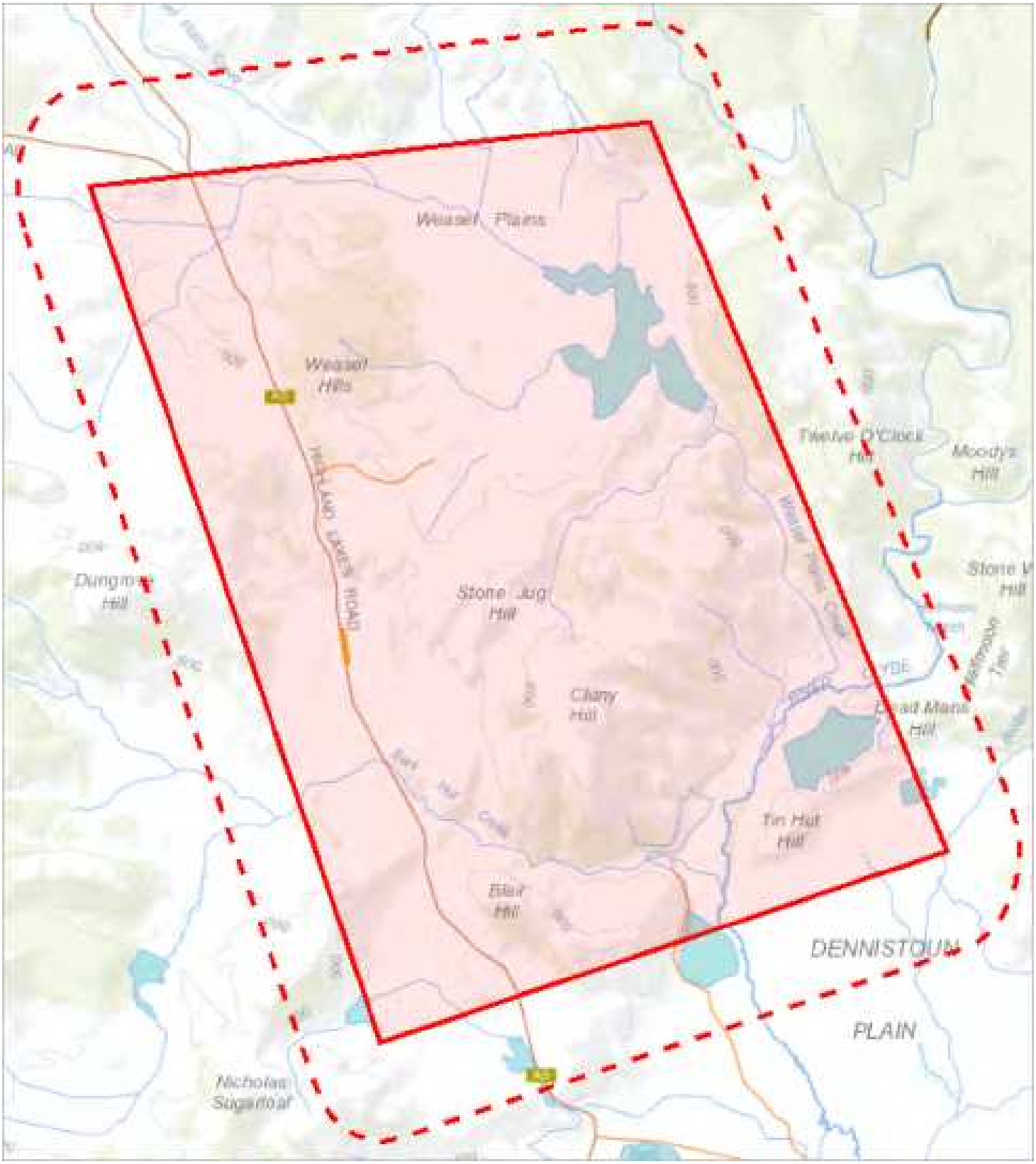
Telephone: 1800 000 699

Email: planning@fire.tas.gov.au

Address: cnr Argyle and Melville Streets, Hobart, Tasmania, Australia, 7000

Reserves within 1000 metres

503412, 5322816



492967, 5311143

Please note that some layers may not display at all requested map scales

Reserves within 1000 metres

Legend: Tasmanian Reserve Estate

- Conservation Area
- Conservation Area and Conservation Covenant (NCA)
- Game Reserve
- Historic Site
- Indigenous Protected Area
- National Park
- Nature Reserve
- Nature Recreation Area
- Regional Reserve
- State Reserve
- Wellington Park
- Public authority land within WHA
- Future Potential Production Forest
- Informal Reserve on Permanent Timber Production Zone Land or STT managed land
- Informal Reserve on other public land
- Roadside Conservation Site
- Conservation Covenant (NCA)
- Private Nature Reserve and Conservation Covenant (NCA)
- Private Sanctuary and Conservation Covenant (NCA)
- Private Sanctuary
- Private land within WHA
- Management Agreement
- Stewardship Agreement
- Part 5 Agreement (Meander Dam Offset)
- Other Private Reserve

Legend: Cadastral Parcels

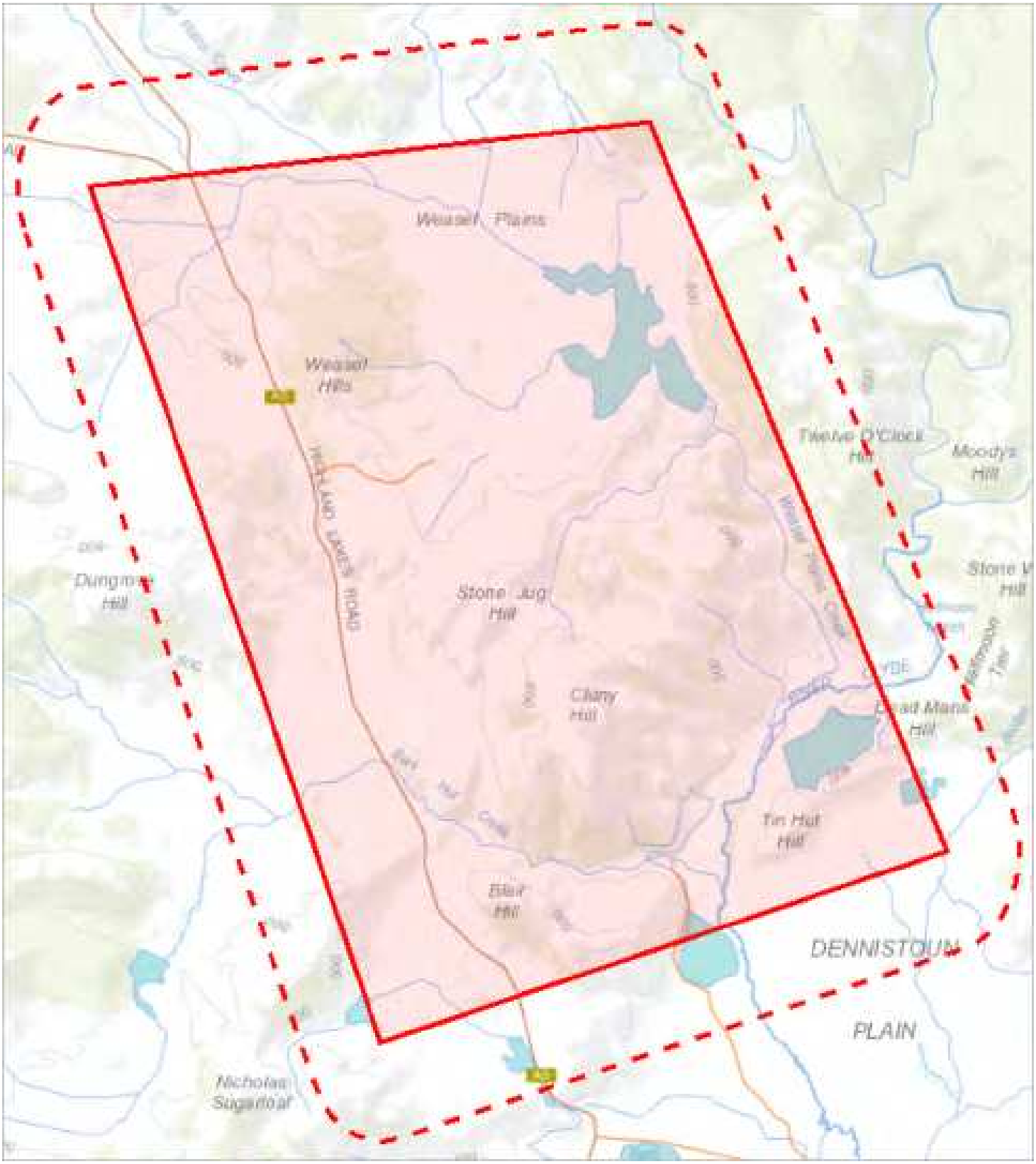
Reserves within 1000 metres

Name	Classification	Status	Area (HA)
	Informal Reserve on other public land	Informal Reserve	1.87160751

For more information about the Tasmanian Reserve Estate, please contact the Natural Values Science Services Branch.
Email: LandManagement.Enquiries@nre.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Known biosecurity risks within 1000 meters

503412, 5322816



492967, 5311143

Please note that some layers may not display at all requested map scales

Known biosecurity risks within 1000 meters

Legend: Biosecurity Risk Species

Point Verified
Point Unverified
Line Verified
Line Unverified
Polygon Verified
Polygon Unverified

Legend: Hygiene infrastructure

Location Point Verified
Location Point Unverified
Location Line Verified
Location Line Unverified
Location Polygon Verified
Location Polygon Unverified

Legend: Cadastral Parcels

Known biosecurity risks within 1000 meters

Verified Species of biosecurity risk

No verified species of biosecurity risk found within 1000 metres

Unverified Species of biosecurity risk

No unverified species of biosecurity risk found within 1000 metres

Generic Biosecurity Guidelines

The level and type of hygiene protocols required will vary depending on the tenure, activity and land use of the area. In all cases adhere to the land manager's biosecurity (hygiene) protocols. As a minimum always Check / Clean / Dry (Disinfect) clothing and equipment before trips and between sites within a trip as needed https://www.nre.tas.gov.au/invasive-species/weeds/weed-hygiene/keeping-it-clean-a-tasmanian-field-hygiene-manual

On Reserved land, the more remote, infrequently visited and undisturbed areas require tighter biosecurity measures.

In addition, where susceptible species and communities are known to occur, tighter biosecurity measures are required.

Apply controls relevant to the area / activity:

- Don't access sites infested with pathogen or weed species unless absolutely necessary. If it is necessary to visit, adopt high level hygiene protocols.
- Consider not accessing non-infested sites containing known susceptible species / communities. If it is necessary to visit, adopt high level hygiene protocols.
- Don't undertake activities that might spread pest / pathogen / weed species such as deliberately moving soil or water between areas.
- Modify / restrict activities to reduce the chance of spreading pest / pathogen / weed species e.g. avoid periods when weeds are seeding, avoid clothing/equipment that excessively collects soil and plant material e.g. Velcro, excessive tread on boots.
- Plan routes to visit clean (uninfested) sites prior to dirty (infested) sites. Do not travel through infested areas when moving between sites.
- Minimise the movement of soil, water, plant material and hitchhiking wildlife between areas by using the Check / Clean / Dry (Disinfect when drying is not possible) procedure for all clothing, footwear, equipment, hand tools and vehicles https://www.nre.tas.gov.au/invasive-species/weeds/weed-hygiene
- Neoprene and netting can take 48 hours to dry, use non-porous gear wherever possible.
- Use walking track boot wash stations where available.
- Keep a hygiene kit in the vehicle that includes a scrubbing brush, boot pick, and disinfectant https://www.nre.tas.gov.au/invasive-species/weeds/weed-hygiene/keeping-it-clean-a-tasmanian-field-hygiene-manual
- Dispose of all freshwater away from natural water bodies e.g. do not empty water into streams or ponds.
- Dispose of used disinfectant ideally in town though a treatment or septic system. Always keep disinfectant well away from natural water systems.
- Securely contain any high risk pest / pathogen / weed species that must be collected and moved e.g. biological samples.

Hygiene Infrastructure

No known hygiene infrastructure found within 1000 metres

ATTACHMENT 2. PROTECTED MATTERS SEARCH TOOL (PMST) REPORT (EPBC)

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 06-Jun-2024

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	32
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	14
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	3
Regional Forest Agreements:	1
Nationally Important Wetlands:	None
EPBC Act Referrals:	3
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Alpine Sphagnum Bogs and Associated Fens	Endangered	Community likely to occur within area	In feature area
Lowland Native Grasslands of Tasmania	Critically Endangered	Community likely to occur within area	In feature area
Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana)	Critically Endangered	Community may occur within area	In feature area
Tasmanian white gum (Eucalyptus viminalis) wet forest	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Aquila audax fleayi Tasmanian Wedge-tailed Eagle, Wedge-tailed Eagle (Tasmanian) [64435]	Endangered	Breeding likely to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Ceyx azureus diemenensis Tasmanian Azure Kingfisher [25977]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago hardwickii			
Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus			
White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area	In feature area
Lathamus discolor			
Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area	In feature area
Neophema chrysostoma			
Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pterodroma leucoptera leucoptera			
Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area	In feature area
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In feature area
Tyto novaehollandiae castanops (Tasmanian population)			
Masked Owl (Tasmanian) [67051]	Vulnerable	Species or species habitat known to occur within area	In feature area
FISH			
Prototroctes maraena			
Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area	In buffer area only
FROG			
Litoria raniformis			
Southern Bell Frog,, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat may occur within area	In feature area
INSECT			
Oreixenica ptunarra			
Ptunarra Brown, Ptunarra Brown Butterfly, Ptunarra Xenica [26327]	Endangered	Species or species habitat known to occur within area	In feature area
MAMMAL			

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Dasyurus maculatus maculatus (Tasmanian population)](#)			
Spotted-tail Quoll, Spot-tailed Quoll, Tiger Quoll (Tasmanian population) [75183]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Dasyurus viverrinus](#)			
Eastern Quoll, Luaner [333]	Endangered	Species or species habitat likely to occur within area	In feature area
[Perameles gunnii gunnii](#)			
Eastern Barred Bandicoot (Tasmania) [66651]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Sarcophilus harrisii](#)			
Tasmanian Devil [299]	Endangered	Species or species habitat likely to occur within area	In feature area
PLANT			
[Acacia axillaris](#)			
Midlands Mimosa, Midlands Wattle [13563]	Vulnerable	Species or species habitat may occur within area	In feature area
[Barbarea australis](#)			
Native Wintercress, Riverbed Wintercress [12540]	Endangered	Species or species habitat known to occur within area	In feature area
[Caladenia anthracina](#)			
Black-tipped Spider-orchid [64855]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Colobanthus curtisiae](#)			
Curtis' Colobanth [23961]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Dianella amoena](#)			
Matted Flax-lily [64886]	Endangered	Species or species habitat likely to occur within area	In feature area
[Glycine latrobeana](#)			
Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Lepidium hyssopifolium](#)			
Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Leucochrysum albicans subsp. tricolor Hoary Sunray, Grassland Paper-daisy [89104]	Endangered	Species or species habitat likely to occur within area	In feature area
Pseudocephalozia paludicola Alpine Leafy Liverwort [66441]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pterostylis commutata Midland Greenhood [64535]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pterostylis pratensis Liawenee Greenhood [66896]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pterostylis ziegeleri Grassland Greenhood, Cape Portland Greenhood [64971]	Vulnerable	Species or species habitat may occur within area	In feature area
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat likely to occur within area	In feature area
REPTILE			
Carinascincus microlepidotus Boulder Cool-skink, Southern Snow Skink [90207]	Endangered	Species or species habitat may occur within area	In buffer area only

Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area
Migratory Wetlands Species			

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
[Bubulcus ibis as Ardea ibis](#) Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
[Lathamus discolor](#) Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
[Neophema chrysostoma](#) Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area
[Sterna striata](#) White-fronted Tern [799]		Migration route may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State	Buffer Status
Good Marsh	Conservation Area	TAS	In buffer area only
Soldiers Marsh #3	Conservation Covenant	TAS	In buffer area only
Southernfield	Conservation Covenant	TAS	In buffer area only

Regional Forest Agreements [Resource Information]

Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State	Buffer Status
Tasmania RFA	Tasmania	In feature area

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
2-D seismic data survey	2001/135	Not Controlled Action	Completed	In feature area
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Southern Highlands Irrigation Scheme (SHIS), Tasmania	2015/7491	Not Controlled Action	Completed	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

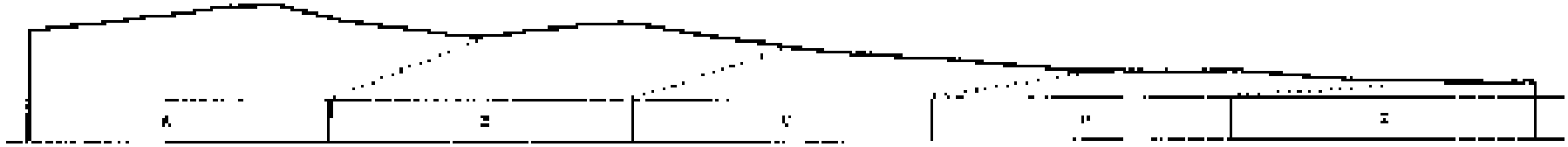
-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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ATTACHMENT 3. LAND SYSTEM INFORMATION - HERMITAGE



COMPONENT	A	B	C	D	E
PROPORTION (%)	30	20	20	20	10
RAINFALL (mm)	Approximate Annual Rainfall: 500-625				
GEOLOGY	Permian Mudstone, Siltstone, Sandstone				
TOPOGRAPHY	Hills				
Position	Mudstone Crests	Sandstone Crests	Upper Slopes	Lower Slopes/Flats	Drainage Flats
Typical Slope(°)	15	8	10	5	2
NATIVE VEGETATION Structure	Woodland	Woodland	Woodland	Woodland	
Floristic Association (See Appendix 1 for common names)	Eucalyptus pauciflora Eucalyptus rubida Eucalyptus amygdalina Eucalyptus viminalis Lomandra longifolia Bossiaea riparia Danthonia sp. Deyeuxia sp. Wahlenbergia sp. Viola betonicifolia Scleranthus biflorus	Eucalyptus pauciflora Eucalyptus rubida Lomandra longifolia Epacris impressa Leucopogon virgatus Pteridium esculentum	Eucalyptus pauciflora Eucalyptus amygdalina Lomandra longifolia Pteridium esculentum	Eucalyptus pauciflora Eucalyptus viminalis Acacia dealbata Pteridium esculentum Banksia marginata Lomandra longifolia	Lomandra longifolia Juncus sp.
SOIL Surface(A)Texture	Fine Sandy Loam	Sand	Gravelly Sandy Clay Loam	Loamy Sand or Clay Loam	Light Clay/Silty Clay
B Horizon(subsoil) Colour (moist) Texture and primary profile form	Shallow stony fine sandy loam - very dark brown (10 YR 2/2) over dark yellowish brown (10 YR 4/4) on bedrock. Uniform.	Shallow sand - very dark greyish brown (10 YR 3/2) over dark greyish brown (10 YR 4/2) on bedrock. Uniform.	Shallow gravelly sandy clay loam - very dark brown (10 YR 2/2) over dark yellowish brown (10 YR 4/4) on bedrock. Uniform.	Deep medium clay - brownish yellow (10YR 6/8) with light yellowish brown (10 YR 6/4) mottle at depth. Duplex.	Deep heavy clay - colours variable - black (2.5 Y 2/0) to brownish yellow (10 YR 6/6) to grey (10 YR 5/1) with strong brown (7.5 YR 5/8) mottle. Gradational.
Permeability	High	High	High	Moderate	Low
Typical depth (m)	0.40	0.40	0.50	>1.40	0.70
LAND USE	Grazing				
HAZARDS	Moderate/High Sheet, Rill, Gully Erosion				Flooding, Waterlogging

HERMITAGE

This land system is located on the Lake Highway north-west of Bothwell and consists of hills and flats formed on interbedded sequences of mudstone, siltstone and sandstone predominantly from the Lower Parmeener Supergroup. It has been extrapolated to include various outlying areas such as around Osterley and along the Ouse River.

Mudstone crests contain a shallow (0.40 m) uniform, stony fine sandy loam developed on bedrock. This supports a woodland dominated by *Eucalyptus pauciflora, Eucalyptus rubida. Eucalyptus viminalis* and *Eucalyptus amygdalina* over an understorey of *Lomandra longifolia, Bossiaea riparia, Danthonia sp., Deyeuxia sp., Wahlenbergia sp., Viola betonicifolia* and *Scleranthus biflorus.*

Sandstone crests contain a shallow (0.40 m) uniform, very dark greyish brown to greyish brown sand developed on bedrock. This supports a woodland dominated by *Eucalyptus pauciflora* and *Eucalyptus rubida* over an understorey of *Lomandra longifolia, Epacris impressa, Leucopogon virgatus* and *Pteridium esculentum.*

Upper slopes contain a shallow (0.50 m) gravelly, uniform sandy clay loam developed on bedrock. This supports a woodland dominated by *Eucalyptus pauciflora* and *Eucalyptus amygdalina* over an understorey of *Lomandra longifolia* and *Pteridium esculentum.*

Lower slopes and flats contain a deep (>1.40 m) duplex soil consisting of a loamy sand to clay loam surface over a brownish yellow clay with a light yellowish brown mottle. This supports a woodland dominated by *Eucalyptus pauciflora* and *Eucalyptus viminalis* over an understorey of Lomandra longifolia, Acacia dealbata, Pteridium esculentum, and *Banksia marginata.* Drainage flats contain a deep (0.70 m) gradational soil consisting of a light clay to silty clay surface over a heavy clay.

Grazing is the principal land use. The soils are particularly prone to erosion. Sheet and rill erosion problems commonly occur on the crests and slopes whilst gully erosion, flooding and waterlogging hazards are associated with the flats. It is closely related to the Ashton Hills (278131) and Huntingdon Tier (278141) Land Systems.

ATTACHMENT 4. FLORA SPECIES LIST (OBSERVED) FOR THE STUDY AREA

INTRO	ENDEMIC	FAMCLASS	FAMILY	FULLNAME
i		**Eudicots**	**Amaranthaceae**	**Chenopodium murale L.**
		Eudicots	**Amaranthaceae**	**Einadia nutans (R.Br.) A.J.Scott subsp. nutans**
		Eudicots	**Amaranthaceae**	**Ptilotus spathulatus (R.Br.) Poir.**
		Eudicots	**Apiaceae**	**Daucus glochidiatus (Labill.) Fisch., C.A.Mey. & Avé-Lall.**
		Eudicots	**Apiaceae**	**Eryngium vesiculosum Labill.**
		Eudicots	**Araliaceae**	**Hydrocotyle hirta R.Br. ex A.Rich.**
i		**Eudicots**	**Asteraceae**	**Achillea millefolium L.**
i		**Eudicots**	**Asteraceae**	**Arctotheca calendula (L.) K.Lewin**
i		**Eudicots**	**Asteraceae**	**Carduus pycnocephalus L.**
i		**Eudicots**	**Asteraceae**	**Carduus tenuiflorus Curtis**
		Eudicots	**Asteraceae**	**Cassinia aculeata (Labill.) R.Br. subsp. aculeata**
		Eudicots	**Asteraceae**	**Centipeda elatinoides (Less.) Benth. & Hook.f. ex O.Hoffm.**
		Eudicots	**Asteraceae**	**Chrysocephalum apiculatum (Labill.) Steetz subsp. apiculatum**
		Eudicots	**Asteraceae**	**Chrysocephalum semipapposum (Labill.) Steetz subsp. semipapposum**
i		**Eudicots**	**Asteraceae**	**Cirsium arvense (L.) Scop. var. arvense**
i		**Eudicots**	**Asteraceae**	**Cirsium vulgare (Savi) Ten.**
		Eudicots	**Asteraceae**	**Coronidium scorpioides (Labill.) Paul G.Wilson**
i		**Eudicots**	**Asteraceae**	**Hypochaeris glabra L.**
i		**Eudicots**	**Asteraceae**	**Hypochaeris radicata L.**
		Eudicots	**Asteraceae**	**Lagenophora stipitata (Labill.) Druce**
i		**Eudicots**	**Asteraceae**	**Leontodon rhagadioloides (L.) Enke & Zidorn**
i		**Eudicots**	**Asteraceae**	**Leontodon saxatilis Lam.**
		Eudicots	**Asteraceae**	**Leptorhynchos squamatus (Labill.) Less. subsp. squamatus**
		Eudicots	**Asteraceae**	**Olearia ramulosa (Labill.) Benth.**
		Eudicots	**Asteraceae**	**Senecio hispidulus A.Rich.**
		Eudicots	**Asteraceae**	**Senecio quadridentatus Labill.**
i		**Eudicots**	**Asteraceae**	**Silybum marianum (L.) Gaertn.**
i		**Eudicots**	**Asteraceae**	**Sonchus oleraceus L.**
i		**Eudicots**	**Asteraceae**	**Taraxacum officinale F.H.Wigg.**

i	Eudicots	Brassicaceae	Capsella bursa-pastoris (L.) Medik.
	Eudicots	Campanulaceae	Wahlenbergia gracilis (G.Forst.) A.DC.
	Eudicots	Campanulaceae	Wahlenbergia multicaulis Benth.
i	Eudicots	Caryophyllaceae	Cerastium glomeratum Thuill.
i	Eudicots	Caryophyllaceae	Petrorhagia nanteuilii (Burnat) P.W.Ball & Heywood
	Eudicots	Caryophyllaceae	Scleranthus biflorus (J.R.Forst. & G.Forst.) Hook.f.
	Eudicots	Caryophyllaceae	Scleranthus fasciculatus (R.Br.) Hook.f.
	Eudicots	Casuarinaceae	Allocasuarina littoralis (Salisb.) L.A.S.Johnson
	Eudicots	Celastraceae	Stackhousia monogyna Labill.
	Eudicots	Convolvulaceae	Convolvulus angustissimus R.Br. subsp. angustissimus
	Eudicots	Convolvulaceae	Dichondra repens J.R.Forst. & G.Forst.
	Eudicots	Crassulaceae	Crassula sieberiana (Schult. & Schult.f.) Druce
	Eudicots	Dilleniaceae	Hibbertia procumbens (Labill.) DC.
	Eudicots	Dilleniaceae	Hibbertia riparia (R.Br. ex DC.) Hoogland
i	Eudicots	Dipsacaceae	Dipsacus fullonum L.
	Eudicots	Ericaceae	Acrotriche serrulata (Labill.) R.Br.
	Eudicots	Ericaceae	Epacris impressa Labill.
	Eudicots	Ericaceae	Leucopogon virgatus var. brevifolius Benth.
	Eudicots	Ericaceae	Lissanthe strigosa subsp. subulata (R.Br.) J.M.Powell
	Eudicots	Ericaceae	Styphelia adscendens R.Br.
i	Eudicots	Euphorbiaceae	Euphorbia peplus L.
	Eudicots	Fabaceae	Acacia dealbata Link subsp. dealbata
	Eudicots	Fabaceae	Acacia genistifolia Link
	Eudicots	Fabaceae	Acacia mearnsii De Wild.
	Eudicots	Fabaceae	Acacia melanoxylon R.Br.
	Eudicots	Fabaceae	Aotus ericoides (Vent.) G.Don
	Eudicots	Fabaceae	Bossiaea prostrata R.Br.
	Eudicots	Fabaceae	Bossiaea riparia A.Cunn. ex Benth.
	Eudicots	Fabaceae	Daviesia latifolia R.Br.
	Eudicots	Fabaceae	Daviesia ulicifolia Andrews subsp. ulicifolia

i		Eudicots	Fabaceae	Medicago sp
i		Eudicots	Fabaceae	Melilotus spp.
		Eudicots	Fabaceae	Oxylobium ellipticum (Vent.) R.Br.
		Eudicots	Fabaceae	Pultenaea gunnii Benth. subsp. gunnii
		Eudicots	Fabaceae	Pultenaea juniperina Labill.
i		Eudicots	Fabaceae	Trifolium spp.
i		Eudicots	Fabaceae	Ulex europaeus L.
i		Eudicots	Fumariaceae	Fumaria densiflora DC.
i		Eudicots	Gentianaceae	Centaurium erythraea Rafn
i		Eudicots	Geraniaceae	Erodium sp.
		Eudicots	Geraniaceae	Geranium potentilloides L'Hér. ex DC. var. potentilloides
		Eudicots	Geraniaceae	Geranium solanderi Carolin
		Eudicots	Haloragaceae	Gonocarpus micranthus Thunb. subsp. micranthus
		Eudicots	Haloragaceae	Gonocarpus tetragynus Labill.
		Eudicots	Haloragaceae	Gonocarpus teucrioides DC.
		Eudicots	Hypericaceae	Hypericum gramineum G.Forst.
		Eudicots	Lamiaceae	Ajuga australis R.Br.
i		Eudicots	Lamiaceae	Prunella vulgaris L.
		Eudicots	Myrtaceae	Eucalyptus pauciflora Sieber ex Spreng. subsp. pauciflora
		Eudicots	Myrtaceae	Eucalyptus rubida H.Deane & Maiden subsp. rubida
	e	Eudicots	Myrtaceae	Eucalyptus tenuiramis Miq.
		Eudicots	Oleaceae	Notelaea ligustrina Vent.
i		Eudicots	Orobanchaceae	Parentucellia latifolia (L.) Caruel
		Eudicots	Oxalidaceae	Oxalis perennans Haw.
i		Eudicots	Oxalidaceae	Oxalis pes-caprae L.
		Eudicots	Phyllanthaceae	Poranthera microphylla Brongn.
i		Eudicots	Plantaginaceae	Plantago coronopus L. subsp. coronopus
i		Eudicots	Plantaginaceae	Plantago lanceolata L.
i		Eudicots	Plantaginaceae	Plantago major L.
		Eudicots	Plantaginaceae	Plantago varia R.Br.

i	Eudicots	Polygonaceae	Acetosella vulgaris Fourr.
i	Eudicots	Polygonaceae	Rumex crispus L.
	Eudicots	Polygonaceae	Rumex dumosus A.Cunn. ex Meisn.
	Eudicots	Proteaceae	Banksia marginata Cav.
	Eudicots	Proteaceae	Persoonia juniperina Labill.
	Eudicots	Ranunculaceae	Ranunculus lappaceus Sm.
	Eudicots	Ranunculaceae	Ranunculus pumilio R.Br. ex DC. var. pumilio
i	Eudicots	Ranunculaceae	Ranunculus repens L.
	Eudicots	Rosaceae	Acaena echinata Nees
	Eudicots	Rosaceae	Acaena novae-zelandiae Kirk
	Eudicots	Rubiaceae	Asperula conferta Hook.f.
	Eudicots	Santalaceae	Exocarpos cupressiformis Labill.
	Eudicots	Santalaceae	Leptomeria drupacea (Labill.) Druce
i	Eudicots	Solanaceae	Solanum nigrum L.
	Eudicots	Thymelaeaceae	Pimelea humilis R.Br.
i	Eudicots	Urticaceae	Urtica urens L.
	Eudicots	Violaceae	Melicytus dentatus (DC.) Molloy & Mabb.
	Eudicots	Violaceae	Viola fuscoviolacea (L.G.Adams) T.A.James
	Monocots	Asparagaceae	Lomandra longifolia Labill.
	Monocots	Centrolepidaceae	Centrolepis strigosa (R.Br.) Poir. subsp. strigosa
	Monocots	Cyperaceae	Carex breviculmis R.Br.
	Monocots	Cyperaceae	Carex iynx Nelmes
	Monocots	Cyperaceae	Carex raleighii Nelmes
	Monocots	Cyperaceae	Ficinia nodosa (Rottb.) Goetgh., Muasya & D.A.Simpson
	Monocots	Cyperaceae	Isolepis fluitans (L.) R.Br.
	Monocots	Cyperaceae	Schoenus apogon Roem. & Schult.
	Monocots	Hemerocallidaceae	Dianella brevicaulis (Ostenf.) G.W.Carr & P.F.Horsfall
	Monocots	Iridaceae	Diplarrena moraea Labill.
	Monocots	Juncaceae	Juncus australis Hook.f.
	Monocots	Juncaceae	Juncus filicaulis Buchenau

	Monocots	Juncaceae	Juncus pallidus R.Br.
	Monocots	Juncaceae	Juncus pauciflorus R.Br.
	Monocots	Juncaceae	Juncus planifolius R.Br.
	Monocots	Juncaceae	Juncus procerus E.Mey.
	Monocots	Juncaceae	Juncus sp.
	Monocots	Juncaceae	Juncus subsecundus N.A.Wakef.
i	Monocots	Poaceae	Agrostis capillaris L.
	Monocots	Poaceae	Agrostis propinqua S.W.L.Jacobs
i	Monocots	Poaceae	Agrostis stolonifera L.
i	Monocots	Poaceae	Aira caryophyllea L. subsp. caryophyllea
i	Monocots	Poaceae	Anthoxanthum odoratum L.
	Monocots	Poaceae	Australopyrum pectinatum (Labill.) Á.Löve
	Monocots	Poaceae	Austrostipa nodosa (S.T.Blake) S.W.L.Jacobs & J.Everett
	Monocots	Poaceae	Austrostipa sp.
	Monocots	Poaceae	Austrostipa stuposa (Hughes) S.W.L.Jacobs & J.Everett
i	Monocots	Poaceae	Briza maxima L.
i	Monocots	Poaceae	Briza minor L.
i	Monocots	Poaceae	Bromus catharticus Vahl
i	Monocots	Poaceae	Bromus diandrus Roth
i	Monocots	Poaceae	Bromus hordeaceus L.
i	Monocots	Poaceae	Bromus sp.
i	Monocots	Poaceae	Cynosurus echinatus
i	Monocots	Poaceae	Dactylis glomerata L.
	Monocots	Poaceae	Deyeuxia sp.
	Monocots	Poaceae	Deyeuxia monticola (Roem. & Schult.) Vickery
	Monocots	Poaceae	Deyeuxia quadriseta (Labill.) Benth.
	Monocots	Poaceae	Dichelachne sp.
	Monocots	Poaceae	Dichelachne rara (R.Br.) Vickery
i	Monocots	Poaceae	Holcus lanatus L.
i	Monocots	Poaceae	Hordeum marinum Huds.

i	Monocots	Poaceae	Lolium multiflorum Lam.
i	Monocots	Poaceae	Lolium perenne L.
	Monocots	Poaceae	Microlaena stipoides (Labill.) R.Br. var. stipoides
i	Monocots	Poaceae	Phalaris aquatica L.
	Monocots	Poaceae	Poa labillardierei Steud. var. labillardierei
	Monocots	Poaceae	Poa rodwayi Vickery
	Monocots	Poaceae	Poa sieberiana Spreng. var. sieberiana
	Monocots	Poaceae	Rytidosperma caespitosum (Gaudich.) Connor & Edgar
	Monocots	Poaceae	Rytidosperma laeve (Vickery) Connor & Edgar
	Monocots	Poaceae	Rytidosperma sp.
	Monocots	Poaceae	Rytidosperma semiannulare (Labill.) Connor & Edgar
	Monocots	Poaceae	Rytidosperma setaceum (R.Br.) Connor & Edgar
	Monocots	Poaceae	Rytidosperma tenuius (Steud.) A.Hansen & Sunding
	Monocots	Poaceae	Tetrarrhena distichophylla (Labill.) R.Br.
	Monocots	Poaceae	Themeda triandra Forssk.
i	Monocots	Poaceae	Vulpia bromoides (L.) Gray
	Monocots	Potamogetonaceae	Potamogeton australiensis A.Benn.
	Monocots	Potamogetonaceae	Potamogeton drummondii Benth.
i	Gymnosperms	Pinaceae	Pinus radiata D.Don
	Pteridophytes	Adiantaceae	Adiantum aethiopicum L.
	Pteridophytes	Aspleniaceae	Asplenium decurrens Willd.
	Pteridophytes	Aspleniaceae	Asplenium flabellifolium Cav.
	Pteridophytes	Dennstaedtiaceae	Pteridium esculentum (G.Forst.) Cockayne subsp. esculentum

ATTACHMENT 5. NRE TAS ISSUED THREATENED FLORA SPECIES NOTESHEETS

Acacia siculiformis

dagger wattle

TASMANIAN THREATENED SPECIES NOTESHEET



Image by S. Wood

Scientific name: ***Acacia siculiformis*** A.Cunn. ex Benth., *Lond. J. Bot.* 1: 337 (1842)
Common Name: dagger wattle (Wapstra et al. 2005)
Group: vascular plant, monocotyledon, family **Mimosaceae**

Status: *Threatened Species Protection Act 1995*: **rare**
Environment Protection and Biodiversity Conservation Act 1999: **Not listed**

Distribution: Endemic status: **not endemic to Tasmania**
Natural Resource Management region: **North, South**

SUMMARY: *Acacia siculiformis* (dagger wattle) is a shrub which in Tasmania occurs near watercourses and in dry, rocky situations within sclerophyll forest. It mostly occurs in a band from the centre of the State to the East Coast but unvouchered records from the north east require verification. About 30 subpopulations have been recorded though fewer than 20 are supported by herbarium specimens. Available data suggests that subpopulations are small, with the total number of plants likely to be considerably fewer than 5,000 with an area of occupancy less than 5 ha, putting the species at risk from inadvertent or chance events. Other threats include dam construction, and while forestry operations may result in minor losses, the associated disturbance may trigger recruitment from soil-stored seed. The species would benefit from management of cumulative losses, and a disturbance regime that allows recruitment leading to supplementation of the soil seed store.



Plate 1. Flowers of *Acacia siculiformis* (image by S. Wood)

IDENTIFICATION AND ECOLOGY

Acacia siculiformis is a shrub that is often associated with open areas such as those fringing rocky areas or open areas created through disturbance such as occasional fires, track clearing or logging. It recruits from seed, presumably from a long-lived soil stored seed bank as with many other *Acacia* species. Bees are the most likely pollination vector (A. Hingston pers. comm.). The species is not known to be susceptible to root rot (*Phytophthora cinnamomi*). This may be due to the dry habitats from which most occurrences are known (P. Barker pers. comm.).

As one of 27 species and infraspecies in the *Acacia* genus as well as in the family Mimosaceae in Tasmania (Baker and de Salas 2013), *Acacia siculiformis* represents a relatively low proportion of its genetic lineage in the state. Being a shrub that can be locally common (albeit in small areas), the species is likely to have biodiversity benefits as a foundation species by providing habitat particularly for invertebrates and being a legume for nitrogen fixing bacteria, biomass for foraging fauna particularly invertebrates, and nutrition from breakdown material for soil microorganisms.

Survey techniques

This shrub flowers in spring and early summer. Most herbarium specimens were collected from September to December. While flowers are necessary to confirm identification, the species can be distinguished by its leaves and colour.

Description

An erect or spreading, rigid shrub between 1-2 m tall. The branches are brown, somewhat scaly and circular in cross section. **Leaves:** The adult foliage consists of flattened leaf stalks (petioles), which function as leaves and are known as phyllodes. These are long and narrow, widest about the middle, often slightly sickle-shaped and tapering to a sharp point. They are 1.0-2.5 cm long and 1.5-4 mm wide with a prominent central vein and thickened margins. **Flowers:** This species produces yellow, ball shaped flowers on stalks up to 12 mm long, in the phyllode axil. **Fruit:** The fruit is a long and narrow pod between 20-70 mm long and 4-7 mm wide, each containing 6-10 black shiny seeds.

[description based on Curtis & Morris 1975, Tamre 1992]

Confusing species

Figure 1 (from Lynch 1993) shows the differentiation of four Tasmanian *Acacia* species based on bud characteristics. The similarities between these species mean a certain level of doubt as to the identity of unvouchered records, particularly if located some distance away from vouchered records.

HABITAT

In Tasmania, *Acacia siculiformis* is found near watercourses and in dry, rocky situations within sclerophyll forest.



Figure 1. The differentiation of four Tasmanian *Acacia* species based on bud characteristics (from Lynch 1993)

DISTRIBUTION, POPULATION PARAMETERS, AND DATA ISSUES

The Australian distribution of *Acacia siculiformis* is shown in Figure 2. The Tasmanian distribution is shown in Figure 3 with a comparison with Figure 4 demonstrating the increase in the occurrence records since 2003. The majority of the new observations have resulted from impact assessment surveys. The linear extent of the species in Tasmania is estimated to be about 230 km with an extent of occurrence of about 16,700 km^2. However, this is reduced to a linear extent of about 100 km and extent of occurrence of 7,000 km^2 using only records that are supported by herbarium specimens (Figure 5). Doubt exists as to the identity of plants recorded outside of this reduced range, given that *Acacia siculiformis* can be confused with a number of similar species (see Figure 1). A record from Beaconsfield is tagged as questionable in the Natural Values Atlas and is not mapped in Figure 3. The Atlas of Living Australia holds details for Tasmanian specimens held in herbaria on mainland Australia that would extend the recorded range westward (historical record) and eastward (Figure 6), though the identity of these specimens requires checking.

Approximately 30 subpopulations have been recorded in Tasmania though fewer than 20 of these are supported by herbarium specimens (Figure 5). Only 45% of the 76 observations of *Acacia siculiformis* held in the Natural Values Atlas have associated data on population size, totalling about 580 plants and occupying 0.8 ha. The distribution of these observations is shown in Figure 7. From these numbers, it is estimated that there are far fewer than 5,000 plants of *Acacia siculiformis* in Tasmania, occupying less than 5 ha in total. The three largest recorded subpopulations have an estimated 200, 123 and 70 plants respectively, though the second of these is outside of the range of vouchered records. Given an approximate doubling of the number of known subpopulations since 2003, it is considered likely that further subpopulations will be found with further survey.

Important occurrences for *Acacia siculiformis* include

- verified subpopulations at the edge of the range of the species, and those that are disjunct, occurring more than 10 to 20 km away from other verified subpopulations;
- larger subpopulations (>50 plants and 0.25 ha);
- subpopulations that represent a significant proportion of the occurrence in a bioregion;
- subpopulations in secure reserves;
- subpopulations that are associated with threatened ecological communities or other threatened non-mobile species.

RESERVATION STATUS

Figure 8 shows that the distribution of reserves is patchy across the confirmed distribution of *Acacia siculiformis*.

CONSERVATION ASSESSMENT

Acacia siculiformis was listed as rare on the original schedules of the Tasmanian *Threatened Species Protection Act 1995* when it was known from 20 or less 10 x 10 km Australian Map Grid Squares in Tasmania (Flora Advisory Committee 1994). It qualifies as rare, meeting criterion B: total population small or restricted and at risk;

- having fewer than 10,000 mature individuals with no more than 2,500 occurring on land that is in an area free from sudden processes capable of causing largely irreversible loss of individuals or habitat.

THREATS, LIMITING FACTORS AND MANAGEMENT ISSUES

Acacia siculiformis is at risk of losses from inadvertent or chance events due to the generally small size of subpopulations. Some subpopulations are at risk of local extinctions or major losses from the construction of dams. Despite a number of occurrences occurring on State forest (Figure 8 Permanent Timber Production Zones), forestry is not likely to be a

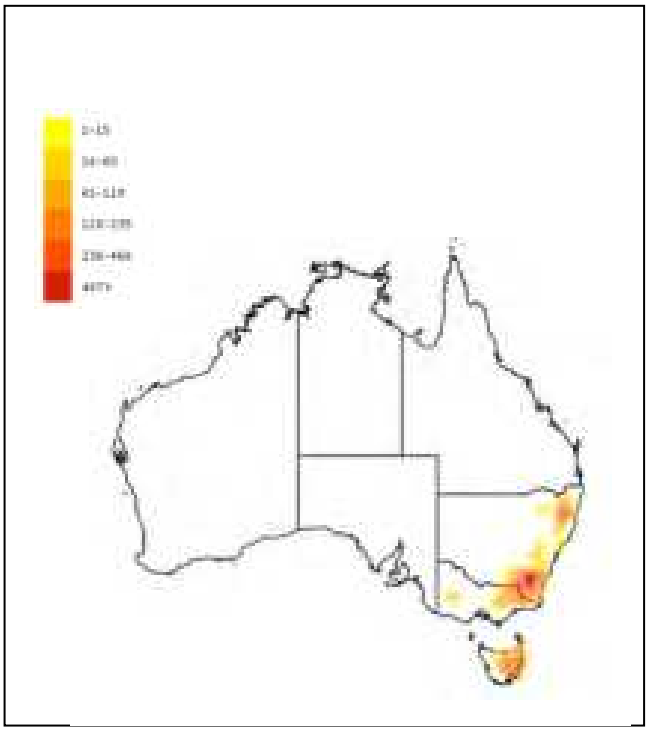


Figure 2. Occurrence records map of *Acacia siculiformis* in Australia
(Atlas of Living Australia March 2014)

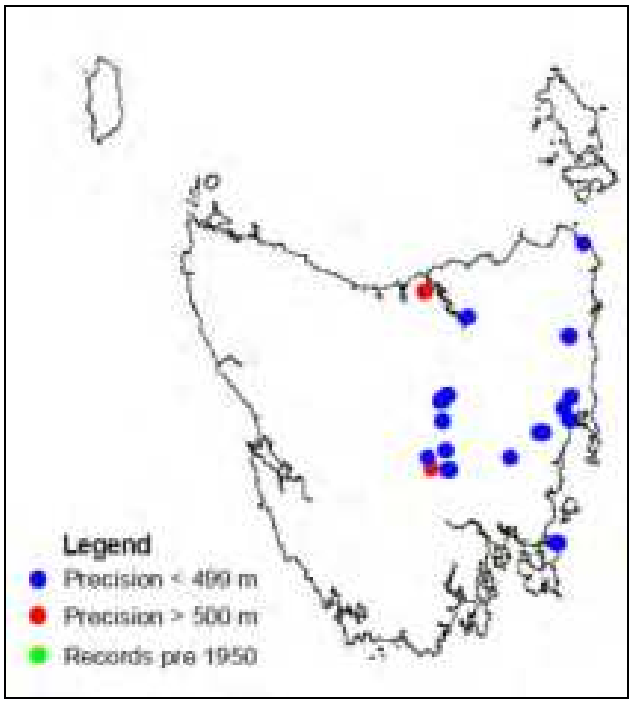


Figure 4. Distribution of *Acacia siculiformis* in Tasmania as per Threatened Species Unit records May 2003

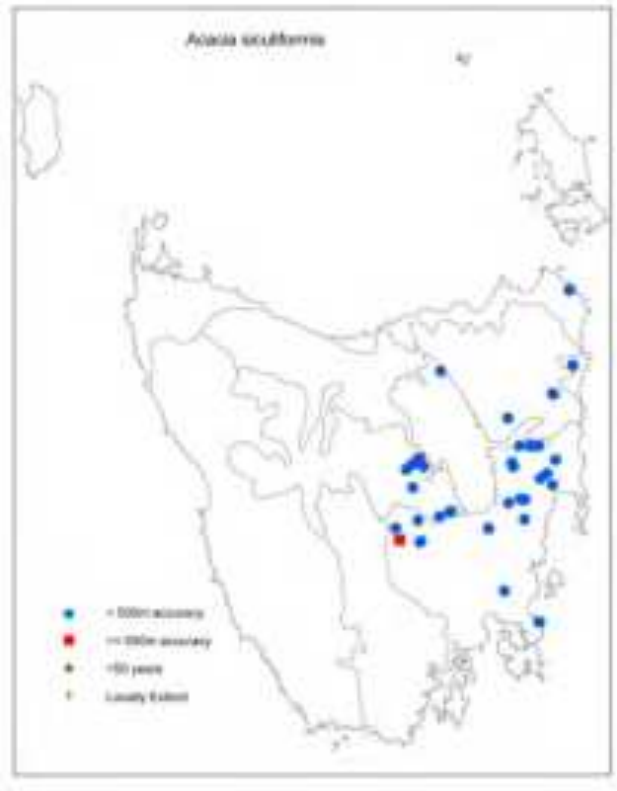


Figure 3. Distribution of *Acacia siculiformis* in Tasmania showing IBRA bioregions
(Natural Values Atlas April 2012)

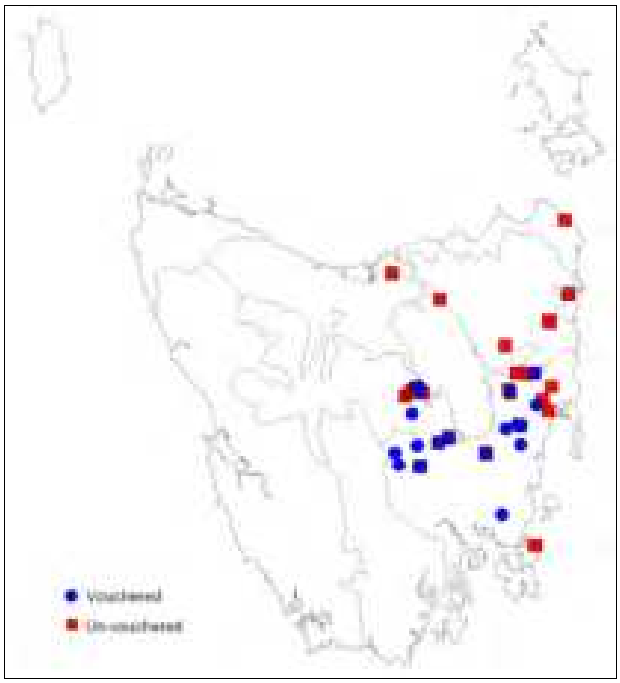


Figure 5. Observations of *Acacia siculiformis* in Tasmania with and without herbarium specimens showing IBRA bioregions
(Natural Values Atlas March 2014)

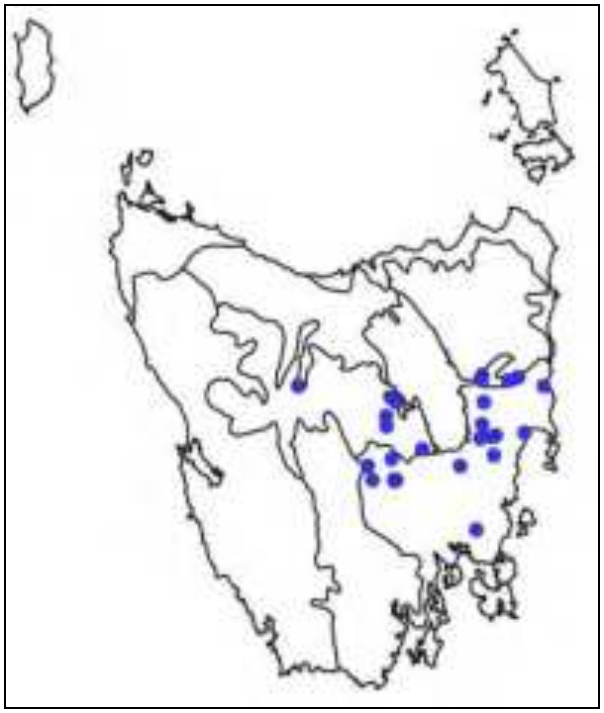
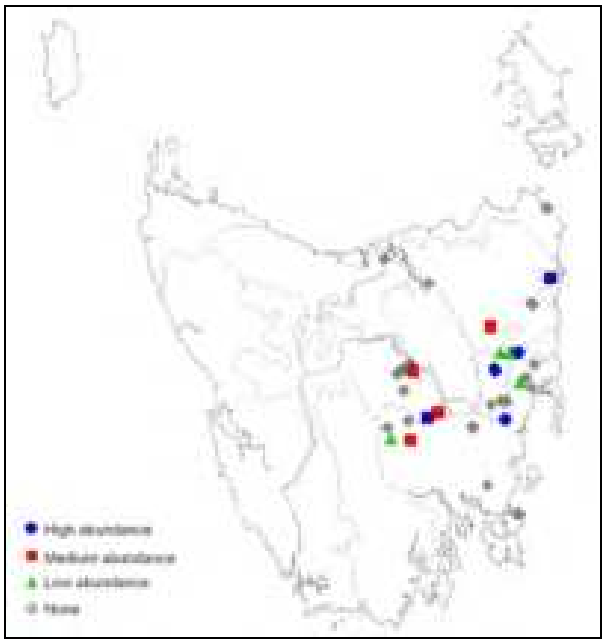
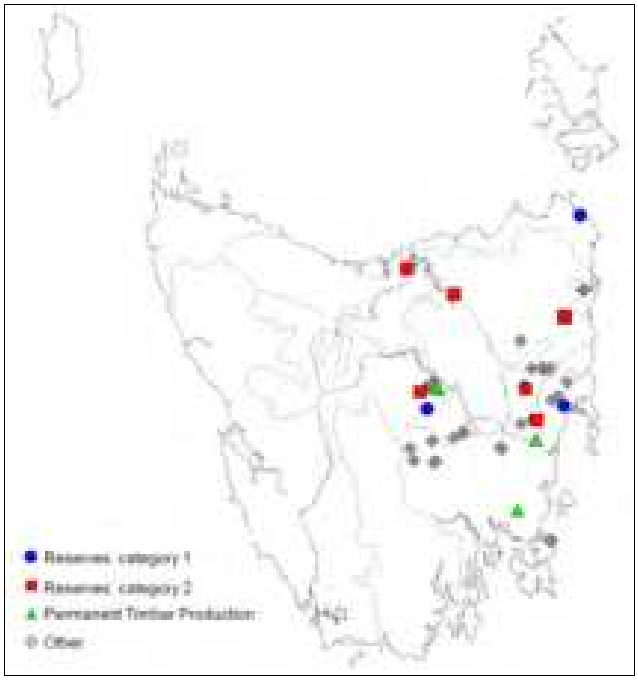


Figure 6. Observations of *Acacia siculiformis* in Tasmania with herbarium specimens showing IBRA bioregions (Atlas of Living Australia March 2014)



High = 70 to 200 plants or locally common
Medium = 10 to 45 plants
Low = 1 to 7 plants or rare

Figure 7. Abundance information for occurrences of *Acacia siculiformis* in Tasmania showing IBRA bioregions (Atlas of Living Australia March 2014). [the grey diamonds are for observations lacking abundance data]



Reserve	Obs.	Category
Mount William National Park	1*	1
Conservation Covenant (2)	1, 1	1
Bouchers Creek Conservation Area	1*	2
Dans Hill Conservation Area	1?	2
Elizabeth River Conservation Area	1	2
Great Lake Conservation Area	1	2
Avenue River Regional Reserve*	3*	2

* unvouchered record requiring verification;
? questionable observation

Figure 8. Tenure and reservation status of observations of *Acacia siculiformis* in Tasmania (Natural Values Atlas March 2014)

key threat to the species as plants are likely to be excluded from harvest operations due to the unsuitability of their habitat for harvesting. Some forest associated disturbance risks localised losses if not managed appropriately. However, the disturbance created by forest roading and selective logging operations is likely to trigger recruitment from any disturbed soil-stored seed. Occurrences may decline with the absence of fire for long intervals due to competition and senescence, though local extinctions are unlikely with the operation of current factors given the likely long-lived nature of soil stored seed. Frequent fires may result in depletion of the soil seed bank if the interval between fires does not allow plants to mature and seed. Cumulative losses may lead to the species qualifying as vulnerable if not managed.

MANAGEMENT STRATEGY

Management objectives

The main objectives to decrease the extinction risk faced by *Acacia siculiformis* are to prevent the inadvertent destruction of occurrences, prevent a decline in the verified range of the species, stem cumulative losses, and promote conditions for recruitment.

What has been done?

Seed has been collected for long term storage at the Tasmania Seed Conservation Centre based at the Royal Tasmanian Botanical Gardens.

What is needed?

Agencies, groups or individuals may assist with some or all of the following recovery actions. Coordinated efforts may achieve the best and most efficient results.

- provide information and extension support to relevant Natural Resource Management committees, local councils, government agencies, the local community and development proponents on the locality, significance and management of known subpopulations and potential habitat;
- develop management agreements with private landowners and public land managers, and ensure that current priorities for the species are incorporated into the Private Land Conservation Program's (DPIPWE) reservation strategies.
- verify observations of the species that fall outside the range of vouchered occurrences;
- verify the identity of specimens held in mainland herbaria that would constitute an increase in the range of the species over that recorded in the Natural Values Atlas;
- improve knowledge of the size and extent of subpopulations across the range of the species;
- track cumulative losses to inform the assessment of applications of permits to take the species;
- investigate reasons for the small size of subpopulations e.g. low seed output.

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Prepared in March 2014.

Cite as: Threatened Species Section (2015). *Notesheet for* Acacia siculiformis *(dagger wattle).* Department of Primary Industries, Parks, Water and Environment, Tasmania.

View:
www.dpipwe.tas.gov.au/threatenedspecieslists
www.threatenedspecieslink.tas.gov.au/

Contact details: Threatened Species Section, Department of Primary Industries, Parks, Water and Environment, GPO Box 44 Hobart Tasmania Australia 7001. Ph. (03) 61654340.

threatenedspecies.enquiries@dpipwe.tas.gov.au

Permit: It is an offence to collect, disturb, damage or destroy this species unless under permit.

Ranunculus pumilio var. *pumilio*



Ranunculus pumilio var. *pumilio*.
Tasmanian Herbarium specimen.

FAMILY: RANUNCULACEAE

BOTANICAL NAME: *Ranunculus pumilio* var. *pumilio,* R.Br. ex DC., *Syst. Nat.* 1: 271 (1817)

COMMON NAME: Ferny buttercup

COMMONWEALTH STATUS: (*EPBC Act*) Not Listed

TASMANIAN STATUS: (*TSP Act*) rare

Description

A tufted annual herb, usually with shaggy long hairs. **Stems:** The stems are spreading and trailing loosely along the ground, between 5-30 cm long. **Leaves:** The leaves are arising from the base of the stem and are also born from the aerial parts of the stem. They are on slender stalks, are rounded in outline and measure between 5-15 mm in diameter. **Flowers:** The flowers are greenish and very small with 5 petals or less. They are oblong in shape and approximately 2 mm long. This species flowers in spring (September to October). **Fruit:** The fruit is small, dry and in clusters that are somewhat flattened. It is usually hairy and covered in projections that often end in a hair (description from Cunningham *et al.* 1992, Curtis & Morris 1975). **This species was previously known as *Ranunculus pumilio*.**

Distribution and Habitat

This species is found all throughout temperate Australia. In Tasmania, *Ranunculus pumilio* var. *pumilio* occurs mostly in wet places from sea level to altitudes of 800-900 metres (Curtis & Morris 1975). No other varieties of *Ranunculus pumilio* occur in Tasmania.

Key Sites and Populations

Key sites include the Esk River, the mouth of Parramore Creek and Walkers Lookout on Flinders Island.

Known Reserves

Known from the River Derwent Conservation Area, South Esk River Private Sanctuary and Waterhouse Conservation Area.

Ecology and Management

Insects are the most likely pollination vector for this species (A. Hingston pers. comm.).

Conservation Status Assessment

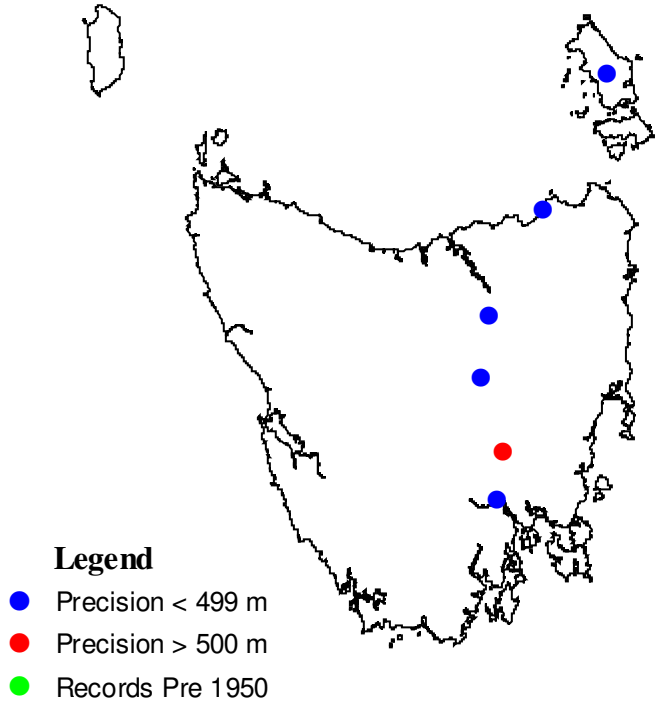
Ranunculus pumilio var. *pumilio* may qualify for listing as vulnerable.

Further Information

- Cunningham, GM, Mulham, W, Milthorpe, P & Leigh, J 1992, *Plants of Western New South Wales*, Inkata Press, Sydney.
- Curtis, WM & Morris, DI 1975, *The Student's Flora of Tasmania,* Part 1, Government Printer, Hobart.

Tasmanian Distribution

(As per Threatened Species Unit records, June 2003)



1:25 000 Map Sheets

Bothwell, Leventhorpe, Longford, Millers, New Norfolk, Oxberry.

Date last modified: 03/09/03

ATTACHMENT 6. PRE-CLEARANCE INSPECTION PROCEDURE DEN MANAGEMENT PROTOCOL



PRE-CLEARANCE INSPECTION AND DEN CHECK AND MANAGEMENT PROTOCOL

ENVIRONMENTAL MANAGEMENT OVERVIEW

This Protocol describes the environmental management objectives and procedures to manage dens and burrows of conservation significant species, whether occupied or not**.**

It must be read and applied in conjunction with any Permit, Approval and/or other Environmental Management Plan that has been issued or prepared for a specific project.

1. OBJECTIVE

The objectives of the Procedure are:

1. To adopt and apply practices consistent with the Guidelines;
2. To minimise potential for disturbance of an active Tasmanian devil or quoll den, particularly one being used for natal activities; and
3. To minimise the risk of mortalities to other burrow-dwelling fauna with similar habitat use to devils and quolls, such as wombats and echidnas.

The Protocol applies the requirements of the Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian devil (*Sarcophilus harrisii*): A supplement to the Guidelines for Natural Values Surveys - Terrestrial Development Proposals (Natural and Cultural Heritage Division, 2015).

2. TERMS

Approval	Any approval granted by a regulatory authority acting under a statutory power that authorises development, works and/or use of land. Examples include a permit granted under the *Land Use Planning and Approvals Act 1993*, approval of an action under the *Environment Protection and Biodiversity Conservation Act 1999* and approved mining operations in accordance with a mine plan within the meaning of the *Mineral Resources Development Act 1995.*
Guidelines	The *Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian devil (Sarcophilus harrisii): A supplement to the Guidelines for Natural Values Surveys - Terrestrial Development Proposals (Natural and Cultural Heritage Division, 2015) and any future iterations of this document.*
Likely Maternal Den	Any den with observed via wildlife cameras to be used by a heavily pouch-laden devil or quoll, an imp (young devil) or a kitten (young quoll), or if an individual devil or quoll is recorded using a den for two or more nights and displaying natal characteristics.
Permit	A permit issued under the *Threatened Species Protection Act 1995* and/or *Nature*

Conservation Act 2002 and relevant *Wildlife Regulations.*

Potential dens	Potential dens can be soil burrows/holes in the substrate with an appropriate entrance hole, clusters of boulders (talus or scree) with cavities, dense clumps of vegetation with visible animal use, rock outcrops and ledges, caves, dry hollow logs, hollowed out tree stumps (tree may be alive or dead) and woodpiles (often remnant from silvicultural harvesting). Tracks, fur, and scats can aid potential den and burrow sites.
Procedure	This PRE-CLEARANCE INSPECTION AND DEN CHECK AND MANAGEMENT PROTOCOL

3. PERMITS

Any specific conditions contained in a Permit and/or other Approval issued under the *Nature Conservation Act 2002* must be strictly adhered to.

4. PROCEDURES

4.1 PRE-CLEARANCE SURVEY

Tasks 1 to 5 will only be conducted by suitably qualified ecologists.

The pre-clearance surveys and clearing approvals process will involve:

(1) No more than 60 days prior to any vegetation clearance, a pre-clearance survey will be conducted.

(2) Within the survey area[1], a systematic coverage of all areas of moderate or low potential denning habitat will be conducted by meandering transects (i.e., 2 ecologists in visual sight, spaced typically 10 to 30 m apart depending on visibility and likelihood of den detection). All Potential Den sites will be investigated and recorded.

(3) To assess 'likelihood of use', the general quality of each Potential Den will be inspected in relation to factors such as insolation (exposure to sunlight), susceptibility to inundation, landscape position, etc. Factors including spider webs, delicate fungi in the burrow wall, claw/wear marks, hairs, scats, bones, scats, and footprints at potential den entrances are all indicators of activity (or non-activity). If the activity assessment concludes that the burrow is not being used (i.e., definitively inactive, and vacant), the burrow will be decommissioned under a Permit.

(4) The 'den monitoring assessment' will be applied to each Potential Den that has evidence of use by a devil or quoll, or evidence of use by a species that cannot be determined, and any den that is highly suitable for devil or quoll occupation but does not have definitive evidence of being vacant at the time of assessment. An exclusion zone of a 50 m radius will be established around a potential den that warrants application of section 6. The exclusion zone will remain in place until the requirements of section 6 are completed.

[1] Note that depending on clearance schedules and survey timing, the entire disturbance footprint may not be surveyed (nor clearance approval requested) at once but instead might be divided into sections that are progressively assessed and then cleared. This approach also addresses the issue of 'currency' of the survey results.

(5) Following completion of the survey, a report will be prepared detailing the survey area, survey coverage, results, and subject to the Permit and Approval a request for clearance approval (with limitations in place if some dens are under monitoring in exclusion zones).

(6) Clearance (or any other soil disturbance) will not commence in the designated area until written approval is provided by NRE or other relevant regulatory authority. Based on the results of the den survey and assessments, NRE may provide either un-conditional or conditional approval to commence works (e.g., establishment of exclusion zones around active dens or dens still under assessment). All conditions must be implemented by the contractor, permit holder and any party involved in the works authorised by the Permit.

(7) Approval to clear in a designated area will be valid for up to 8 weeks, after which time a new assessment will be required unless an extension to this window is approved by NRE (an extension may be considered sufficiently low risk in some scenarios, as informed by section 5 and 6 results).

Notwithstanding (6) and (7), should a previously unidentified or unanticipated discovery of a (potential) den be found by the contractor (or other parties) during works, an assessment as per (3) is to be undertaken, and as necessary the den monitoring assessment as per (4) applied.

If the works area is divided into smaller survey areas, the process will be repeated until surveying of the entire project area is complete.

4.2 DEN MONITORING ASSESSMENT

The term ’den’ is used broadly here

The den monitoring assessment involves the following:

- Up to two infra-red motion sensor cameras will be installed at each entrance of each burrow. Camera settings will be - sensitivity: high, capture method: video; capture length of at least 30 sec; capture delay interval: 0 seconds.
- More cameras may be used to monitor all the accessible locations into woodpiles, rockpiles and other complex habitat structures.
- No bait or other form of attractant are to be used.
- Cameras will remain in place for at least 7 consecutive nights.

After this time, footage will be inspected suitably qualified ecologist to identify captures.

If memory cards are collected for desktop analysis, cards (and batteries if necessary) will be replaced, and camera(s) will remain in place for continued monitoring until action can be informed by the footage. In other words, monitoring will always continue up until the point of decommissioning, which will only be undertaken when an assessment of all footage up until that time has established the den is vacant at the time.

Den/burrow decommissioning will only be conducted by or in the presence of a suitably qualified ecologist.

The assessment of the captured footage would result in one of the following outcomes and corresponding procedure to be applied.

Camera Capture Assessment Outcome	**Corresponding procedure to be applied**
Likely Maternal Den	For a likely maternal den, cameras and the 50 m exclusion zone will remain in place until: • the den is no longer necessary for the rearing of young and it is confirmed that the mother and young have discontinued its use. • or continued monitoring definitively establishes that the den is in fact not a maternal den (e.g., pouch-laden females may visit multiple dens before dropping their young in one location, and some females may be observed showing natal characteristics [such as lactating and scent marking] around dens in which they have not dropped their young. Following either of these scenarios the den will be decommissioned while vacant.
Den/Burrow is in *regular use*[2] **by a devil or quoll**	Cameras and the 50 m exclusion zone will remain in place until: • it is confirmed that the den is not a maternal den (e.g., pouch-laden females may visit multiple dens before dropping their young in one location, and some females may be observed showing natal characteristics [such as lactating and scent marking] around dens in which they have not dropped their young. The footage from the night and morning immediately prior to the inspection will be used to determine occupancy at that time. The den will be decommissioned while vacant.
Den/Burrow is in *regular use* **by a species other** than a devil or quoll	Cameras and the 10 m exclusion zone will remain in place until den is definitively vacant and can be decommissioned.
Den/Burrow in *opportunistic use*[3] **by any species**	The footage from the night and morning immediately prior to the inspection will be used to determine occupancy at that time. If the structure is conclusively vacant at the time of inspection, it will be decommissioned at that time. If an animal is within the structure at that

[2] visited at least once for a minimum of 5 nights over 7 nights of monitoring.

[3] not occupied for at least 2 consecutive nights, may only be visited once or twice in 7 nights; there may be several different animals and species frequenting the burrow.

	time the structure will be revisited the following day and occupancy re-determined based on the footage from the previous night and morning. Monitoring of the structure will continue until a time when it is conclusively vacant at the time of inspection and can be decommissioned.
Den/Burrow inactive (no evidence of use)	Den/burrow will be decommissioned.

5. RECORDS AND REPORTING

Written records and field notes must be collected for future reference and reporting to regulatory authorities if required.

5.1 PRE-CLEARANCE SURVEY

Written and photographic records of the assessment must be collected and archived, including: -

- the date of the pre-clearance survey works, weather conditions, the names of persons involved in the survey;
- the number of potential dens located and a description of the evidence of their use by animals (devils, quolls or other); and
- recommendations to manage any structures (dens or burrows) observed, any further works that should be conducted including the further assessment of structures using wildlife cameras, and .

A report is to be prepared where it is required for a Permit or Approval, or to support approvals or permit applications. Any specific requirements of the Approval are to be included in the report.

5.2 DEN MONITORING ASSESSMENT

Written, photographic and video records of the den monitoring process are to be collected and archived, including: -

- the dates of the wildlife camera footage captured;
- the name of the assessor(s) of the footage captured;
- the relevant footage captured, and
- the actions determined from the footage captured.

A report is to be prepared where it is required for a Permit or Approval, or to support approvals or permit applications. Any specific requirements of the Approval are to be included in the report.

6. REFERENCES

- Natural and Cultural Heritage Division 2015 Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian devil (*Sarcophilus harrisii*). Department of Primary Industries, Parks, Water and Environment, Hobart.
- Threatened Species Section (2014) *Sarcophilus harrisii* (Tasmanian Devil): Species Management Profile for Tasmania's Threatened Species Link. http://www.threatenedspecieslink.tas.gov.au/tasmanian-devil. Department of Primary Industries, Parks, Water and Environment, Tasmania. Accessed on 7/2/2014.

ATTACHMENT 7. NRM SOUTH, SOIL AND WATER MANAGEMENT ON BUILDING AND CONSTRUCTION SITES

Sediment Fences & Fibre Rolls

What are these?

Sediment fences and fibre rolls are sediment control measures installed across slopes or along the parameter of building and construction sites. Fibre rolls are a range of organic products (coconut fibre, straw, flax) that are rolled into large diameter logs. Sediment fences are vertical barriers made from woven geotextile that are held in place by star pickets and a backfilled trench.

Why is it important?

Sediment generated from erosion on building and construction sites can be a major source of pollution to local waterways. Follow the practices discussed in this fact sheet and you will control sediment run-off from your site, meet your legal requirements and help protect our waterways.

Fact Sheet 14

WHAT DO I NEED TO DO?

Fibre Rolls: are log-like products commonly consisting of biodegradable fibres. They vary from biodegradable rolled coir (coconut fibre) and hessian socks filled with straw or mulch, to non-biodegradable geotextile tubes filled with mulch or straw. Biodegradable fibre rolls can be left permanently onsite to assist stabilisation and will support vegetative growth if left in place.

Sediment fences: are a commonly used sediment control measure constructed from heavy-duty geotextile. Although a sediment fence looks like shade cloth it is very different (shade cloth is not appropriate because it cannot slow water flow enough to adequately pond water up-slope of the fence and allow sediment to settle under gravity).

Before starting site works:

Identify drainage flow pathways that will intercept runoff from the site. Decide whether to use fibre rolls or sediment fences. Use fibre rolls at the base of an embankment, on slopes that are exposed, or on vegetated slopes where vegetation is failing to control erosion. Sediment fences should be used on small drainage areas and placed down-slope of potential areas of erosion. Document these measures on your Soil and Water Management Plan (if required) **(see Fact Sheet 3)**.

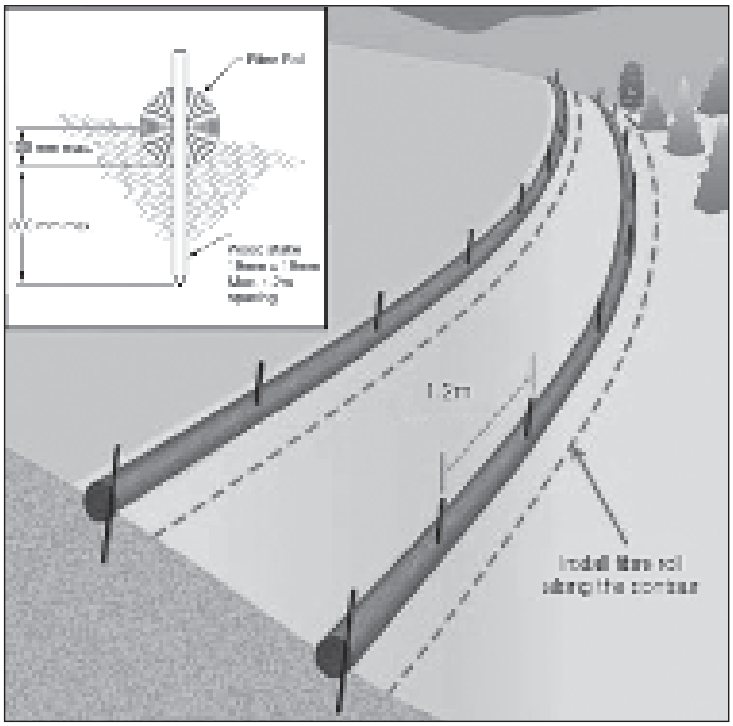


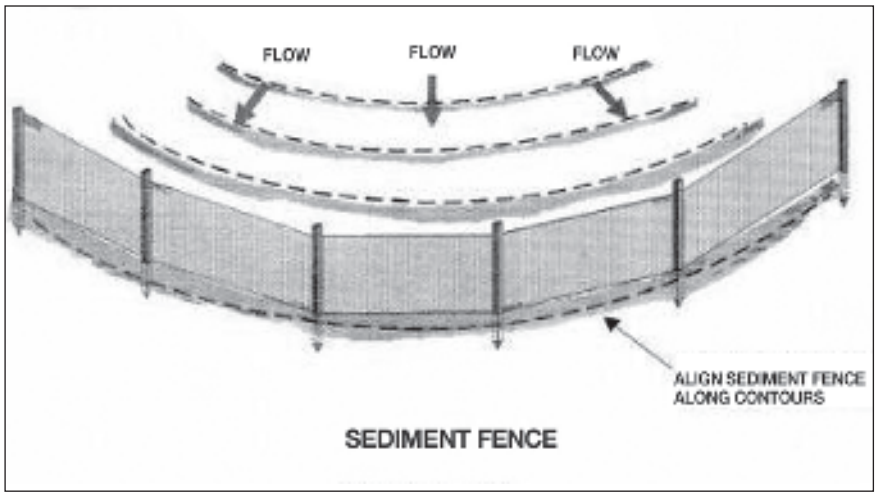
Figure 14A: Installation of fibre rolls

Installing the control measures:

Sediment control measures need to be in place prior to the start of site works. They can be altered after ground disturbance activities and if the site's drainage patterns change.

Installing fibre rolls:

1) Find a suitable installation site (if on a slope, place parallel to contours).
2) Remove large rocks and debris, and prepare a shallow concave trench (50–100 mm deep) to inset the fibre roll. (***Note:*** Place excavated material on the upside of the fibre roll to prevent undercutting.)
3) Place the fibre roll in a shallow trench and stake through the fibre roll every 30 cm.
4) Place further stakes on both sides of the fibre roll to within 2 m from the end of the roll.



Installing sediment fences:

1) Survey and mark out location of sediment fence, ensure it is parallel to the contours of the site.
2) Dig a 150 mm trench immediately above the proposed fence line.
3) Place the bottom of the fabric to the base of the trench and run fabric up the down-slope side of the trench.
4) Backfill the trench and compact to secure anchorage of the fabric.
5) Drive 1.5 m star pickets into ground, 2 m apart to support the sediment fence fabric. Tension and fasten fabric to pickets using UV stabilised zip ties or wire ties.
6) Join sections of fabric at a support post with a 2 m overlap.
7) Angle the ends of the sediment fence upslope to reduce scouring.

Don't place sediment fences across creeks or major drainage lines.

Maintaining the control measures:

Fibre rolls and sediment fences should be checked regularly, especially after every rain event and cleaned or repaired. For sediment fences check that all the pickets and the bottom of the fence are secure and that there are no tears in the fabric.

List of fact sheets

1. Soil & Water Management on Large Building & Construction Sites
2. Soil & Water Management on Standard Building & Construction Sites
3. Soil & Water Management Plans
4. Dispersive Soils – High Risk of Tunnel Erosion
5. Minimise Soil Disturbance
6. Preserve Vegetation
7. Divert Up-slope Water
8. Erosion Control Mats & Blankets
9. Protect Service Trenches & Stockpiles
10. Early Roof Drainage Connection
11. Scour Protection – Stormwater Pipe Outfalls & Check Dams
12. Stabilised Site Access
13. Wheel Wash
14. **Sediment Fences & Fibre Rolls**
15. Protection of Stormwater Pits
16. Manage Concrete, Brick & Tile Cutting
17. Sediment Basins
18. Dust Control
19. Site Revegetation

Remember:

Everyone working on building and construction sites has a responsibility to prevent pollution. If you do have an accident and pollution occurs you are required by law to notify the site supervisor. If the site supervisor cannot be contacted, workers should immediately notify the local council so they can work with you to minimise any harm to the environment.

Acknowledgement:

Figures 14A and 14B after California Regional Water Quality Control Board 1999 *"Erosion & Sediment Control Field Manual"*.

Date of Issue: December 2008

pitt&sherry

Weasel Solar Farm

Flood Impact Assessment

Prepared for

Tasflo Pty Ltd c/ -Robert Luxmoore Project Management

Client representative

Emanuele Raffaele

Date

25 September 2024

Rev03



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Appendix B — Proposed Development Site Plan
Appendix C — Annotated Site Plan Against Flood Hazard Maps
Appendix D — Site visit photos of culverts

Prepared by — Caelan Hearne		**Date — 25/09/2024**
Reviewed by — Robert Webster		**Date — 25/09/2024**
Authorised by — Joshua Coates		**Date — 25/09/2024**

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
00	Draft flood assessment	DW	RW	JC	22/05/2024
01	Final flood assessment	TR	RW	JC	24/06/2024
02	Revised Final flood assessment	TR	RW	JC	28/06/2024
03	Revised final flood assessment	CH	RW	JC	25/09/2024

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1. Introduction

Tasflo Pty Ltd are seeking to develop existing agricultural land into a long-term renewable energy asset. The proposal would involve the development of a large-scale solar farm, connecting the site to existing TasNetworks transmission infrastructure.

The development is being managed by Robert Luxmoore Project Management who have engaged pitt&sherry for advice on the Hydrology and Hydraulics aspects of the project during the approvals phase. This report assesses existing flood conditions at the proposed Weasel Solar Farm site (the site) and describes impacts the proposed development may have on flood behaviour and vice-versa. High-level commentary is provided on risks and opportunities uncovered, and associated implications for planning approvals as part of the proposed development scenario. Detailed flood modelling of the proposed development has been excluded from this study.

This report will address stormwater and flooding criteria of the relevant state and local planning provisions.

1.1 Site overview & climate

Located in Tasmania's Central Highlands, the site sits to the east of the Western Tiers. The property is named 'THE WEASEL', and is located at 3415 Highland Lakes Rd, Bothwell. At the Bothwell (Clyde River) climatology station, about 10km south of the site, the mean annual rainfall is about 400mm.

The site area is an area of approximately 2700ha and development area is 440ha plus transmission corridors. The footprint covers, and includes all the proposal elements, i.e. access roads, transmission corridors, construction compound, substation, PV panel areas and BESS areas. An overview of the proposed development (shared by client on 13/09/2024) is included in Appendix B and an extract is presented in Figure 1 below.

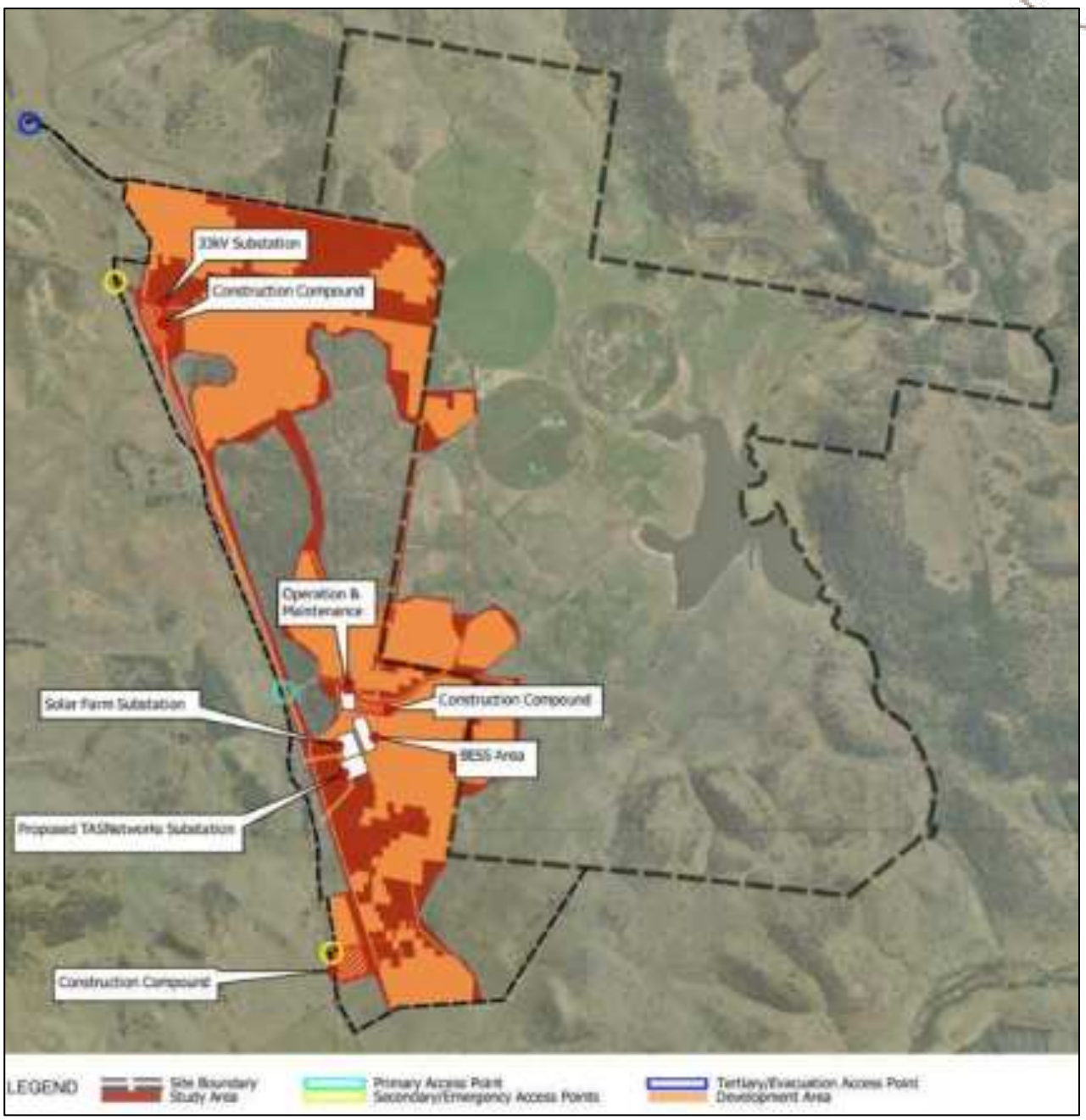


Figure 1 - Proposed Development

To ensure detail is visible in flood maps, this report has divided the site into north and south sections, hereafter referred to as Site North and Site South. These sections are divided by roughly the northern border of Catchment E, which is shown in Figure 3.

2. Data collection & review

This assessment relies upon a variety of freely available data sources as well as client supplied items. A range of sources have been used to collate information including desktop and site visits.

2.1 Topography

A site-wide 2-metre digital elevation model was downloaded from the ELVIS Elevation and Depth Data portal (https://elevation.fsdf.org.au/), which is a mosaic of 2-metre LIDAR survey and 10-metre photogrammetry imagery. The DEM was inspected to confirm its suitability for hydraulic modelling by comparing with measurements made during a site inspection and was found to be sufficiently accurate. It is assumed that due to the nature of the site being open greenfield that no significant terrain changes have been made since creation of the DEM, and therefore the DEM is sufficiently recent to enable hydraulic modelling. Hydraulic controls such as roads and culverts at site are also assumed to be unchanged since the creation of the DEM.

2.2 Drainage culverts

Several drainage culverts are present through the site and are generally cross under Highland Lakes Road. Hydraulic controls such as these culverts have the potential to impact flow through the site, so an inspection was undertaken on 18/03/2024 to measure culvert dimensions and qualitatively assess culvert blockage and scour. Pictures of the culverts are presented within Appendix D. For culverts that could not be assessed due to access constraints during the inspection, measurements were taken using the 2-metre Digital Elevation Model to inform the invert levels upstream and downstream of the culvert. The information gathered as part of this exercise was applied in the hydraulic model and is summarised in Table 1.



Figure 2 - Culverts throughout site

Table 1 - Culvert dimensions

Culvert	Type	Dimensions (mm)	Number of	% Blocked (existing condition)	Source
1	Pipe	400	1	60%	Measured during site inspection
2	Box	1800 x 1800	3	0%	Measured during site inspection
3	Box	1800 x 1800	3	10%	Measured during site inspection
4	Pipe	600	1	40%	Measured during site inspection
5	Not applied in model – outside of hydraulic domain				
6	Not applied in model – outside of hydraulic domain				
7	Pipe	1200 x 900	2	Unknown	Measured using 2m DEM. Blockage assumed.

All culvert upstream and downstream invert levels have been approximated using a 2-metre DEM. Using the onsite estimated % blocked values within the flood modelling is a reasonable approach which will generate slightly conservative flood extents. If these culverts are cleared, then the modelling results will be altered, although as they are relatively small culverts it is expected that the change would be extremely minor.

2.3 Rainfall data

Rainfall Intensity-Frequency-Duration (IFD) data was sourced from the Bureau of Meteorology's Design Rainfall Data System. Use of BoM IFDs is industry standard and they are endorsed by Australian Rainfall and Runoff (ARR) 2019. A sample of three (3) IFDs throughout the site were examined and the most intense rainfalls applied in hydrologic modelling. These were sourced from -42.2313° S, 146.9315°E, which is approximately at the northern end of Catchment A.

2.4 Manning's 'n' Roughness values

Manning's n values represent surface friction and the capacity of a rough surface to dissipate flow energy. Manning's n can vary with water depth, as, for example, grass blades are pushed over by the passage of deeper, heavier flows. This is an important physical phenomenon to represent in a hydraulic model, especially in shallow-flow areas.

Manning's n values were estimated based on aerial photography and industry best practice guidelines, and are summarised in Table 2 below.

Table 2 - Manning's 'n' Roughness values

Material ID	Depth (m)	Manning's n	Description
1	0.03	0.25	Grass Floodplain
	0.2	0.1	
	1	0.055	
	2	0.042	
	3	0.04	
	5	0.035	
2	All	0.05	Bush
3	0.01	0.3	Streams
	0.1	0.1	
	0.15	0.09	
	0.25	0.07	
	0.5	0.04	
	1	0.03	
	2	0.025	
4	All	0.02	Road
5	All	0.05	Buildings
6	All	0.025	Farm Dams

3. Hydrologic assessment

3.1 Site Characteristics

Catchments and streams at site were manually delineated. An overview of the site and upstream catchments is presented below in Figure 3.

The site spans two distinct catchments; in the north, flows are conveyed from surrounding subcatchments A, B, C and D into Weasel Plains Creek basin, which is a tributary to the River Clyde. These subcatchments have a total area of approximately 28.8 km². At the southern end of site, Highland Lakes Road cuts through a gentle valley bounded by Catchment E, which has a total area of 7.25km² and drains south toward East Cluny. The northern and southern catchments are separated by a ridge roughly at the boundary of Catchment E and Catchment D.

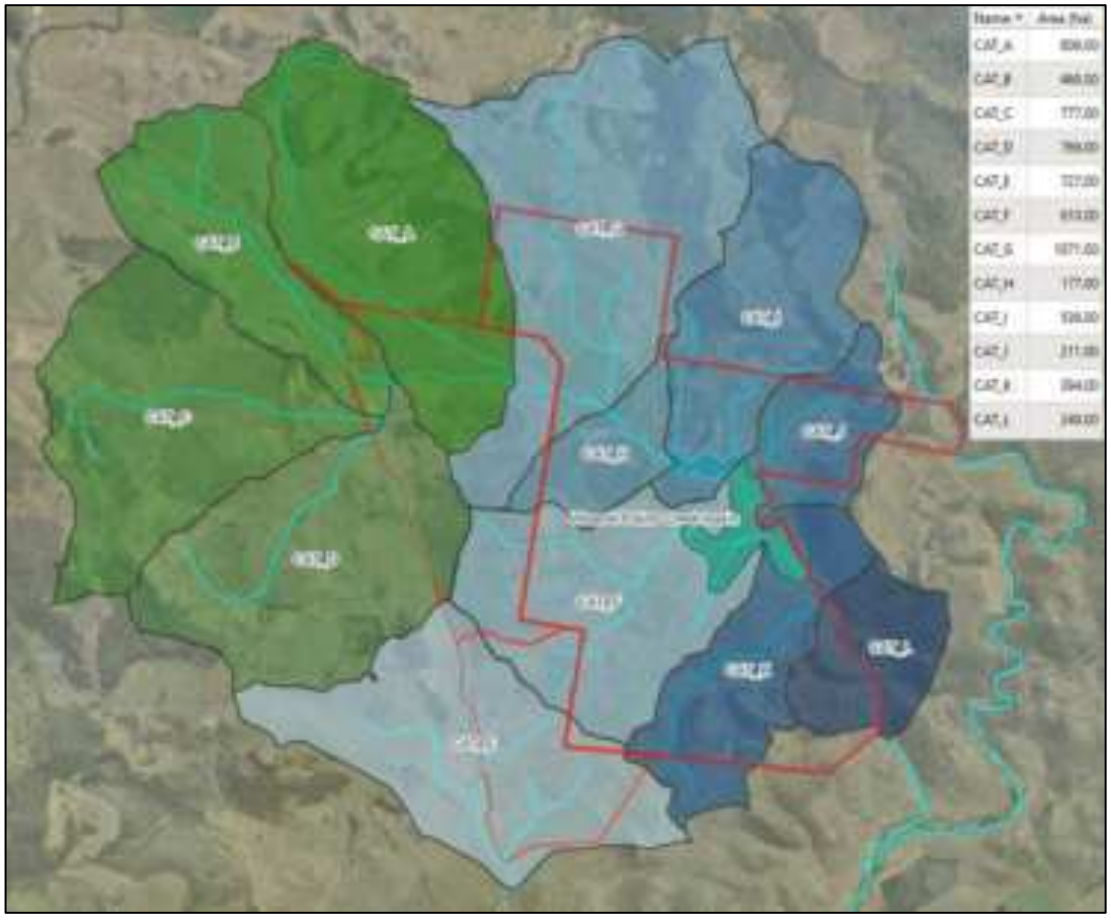


Figure 3 - Site overview: catchments (green), rain-on-grid catchments (blue), boundary of proposed development (red), and watercourses (teal).

3.2 Hydrologic modelling approach

A combination of traditional runoff-routing hydrologic modelling and Rain-on-Grid (RoG) methods were used to model flood conditions at site. External catchments were modelled using a traditional approach, and internal catchments using Rain-on-Grid.

The 1% Annual Exceedance Probability (AEP) storm was selected by the client as the design event. A 100-year Representative Concentration Pathway (RCP) of 8.5 was applied to represent climate change. This equates to a 16.3% increase in rainfall.

A traditional hydrologic assessment was undertaken in accordance with ARR guidelines to estimate flows approaching the site boundary from upstream Catchments A, B, C and D, shown in Figure 3. Rain on Grid (RoG) hydrologic modelling techniques were used to estimate flows from remaining areas (blue), including Catchment E. The Rain on Grid approach is more appropriate as it can efficiently define flow behaviour in minor streams

The methodology applied is summarised as follows.

3.2.1 Traditional hydrologic modelling

- Pre-burst rainfall intensities, temporal and spatial patterns, climate change multipliers and losses were obtained from the ARR data hub. These included the following base data:
    - 22mm initial loss
    - 5.1mm/hour continuing loss
    - Median pre-burst rainfalls
    - Southern Slopes Tasmania Temporal Patterns
    - A rainfall intensity multiplier of 1.16 to represent a year 2090 RCP 8.5 climate change scenario
- Intensity-frequency-duration design rainfalls were obtained from the Bureau of Meteorology.
- An event-based RORB hydrologic model was prepared using the Watercom DRAINS software package. Nodes were placed at stream junctions, catchment centroids and outlets, and at stream intersections with the site boundary to enable the extraction of hydrographs for hydraulic modelling
- An Areal Reduction Factor of 0.895 was calculated to account for spatial rainfall variability and applied to the model
- RORB modelling parameters Kc and m were estimated using Tasmanian-specific equations. This gave values of 5.77 and 0.8, respectively
- Catchments were assumed to be 0% impervious.

3.2.2 Rain on Grid hydrologic modelling

- The critical storm at the outlet of the 2D domain was found to have a duration of 3 to 4.5 hours. This is in contrast with the critical storm for individual catchments, which was found to be 25 minutes. The 270-minute storm was selected for the rain-on-grid component of hydrologic modelling for the remaining site area. A hyetograph was produced using the most intense design rainfalls described above and was applied to the remaining site area using the TUFLOW software package.
- A rainfall intensity multiplier of 1.16 was applied to represent a year 2090 RCP 8.5 climate change scenario

3.3 Hydrologic model results

Peak flows obtained through traditional hydrologic modelling are summarised in Table 3 below.

Table 3 - Peak flows from upstream catchments

Catchment	Peak 1% AEP flow (m^3/s)
CAT_EXG_A	15.4
CAT_EXG_B	8.6
CAT_EXG_C	12.1
CAT_EXG_D	12.4

Rain-on-Grid modelling results were extracted at Culvert 7. Three distinct catchments were found to drain to this location, with a combined 1% AEP flow rate of approximately $40m^3/s$. Rain-on-Grid results are best interpreted from the maps shown in the appendices.

3.4 Hydrologic model verification - RFFE

To ensure the results of the hydrologic modelling (with the adopted of the IL/CL loss model) are reasonable, the model was validated against the Regional Flood Frequency Estimate (RFFE) method. Developed by Australian Rainfall & Runoff, a RFFE utilises nearby gauged catchments to approximate the response times and losses of the area to estimate peak flows. Location and other input data for RFFE using Catchment A as the test catchment:

Table 4 - RFFE catchment inputs

Latitude (Outlet)	**-42.268**
Longitude (Outlet)	146.955
Latitude (Centroid)	-42.247
Longitude (Centroid)	146.942
Catchment Area	$8.05km^2$

The model results are presented below:

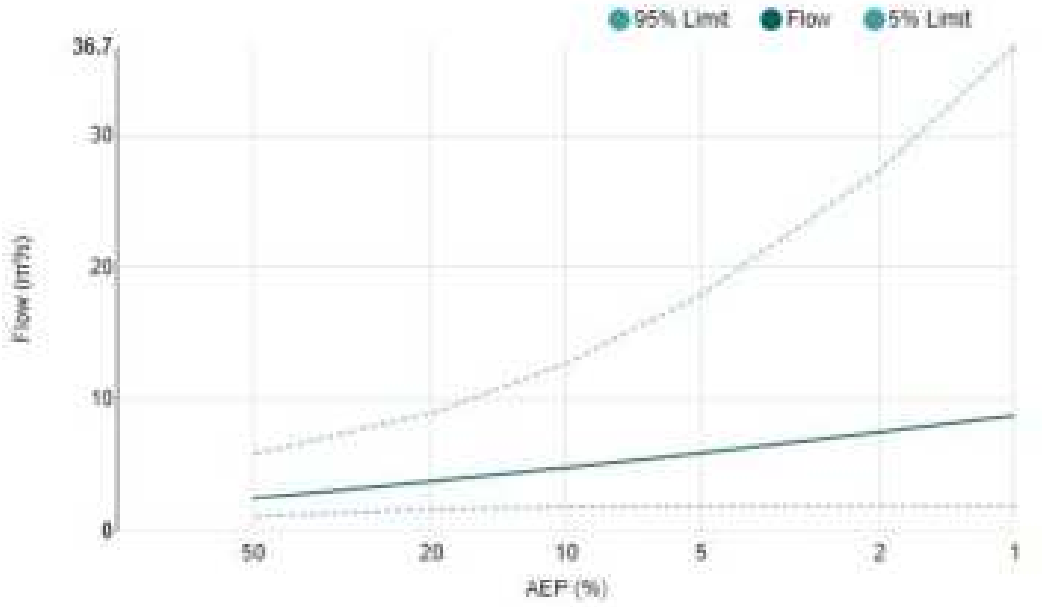


Figure 4 - RFFE peak flow chart – Catchment A

Table 5 - RFFE Confidence Limits – Catchment A

AEP (%)	Discharge (m^3/s)	Lower Confidence Limit (5%) (m^3/s)	Upper Confidence Limit (95%) (m^3/s)
50	2.48	1.07	5.82
20	3.82	1.65	8.94
10	4.84	1.83	12.7
5	5.92	1.88	17.5
2	7.46	1.90	27.3
1	8.73	1.88	36.7

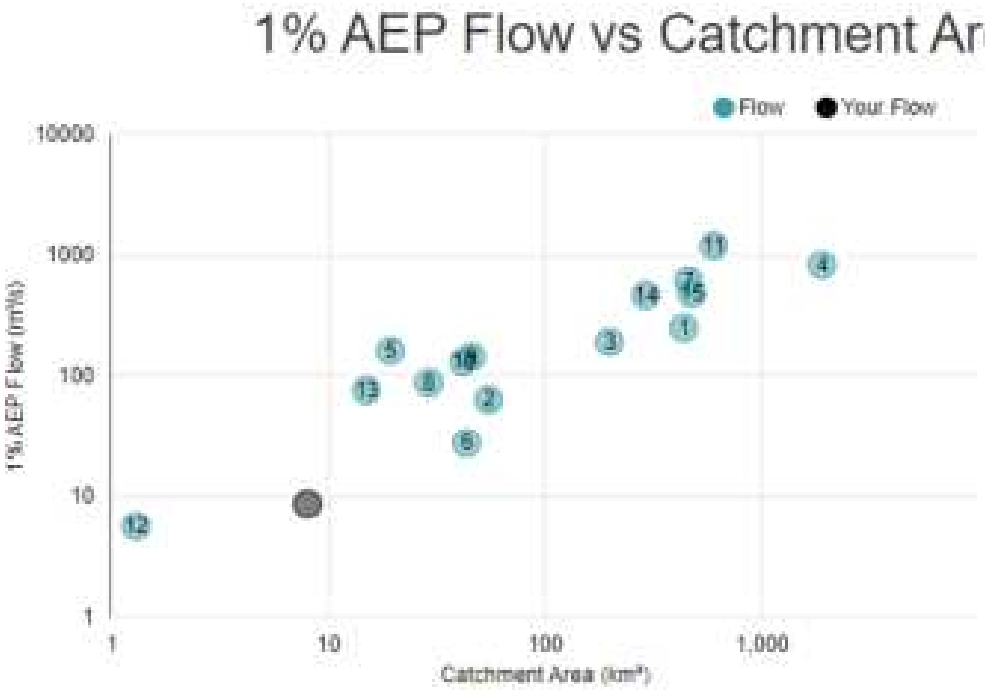


Figure 5 - Flow Vs. Catchment Area Comparison – Catchment A

The peak 1% AEP flow defined within the modelling outputs (15.4m^3/s) sits within the lower and upper confidence limits observed within Table 5 and also sits roughly within the line of best fit within Figure 5. It is also noted that catchment 13 featured in Figure 5 produces a much greater flow rate for a catchment area slightly larger suggesting that a flow rate greater than the RFFE value to not be unreasonable. The modelling results align with the outputs of the RFFE and this therefore suggests that the IL/CL modelling is appropriate.

4. Hydraulic assessment

A two-dimensional TUFLOW model was created to simulate flood behaviour throughout the site. Modelling has been carried out in accordance with the Australian Rainfall and Runoff 2019 guidelines.

4.1 Methodology and Assumptions

An event-based model representing the 1% AEP storm and pre-development site conditions was set up following a typical TUFLOW workflow; shapefiles were created in QGIS Geographic Information Systems software and read into the various TUFLOW control files.

The following assumptions were made to facilitate the simulation:

- Downstream boundary conditions were modelled as stage-discharge relationships. The energy gradient was set to approximate the upstream terrain grade. Downstream boundary conditions were located far enough from points of interest to ensure that tailwater conditions were not impacting results.
- Default Initial and Continuing Loss values were sourced from the ARR data hub and applied as soil loss values in the model. These are:
    - IL: 22 mm
    - CL: 5.1 mm/hr
- A cell size of 4m x 4m was used to ensure that roads, small watercourses and culverts are accurately represented. Sub-grid sampling was enabled to ensure the model considers fine topographic features.
- Two-dimensional Z-lines were used as breaklines to align cell faces to Highland Lakes Road and ensure flows are realistically conveyed through table drains
- A blockage factor was applied to the culverts based on photos taken during site inspection (presented in Appendix D). Culvert 7 was not inspected, so a value was assumed. These were:
    - Culvert 1: 60% blockage
    - Culvert 2: 0% blockage
    - Culvert 3: 10% blockage
    - Culvert 4: 40% blockage
    - Culvert 7: 20% blockage
- Using the onsite estimated % blocked values within the flood modelling is a reasonable approach which will generate slightly conservative flood extents. If these culverts are cleared, then the modelling results will be altered, although as they are relatively small culverts it is expected that the change would be extremely minor.
- Culvert 7 is assumed to be a pair of 1.2x0.9 box culverts based on measurements take from the 2m DEM. This is a conservative estimate, which will have the effect of slightly overestimating upstream flood extents. Because upstream flows represent a category 5 hazard, a conservative assumption is the recommended approach.

4.2 Results

Flood maps are provided in Appendix A with associated commentary and recommendations on the outputs within Sections 5 & 6 and Appendix C.

4.2.1 Peak Hazard

The mapping of depth and velocity across the site allows for the generation of hazard mapping. The Australian Guide to Rainfall and Runoff 2019 sets out hazard banding by the following chart, Figure 6. The hazard is a product of the water

depth and velocity. While it doesn't strictly dictate where buildings can and cannot be placed, it is a useful guide given that people will be operating in and around the structures.

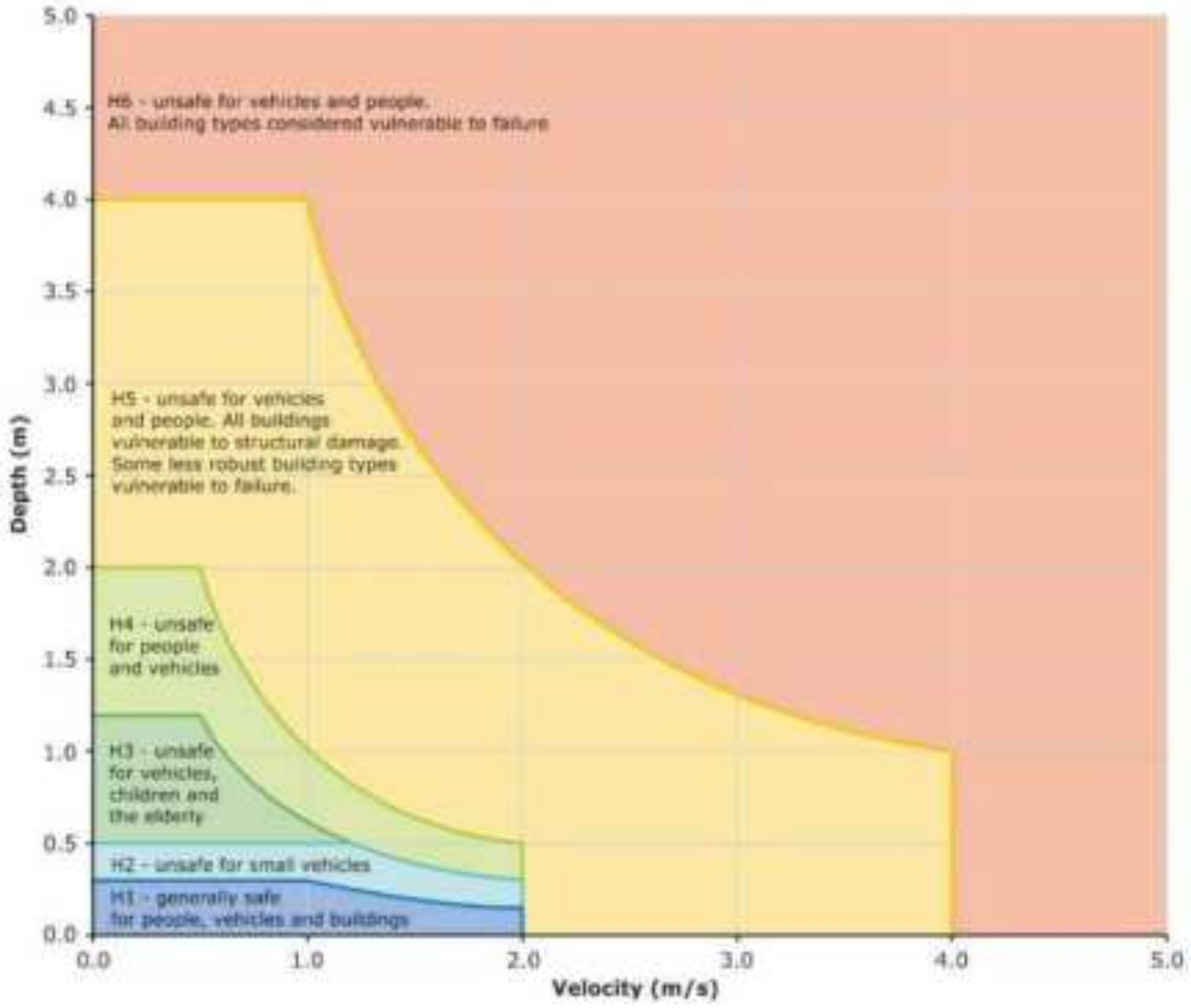


Figure 6 - Combined Flood Hazard Curves - ARR2019

5. Planning assessment

The development will be assessed against the *Tasmanian Planning Scheme – State Planning Provisions* and the *Central Highlands Local Provisions Schedule 2023*. The *Central Highlands Local Provisions Schedule 2023* contains no flood related provisions specific to the site. The proposal will need to demonstrate compliance with, amongst other things, the Natural Assets Code – Waterway and Coastal Protection Area (C7.0) and the Flood-Prone Areas Hazard Code (C12.0) of the Tasmanian Planning Scheme.

Figure 7 depicts the extent of these overlays at site. All watercourses throughout the site are impacted by the Waterway and Coastal Protection Area Overlay. No Flood-Prone Areas are located within site, but the proposal will need to consider this Code for development approval.

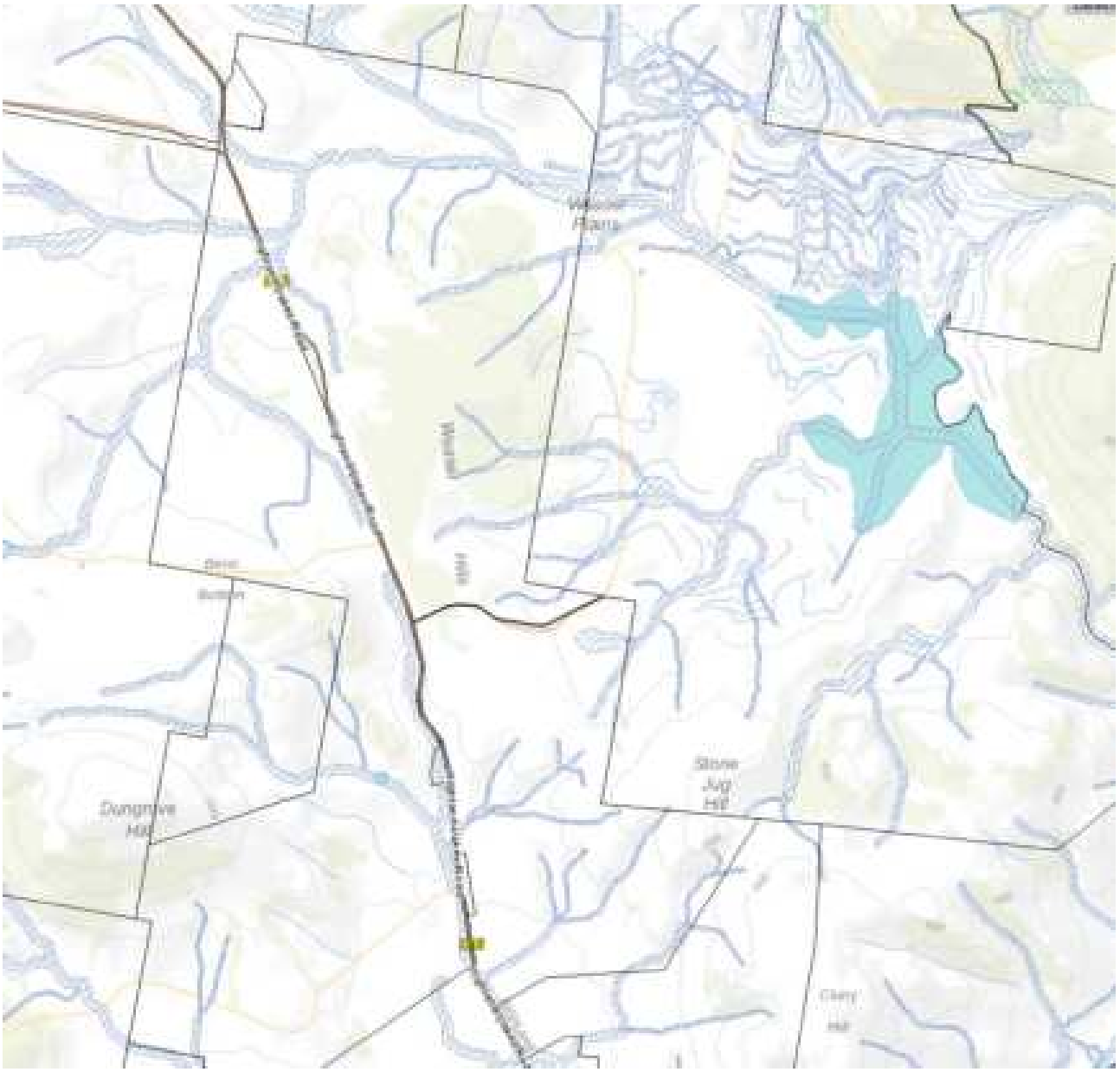


Figure 7 - Tasmanian Planning Scheme - Code Overlay

Table 6 and Table 7 below present the relevant planning criteria and responses to either the acceptable solution or performance criteria.

Table 6 - C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area

Objective: That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

Acceptable Solution	Performance Criteria
A1 Buildings and works within a waterway and coastal protection area must: a) Be within a building area on a sealed plan approved under this planning scheme b) In relation to a class 4 watercourse, be for a crossing or bridge not more than 5m in width; or c) If within the spatial extent of tidal waters, be an extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway that is not more than 20% of the area of the facility existing at the effective date.	**P1.1** Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to: a) Impacts caused by erosion, siltation, sedimentation and runoff b) Impacts on riparian or littoral vegetation c) Maintaining natural streambank and streambed condition, where it exists d) Impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation e) The need to avoid significantly impeding natural flow and drainage f) The need to maintain fish passage, where known to exist g) The need to avoid land filling of wetlands h) The need to group new facilities with existing facilities, where reasonably practical i) Minimising cut and fill j) Building design that responds to the particular size, shape, contours or slope of the land k) Minimising impacts on coastal processes, including sand movement and wave action l) Minimising the need for future works for the protection of natural assets, infrastructure and property m) The environmental best practice guidelines in the Wetlands and Waterways Works Manual; and n) The guidelines in the Tasmanian Coastal Works Manual.

Objective: That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.	
	P1.2 Buildings and works within the spatial extent of tidal waters must be for a use that relies upon a coastal location to fulfil its purpose, having regard to: a) The need to access a specific resource in a coastal location b) The need to operate a marine farming shore facility c) The need to access infrastructure available in a coastal location d) The need to service a marine or coastal related activity e) Provision of essential utility or marine infrastructure; or f) Provisions of open space or for marine-related educational, research, or recreational facilities.
Response	
The proposed development will comply with A1. Buildings and other key infrastructure will be located outside of the waterways marked in the Code and those defined in the modelling.	

Table 7 - C12.6.1 Buildings and works within a flood-prone hazard area

Objective: That:

(a) building and works within a flood-prone hazard area can achieve and maintain a tolerable risk from flood; and

(b) buildings and works do not increase the risk from flood to adjacent land and public infrastructure.

Acceptable Solution	Performance Criteria
A1 No Acceptable Solution	**P1.1** Buildings and works within a flood-prone hazard area must achieve and maintain a tolerable risk from a flood, having regard to: (a) The type, form, scale and intended duration of the development (b) Whether any increase in the level of risk from flood requires any specific hazard reduction or protection measures (c) Any advice from a State authority, regulated entity or a council; and (d) The advice contained in a flood hazard report. **P1.2** A flood hazard report also demonstrates that the building and works: (a) Do not cause or contribute to flood on the site, on adjacent land or public infrastructure; and (b) Can achieve and maintain a tolerable risk from a 1% annual exceedance probability flood event for the intended life of the use without requiring any flood protection measures.

Response

P1.1(a) – The form and scale of the development will be minimised by locating assets outside of the flow paths outlined in the modelling.

P1.1(b) – The detailed design phase will address the specific hazard protection measures (such as cut off drains and bunding of critical infrastructure). It is noted that the primary approach is to locate solar panels outside of flow paths. Where additional measures are required to manage overland flow, these will be identified at a detailed design phase to ensure that as infrastructure design develops the flood related controls are appropriate.

P1.1(c) – Relevant authorities' advice will be observed to when received. This assessment has not identified any specific advice

P.1.1(d) –The development will comply with the recommendations in this report. Primarily to locate infrastructure outside of flow path location.

P1.2(a) – The proposed development will not contribute to flooding on this site or adjacent land. Flows will be contained to existing flow paths and directed to existing waterways.

P1.2(b) – Peak hazard ratings are in acceptable ranges and construction is proposed to avoid high hazard areas such as streams. See Appendix A for site hazard mapping.

6. Conclusions and Recommendations

A Hydrologic and Hydraulic assessment of the proposed solar farm development has been undertaken to identify and demonstrate the flood risks posed in the study area. The analysis follows the guiding principles outlined in the Australian Rainfall and Runoff 2019 for flood estimation. Conclusions and recommendations for the site are:

- All infrastructure is generally well positioned, with suggestions presented in annotated hazard maps (Appendix C). It is recommended that these suggestions are followed to minimise potential flood risk impact.
- There are works currently situated over watercourses with a peak depths of over 1m. It is recommended that these works are relocated to ensure existing catchment hydrology is not disrupted, and that the development causes no worsening of flood conditions.
- In general, it is recommended that PV panels are kept outside H2-H6 hazard category areas, to ensure that the panels would not be damaged by flood waters and the form and scale of the development minimises disruption to existing flow paths. While solar panels can potentially operate in higher hazard areas, it is not known whether panels can withstand the forces of water expected. Further study could be undertaken to estimate the structural capacity of the panels and model the developed scenario to estimate impacts of the development on existing flow patterns. This could enable placement of panels in higher hazard areas. A post development scenario assessment would be needed if this approach is adopted to ensure that flood risk is not increased.
- Hardstand areas in Catchment E will increase the volume of runoff directed to the small group of dwellings downstream in East Cluny. This is unlikely to worsen flooding during frequent rainfall events, but during the 1% AEP event, could increase peak flows. Further analysis could be undertaken to determine the most suitable location for hardstand areas and inform drainage design to minimise impact on the downstream group of dwellings.
- The present analysis does not consider any earthworks. Subsequent analysis should be undertaken to provide finished floor levels (FFL) for sensitive infrastructure and inform drainage design, with consideration of design layouts and earthworks. Finished floor levels (FFL) should include a freeboard above the 1% AEP depth, which is typically 300mm, depending on the sensitivity of the structure. Additional hydraulic studies should be undertaken to assess potential impacts to critical infrastructure such as batteries and transformers when earthworks and layouts are confirmed. Terrain in the present flood model is based on LIDAR and does not consider any earthworks. An additional hydraulic study will allow for the detailed design of additional drainage infrastructure to protect proposed assets.

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Appendices

Appendix A – Flood Maps

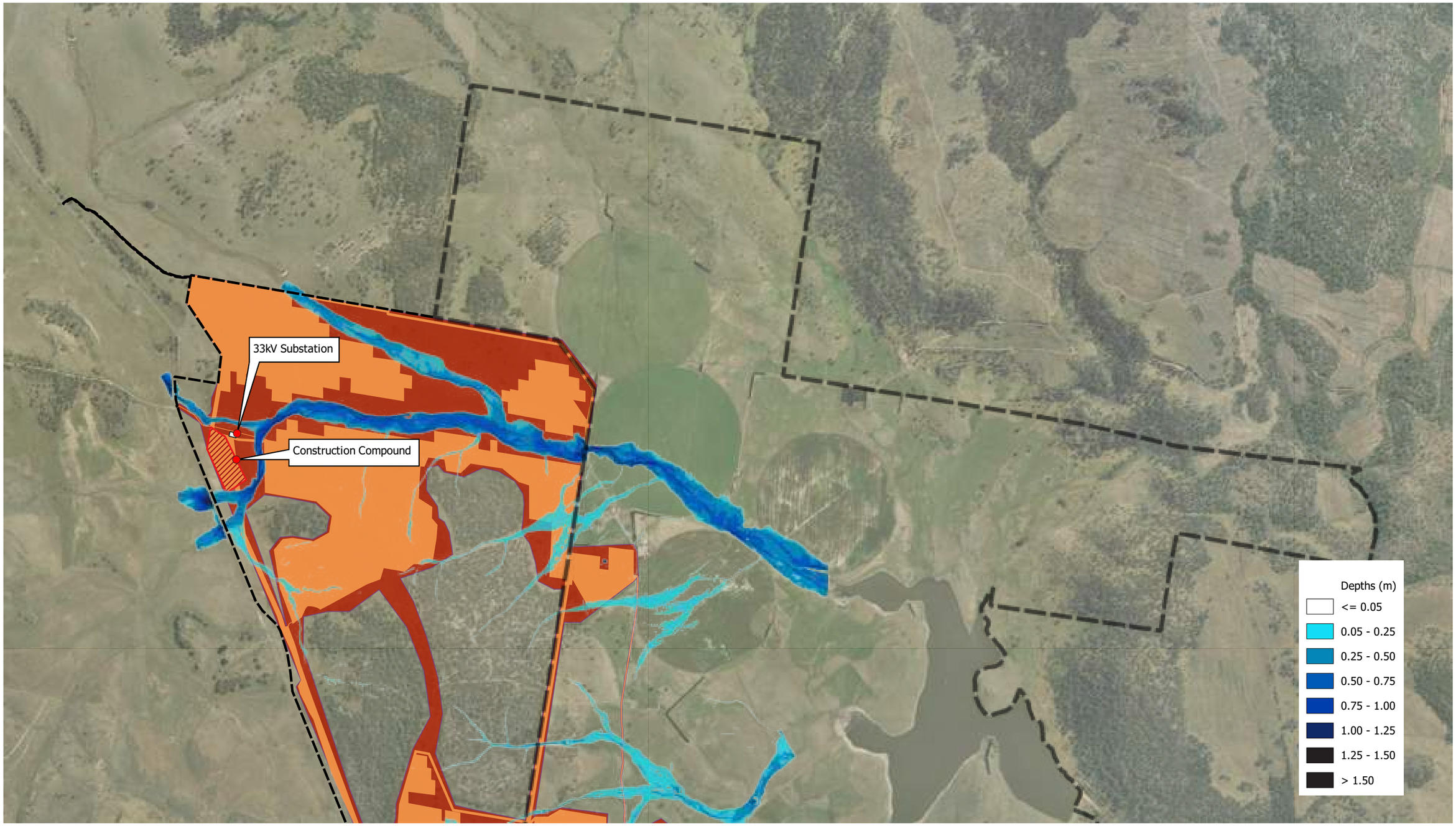


Figure A1: Peak Flood Depths

Weasel Solar Farm

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LEGEND

Site Boundary
Study Area

Development Area
BESS and Network Connection Components

Temporary Construction Compound

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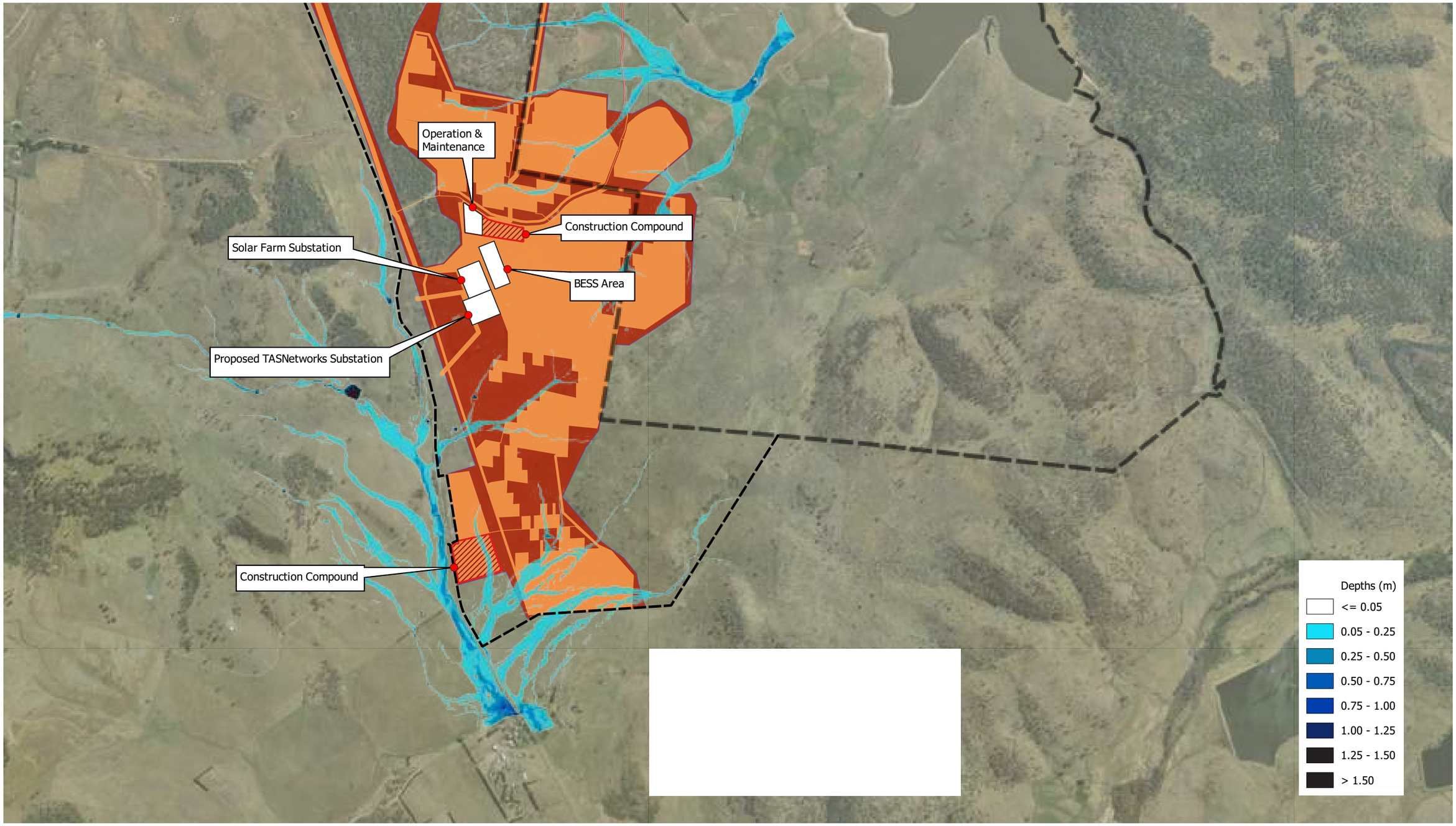


Figure A1: Peak Flood Depths

Weasel Solar Farm

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LEGEND

Site Boundary
Study Area

Development Area
BESS and Network Connection Components

Temporary Construction Compound

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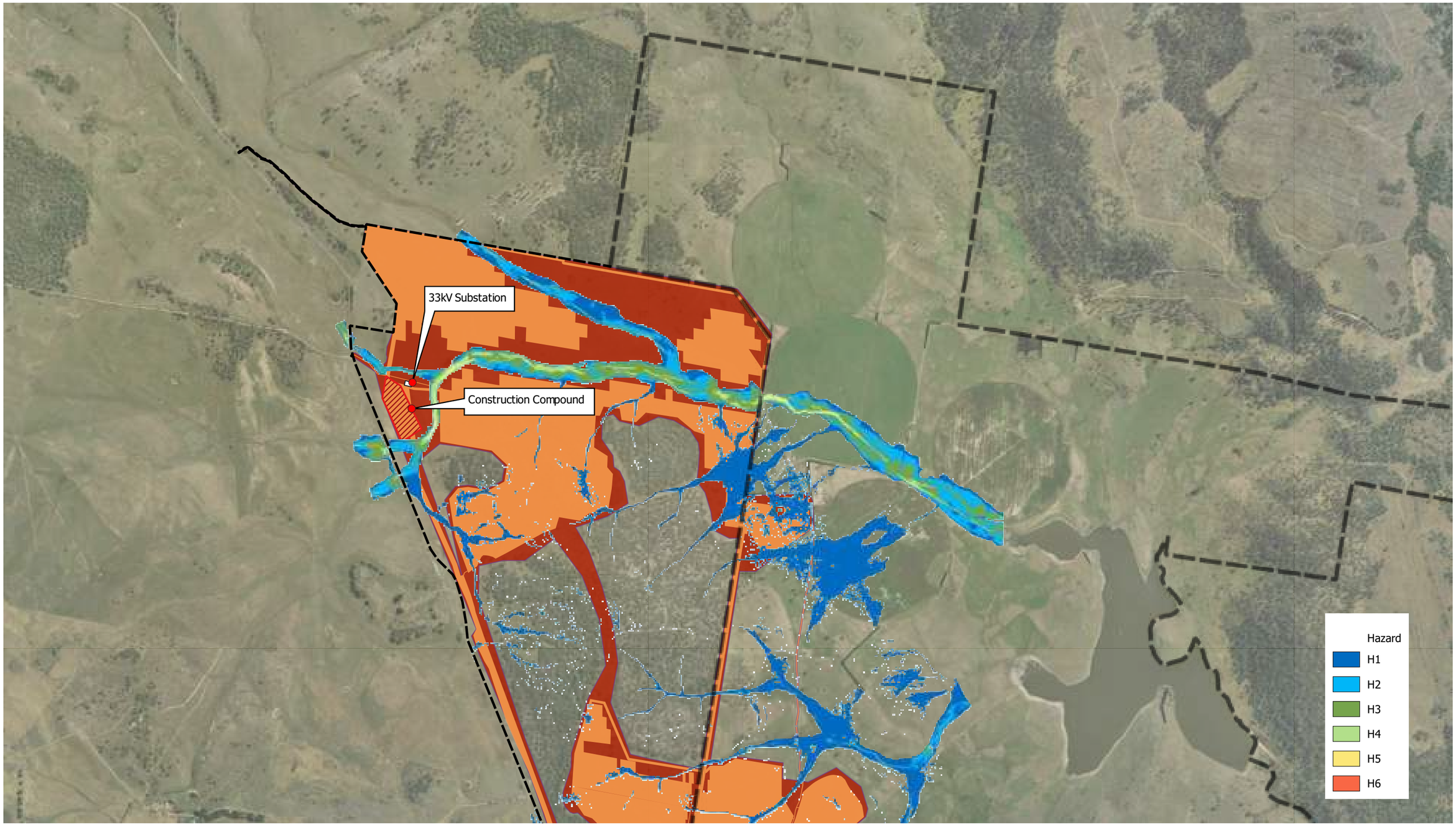


Figure A3: Peak Flood Hazard

LEGEND
Site Boundary
Study Area
Development Area
BESS and Network Connection Components
Temporary Construction Compound

Weasel Solar Farm

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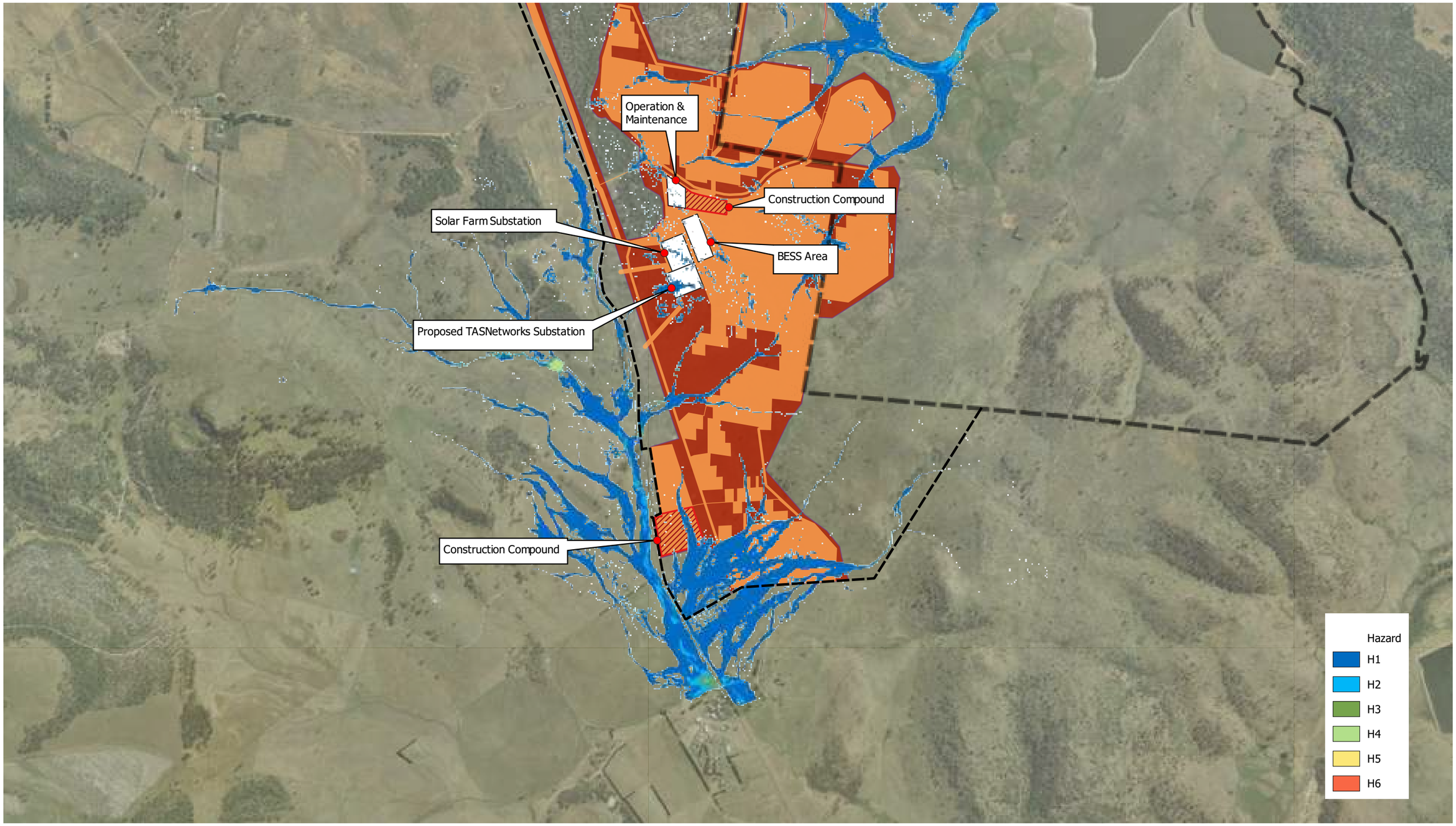


Figure A3: Peak Flood Hazard

LEGEND
Site Boundary
Study Area
Development Area
BESS and Network Connection Components
Temporary Construction Compound

Weasel Solar Farm

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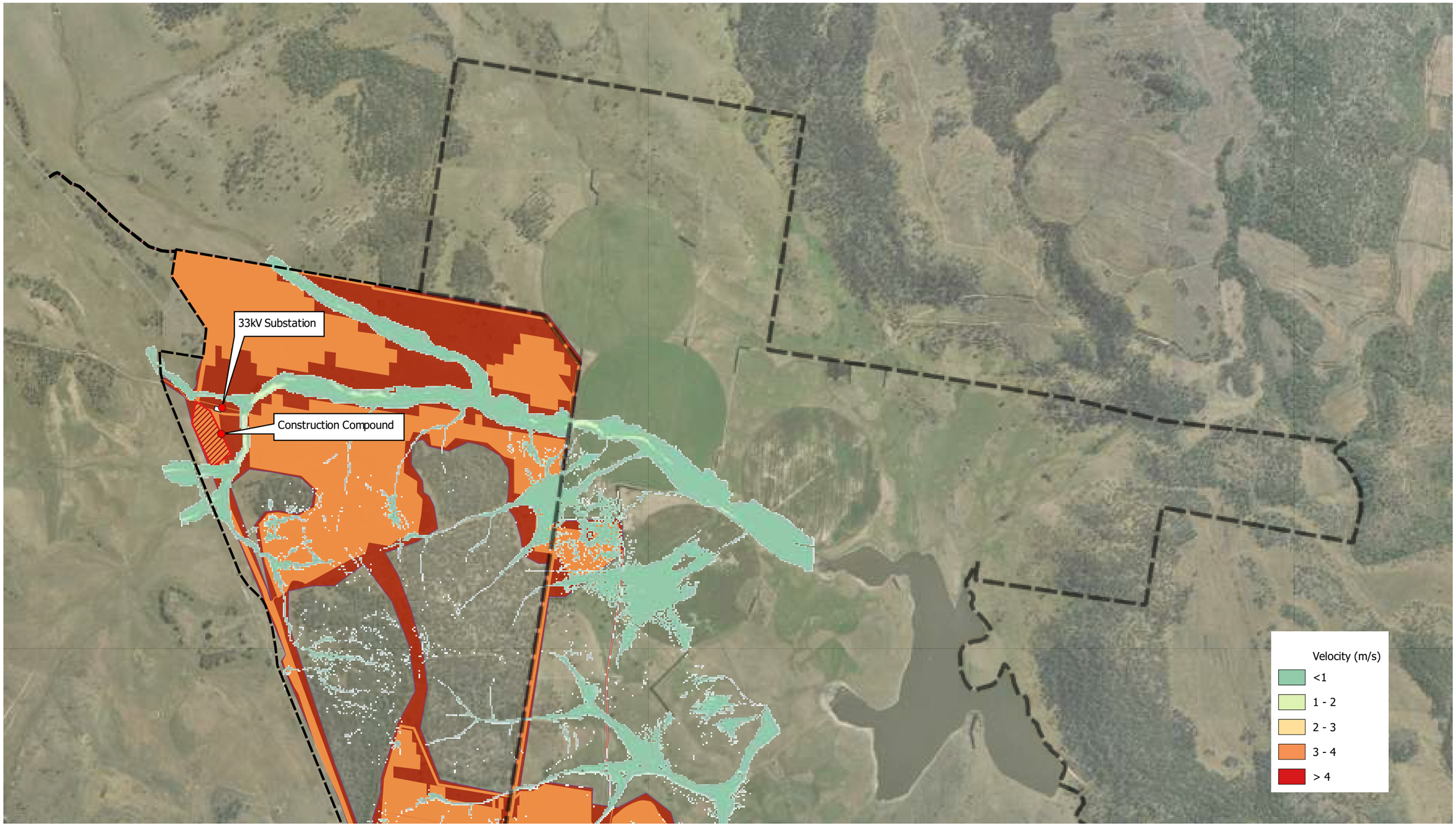


Figure A5: Peak Flood Velocities

LEGEND
Site Boundary
Study Area
Development Area
BESS and Network Connection Components
Temporary Construction Compound

Weasel Solar Farm

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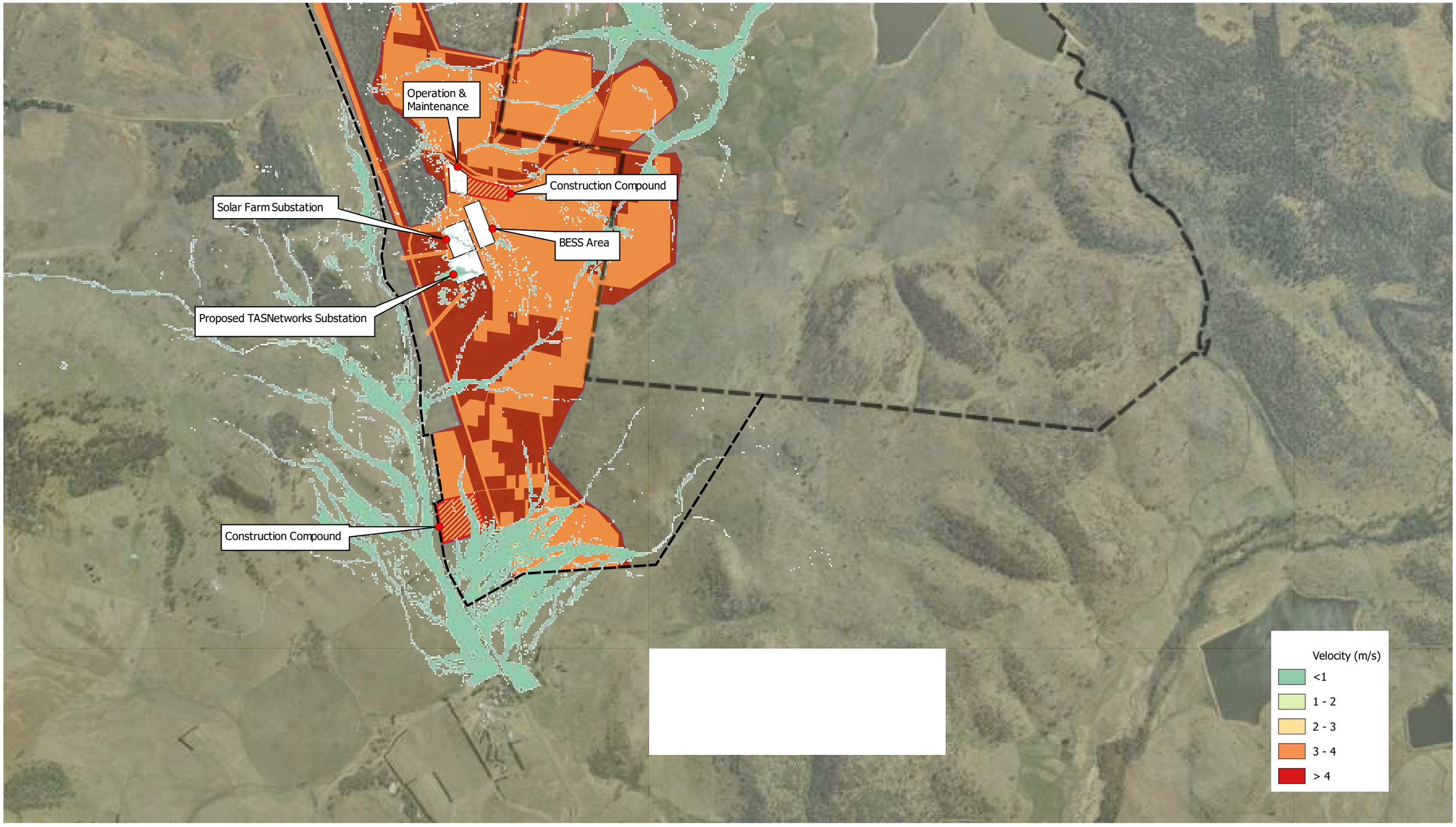


Figure A5: Peak Flood Velocities

LEGEND
Site Boundary
Study Area
Development Area
BESS and Network Connection Components
Temporary Construction Compound

Weasel Solar Farm

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Appendices

Appendix B – Proposed Development Site Plan

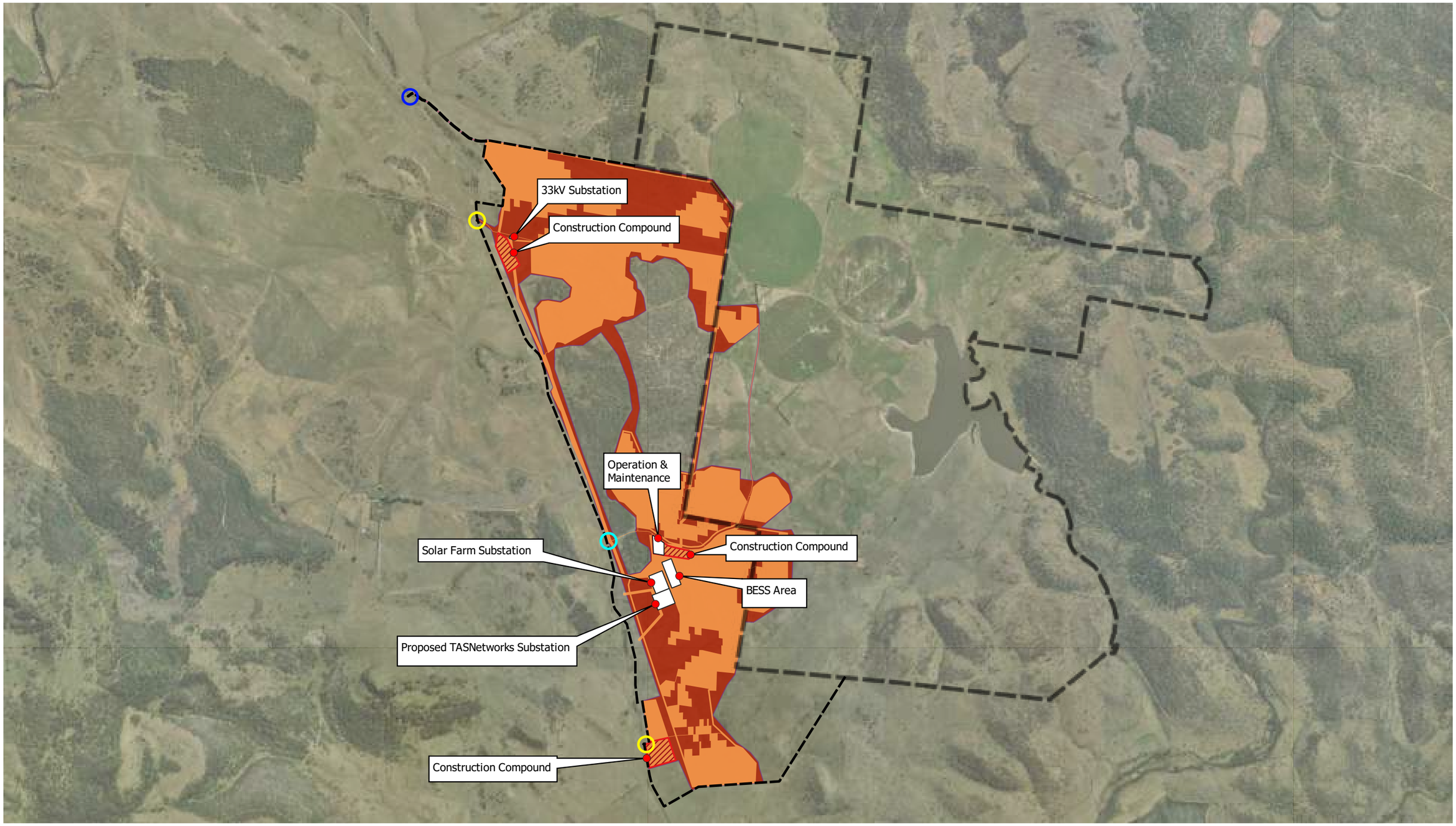


Figure B1: Site Plan

LEGEND

Site Boundary
Study Area

Primary Access Point
Secondary/Emergency Access Points

Tertiary/Evacuation Access Point
Development Area

Weasel Solar Farm

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Appendices

Appendix C – Annotated Site Plan Against Flood Hazard Maps

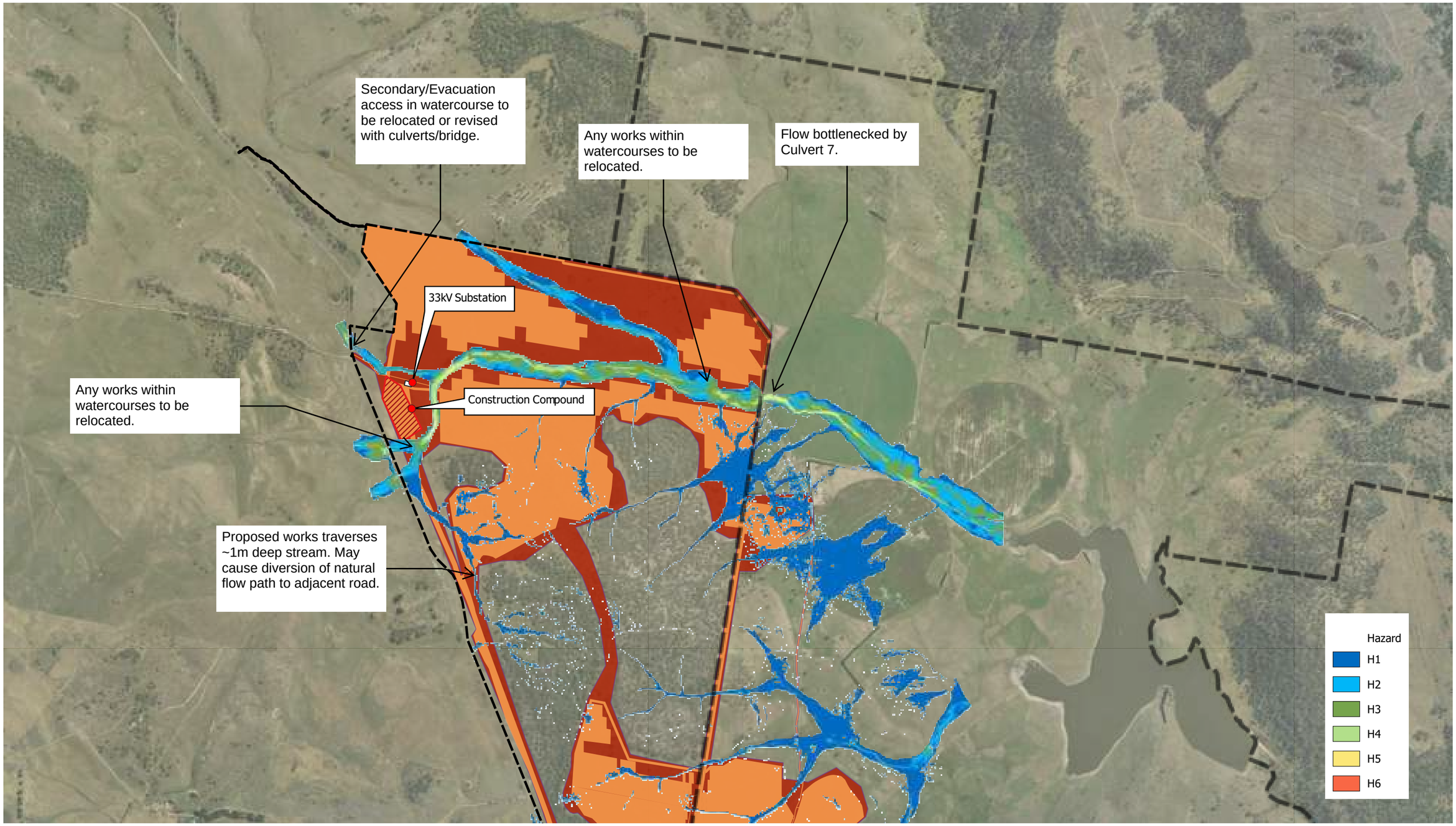


Figure A3: Peak Flood Hazard

LEGEND
Site Boundary
Study Area
Development Area
BESS and Network Connection Components
Temporary Construction Compound

Weasel Solar Farm

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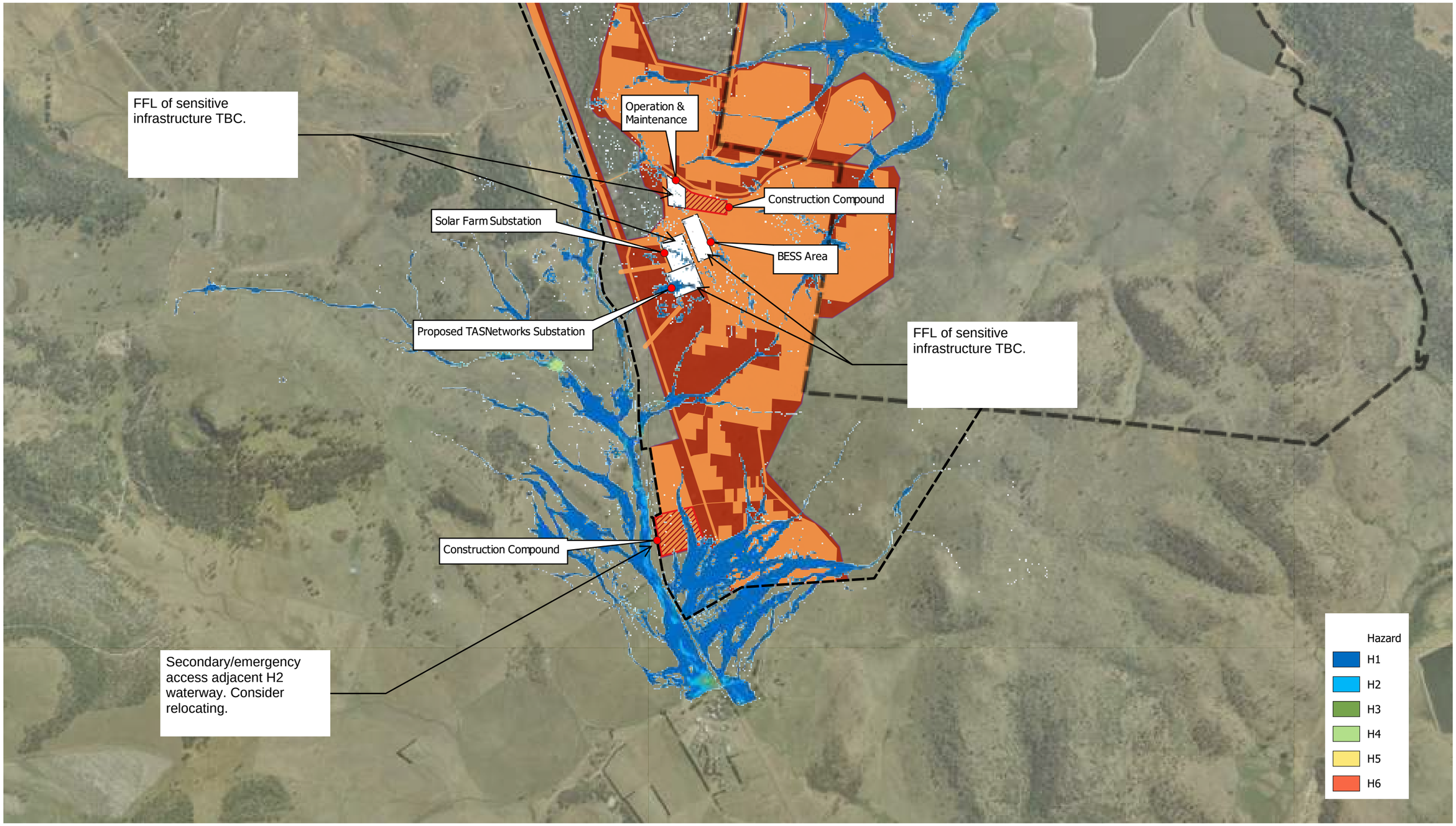


Figure A3: Peak Flood Hazard

LEGEND
Site Boundary / Study Area
Development Area / BESS and Network Connection Components
Temporary Construction Compound

Weasel Solar Farm

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DATA SOURCES: TheLIST Orthophoto

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Appendices

Appendix D – Site visit photos of culverts



Figure 8 - Culvert 1



Figure 9 - Culvert 2



Figure 10 - Culvert 3



Figure 11 - Culvert 4

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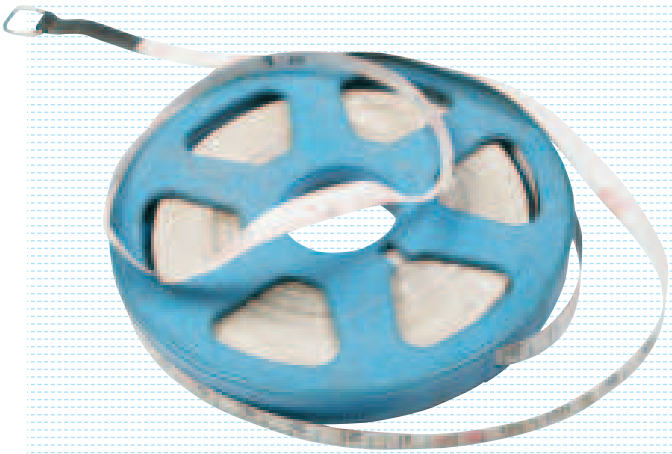
Weasel Solar Farm – Flood Impact Assessment

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Located nationally —
Melbourne
Sydney
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Weasel Solar Farm Project
Central Highlands Region, Tasmania

Aboriginal Heritage Assessment Report
Final Version 1

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Robert Luxmoore

26.8.2024

CULTURAL HERITAGE MANAGEMENT AUSTRALIA

Report Version Control

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Draft Report V1	Proponent for review	27.5.2024
Final Draft Report V1	Aboriginal Heritage Tasmania	13.8.2024
Final Report version	Aboriginal Heritage Tasmania	26.8.2024

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Executive Summary

Project outline

The Weasel Solar Farm is a large-scale solar project. The proposed site for the Weasel Solar Farm is located around 9km north of the town of Bothwell, in the Central Highlands Region of Tasmania and is in the Local Government Area of the Central Highlands Council (see Figure 1). The site is situated on three rural properties:

- 'The Weasel' – 3415 Highland Lakes Road Bothwell TAS 7030 (Title Ref. 140433/1).
- 'Weasel Plains' - 3236 Highlands Lakes Road Bothwell TAS 7030 (Title Ref 140581/1).
- 'Rockford' – 3759 Highland Lakes Road Bothwell TAS 7030 (Title Ref 104298/1).

The potential overall development area for the Weasel Solar Farm encompasses approximately 435ha plus internal transmission corridors (see Figures 2 and 3).

Robert Luxmoore has been engaged by the proponent (TasFlo Pty Ltd) to undertake the design, planning and approvals process for the Weasel Solar Farm project. As part of this process, CHMA Pty Ltd and Aboriginal Heritage Officer (AHO) Rocky Sainty have been engaged to undertake an Aboriginal heritage assessment for the Weasel Solar Farm project. This report presents the findings of the Aboriginal heritage assessment.

Registered Aboriginal Sites in the Vicinity of the Study Area

As part of Stage 1 of the assessment process, a search was undertaken of the Aboriginal Heritage Register (AHR) to determine whether any registered Aboriginal heritage sites are located within, or in the general vicinity of the Weasel Solar Farm site. The search shows that there are a total of 28 registered Aboriginal heritage sites that are located within an approximate 5km radius of the Weasel Solar Farm site (search results provided on the 8.3.2024 by Hannah Waterhouse from AHT).

Based on the information generated from the AHR search results, none of these registered Aboriginal sites are situated within or in the immediate vicinity of the Weasel Solar Farm site. The closest registered Aboriginal sites are located on the west side of Highland Lakes Road, close to the junction with Waddamana Road. There are four sites clustered in this area (all artefact scatters). The closest site is AH468 which is situated around 105m to the west of the western boundary of the Weasel Solar Farm site. The other three sites are located between 800m and 1km to the west of the western boundary. The detailed AHR search results are presented in section 4.3 of this report.

Survey Results

No Aboriginal heritage sites or suspected Aboriginal heritage features were identified during the field survey assessment of the Weasel Solar Farm site. The field team were able to confirm that there are no rock outcrop features located within the project footprint that would be in any way suitable for occupation. The field survey was also

able to confirm that there is no evidence for Aboriginal stone quarry/procurement sites being located within the project footprint. The field team inspected all exposed rock outcrop areas and did not identify any stone materials that would be suited for artefact manufacturing. The occasional small quartzite nodules were identified in paddocks, however none of these nodules showed any evidence of having been modified. As part of the field survey assessment, the field team also inspected those mature Eucalypt trees within the project footprint for any signs of Aboriginal scarring. No signs of scarring were identified, and no cider gum trees were identified in the project footprint.

As detailed in section 4.3 of this report, a search of the AHR shows that there no registered Aboriginal sites located within or in the immediate vicinity of the project area. The closest registered site is AH468 which is situated around 105m to the west of the western boundary of the Weasel Solar Farm site. This assessment has therefore confirmed that there are no known Aboriginal heritage sites that are situated within the potential overall development area for the Weasel Solar Farm project.

There were some constraints in surface visibility experienced across the surveyed areas, with average surface visibility ranging between 30%-40%. Given these constraints, it can't be stated with absolute certainty that there are no undetected Aboriginal sites present within the proposed development area for the Weasel Solar Farm project.

In the predictive modelling developed for this project, it was anticipated that comparatively higher densities of sites and artefacts may be expected to occur in the northern portion of the Weasel Solar Farm site area, around the margins of Weasel Plains Creek. It was noted that micro-topography would be an important consideration, with sites most likely to be concentrated on elevated, level and well drained landscape units that sit above the flood plain and cold air drainage level of the creek. Away from Weasel Plains Creek, site densities would be expected to be low to very low.

Although no Aboriginal sites were identified in this northern portion of the study area, two specific areas were identified where it is assessed that there is an increased potential for artefact deposits to be present. These two locations have been designated as areas of Potential Archaeological Sensitivity (PAS1 and PAS2). Both areas are located along the margins of Weasel Plains Creek and encompass elevated landscape features that sit above the lower lying flood plains of the creek. Table i provides the summary details for the two identified PAS areas, with Figure i showing the location of the two PAS areas.

Besides these two PAS areas, no other specific locations of potential archaeological sensitivity were identified within the Weasel Solar Farm site. Overall, it is assessed that there is a low to very low potential for undetected Aboriginal sites to be present. The detailed survey results and discussions is presented in section 7 of this report.

Table i: Summary details for PAS1 and PAS2

AH No.	Grid References (GDA 94)	Description
PAS1	E496265 N5321267 E496226 N5321153 E496593 N5321134 E496533 N5321038	Area measures approximately 330m (east-west) x 120m and encompasses a section of the spine of an east-west trending spur line (slope gradients 2-5º). The spur line is bordered to the north and south by Weasel Plains Creek and a tributary of the creek, which merge at east termination point of spur. Soils across the area are grey/brown loams with reasonable depth. Area has been cleared of native vegetation and is covered with grasses. Surface visibility is 30%.
PAS2	E497246 N5321023 E497184 N5321116 E497274 N5321200 E497269 N5321137	Area measures approximately 130m (north-south) x 80m and incorporates a small rise that sits slightly above the northern margins of Weasel Plains Creek, 200m north of creek channel. Soils across the area are grey/brown loams with reasonable depth. Area has been cleared of native vegetation and is covered with grasses. Surface visibility is 30%.

Management Recommendations

Heritage management options and recommendations provided in this report are made on the basis of the following criteria.

- Consultation with Rocky Sainty (Aboriginal Heritage Officer).
- The outcomes of the Aboriginal Community Consultation process as documented in Appendix 2.
- The legal and procedural requirements as specified in the *Aboriginal Heritage Act 1975* (The Act), as summarised in section 9 of this report;
- The results of the investigation as documented in section 7 this report; and
- Background research into the extant archaeological and ethno-historic record for the study area and the surrounding region, as presented in sections 3 and 4 of this report.

Recommendation 1

No Aboriginal heritage sites or suspected Aboriginal heritage features were identified during the field survey assessment of the potential overall development area for the Weasel Solar Farm project. A search of the AHR shows that there are no registered Aboriginal sites that are located within or in the immediate vicinity of the site. On the basis of the above, it is advised that the current potential overall development area for the Weasel Solar Farm project will have no impacts on known Aboriginal sites, and therefore there are no Aboriginal heritage constraints, or legal impediments to the project proceeding.

Recommendation 2

Two areas of Potential Archaeological Sensitivity (PAS1 and PAS2) have been identified within the Weasel Solar Farm site. Both PAS areas are situated within the potential overall development area for the Weasel Solar Farm (see Figure i).

It is recommended that the preferred management option is to amend the current proposed development area for the Weasel Solar Farm to avoid impacting these two PAS areas.

If there is the potential that either PAS area may be impacted by the proposed solar farm development, then it is recommended that a limited sub-surface test pitting program should be implemented within the bounds of the PAS areas. The purpose of this test pitting program will be to confirm the presence absence of artefact deposits in these areas and if artefact deposits are confirmed, then to ascertain the nature and extent of these deposits. The scope and requirements of the sub-surface test pitting program should be ratified with AHT prior to the test pitting being implemented. This would involve the development of an approved Method Statement for these works. The findings of the test pitting program should be presented in a report which would act as an addendum to this report. The report would include management recommendations for any further requirements that may apply to these PAS areas and obligations regarding managing any identified Aboriginal cultural values.

All Aboriginal relics are protected under the *Aboriginal Heritage Act 1975* (The Act) and it is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. The two PAS areas are located on Privately owned land. Any test pits excavated on privately owned land will not require a Permit. However, if Aboriginal cultural materials or suspected features are identified during the test pitting program then test pitting works at that test pit location will cease and AHT will be contacted and advised of the find. Test pitting works at the location of the identified find cannot re-commence until such time as a Permit has been obtained.

Recommendation 3

Besides PAS1 and PAS2, it is assessed that there is generally a low to very low potential for undetected Aboriginal heritage sites to occur within the current potential overall development area for the Weasel Solar Farm. However, if, during the course of the proposed development works, previously undetected archaeological sites or objects are located, the processes outlined in the Unanticipated Discovery Plan should be followed (see Appendix 1). A copy of the Unanticipated Discovery Plan (UDP) should be kept on site during all ground disturbance and construction work. All construction personnel should be made aware of the Unanticipated Discovery Plan and their obligations under the *Aboriginal Heritage Act 1975* (the Act). This could be facilitated through the implementation of a Cultural Heritage Awareness induction for contractors and personnel.

Recommendation 4

If the current potential overall development area for the Weasel Solar Farm. changes, then additional survey assessments will need to be undertaken for areas not covered by the current assessment.

Recommendation 5

Copies of this report should be submitted to Aboriginal Heritage Tasmania (AHT) for review and comment.

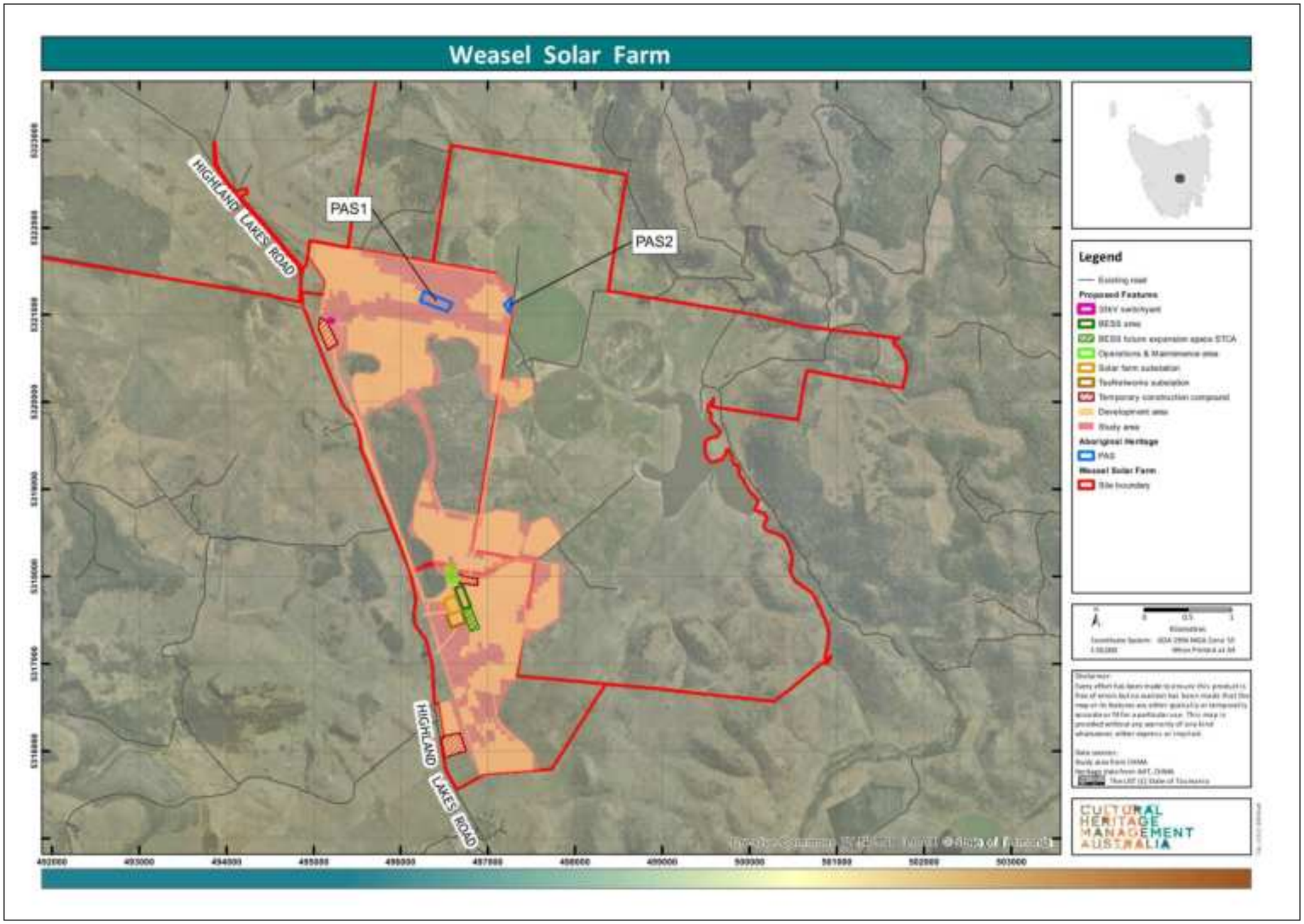


Figure i: Aerial map showing the location of PAS1 and PAS2 in relation to the proposed potential overall development area

1.0 Project Outline

1.1 Project Details

The Weasel Solar Farm is a large-scale solar project. The proposed site for the Weasel Solar Farm is located around 9km north of the town of Bothwell, in the Central Highlands Region of Tasmania and is in the Local Government Area of the Central Highlands Council (see Figure 1). The site is situated on three rural properties:

- 'The Weasel' – 3415 Highland Lakes Road Bothwell TAS 7030 (Title Ref. 140433/1).
- 'Weasel Plains' - 3236 Highlands Lakes Road Bothwell TAS 7030 (Title Ref 140581/1).
- 'Rockford' – 3759 Highland Lakes Road Bothwell TAS 7030 (Title Ref 104298/1).

The potential overall development area for the Weasel Solar Farm encompasses approximately 435ha, containing approximately 400Ha of solar panels with a nameplate capacity of approximately 200MWp AC. It will be accompanied by a battery energy storage system (BESS) and electricity infrastructure including inverters and a switchyard containing an electrical substation to feed into the existing 220kV transmission line. The proposal includes land for construction, maintenance, and operation, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, and landscaping. Figures 2 and 3 show the potential overall development area for the Weasel Solar Farm project.

The Weasel Solar Farm is part of a larger 'Highlands Renewable Energy Hub' concept – a multifaceted landowner-led renewable energy concept with the aim to create local jobs and lower electricity costs for Bothwell and the Central Highlands region. The Highlands Renewable Energy Hub comprises this project, along with a potential Wind Farm and Renewable Energy Business Park. The project will be connected to the National Energy Market (NEM) via an interconnection to the existing TasNetworks 220 kV transmission line that lies within the western boundary of the site, parallel to Highland Lakes Road.

Each component of the Highlands Renewable Energy Hub will require separate approval processes. This project is solely focused on the solar and BESS application, including connection to the grid, access roads and associated works (As shown in Figures 2 and 3).

Robert Luxmoore has been engaged by the proponent (TasFlo Pty Ltd) to undertake the design, planning and approvals process for the Weasel Solar Farm project.
As part of this process, CHMA Pty Ltd and Aboriginal Heritage Officer (AHO) Rocky Sainty have been engaged to undertake an Aboriginal heritage assessment for the Weasel Solar Farm project. This report presents the findings of the Aboriginal heritage assessment.

1.2 Aims of the Investigation

The principal aims of this assessment are as follows.

- To undertake an Aboriginal cultural heritage assessment for the potential overall development area for the Weasel Solar Farm project (the study area as shown in Figures 1-3). The assessment is to be compliant with both State and Commonwealth legislative regimes, in particular the intent of the *Aboriginal Heritage Act 1975* and the associated *Aboriginal Heritage Standards and Procedures (2023).*
- Search the Aboriginal Heritage Register (AHR) to identify previously registered Aboriginal heritage sites within and in the general vicinity of the study area.
- Undertake relevant archaeological, environmental and ethno-historical background research to develop and understanding of site patterning within the study area.
- To locate, document and assess any Aboriginal heritage sites located within the study area.
- To assess the archaeological and cultural sensitivity of the study area.
- To assess the scientific and Aboriginal cultural values of any identified Aboriginal cultural heritage sites located within the study area.
- Consult with (or ensure the Aboriginal community representative consults with) Aboriginal organisation(s) and/or people(s) with an interest in the study area in order to obtain their views regarding the cultural heritage of the area.
- To develop a set of management recommendations aimed at minimising the impact of the proposed construction of the Weasel Solar Farm on any identified Aboriginal heritage values.

1.3 Project Methodology

A three-stage project methodology was implemented for this assessment.

Stage 1 (Pre-Fieldwork Background Work)

Prior to fieldwork being undertaken, the following tasks were completed by CHMA staff.

Consultation with Aboriginal Heritage Tasmania

Aboriginal Heritage Tasmania (AHT) was contacted and informed that an Aboriginal heritage assessment was to be undertaken for the Weasel Solar Farm project. As part of this initial contact a search request of the Aboriginal Heritage Register (AHR) was submitted to AHT in order to ascertain the presence of any previously registered sites in the vicinity of the study area (search submitted on the 27.2.2024).

Consultation with Rocky Sainty (Aboriginal Heritage Officer)

Rocky Sainty is the designated Aboriginal Heritage Officer for the present investigations. As part of Stage 1 works Stuart Huys (CHMA archaeologist) and Rocky Sainty were in regular contact. The main purpose of this contact was to discuss the scope of the present investigations, to ratify the proposed methodology for the investigations and to co-ordinate the timeframes for implementing field work.

The collation of relevant documentation for the Project

The following documentation was collated for this project.

- A review of the relevant heritage registers (AHR) and the collation of information pertaining to any registered heritage sites located within the general vicinity of the study area.
- Maps of the study area.
- Relevant reports documenting the outcomes of previous Aboriginal heritage studies in the vicinity of the study area.
- Ethno-historic literature for the region.
- References to the land use history of the study area.
- Environmental information for the study area.
- Geotechnical information for the study area, including soil and geology data.

Stage 2 (Field Work)
Stage 2 entailed the fieldwork component of the assessment. The field survey was undertaken by Stuart Huys and Shay Hannah) (CHMA archaeologists) and Rocky Sainty (Aboriginal Heritage Officer) and was implemented over a period of 5 days (25.4.2024, 26.4.2024, 29.4.2024, 30.4.2024, 1.5.2024). The primary focus of the field survey assessment was the proposed potential overall development area for the Weasel Solar Farm project, which encompasses approximately 435ha. The field team walked a total of 68.45kms of survey transects across this area with the average width of the transects being 10m. Section 6 provides further details as to the survey coverage achieved within the study area.

The results of the field investigation were discussed between Rocky Sainty Shay Hannah and Stuart Huys. This included the potential cultural and archaeological sensitivity of the study area, and possible management options.

Stage 3 (Report Production)
Stage three of the project involves the production of a Draft and Final Report that includes an analysis of the data obtained from the field survey, an assessment of archaeological sensitivity and management recommendations. The report was prepared by Stuart Huys (CHMA), in liaison with Rocky Sainty (Aboriginal Heritage Officer). The report has been structured to comply with the standards and requirements of the current *Aboriginal Heritage Standards and Procedures* prepared by AHT.

A draft copy (one electronic copy) of the report has been submitted to the proponent and AHT for review. The draft report has also been sent out to a range of Tasmanian Aboriginal organisations for review and comment. The outcomes of the consultation process are presented in Appendix 2 of this report.

1.4 Project Limitations
All archaeological investigations are subject to limitations that may affect the reliability of the results. The main constraint to the present investigation was restricted surface visibility due primarily to vegetation cover. Surface visibility across the project footprint was restricted to an estimated average of between 30% and 40%. In the context of Tasmania, this level of average surface visibility is comparatively reasonable. Numerous erosion scalds, graded vehicle tracks and

cleared areas were present within the surveyed study area footprint, and these provided locales of improved visibility. The constraints in surface visibility limited the effectiveness of the survey assessment to some degree. The issue of surface visibility is further discussed in Section 6 of this report.



Plate 1: Rocky Sainty, the Aboriginal Heritage Officer (AHO) for this project

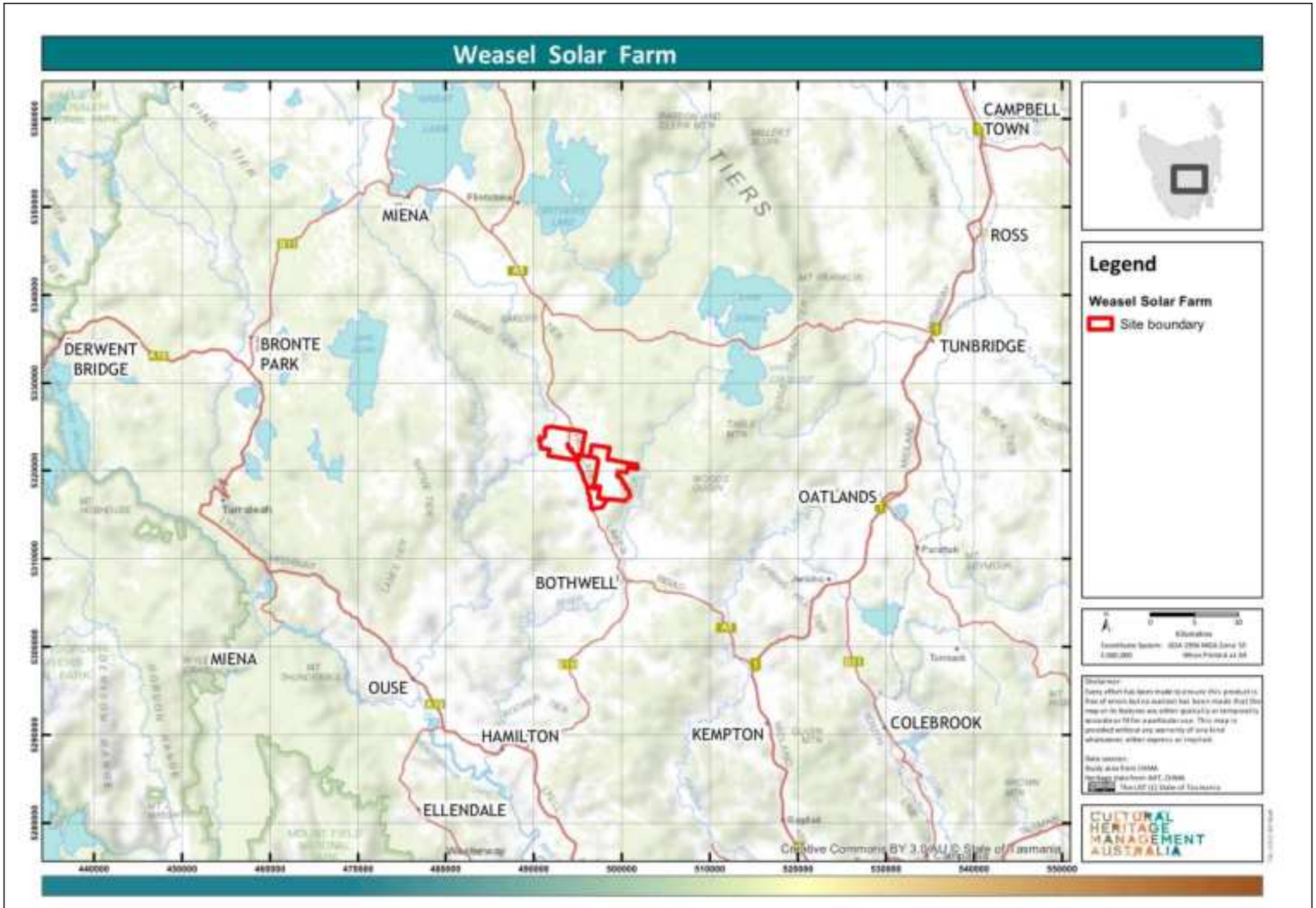


Figure 1: Topographic map showing the general location of the Weasel Solar Farm site in the Central Highlands Region of Tasmania

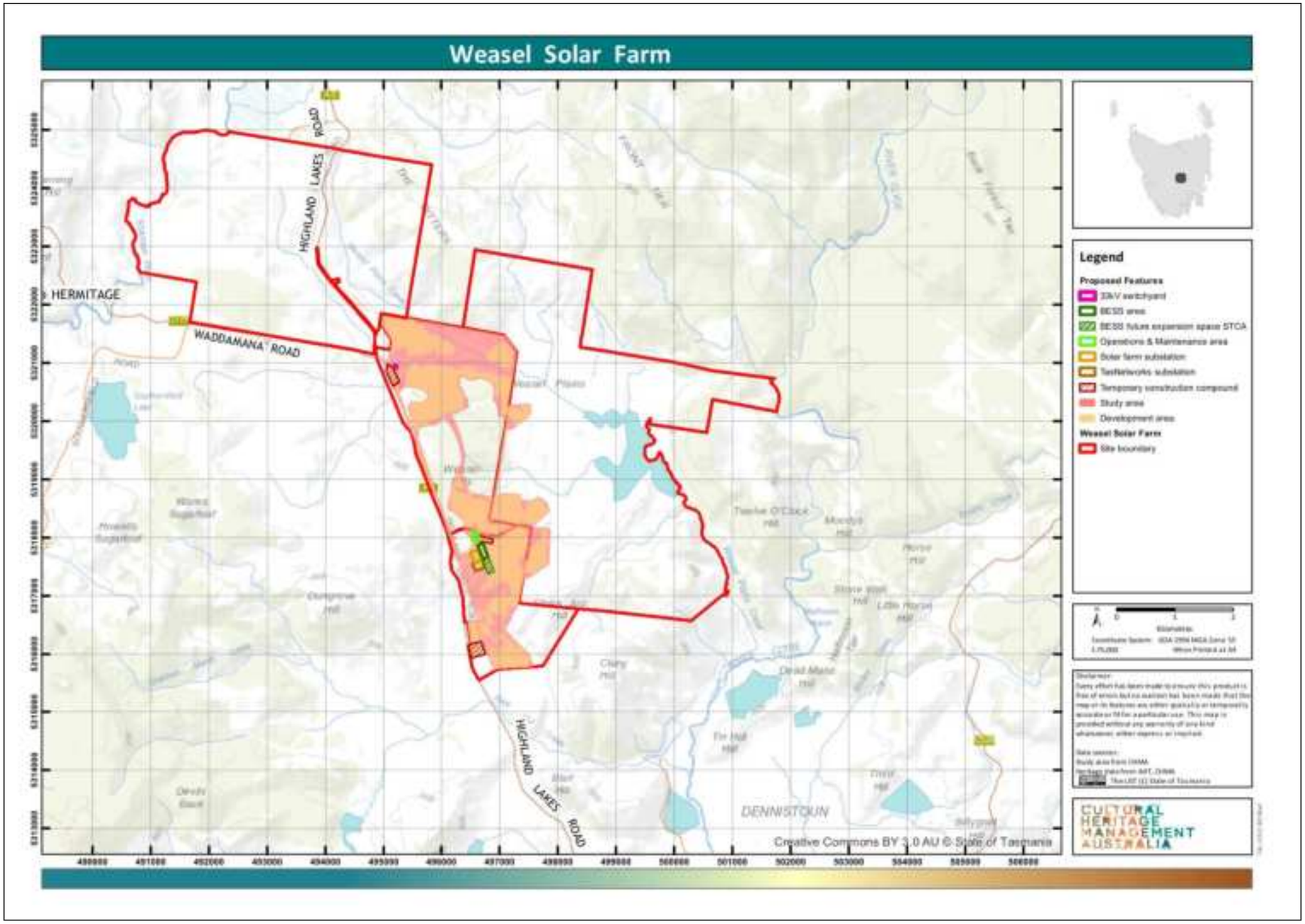


Figure 2: Topographic map showing the landscape setting and potential overall development area for the Weasel Solar Farm project

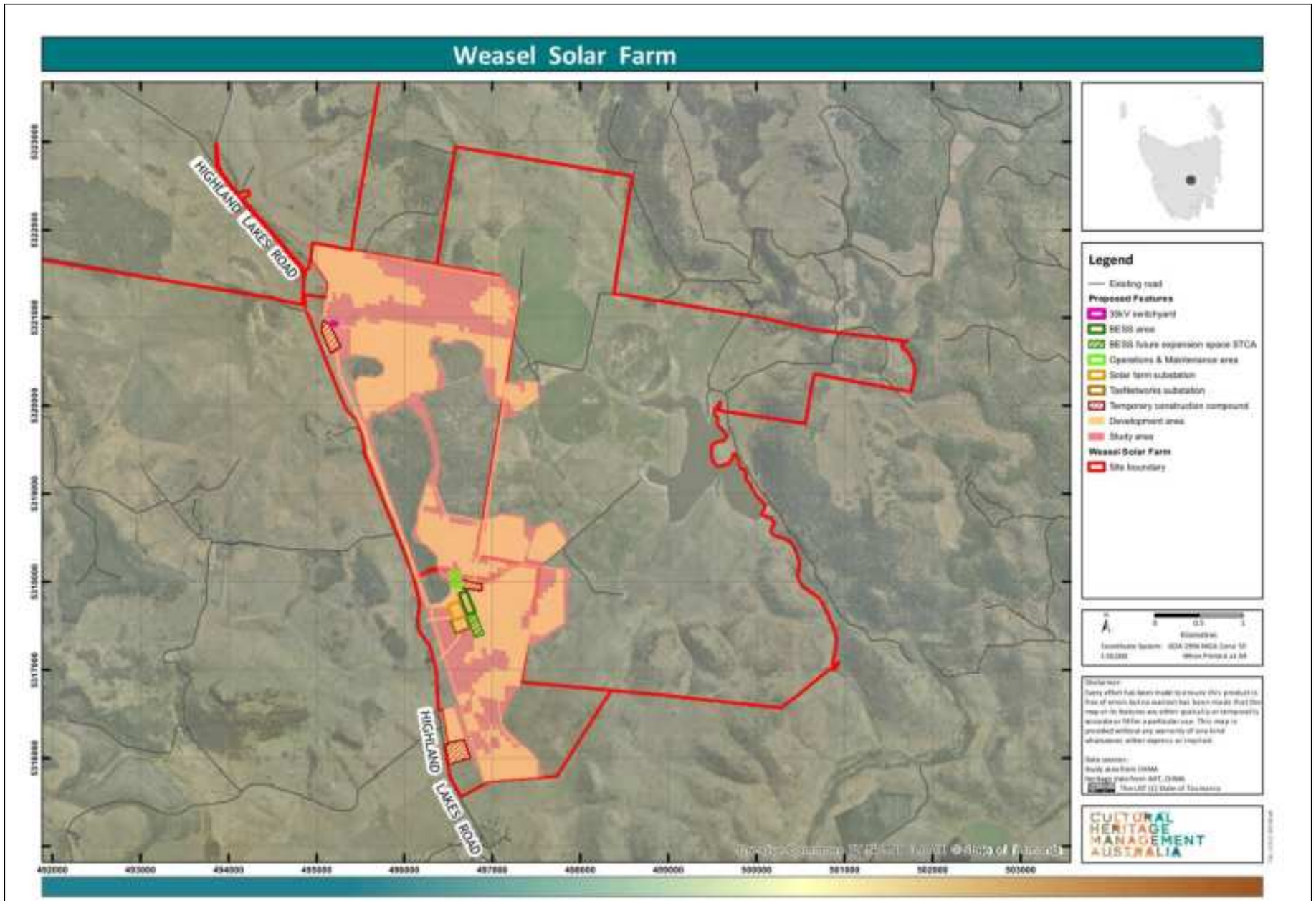


Figure 3: Aerial image showing the potential overall development area for the Weasel Solar Farm project

2.0 Environmental Setting of the Study Area

2.1 Introduction

Prior to undertaking archaeological survey of the study area, it is necessary to characterise the landscape. This includes considering environmental factors such as topography, geology, climate, vegetation and past and current landscape use. An assessment of the environmental setting helps to develop understanding of the nature of Aboriginal occupation and site patterning that might be expected to occur across the study area. In addition, it must be remembered that in Aboriginal society, the landscape extends beyond economic and technological behaviour to incorporate social geography and the embodiment of Ancestral Beings.

The archaeological context is generally only able to record the most basic aspects of Aboriginal behaviour as they relate to artefact manufacture and use and other subsistence related activities undertaken across the landscape such as raw material procurement and resource exploitation. The distribution of these natural resources occurs intermittently across the landscape and as such, Aboriginal occupation and associated archaeological manifestations occur intermittently across space. However, the dependence of Aboriginal populations on specific resources means that an understanding of the environmental resources of an area accordingly provides valuable information for predicting the type and nature of archaeological sites that might be expected to occur within an area.

The primary environmental factors known to affect archaeological patterning include the presence or absence of water, both permanent and ephemeral, animal and plant resources, stone artefact resources and terrain.

Additionally, the effects of post-depositional processes of both natural and human agencies must also be taken into consideration. These processes have a dramatic effect on archaeological site visibility and conservation. Geomorphological processes such as soil deposition and erosion can result in the movement of archaeological sites as well as their burial or exposure. Heavily vegetated areas can restrict or prevent the detection of sites, while areas subject to high levels of disturbance may no longer retain artefacts or stratified deposits.

The following sections provide information regarding the landscape context of the study area including topography, geology, soils and vegetation.

2.2 Environmental Setting of the Study Area

The site for the Weasel Solar Farm Project is situated 9km north of the town of Bothwell, in the Central Highlands Region of Tasmania. It is positioned on the east site of Highland Lakes Road and is accessed via Weasel Plains Road.

The site is on the southern edge of the Central Plateau, above the more gently undulating plains to the south east. The southern slopes of the Central Plateau are characterised by elevated basalt and dolerite ridgelines interspersed by open marshy

valleys and lagoons. Drainage across the plateau is mainly to the south east, eventually draining into the Derwent River catchment (Jetson 1989:xiii).

The project site is located on the Weasel Plains, with the terrain across the site area being characteristically gently to moderately undulating. Slope gradients are typically in the range of between 2º and 15º, but do increase to over 20º in parts (see Plates 2 and 3). The Weasel Plains are surrounded by a series of more steeply undulating hills, including Weasel Hills to the south-west, Cluny Hill to the south, Twelve O'Clock Hill to the east and the Bitters to the north. The underlying geology across the entire site is dominated by Upper glaciomarine sequences of pebbly mudstone, pebbly sandstone and limestone (see Plate 4) associated with the Lower Parmeener Supergroup (TheList 2024). From an Aboriginal heritage perspective, none of these lithologies are suited for stone artefact manufacturing, being too soft and brittle, and were seldom targeted for this purpose.

The Parmeener Supergroup is generally divided into a Lower division which includes all known glaucomarine strata and an Upper division which includes all freshwater strata. The Lower Parmeener group consists of muddy lagoonal and estuarine rocks. The change from rocks of a restricted glaciomarine environment to rocks of a fluviatile environment is relatively abrupt in stratigraphic sections. A eustatic fall in sea level or regional uplift in eastern Australia may have contributed to the abrupt change in the Lower/Upper Parmeener Supergroup boundary.

Soils which have formed on the sedimentary rocks of the Parmeener Supergroup have a tendency to be highly erodible. Grey brown duplex soils have formed on the sandstones and mudstones in the Bothwell area, while thin yellow Tenosols commonly occur on the crests of hills and rocky outcrops in the Hermitage area. Due to the high erodibility of these soil types, buried archaeological material is not predicted to commonly occur.

Weasel Plains Creek is the only named water course in the study area (see Plate 5). The creek flows in a north-west to south-east direction and cuts through the northern portion of the site. This an ephemeral water course, which is a tributary of the Clyde River. It merges with the river around 3km to the south-east. The Clyde River is one of the major water natural water course in this area, and has its headwaters around Lake Crescent. The river flows in a south-west direction out of Lake Crescent and eventually empties into the River Derwent just south of the town of Bothwell. Other minor, unnamed water courses occur across the site area, all of which are tributaries of Weasel Plains Creek.

The proposed potential overall development area for the Weasel Solar Farm project, encompasses approximately 435ha. The native vegetation across this area has predominantly been cleared as part of past farming practices and replanted with grasses. Some areas around Weasel Plains Creek (in the north of the study area) have also been ploughed in the past. Patches of remnant native vegetation occur throughout parts of the site, mainly around the Weasel Hills, *where Eucalyptus pauciflora* forest and woodland is the dominant vegetation structure. Surrounding this

woodland are patches of Lowland grassland complex and Lowland grassy sedgeland (see Plates 6 and 7).

From an archaeological perspective, any Aboriginal heritage sites that are situated within those parts of the study area that have been cleared as part of past farming practices will have been subject to moderate levels of disturbances. These disturbances are likely to involve soil mixing within the upper 30cm of the soil horizon and some level of spatial disturbance. There are also a series of existing vehicle tracks that extend across many parts of the site area, associated with existing pastoral activities. A major transmission line easement also runs through the site. Any Aboriginal sites present on these tracks or transmission line easement will have been impacted to varying extents.

Within the lesser disturbed parts of the study area footprint, where the remnant native vegetation is still present, natural processes of deposition, erosion and pedogenisis are the only likely causes of movement of archaeological materials within these areas of lesser disturbances. The potential therefore exists for in situ archaeological deposits to remain in these parts of the site.

The climate of the Central Highlands is cold – temperate. Rainfall is generally consistent throughout the year, although late summer tends to be slightly dryer (BOM 2024). Mean annual rainfall for Bothwell is 529.2mm (BOM 2024). The warmest part of the year is late summer, however mean maximum temperatures are below 23 degrees Celsius. In winter the region frequently has snow with minimum temperatures below freezing.



Plate 2: View north-west across the central part of the site, showing typical gently undulating terrain



Plate 3: View east showing an example of the typical terrain in the northern part of the study area



Plate 4: A pile of rocks in a farm paddock, illustrating the underlying geology of the site



Plate 5: View north-west along Weasel Plains Creek which flows through the north part of the site



Plate 6: View north-east showing cleared farm paddocks



Plate 7: View east at stands of native forest within the central part of the site

3.0 Ethno-historic Background

3.1 Aboriginal Social Organisation in Tasmania

Ryan (2012) explains that the terms 'nation' and 'clan' are the preferred terms used by the Tasmanian Aboriginal community in place of 'tribe' and 'band' respectively. This terminology has been adopted in the following discussion.

According to Jones (1974), the social organisation of Tasmanian Aboriginal society appears to have consisted of three social units, these being the hearth group, the band (clan) and the tribe (nation). The hearth group was the basic family unit and would generally have consisted of a man and woman, their children, aged relatives and sometimes friends and other relatives. The size of hearth groups would generally range from between 2-8 individuals (Jones 1974: Plomley 1983). Plomley (1983) provides a description made by Peron of a hearth group he encountered at Port Cygnet:

> *There were nine individuals in this family, and clearly they represented a hearth group, because Peron visited their campsite with its single hut. The group comprised an older man and wife, a younger man and wife, and five children, one a daughter (Oure-Oure) of the older man and wife, and the other four the children of the younger man and wife.* (Plomley 1983:168).

The clan appears to have been the basic social unit and was comprised of a number of hearth groups (Jones 1974). Jones (1974:324-325) suggests that the clan owned a territory and that the boundaries of this territory would coincide with well-marked geographic features such as rivers and lagoons. Whilst the clan often resided within its territory, it also foraged widely within the territories of other clans. Brown (1986:21) states that the band was led by a man, usually older that the others and who had a reputation as a formidable hunter and fighter. Brown also suggests that the clan (as well as the hearth group) was ideally exogamous, with the wife usually moving to her husband's band and hearth group.

Each clan was associated with a wider political unit, the nation. Jones (1974:328-329) defines the tribe (or nation) as being:

> *…that agglomeration of bands which lived in contiguous regions, spoke the same language or dialect, shared the same cultural traits, usually intermarried, had a similar pattern of seasonal movement, habitually met together for economic and other reasons, the pattern of whose peaceful relations were within the agglomeration and of whose enmities and military adventures were directed outside it. Such a tribe had a territory, consisting of the sum of the land owned by its constituent bands…The borders of a territory ranged from a sharp well defined line associated with a prominent geographic feature to a broad transition zone*. (Jones 1974:328-329)

According to Ryan (2012:11), the Aboriginal population of Tasmania was aligned within a broad framework of nine nations, with each nation comprising between six to fifteen clans (Ryan 2012:14). The mean population of each Nation is estimated to

have been between 350 and 470 people, with overall population estimates being in the order of five to ten thousand people prior to European occupation (Ryan 2012:14). Ryan (2012:13) presents a map showing the approximate boundaries for the nine Tasmanian Aboriginal Tribes. The present study area falls within the territory of the Big River Nation (see Figure 4). Ryan (2012:25-26) notes that the Big River was the colonial name for the River Ouse.

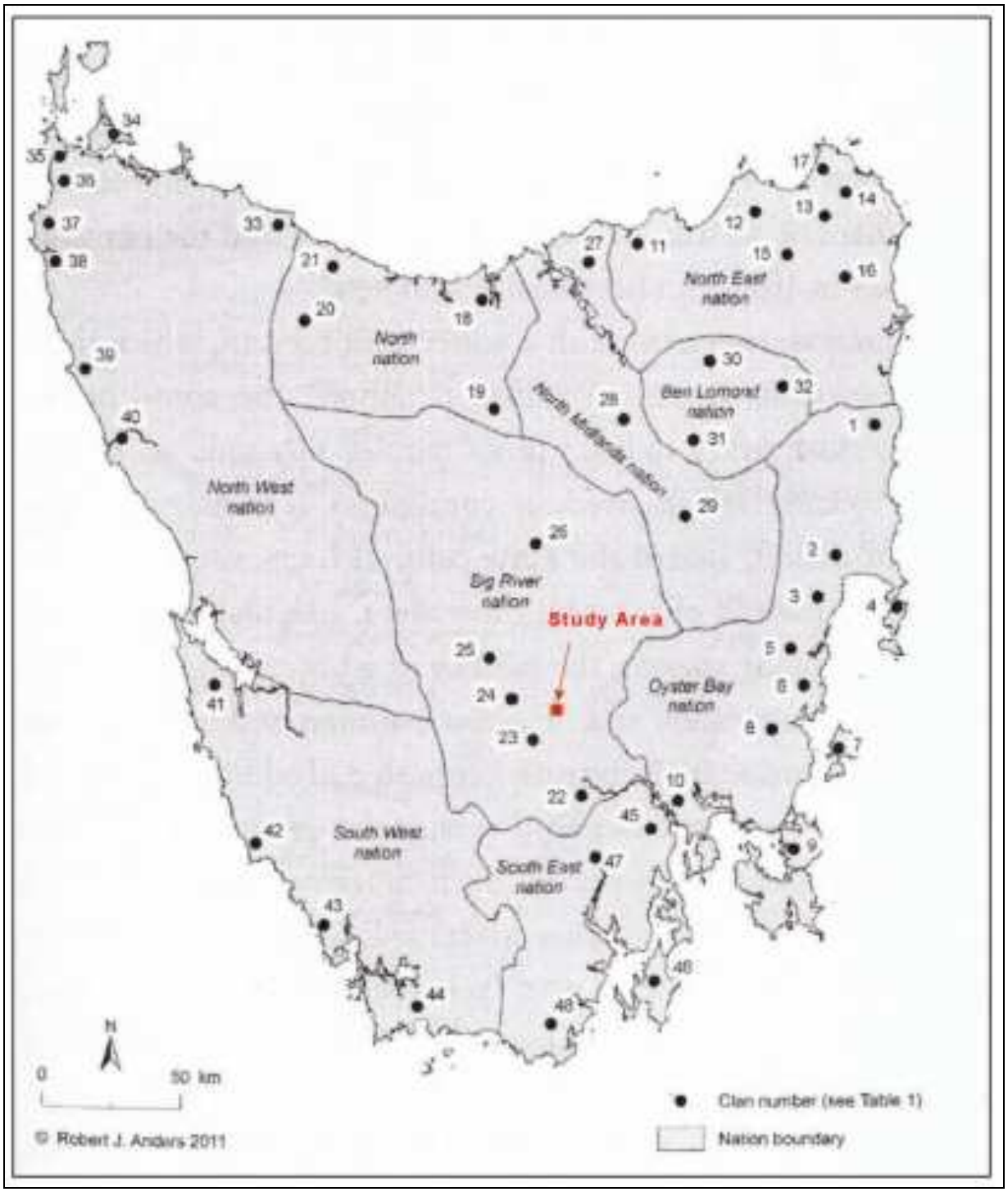


Figure 4: The location of the study area within the territory of the Big River Nation (taken from Ryan 2012:13)

The Big River Nation occupied the Central Highlands and are estimated to have numbered between four and five hundred people at the time of contact with European settlers (Ryan 2012:26). They were the only Tasmanian nation without access to a coastal strip. However, this was compensated by the highland lake system, control over Great Lake, and visiting arrangements with the neighbouring North and Oyster Bay Nations (Ryan 2012:25). Through these relationships the Big River people had seasonal access to the east, north and west coasts, and to the ochre sources in the mountains to the north (Ryan 2012:28). The Big River Nation interacted with a greater number of diverse nations and clans than any other Tasmanian nation (Ryan 2012:27). This suggests an active and dynamic social unit continually exposed to varying cultures and ideas through this high level of interaction outside the nation.

The Big River Nation is believed to have comprised five clans: The Leenowwenne people who lived near New Norfolk, the Pangerninghe who lived on the west bank of the River Derwent just opposite the meeting of the Derwent and Clyde Rivers, the Braylwunyer people who lived on the hilly plains between the Ouse and Dee Rivers, the Larmairrenener people lived in the high country west of the Dee River and the Luggermairrernerpairner people who lived north of the Great Lake (Ryan 2012:16). The study area was most likely situated within the territory of the Pangerninghe people (see Figure 4).

Travel across the Big River Nation's lands was via well maintained and regularly used travelling routes. Ryan (2012: 26-7) describes the Big River Nation as having two routes running north out of their country. One route ran along their western boundary "from near Lake St Clair, past Cradle Mountain and Lake Dove, to south of Black Bluff". The second route, being the one "they most commonly used went past the Great Lake and through a pass in the Great Western Tiers near Quamby Bluff where the present-day Lake Highway makes its descent. A third travelling route followed the River Derwent Valley. This is the closest of the major travelling routes to the study area (see Figure 5). Ryan (2012:26) reports that the clans of the Big River Nation appear to have mainly camped along the shores of the natural lake systems (particularly Great Lake, Arthurs Lake and Lake Echo) and along the Shannon, Dee, Ouse and Clyde Rivers, which connect the lakes to the River Derwent. All of these lake and river systems were resource rich zones and opened onto kangaroo hunting grounds.

The valleys of the Big River Nation that Robinson travelled through had been burnt to facilitate access and attract game. Robinson records the evidence of this as he travels through the area around modern day Bronte Lagoon (Plomley 2008:545). Robinson also recorded the petrified wood artefacts that he found across the southern plateau country (Plomley 2008:548). There were worn paths through the country that Robinson in some cases followed. One ran along the Dee River valley, and it seems that this was also a major travel route for the Big River people (Plomley 2008:549).

There is evidence that the Big River people put ochre in their hair. In a wonderful example of culture contact, Robinson recorded that when his party passed through

Campbell Town some of the Big River people pound a brick to a fine powder and mixed it with animal grease to apply a thick coat to their hair (Plomley 2008:535).

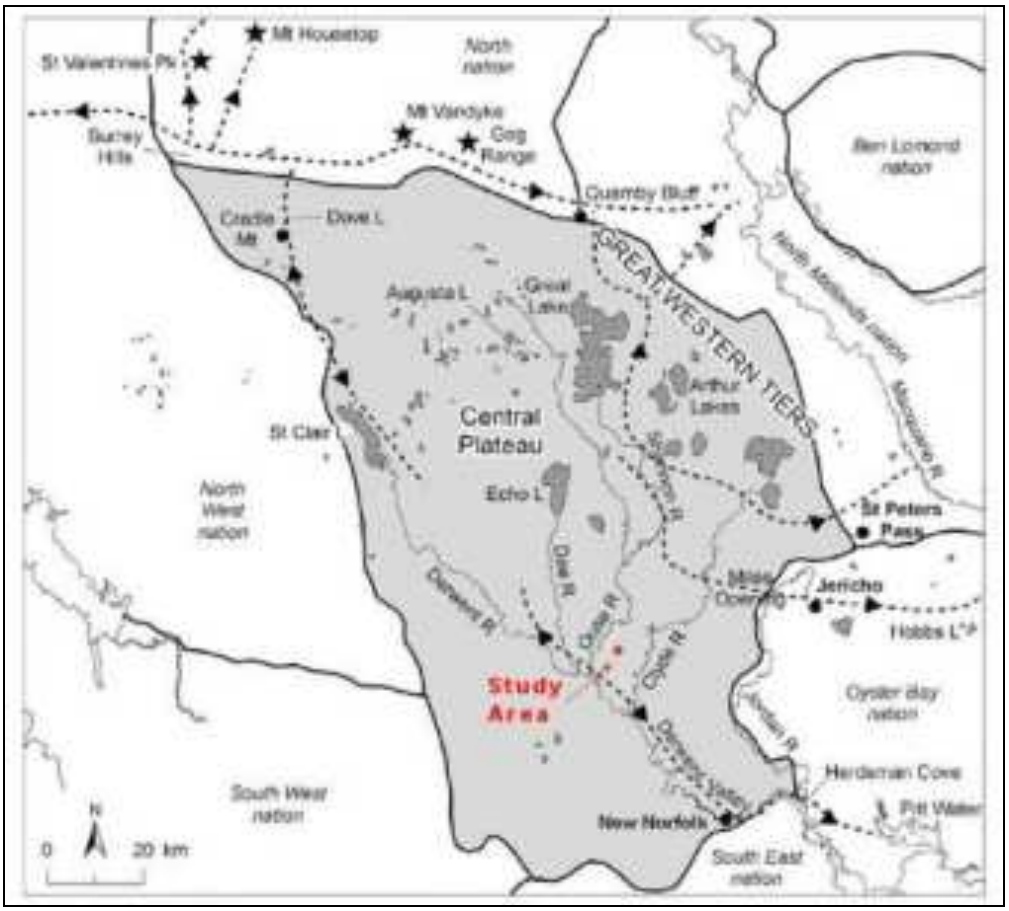


Figure 5: Trade routes and seasonal movements of the Big River Nation (Ryan 2012: 27)

Ethnographic Accounts of the Big River Nation

Several early explorers and ethnographers have left accounts of their observations of the Big River Nation that provide an insight into the economy, material culture and social customs of the people prior to European settlement. Primary among the ethnographic sources are the diaries of George Augustus Robinson, appointed as government Protector of Aborigines who followed a policy of conciliation with the ultimate aim of removing Aboriginal people to offshore islands (Plomley 2008:515).

In December 1831, George Augustus Robinson (the 'Protector of Aborigines') travelled across the Great Western Tiers and Central Highlands in search of the Big River Nation. Around the Lake Echo area, Robinson records Aboriginal hut sites along the margins of the marshy lagoons that intercept the rugged hills (Plomley 2008:543-44). There are often large numbers of huts that Robinson describes as 'villages' (Plomley 2008:548). When Robinson approached the huts they were empty but showed signs of having recently been occupied. He repeatedly described the abundance of 'kangaroo' (Bennett's wallaby), 'native bread' (a tuber, *Polyporus myllitae*) and duck and bird life that abounded in: 'the place of resort … and their hunting grounds' (Plomley 2008:542). There is also reference to a plant with a red

berry that the Larmairrenener people call *Murerleener* (Plomley 2008:543). The plant was unknown to those Aboriginal people from the south that were with Robinson.

3.2 European Settlement of the Big River Nation

European exploration into the central highlands occurred early in the settlement phase of the colony. Robert Brown led a reconnaissance of the River Derwent in 1803. Brown followed the course of the river for about fifty miles upstream, sighting the Clyde and Ouse Rivers in the process. This was followed four years later by an excursion into the Western Tiers and central highlands by Laycock and his party in 1807, seeking an overland route between Port Dalrymple and Hobart in order to obtain supplies. Following Laycock's expedition there was a hiatus of almost ten years until John Beamont and his exploration party were dispatched to examine the land around the Great Lake (Jetson 1989:xiii). Beaumont is reported to have penetrated west to the highlands north of Lake St Claire.

The first Europeans to venture into the highlands with any sense of permanency were kangaroo hunters, stockkeepers and bushrangers (Jetson 1989:12). One hunter called Toombs is reported to have advanced as far as the Great Lake by 1815 (Kostoglou 1998). The notorious bushranger Michael Howe made the highlands his home, living off the bush and wearing skins until his violent death at the hands of a past accomplice near Bothwell in 1818 (Jetson 1989:16). Robinson gives a sense of the violence of these people, who were more than ready to attack the Aboriginal inhabitants of the highlands. Robinson described numerous attacks by the settlers and gives a revealing description of a typical stockkeepers hut that he observed near Lake Echo:

> *A formidable construction … made by piling large rolled logs horizontally upon each other, halved together at the ends, with portholes to fire out of. The roof is barked and covered with turf so as not to ignite. (Plomley 2008:541)*

For the first two decades of European settlement in Van Diemen's Land the highlands provided something of a refuge for members of the Big River Nation as the plains below became settled. Robinson claimed in 1831 that in this country '[the Big River Nation] had remained undisturbed by their white enemies' (Plomley 2008:548). However, all this was about to change. From the early 1820s European settlement of the central highlands began to have a devastating impact on the Big River Nation. Within one year from 1822 to 1823 the European population of the highlands multiplied tenfold; from a population of less than ten men and a few thousand sheep to over sixty settlers with their families and upwards of sixty thousand sheep (Ryan 2012:115). The Big River Nation responded to this rapid colonisation with the onset of guerrilla war.

Initial contact between the Big River Nation and European settlers had aspects of an exchange dialogue. Ryan (2012:115) records that in the autumn of 1822 Big River people visited the east coast, and on their return to their territory encountered the new wave of settlers. Ryan notes that Big River women were traded to the settlers in exchange for food (2012:115). This suggests either a very rapid adaptation to European dietary staples, or the rapid devastation of traditional hunting grounds and resources. The 1820s through to the mid 1830s saw an increased number of

surveying and exploration parties entering the central highlands. These included Scott (1821-23), Helder (1825), Sharland (1832) and Frankland (1835). The increasing shortage of food supplies in the colonies led to the dispatch of kangaroo hunters into the un-settled parts of the colonies. These hunting parties were soon roaming areas well beyond the borders of the colonised areas.

Pastoralists soon followed the hunting parties, with shepherds penetrating into the eastern fringes of the Lakes District by 1818. By the early 1820s larger flocks of sheep were grazing as far west as the Great Lake (Kostoglou 1998). Wild cattle were sighted in these areas in the early 1820s. Grazing operations in the central highlands during this early period were generally small scale operations run by a single shepherd or small groups of men, with the herds rarely being contained by fences. By the latter part of the 18th century, many of the small scale pastoral holdings had been abandoned or bought out by large sheep stations that had begun to operate in the district (Kostoglou 1998).

From 1824 violence and guerrilla attacks came to characterise the highlands. In January 1824 a European stockman was killed at Abyssinia when he attempted to abduct a Big River woman (Ryan 2012:115). This led to a skirmish in which the stockman was speared and his hut burnt (Ryan 2012:115). Attacks continued from both the Big River people and the Europeans throughout the 1820s. In 1827 Luggermairrernerpairner people robbed five huts along the Ouse and Shannon Rivers, creating panic among the European settlers (Ryan 2012:118). By the end of the year the Luggermairrernerpairner had moved west into more rugged country, although they continued to attack and raid settler's huts. Firearms were sometimes taken during these raids, and Ryan suggests that these were useful trade items (2012:118).

Ryan argues that firearms were quickly absorbed into the material culture of the Big River people and were exchange items rather than valued weapons (1996:118). However, Robinson claims that his companions saw the firearms as weapons, to use against the Europeans but also in fights with antagonistic neighbouring tribes, such as the North Tribe (Plomley 2008:547). In his 1830 expedition through the highlands Robinson expresses surprise at the sheer number of weapons caches that his companions reveal to him (Plomley 2008:547). This demonstrates the volatile situation in the highlands, and the rapidity with which violence could erupt.

By 1828 the two surviving Big River clans, the Luggermairrernerpairner and the Larmairrenener, had moved to the Lagoon of Islands and Regents Plains areas (Ryan 2012:118). This congregation of people was seen as a threat by the Europeans and prompted the settlers to appeal to Hobart for protection (Ryan 2012:118). Military parties were dispatched to disperse the Aboriginal people, but the bands were not located. Ryan suggests that the Big River people had travelled to the north coast for the winter (2012:118). However, by October the surviving members of the Big River Nation returned to the highlands, and guerrilla warfare intensified (Ryan 2012:118). The Larmairrenener people travelling with Robinson told him how during the cold winter of 1830, the people stayed in the highlands rather

than follow seasonal migration patterns to Oyster Bay (Jetson 1989:32). This demonstrates the danger on the midlands to Aboriginal people by the early 1830s.

In September 1830 the 'Black Line' moved through the central highlands; a military operation aimed at forcibly removing Aboriginal people from pastoral districts across Tasmania. Ryan (2012:120) argues that the Big River people once again moved to the high country to the west in order to avoid the armed parties. The Black Line was largely ineffective in the highlands; Robinson relates how his companions showed him how people avoided the line in the steep terrain and thick bush (Plomley 2008:547). He writes that 'the people here had avoided the strictest search' (Plomley 2008:547).

Correspondence files for the District leading to the 1830 "Black line", refer to a range of conflicts in the Bothwell district (see Clements 2014); CSO1/323/7578). Governor Arthur had positioned troop depots at frontier hotspots, including Bothwell, to deter Aboriginal people from passing through the settled districts. In February 1830 settlers of the Clyde met and petitioned the government, claiming that 'Aborigines were threatening the extinction of the colony itself by firing crops and dwellings' (Reynold 2004:59, 61). Ellis records that between 1822 and 1831 'Big River people killed around 60 Europeans, raided huts for weapons, blankets and stores, speared stock, burnt haystacks, huts, fences and homes, and annexed or raised grazing areas. About 240 Aborigines were killed by Europeans and less than sixty remained by 1831' (Ellis 2001:14).

Robinson met the surviving Big River people on December 1831 just north of Lake Echo (Ryan 2012:120). At this point the group numbered only twenty six people, and were led by Montpeilliater of the Big River Tribe and Tongerlongton from the Oyster Bay Nation (Ryan 2012:121). The group agreed to accompany Robinson to Hobart in order to claim compensation for the loss of their land and the lives of many of their people (Ryan 2012:122). This compensation never eventuated and the people were eventually resettled on offshore islands.

The Big River Nation was dispossessed of their country by the killing of an estimated two hundred and forty people, while around sixty Europeans were also killed in frontier violence on the highlands (Ryan 2012:122). In addition, the trade and abduction of Big River women by male European stockmen and settlers contributed to the decimation of the Big River people.

4.0 Background Archaeology

4.1 Previous Archaeological Research in the Region

The study area is located within the southern portion of the Central Highlands of Tasmania. Probably the most comprehensive archaeological investigation undertaken within the Central Highlands region is that of Cosgrove (1984), who implemented the Central Highlands Prehistory Project. This project entailed the collation of ethno-historic literature for the region, and the undertaking of a range of field survey investigations, with the primary aim being to compile a database for future archaeological work in the region and to establish a preliminary model of Aboriginal settlement in the Central Highlands.

For the purposes of his field survey assessment, Cosgrove (1984) divided the Central Highlands into five areas based on variations in climate, altitude, vegetation and geomorphology. The five areas were defined as High Plateau Surface, Low Plateau Surface, St Clair Surface, High Coastal Surface and South-West Derwent Catchment Area. These categories were then further divided into riverine and lacustrine environments.

The Clyde River has its origins at Lake Crescent, a naturally occurring body of water located on the eastern side of the Central Plateau. In the course of the field assessment, Cosgrove (1984) identified a total of twenty sites in the vicinity of the Clyde River. Eighteen of these sites were classified as artefact scatters, with the remaining two sites being sandstone rock shelters. The vast majority of these sites were situated within 200m of the River and had northerly or easterly aspects. The largest of the artefact scatters was identified in a large deflated sand sheet, 400m southeast of the River and comprised over 350 artefacts as well as a number of hearths. The other seventeen artefact scatters each comprised less than 25 artefacts (Cosgrove 1984).

Overall, the field survey investigations undertaken by Cosgrove (1984) in the Central Highlands resulted in the identification of 202 Aboriginal sites. The vast majority of these were classified as artefact scatters or isolated artefacts (193 sites). Of the remaining nine sites, four were classified as sandstone rock shelters, three were rock cairns of possible Aboriginal origin and two were quarry sites. Cosgrove (1984) is of the opinion that most, if not all of these sites date to within the Holocene period. The overall evidence (ethnohistoric accounts and archaeological results) indicates that Aboriginal settlement patterns show a preference towards occupying those areas where there is the interface of the boundaries of lake and forest environments, where maximum resources were available. This is seen as a decisive Sub-Alpine adaptation strategy (Cosgrove 1984).

The exploitation of the Central Highlands region was characterised by two main forms of economic strategy (Cosgrove 1984). The first is a subsistence economy based on the exploitation of forest resources, primarily arboreal and terrestrial animals, and to a limited degree a small range of forest plants. The second is the exploitation of lake and riverine resources, which includes the hunting of birds and

aquatic mammals, as well as the harvesting of aquatic plants. The evidence available for settlement patterns in the Central Highlands indicates that there was a distinct concentration of activity in the contact zones between lake and forest environments, where presumably the available resources were maximised (Cosgrove 1984).

The movement of Aboriginal people through the Central Highlands was primarily via the use of a network of tracks that crossed the region. Aboriginal movement through this region was facilitated by the use of fire. The practice of firing both grassland and forest was common and observed by early European settlers or explorers in the region to take place between the months of October and March. The result on the landscape was to limit vegetation regrowth thereby providing easier movement through otherwise densely forested areas (Cosgrove 1984).

Cosgrove (1984) highlights the use of fire and the practice of barking trees as two adaptive practices that greatly enhanced the success of Aboriginal people occupying this region. The barking of trees was primarily for the purpose of constructing bark huts. These bark huts not only provided essential shelter in this harsh environment, but the practice of tree barking also had the long-term effect of further opening up the forested areas, eventually producing a mosaic of forest and grassland vegetation (Cosgrove 1984). These strategies reflect management of and adaptation to the harsh highlands environment.

4.2 Previous Studies in the Vicinity of the Study Area

There have been a number of smaller heritage investigations carried out within the general vicinity of the study area. Most of these studies have been undertaken as part of impact assessments associated with specific development projects. The following provides a brief overview of a select range of the investigations that have been undertaken in closer proximity to the study area.

Stone and Stanton (2006) Waddamana to Risdon Vale 220kV Transmission Line

Stone and Stanton (2006) were engaged to undertake an Aboriginal heritage assessment for the proposed route corridor for the Waddamana to Risdon Vale 220kV Transmission Line, which was a total of 100km in length. Part of this corridor runs through the Weasel Solar Farm site.

The assessment resulted in the recording of a total of 22 Aboriginal sites. Five of these sites correlated with previous registered site recordings. The remaining 17 sites were new finds. There were an additional five registered Aboriginal sites reported to be within the corridor that could not be found. The recorded Aboriginal sites were all classified as either Isolated artefacts or artefact scatters, with the vast majority of the sites occurring within the section of the corridor that ran within the Jordan River Valley (Stone and Stanton 2006:18-21).

Only one Aboriginal site was recorded in the vicinity of Weasel Plains, this being site AH10222. The site was described as an artefact scatter that was identified across a series of erosion scalds on a sand sheet, above the cold air drainage line on the margins of Weasel Plains Creek.

CHMA (2009b and 2010b) Clyde Valley Pipeline and Water Storage Scheme

CHMA (2009b) was engaged by TIDB to undertake a heritage assessment for the proposed Clyde Valley Pipeline route and associated Water Storage Scheme. The proposed pipeline route ran from the Shannon River at Hermitage to the proposed Norwood storage facility located on a tributary of the Clyde River called Bark Hut Creek, a distance of around 13km. The Bark Hut Creek section of the proposed pipeline route is located within a few kilometres of the present study area.

In the course of the field survey assessment CHMA (2009b) identified a total of three Aboriginal heritage sites. Two of these sites were classified as isolated artefacts (sites AH10935 and AH10937) with the third site being an open artefact scatter comprising five artefacts (site AH10936). All three sites were situated within 2km of the western commencement point of the pipeline route easement, between the Shannon River and Pleasant Knoll. Based on the survey findings, CHMA (2009b:35) assessed that site and artefact densities were likely to be comparatively higher on elevated and level landscape features that are situated within 1-2km of the Shannon River. Densities within the remainder of the study area were predicted to be low.

CHMA (2010b) subsequently carried out a program of sub-surface investigations at two selected Potential Archaeological Deposit (PAD) locations along the proposed pipeline route. PAD1 encompassed the slightly elevated margins on the southeastern side of the Shannon River, in the general vicinity of the pump station.

Excavations at PAD1 resulted in the identification of one surface artefact and three sub-surface artefacts. This area was subsequently designated as site AH11259. The sub-surface artefacts were recovered from three test pits (pits 1-3-4) that were all located along the immediate margins of the River. Based on the findings, CHMA (2010b:17-18) believed that artefact densities in this area were low-moderate and predominantly confined to the flat southeast margins of the river. CHMA (2010b:18) considered it unlikely that artefact deposits extended further up the rocky hill slopes that border the river margins. The identified bounds of AH11259 extend between grid references E490322 N5321713, E490328 N5321708 and E490334 N5321712.

The PAD2 area was located on a flat saddle in the hills above and to the southeast of the broad Shannon River valley. A total of four artefacts were recovered from the fifteen test pits excavated in this area, with single artefacts retrieved from pits 7-8-9-10 (CHMA 2010b:25). The results of the test pitting program demonstrated the presence of low to moderate densities of sub-surface artefact deposits at PAD2. CHMA (2010b:25) believe that these artefact deposits appear to be primarily confined between grid references E491343 N5321261 (Pit 7) and E491287 N5321284 (Pit 10). This area correlates with the central portion of the saddle, where the saddle area is at its broadest and most level. This area was designated as AH11264.

CHMA (2009a and 2010a) Hollow Tree Pipeline Assessment

CHMA (2009a) was engaged by the Tasmanian Irrigation Development Board (TIDB) to undertake a heritage assessment for a proposed irrigation pipeline scheme in the vicinity of Hollow Tree Road, just to the south of the township of Bothwell. This is

around 10km south of the present study area. No Aboriginal sites were identified during the field survey assessment of the pipeline route options.

CHMA (2010a) subsequently carried out a program of sub-surface investigations at two areas of potential archaeological sensitivity identified along the proposed pipeline route (PAS1 and PAS2). No artefacts or cultural materials were recovered from the ten test pits excavated at PAS 1, which is located on the margins of the Clyde River. A total of six stone artefacts were recovered from the ten test pits excavated at PAS 2, which is situated on the margins of Springhill Creek. The test pitting indicated the presence of a low-moderate density stone artefact scatter which was designated as site AH11191 (CHMA (2010a:8)

CHMA (2012a) Weasel Plains Farm Dam Assessment

CHMA (2012a) was engaged by Mr Scott Bowden to undertake an Aboriginal heritage assessment of a proposed farm dam on Weasel Plains which is situated around 7km north of Bothwell. The dam site was located in an open valley along a small tributary creek line of Weasel Plains Creek. The field survey did not identify any Aboriginal heritage sites or areas of Potential Archaeological deposits (PADs). CHMA (2012a) assessed the negative findings as being an accurate reflection of the low archaeological sensitivity of the study area.

CHMA (2012b) Weasel Plains Farm Dam Assessment

CHMA (2012b) was engaged by Mr Scott Bowden to undertake an Aboriginal heritage assessment of a proposed farm dam on the Woodspring property which is located around 10km northeast of Bothwell, along the northern reaches of Fordell Creek. The survey resulted in the identification of a total of four Aboriginal sites within the bounds of the proposed Woodspring farm dam (sites AH11706 – AH11709). These sites were classified as either small artefact scatters (each containing less than six artefacts) or isolated artefacts. The sites were all located along the alluvial sand deposits that line Fordell Creek. CHMA (2012b) considered that it was likely that further artefact deposits were present within this sand body.

CHMA (2015) SHIS Southernfield Dam assessment

CHMA and Vernon Graham were engaged by Tasmanian Irrigation (TI) to undertake an assessment of the proposed Southernfield Dam, Shannon River pump station and transfer pipeline, which forms part of the Southern Highlands Irrigation Scheme (SHIS). This is located a few kilometres to the north-west of the Weasel Solar Farm site.

In the course of the survey investigations, CHMA (2015) identified a total of six Aboriginal heritage sites (sites AH13027-AH13032). Two of these sites were classified as artefact scatters, with each site comprising between 2 and 9 surface artefacts (site AH13027=9 artefacts and AH13028 = 2 artefacts). Three of the identified Aboriginal sites were classified as isolated artefacts (sites AH13029-AH13031). The remaining site (AH13032) was classified as a potential rock shelter site. The site is located within a sandstone rock outcropping on the eastern margins of an ephemeral creek line. On the western face of the sandstone outcrop (facing the creek) is a sandstone overhang feature (centre point gr E490252 N5320945). A

detailed inspection of the sandstone faces of the overhang did not reveal any indication of Aboriginal rock art or any Aboriginal cultural deposits. However, given the size of the shelter, and the close proximity to a creek system, it was considered very likely that the overhang was occupied periodically by Aboriginal people, and that there will be the archaeological signature of this occupation present within the shelter (CHMA 2015).

CHMA (2022) TasNetworks Distribution Line

CHMA (2022) were engaged by TasNetworks to undertake an Aboriginal heritage assessment for a new power line connection including eight poles to be installed as part of an irrigation upgrade at private property 2925 Highland Lakes Road, Bothwell. The field survey assessment resulted in the identification and recording of a low density artefact scatter comprising two artefacts. The two artefacts were situated within 1m of each other, on an erosion scald (bull pit) measuring 3m x 1m. The erosion scald is around 10m to the east of the section of graded vehicle track where Stanton and Stone (2008) recorded site AH10596. Given this close spatial proximity, the two artefacts recorded were assessed as being a component of site AH10596. Besides the two artefacts associated with site AH10596, no additional Aboriginal sites, suspected features or specific areas of elevated archaeological potential were identified (CHMA (2022).

4.3 Registered Aboriginal Sites in the Vicinity of the Study Area

As part of Stage 1 of the assessment process, a search was undertaken of the Aboriginal Heritage Register (AHR) to determine whether any registered Aboriginal heritage sites are located within, or in the general vicinity of the Weasel Solar Farm site. The search shows that there are a total of 28 registered Aboriginal heritage sites that are located within an approximate 5km radius of the Weasel Solar Farm site (search results provided on the 8.3.2024 by Hannah Waterhouse from AHT). The majority of these sites are classified as either artefacts scatters (13 sites) or isolated artefacts (11 sites). In addition, there are two occupied Aboriginal rock shelters) and two Unoccupied rock shelter. Table 1 provides the summary details for these 28 registered Aboriginal sites, with Figure 6 showing the location of the sites in relation to the Weasel Solar Farm site.

Based on the information generated from the AHR search results, none of these registered Aboriginal sites are situated within or in the immediate vicinity of the Weasel Solar Farm site. The closest registered Aboriginal sites are located on the west side of Highland Lakes Road, close to the junction with Waddamana Road. There are four sites clustered in this area (all artefact scatters). The closest site is AH468 which is situated around 105m to the west of the western boundary of the Weasel Solar Farm site. The other three sites are located between 800m and 1km to the west of the western boundary. Figure 7 shows the location of these sites in relation to the Weasel Solar Farm site.

Table 1: Summary details for Registered Aboriginal sites located within a 5km radius of the Weasel Solar Farm site (Based on information generated from the AHR Search dated 8.3.2024)

AH Number	Site Type	Locality
468	Artefact Scatter	Bothwell
10222	Artefact Scatter	Bothwell
10596	Artefact Scatter	Bothwell
10935	Isolated Artefact	Bothwell
10936	Artefact Scatter	Hermitage
10937	Isolated Artefact	Hermitage
11259	Isolated Artefact	Hermitage
11264	Artefact Scatter	Hermitage
1470	Isolated Artefact	Bothwell
1472	Isolated Artefact	Bothwell
1473	Isolated Artefact, Artefact Scatter	Bothwell
1474	Artefact Scatter	Bothwell
1478	Artefact Scatter	Bothwell
1481	Artefact Scatter	Bothwell
1482	Artefact Scatter, Occupied Rockshelter	Bothwell
2806	Unoccupied Rockshelter, Isolated Artefact	Hermitage
2807	Artefact Scatter	Hermitage
2808	Unoccupied Rockshelter	Hermitage
7127	Isolated Artefact	Bothwell
13027	Artefact Scatter	Hermitage
13028	Artefact Scatter	Hermitage
13029	Isolated Artefact	Hermitage
13030	Isolated Artefact	Hermitage
13031	Isolated Artefact	Hermitage
13032	Unoccupied Rockshelter	Hermitage
13059	Artefact Scatter	Hermitage
13088	Isolated Artefact	Hermitage
13089	Isolated Artefact, Other	Hermitage

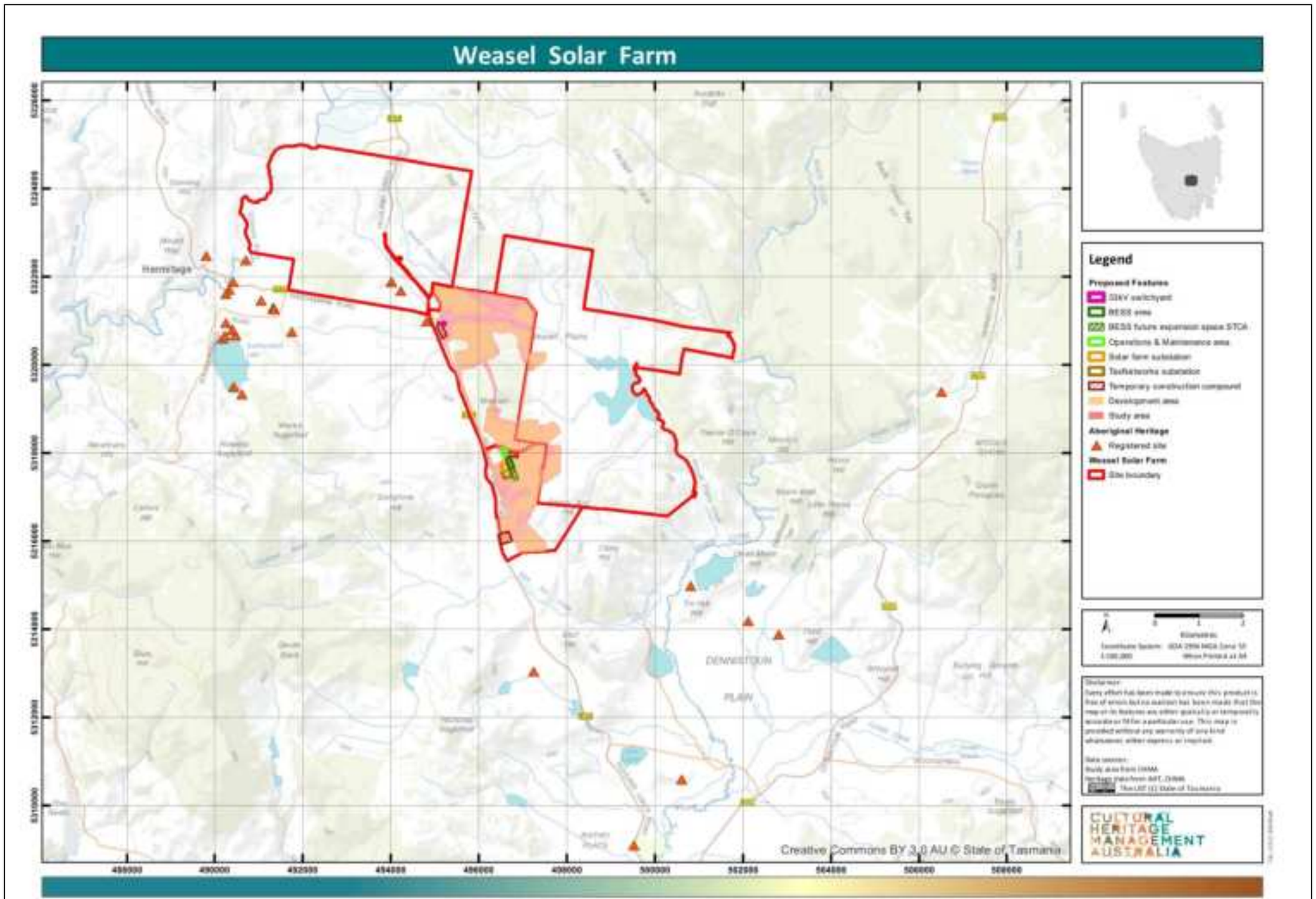


Figure 6: Topographic map showing the location of Registered Aboriginal sites located within a 5km radius of the Weasel Solar Farm site (Based on information generated from the AHR Search dated 8.3.2024)

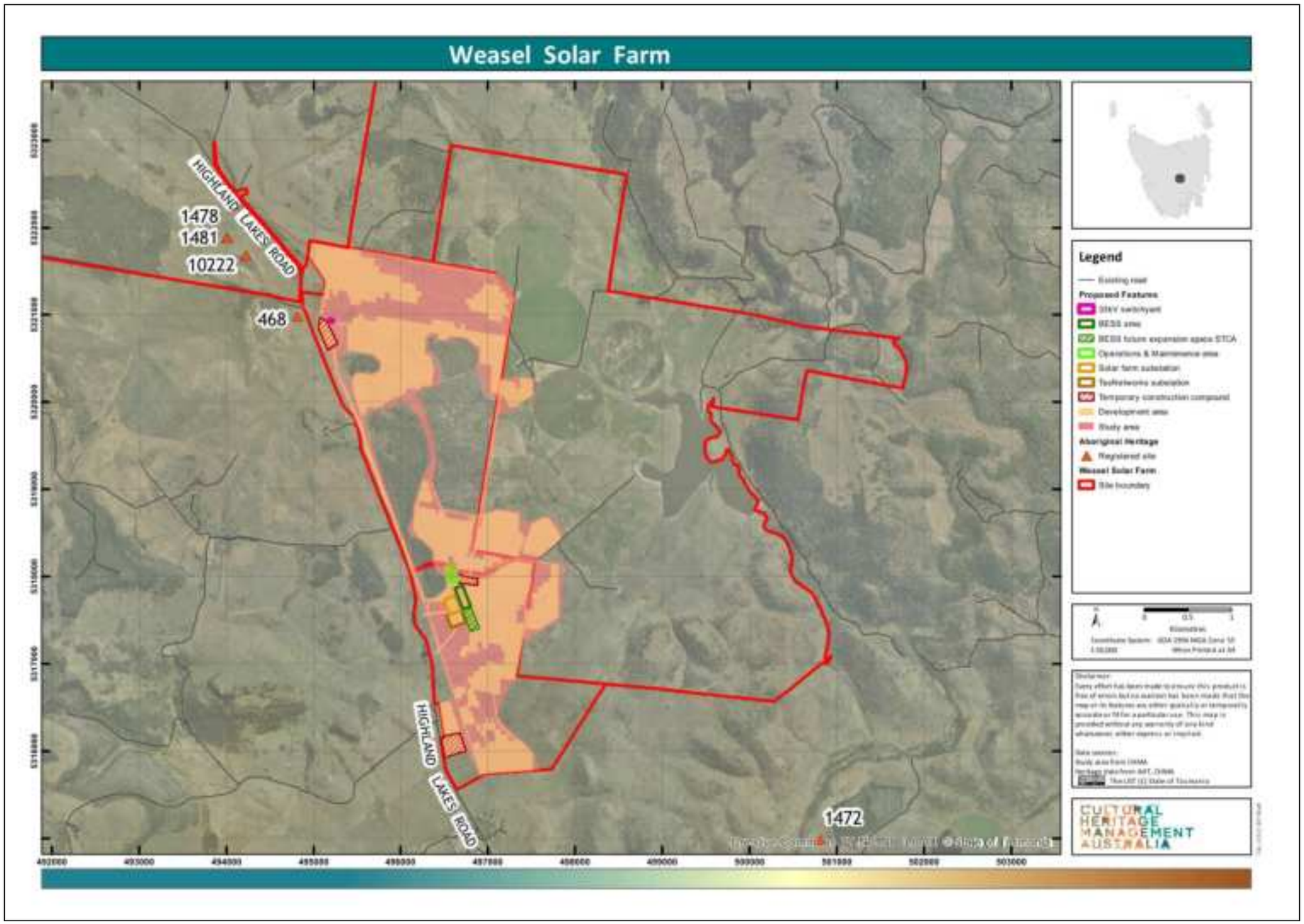


Figure 7: Aerial map showing the location of closest Registered Aboriginal sites in relation to the Weasel Solar Farm site (Based on information generated from the AHR Search dated 8.3.2024)

5.0 Predictive Modelling

5.1 Introduction to Predictive Modelling

Predictive modelling, in an archaeological context, is a fairly straightforward concept and has been utilised by archaeologists in Australia for a number of years as a tool for undertaking research into Aboriginal heritage sites. In summary, predictive modelling involves the collation of information generated from previous archaeological research in a given region, and using this information to establish patterns of Aboriginal site distributions within the landscape of that particular region. On the basis of perceived patterns of site distribution, archaeologists can then make predictive statements regarding the potential for various Aboriginal site types to occur within certain landscape settings, and can make preliminary assessments regarding the potential archaeological sensitivity of landscape types within a given region.

5.2 Predictive Models; Strengths and Weaknesses

It should be acknowledged that most, if not all predictive models have a number of potential inherit weaknesses, which may serve to limit their value. These include, but may not be limited to the following:

1) The accuracy of a predictive model is directly influenced by the quality and quantity of available site data and information for a given region. The more data available and the greater the quality of that data, the more likely it is that an accurate predictive model can be developed.
2) Predictive modelling works very well for certain types, most particularly isolated artefacts and artefact scatters, and to a lesser extent scarred trees. For other site types it is far more difficult to accurately establish distribution patterns and therefore make predictive modelling statements. Unfortunately, these site types are generally the rarer site types (in terms of frequency of occurrence) and are therefore generally the most significant sites.
3) Predictive modelling (unless it is very sophisticated and detailed) will generally not take into account micro-landscape features within a given area. These micro features may include (but is certainly not limited to) slight elevations in the landscape (such as small terraces) or small soaks or drainage depressions that may have held water. These micro features have been previously demonstrated to occasionally be focal points for Aboriginal activity.
4) Predictive modelling to a large extent is often predicated on the presence of watercourses. However, in some instances the alignment of these watercourses has changed considerably over time. As a consequence, the present alignment of a given watercourse may be substantially different to its alignment in the past. The consequence of this for predictive modelling (if these ancient water courses are not taken into account) is that predicted patterns of site distributions may be greatly skewed.

5.3 A Predictive Model of Site Type Distribution for the Study Area

The findings of previous archaeological investigations undertaken in the general vicinity of the study area indicate that the most likely site types that will be encountered within the Weasel Solar Farm site will be artefact scatters and isolated artefacts. Other Aboriginal site types such as stone quarries, Aboriginal Scarred (Modified Trees) and Aboriginal rock shelters have also been recorded in the general surrounds of the study area. It is possible, although far less likely that these site types will be encountered in the study area. The following provides a definition for these site types, and a general predictive statement for their distribution within the site area.

Artefact Scatters and Isolated artefacts

Definition

Isolated artefacts are defined as single stone artefacts. Where isolated finds are closer than 50 linear metres to each other they should generally be recorded as an artefact scatter. Artefact scatters are usually identified as a scatter of stone artefacts lying on the ground surface. For the purposes of this project, artefact scatters are defined as at least 2 artefacts within 50 linear metres of each other. Artefacts spread beyond this can be best defined as isolated finds.

It is recognised that this definition, while useful in most instances, should not be strictly prescriptive. On some large landscape features for example, sites may be defined more broadly. In other instances, only a single artefact may be visible, but there is a strong indication that others may be present in the nearby sediments. In such cases it is best to define the site as an Isolated Find/Potential Archaeological Deposit (PAD).

Artefact scatters can vary in size from two artefacts to several thousand, and may be representative of a range of activities, from sporadic foraging through to intensive camping activity. In rare instances, campsites which were used over a long period of time may contain stratified deposits, where several layers of occupation are buried one on top of another.

Site Distribution Patterns:

Previous archaeological research in the region has identified the following pattern of distribution for this site type.

- The majority of sites will comprise low density artefact scatters made from locally sourced raw materials.
- Artefact scatters are expected to occur on small flats close to water.
- Sites may be clustered around marshlands and lagoons, especially at the intersection of vegetation zones.
- There is likely to be a distinct concentration of activity in the contact zones between lake and forest environments, where presumably the available resources were maximised.
- The dolerite ridgelines are generally less likely to contain archaeological sites.

Predictive Statement:

Applying the broad regional pattern of site distribution (presented above) to the Weasel Solar Farm site, it is anticipated that site and artefact densities will be generally low across the area, with the most likely site type being low density artefact scatters and isolated artefacts. Higher densities of sites and artefacts may be expected to occur in the northern portion of the site area, around the margins of Weasel Plains Creek. Micro-topography will be an important consideration, with sites most likely to be concentrated on elevated, level and well drained landscape units that sit above the flood plain and cold air drainage level of the creek. Away from Weasel Plains Creek, site densities would be expected to be low to very low.

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Stone Quarry/Procurement Sites

Definition

A stone procurement site is a place where stone materials were obtained by Aboriginal people for the purpose of manufacturing stone artefacts. Quarry sites on the other hand have some evidence of the stone being actively extracted using knapping and/or digging. Stone procurement sites are often pebble beds in water courses (where there may be little or no evidence of human activity) or naturally occurring lag deposits exposed on the surface. Quarry sites are usually stone outcrops, with evidence of knapping and pits dug to expose the rock. Concentrations of hammer stones and a thick layer of knapping debris are often present.

Predictive Statement

Previous archaeological research in the Central Highlands region has shown that the most common stone material types utilised for making stone artefacts are silcrete, chert, hornfels, quartzites, quartz, and fine grained volcanics. The sources for these stone material types usually occur in the form of discreet outcrops of bedrock material or concentrations of nodules either within the soil matrix, or in the beds of water courses. No Aboriginal stone quarry sites have been recorded within a 5km radius of the study area, which indicates that there is unlikely to be suitable stone materials for artefact manufacturing in the general surrounds of the study area.
The underlying geology across the entire site is dominated by Upper glaciomarine sequences of pebbly mudstone, pebbly sandstone and limestone. From an Aboriginal heritage perspective, none of these lithologies are suited for stone artefact manufacturing, being too soft and brittle, and were seldom targeted for this purpose. On this basis it is very unlikely that evidence of Aboriginal quarrying or procurement will be present within the Weasel Solar Farm site.

Aboriginal Rock Shelters

Definition

Such sites may contain deposit and/or art. As the name implies, these sites are formed under rocky outcrops which may either be escarpments hollowed by erosion, or in the case of rocks such as granite shelters, may be located under boulder overhangs.

Predictive Statement

Obviously, rock shelters will only occur in areas where there are rock formations of a suitable size and scale to provide potential shelter for human habitation. In the Central Highlands region, the most common form of rock shelters are sandstone caves/overhangs and granite overhangs. As noted in section 4.3, there are two occupied Aboriginal rock shelters and two Unoccupied rock shelter that are located within a 5km radius of the study area, which indicates there is the potential for rock shelters to occur in the Weasel Solar Farm site, if sizable rock outcrops are present.

Aboriginal Scarred (Modified) Trees

Definition

Tree bark is a natural material that has been traditionally used by Aboriginal people for a range of purposes, for example, to create shelters, watercraft, shields or containers. The removal of bark or wood for those purposes results in permanent scarring of a tree. The removal of bark could also be specifically to create a scar that could, for example, signify a traditional boundary or communicate other important cultural information. Other kinds of traditional tree modification by Aboriginal people include tree carving, removal of wood for manufacturing artefacts and cutting into the tree to aid in food collection (e.g. to reach nesting animals, sap or honey) or to create holds for tree climbing. There is also ethnohistorical evidence of tree modification for traditional Aboriginal births and burials in some parts of Australia. Aboriginal scarred trees provide important evidence of Aboriginal activities and cultural information that is often not readily available through other sources, and they are often considered highly significant to Aboriginal people. Scarred trees are rare across Australia due to the nature and extent of land clearing activities but also because trees are vulnerable to destruction from a range of factors including bushfires and natural decay. Hence identification, recording and protection of Aboriginal scarred trees are important for effective cultural heritage management. Being able to discern scars of Aboriginal cultural origin from natural scarring or scars that are the product of non-Aboriginal or European activity can sometimes be complex. Carved trees are far more easily to identify than scarred trees, as the distinct patterns carved into the trees makes them unmistakably identifiable as made by human agency, and the motifs are often unmistakably Aboriginal. The diagnostic features of Aboriginal scarred trees are often quite subtle, which makes their identification complex and multifaceted.

Predictive Statement

Aboriginal scarred or modified trees are a comparatively very rare site type in Tasmania. However, in the Central Highlands Region a number of these scarred trees have been recorded. These are mainly associated with Cider gums, where the tree has been cut by Aboriginal people to obtain the cider sap. The chances of encountering such scarred trees within the study area are negligible, given that Cider gums are not reported for this area.

6.0 Effective Survey Coverage of the Study Area

Survey Coverage and Surface Visibility
Survey coverage refers to the estimated portion of a study area that has actually been visually inspected during a field survey. Surface Visibility refers to the extent to which the actual soils of the ground surface are available for inspection. There are a number of factors that can affect surface visibility, including vegetation cover, surface water and the presence introduced gravels or materials. Figure 8 presents a chart which is used as a general guideline for estimating surface visibility.

The field survey was undertaken by Stuart Huys and Shay Hannah) (CHMA archaeologists) and Rocky Sainty (Aboriginal Heritage Officer) and was implemented over a period of 5 days (25.4.2024, 26.4.2024, 29.4.2024, 30.4.2024, 1.5.2024). The field team walked a total of 68.45kms of survey transects across the Weasel Solar Farm site, with the average width of the transects being 10m. This equates to a total survey coverage of 684 500m². The primary focus of the field survey assessment was the proposed potential overall development area for the Weasel Solar Farm project, which encompasses approximately 435ha. Figure 9 shows the alignment of these transects.

Surface visibility was reasonably consistent across the surveyed areas, ranging between an estimated average of between 30% and 40%, which is in the low-medium range (see Figure 8). Vegetation cover was the main impediment to surface visibility. As a general rule, surface visibility was slightly better (averaging around 40%) on the hill slopes and crests (see Plates 8 and 9), compared to the lower lying valley floors, where visibility averaged 30% (see Plates 10 and 11). In the context of Tasmania, this level of average surface visibility is reasonable. Numerous erosion scalds, graded vehicle tracks and cleared areas were present within the surveyed areas, and these provided locales of improved visibility (see Plate 12). In an effort to increase effective coverage, these areas were targeted by the field team.

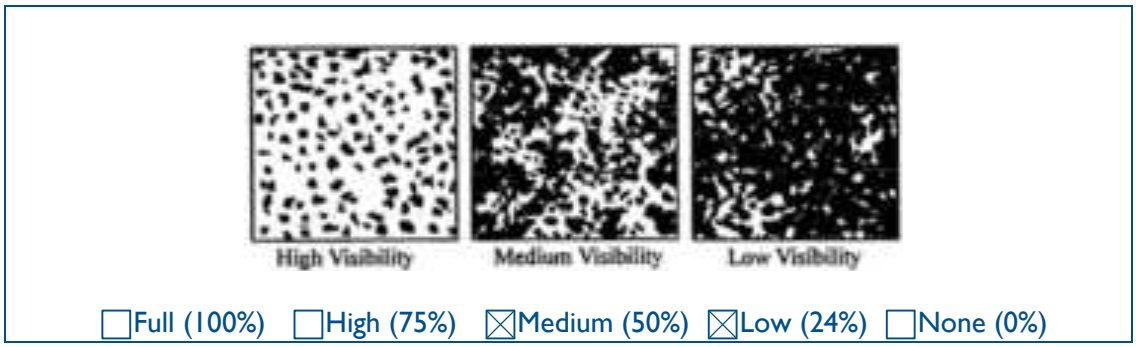


Figure 8: Guidelines for the estimation of surface visibility

Effective coverage
Variations in both survey coverage and surface visibility have a direct bearing on the ability of a field team to detect Aboriginal heritage sites, particularly site types such as isolated artefacts and artefact scatters which are the site types most likely to be encountered in the Weasel Solar Farm site. The combination of survey coverage and surface visibility is referred to as effective survey coverage. Table 2 presents the

estimated effective survey coverage achieved by the field team. The overall effective coverage is estimated to be 251 500m². Generally, the level of effective coverage is assessed as being adequate for the purposes of determining the likely presence, nature and extent of Aboriginal heritage sites that may be present within the potential overall development area for the Weasel Solar Farm project.

Table 2: Effective Survey Coverage achieved for the Weasel Solar Farm survey Assessment

Locations surveyed	Total Area Surveyed	Estimated Average Surface Visibility	Effective Survey Coverage
Grassed Agricultural Areas on Plains	22 300m x 10m = 223 000m²	30%	66 900m²
Hills and ridges fringing plains	46 150m x 10m = 461 500m²	40%	184 600m²
Total	68 450m x 10m = 684 500m²		251 500m²



Plate 8: View east showing typical levels of surface visibility (40%) in the hills areas



Plate 9: View north-west showing average visibility of 40% in the hill areas



Plate 10: View north-west across the valley floor plains with surface visibility at around 40%



Plate 11: View west across the plains area with visibility averaging 30%



Plate 12: View east at a large erosion scald within the hills providing a locale of improved visibility

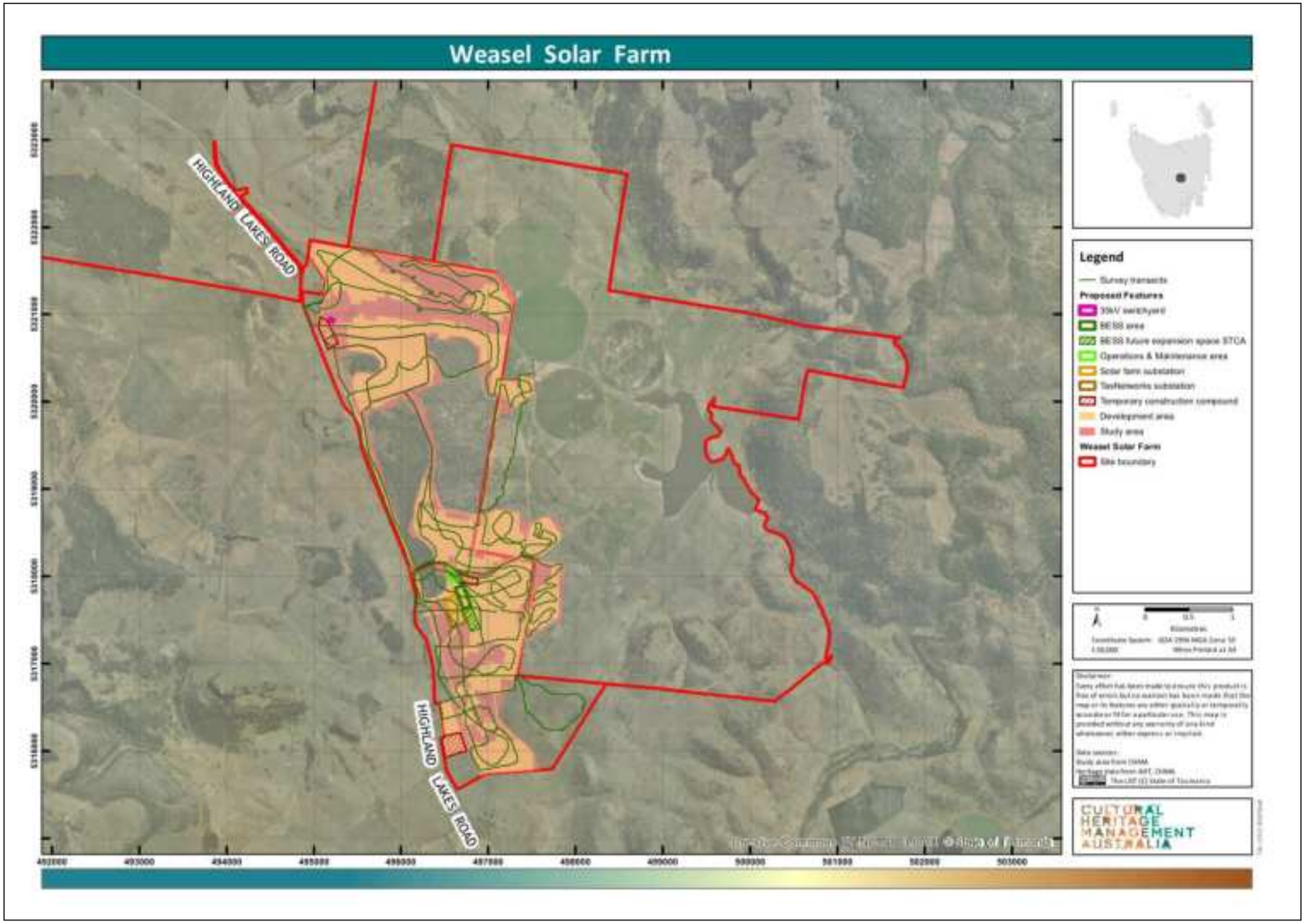


Figure 9: Aerial map showing survey transects walked across the Weasel Solar Farm site, with transects focused on the proposed potential overall development area

7.0 Survey Results and Discussion

7.1 Summary Overview of the Survey Results

No Aboriginal heritage sites or suspected Aboriginal heritage features were identified during the field survey assessment of the Weasel Solar Farm site. The field team were able to confirm that there are no rock outcrop features located within the project footprint that would be in any way suitable for occupation. The field survey was also able to confirm that there is no evidence for Aboriginal stone quarry/procurement sites being located within the project footprint. The field team inspected all exposed rock outcrop areas and did not identify any stone materials that would be suited for artefact manufacturing. The occasional small quartzite nodules were identified in paddocks, however none of these nodules showed any evidence of having been modified. As part of the field survey assessment, the field team also inspected those mature Eucalypt trees within the project footprint for any signs of Aboriginal scarring. No signs of scarring were identified, and no cider gum trees were identified in the project footprint.

As detailed in section 4.3 of this report, a search of the AHR shows that there no registered Aboriginal sites located within or in the immediate vicinity of the project area. The closest registered site is AH468 which is situated around 105m to the west of the western boundary of the Weasel Solar Farm site. This assessment has therefore confirmed that there are no known Aboriginal heritage sites that are situated within the potential overall development area for the Weasel Solar Farm project.

As described in section 6 of this report, there were some constraints in surface visibility experienced across the surveyed areas, with average surface visibility ranging between 30%-40%. Given these constraints, it can't be stated with absolute certainty that there are no undetected Aboriginal sites present within the proposed development area for the Weasel Solar Farm project.

In the predictive modelling developed for this project, it was anticipated that comparatively higher densities of sites and artefacts may be expected to occur in the northern portion of the Weasel Solar Farm site area, around the margins of Weasel Plains Creek. It was noted that micro-topography would be an important consideration, with sites most likely to be concentrated on elevated, level and well drained landscape units that sit above the flood plain and cold air drainage level of the creek. Away from Weasel Plains Creek, site densities would be expected to be low to very low.

Although no Aboriginal sites were identified in this northern portion of the study area, two specific areas were identified where it is assessed that there is an increased potential for artefact deposits to be present. These two locations have been designated as areas of Potential Archaeological Sensitivity (PAS1 and PAS2). Both areas are located along the margins of Weasel Plains Creek and encompass elevated landscape features that sit above the lower lying flood plains of the creek. PAS1 encompasses the gently sloping spine of a low relief spur line that is bordered

to the north and south by tributary channels of Weasel Plains Creek (see Plate 13). PAS2 is a small, discrete, elevated and level rise that is situated around 200m north of Weasel Plains Creek (see Plate 14). Surface visibility across both PAS areas was restricted to around 30%. Soils across the two PAS areas appear to have a reasonable depth. There is the potential that both of these locations may have been occasionally utilised as interim camp sites and as such there is the potential for artefact deposits to be present. The densities of artefacts at both PAS areas would be expected to be in the low to moderate range. It is not expected that high artefact densities representing more intensive activity will be present. Both PAS areas have been entirely cleared of native vegetation as part of past farming activity, which means that any artefact deposits that are present will have been impacted to some extent. However, these disturbances are likely to be primarily confined to the top 30cm of the soil horizon, involving some vertical and horizontal displacements of artefacts. Table 3 provides the summary details for the two identified PAS areas, with Figures 10 and 1 showing the location of the two PAS areas.

Besides these two PAS areas, no other specific locations of potential archaeological sensitivity were identified within the Weasel Solar Farm site. Overall, it is assessed that there is a low to very low potential for undetected Aboriginal sites to be present. The fact is that the field team spent five days in the field and walked over 68km of transects across the Weasel Solar Farm site, without identifying a single site. The average levels of surface visibility were certainly sufficient to generate an impression of the general level of site densities that can be expected to occur across the surveyed areas. With the possible exception of PAS1 and PAS2, the negative survey results provide a strong indication that Aboriginal sites are either absent or are present in low to very low densities. If undetected sites are present, they are likely to be isolated artefacts or small, low density artefact scatters, which are representative of sporadic activity. There are no indications that higher concentrations of artefacts, representing more focused areas of activity (such as regular camp site locations) are present within the site area.

These findings and the interpretation of the findings are generally consistent with the broader pattern of site distribution noted for the Central Highlands Region and the findings of investigations undertaken in the surrounds of the study area. The findings of these archaeological investigations indicate that site densities are generally significantly lower in the Central Highlands compared with the Midlands. However, there does appear to be a distinct increase in site and artefact densities around the margins of the natural lakes and marshes in the region, particularly around Great Lake, as well as along major river valleys. The study area is situated away from these larger natural water bodies and rivers and therefore site densities would be expected to be lower away from the major resource zones, reflecting more sporadic activity. This is discussed in more detail in section 7.2.

Table 3: Summary details for PAS1 and PAS2

AH No.	Grid References (GDA 94)	Description
PAS1	E496265 N5321267 E496226 N5321153 E496593 N5321134 E496533 N5321038	Area measures approximately 330m (east-west) x 120m and encompasses a section of the spine of an east-west trending spur line (slope gradients 2-5º). The spur line is bordered to the north and south by Weasel Plains Creek and a tributary of the creek, which merge at east termination point of spur. Soils across the area are grey/brown loams with reasonable depth. Area has been cleared of native vegetation and is covered with grasses. Surface visibility is 30%.
PAS2	E497246 N5321023 E497184 N5321116 E497274 N5321200 E497269 N5321137	Area measures approximately 130m (north-south) x 80m and incorporates a small rise that sits slightly above the northern margins of Weasel Plains Creek, 200m north of creek channel. Soils across the area are grey/brown loams with reasonable depth. Area has been cleared of native vegetation and is covered with grasses. Surface visibility is 30%.



Plate 13: View east across PAS1



Plate 14: View south across PAS2

7.2 General Interpretation of the Evidence

The available ethnographic information indicates that the Weasel Solar Farm site is most likely situated within the territory of the Pangerninghe people who were a clan of the Big River Nation. The ethnography indicates that the clans of the Big River Nation travelled across their land via well maintained and regularly used travelling routes. One of the major travelling routes ran along the River Derwent Valley, through to the Highland Lakes. This is the closest of the major travelling routes to the study area. Ryan (2012:26) reports that the clans of the Big River Nation appear to have mainly camped along the shores of the natural lake systems (particularly Great Lake, Arthurs Lake and Lake Echo) and along the Shannon, Dee, Ouse and Clyde Rivers, which connect the lakes to the River Derwent. All of these lake and river systems were resource rich zones and opened onto kangaroo hunting grounds. These would most probably have been favoured interim camp site locations that were utilised on a regular seasonal basis by the Big River Nation, as they moved through their territory. This is consistent with the Aboriginal settlement and subsistence patterns observed by Cosgrove (1984) for the Central Highlands, where there was a noted preference towards occupying those areas where there is the interface of the boundaries of lake and forest environments, where maximum resources were available. This is seen as a decisive Sub-Alpine adaptation strategy.

The available archaeological information appears to support the ethnographic information. High concentrations of Aboriginal sites have been recorded along the River Derwent Valley, and the other major river valleys such as the Clyde, Shannon and Ouse Rivers, as well as around the margins of the major lake and lagoon

systems. This archaeological signature provides tangible evidence that these areas were indeed major focal points of activity for the Big River Nation. In contrast, the densities of Aboriginal sites appear to decrease significantly in areas away from the major lake and river valley systems. This indicates the activity in these areas was generally more sporadic and restricted to periodic hunting and foraging activity. Potential exceptions were areas where there were concentrations of specific resources, such as certain stone materials that were targeted for artefact manufacturing.

The Weasel Solar Farm site is located in rolling hills interspersed by plains and small valleys. The only named water course within the site is Weasel Plains Creek, an ephemeral water course, which is a tributary of the Clyde River. The upper reaches of this creek flow through the northern portion of the site. Based on the available archaeological and ethnographic information, together with the observations made during the current survey assessment, it is apparent that the terrain encompassed by the Weasel Solar Farm site was not likely to have been a major focal point of activity for the Pangerninghe people. This assessment is based on the fact that the area sits outside of the major river valley resource zones, together with the observation that there are no specific resources present (such as stone materials suitable for artefact manufacturing) that would have been targeted by the Pangerninghe people. The Pangerninghe people would probably have occasionally hunted and camped through this area, but visits would have been intermittent and short in duration, so that large scale cultural deposits do not accumulate. The people would carry the majority of their tool kit with them, as they needed to be highly mobile in order to make the most of the seasonal resources and trade opportunities. Artefacts discarded by such groups are likely to be those that are easily replaced. Rates of discard are expected to be low, resulting in low to very low densities of archaeological sites and isolated artefacts.

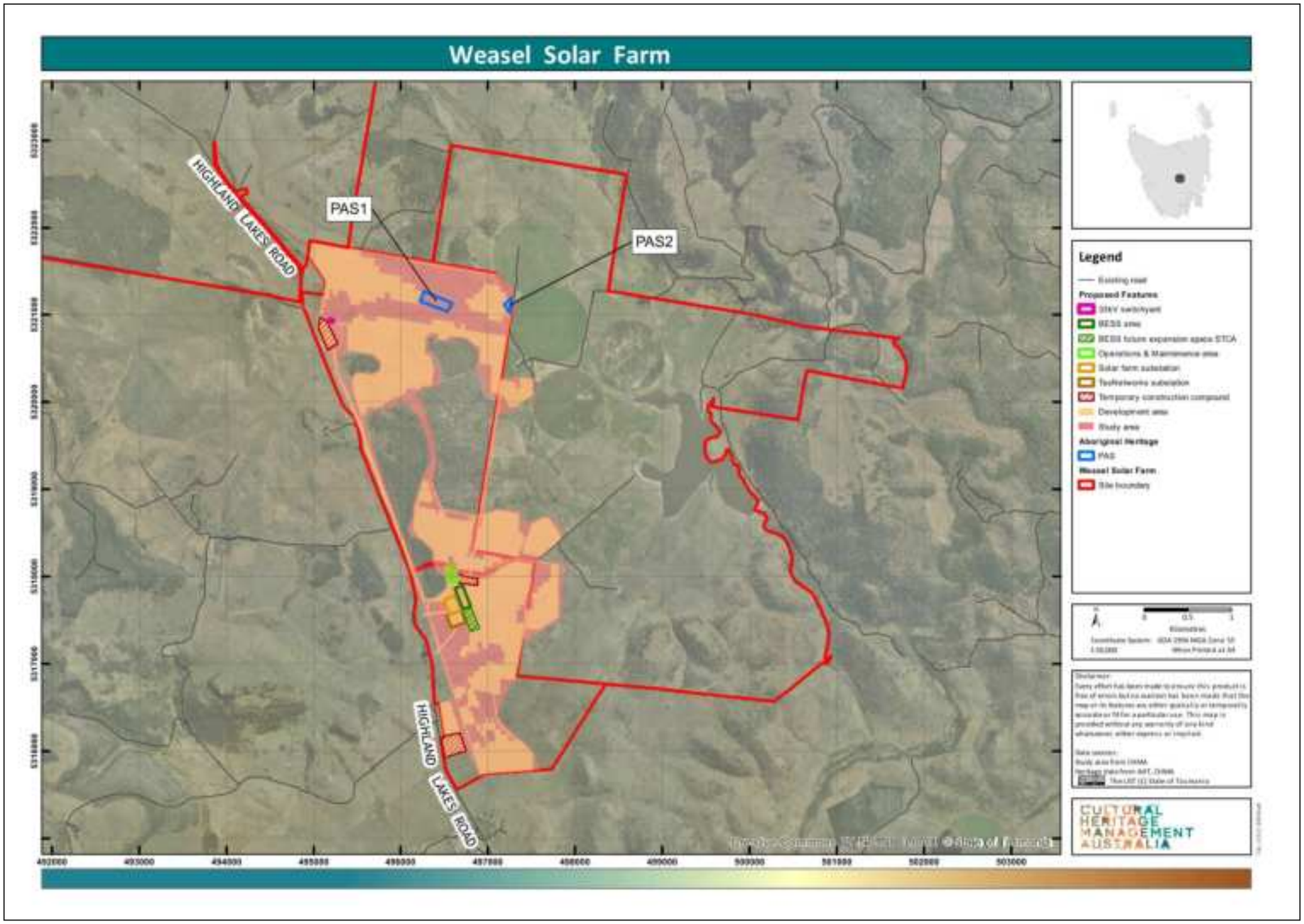


Figure 10: Aerial map showing the location of PAS1 and PAS2 in relation to the proposed potential overall development area

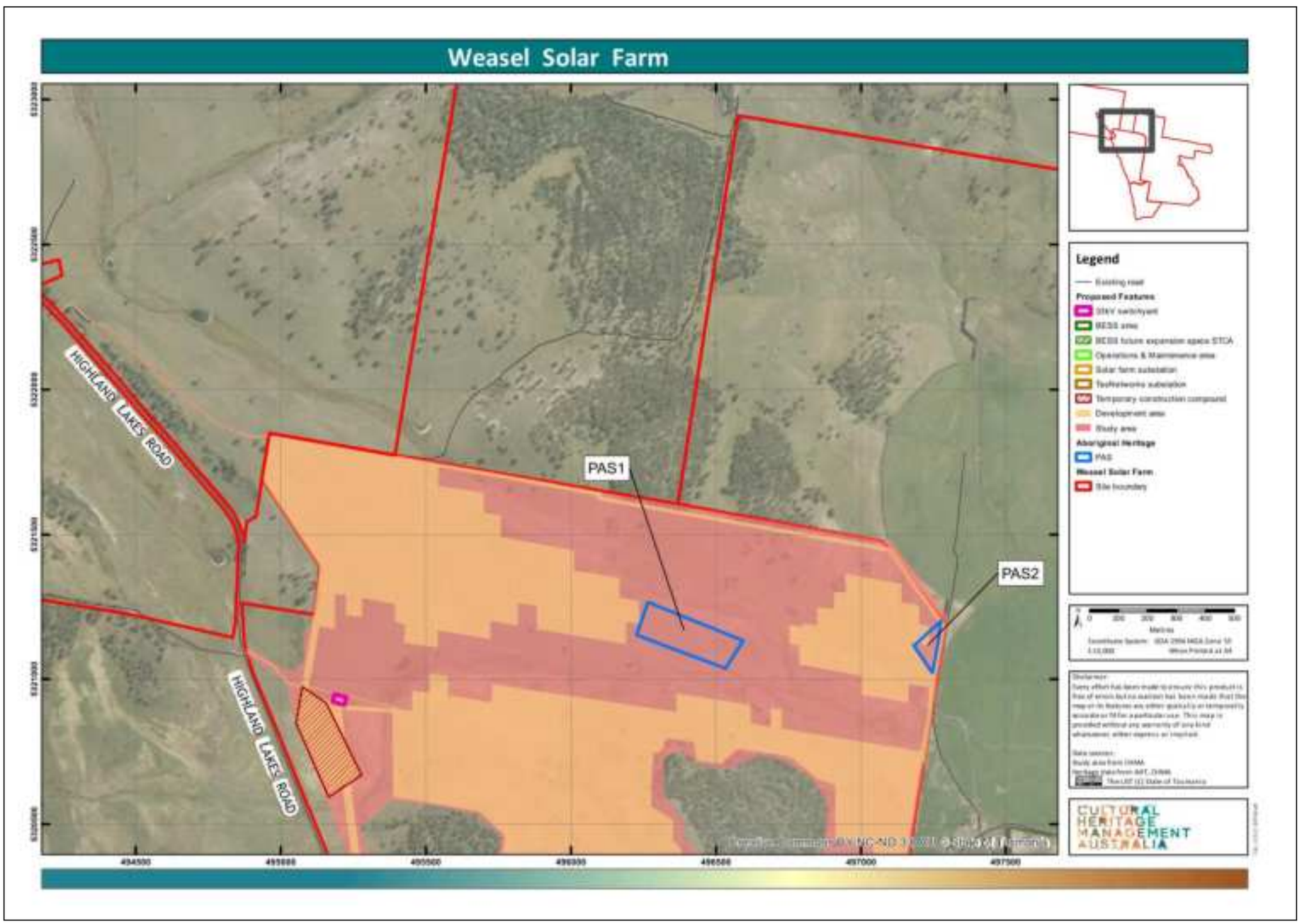


Figure 11: Zoomed in aerial map showing the location of PAS1 and PAS2 in relation to the proposed potential overall development area

8.0 Consultation with Aboriginal Communities and Statement of Aboriginal Significance

The designated Aboriginal Heritage Officer (AHO) for this project is Rocky Sainty. One of the primary roles of the Aboriginal Heritage Officer is to consult with Aboriginal community groups. The main purpose of this consultation process is:

- to advise Aboriginal community groups of the details of the project,
- to convey the findings of the Aboriginal heritage assessment,
- to document the Aboriginal social values attributed to Aboriginal heritage resources in the study area,
- to discuss potential management strategies for Aboriginal heritage sites, and
- to document the views and concerns expressed by the Aboriginal community representatives.

No Aboriginal heritage sites or suspected Aboriginal heritage features were identified during the field survey assessment of the Weasel Solar Farm site. A search of the AHR shows that there are no registered Aboriginal sites that are located within or in the immediate vicinity of the solar farm site. Two areas of potential archaeological sensitivity (PAS1 and PAS2) were identified. It has been recommended that these areas are avoided (if possible). If they cannot be avoided, then it has been recommended that further archaeological investigations be undertaken at these PAS locations. Besides these two PAS areas, it is assessed that there is generally a low to very low potential for undetected Aboriginal heritage sites to be present within the Weasel Solar Farm site.

Because of the presence of the two identified PAS areas, the decision has been made to send this report out to a select range of Tasmanian Aboriginal organisations for review and comment. The outcomes of this consultation process are presented in Appendix 2 of this report. The report has also been provided to AHT for review.

Rocky Sainty has provided a statement of the Aboriginal cultural values attributed to the study area as a whole. This statement is presented below.

Statement of Cultural/Social Significance by Rocky Sainty
Aboriginal heritage provides a direct link to the past, however, is not limited to the physical evidence of the past. It includes both tangible and intangible aspects of culture. Physical and spiritual connection to land and all things within the landscape has been, and continues to be, an important feature of cultural expression for Aboriginal people since creation. Physical evidence of past occupation of a specific place may include artefacts, living places (middens), rock shelters, markings in rock or on the walls of caves and/or rock shelters, burials and ceremonial places. Non-physical aspects of culture may include the knowledge (i.e. stories, song, dance, weather patterns, animal, plant and marine resources for food, medicines and technology) connected to the people and the place.

*While so much of the cultural landscape that was **lutruwita** (Tasmania) before invasion and subsequent colonization either no longer exists, or has been heavily impacted on, these values continue to be important to the Tasmanian Aboriginal community and are relevant to the region of the project proposal.*

We did not identify any Aboriginal heritage sites during the survey of the proposed footprint for the Weasel Solar Farm site, and our AHR search shows that there are no registered sites located in this area.

We did identify two areas where the archaeologist (Stuart Huys) and I agree that there is an increased chance that Aboriginal cultural deposits may be present. These have been termed as areas of Potential Archaeological Sensitivity (PAS1 and 2) in this report. Both PAS areas are situated close to the margins of Weasel Plains Creek. It is my opinion that there is a reasonable possibility that our ancestors would have selected these areas as occasional camp site locations. Because Weasel Plains Creek is a relatively minor water course which drains a small valley, I think it is very unlikely that either location would have been a major camp location. This are more likely to have been focused within the larger river valley systems, where there were more available resources.

Given the potential for Aboriginal heritage values to be present at these two PAS areas, it is my preference that the proposed development footprint for the solar farm is amended so as to exclude development within these two areas of potential sensitivity. If avoidance is not possible then I support the recommendations in this report to undertake test pitting in these two PAS areas in order to clarify whether cultural deposits are present and if so, in what densities.

Based on my observations made during the field survey, I am satisfied that there is generally a low to very low potential for Aboriginal heritage values to be present across the remainder of the proposed development footprint for the Solar Farm. We covered a large area with our field survey, and despite reasonable conditions of surface visibility we didn't identify any sites. This provides a very clear indication to me that this area was not a focal point of activity for our Old People. Our ancestors would certainly have occasionally hunted and camped in the hills and plains area around Weasel Plains Creek. However, they are unlikely to have stayed in this area for any long duration of time. Instead, they are more likely to have had their major camp locations at certain favoured spots within the major river valleys such as the Clyde, Shannon, Ouse and Derwent Rivers, and to have travelled along these valley systems as part of their seasonal movement through Country.

Even if the site of the project proposal contains no evidence of Aboriginal heritage there is always the cultural resources (flora, fauna, aquaculture or any other resource values that the earth may offer) and the living landscape, which highlight the high significance to the Aboriginal cultural heritage values to the country. The proposed site for the Solar Farm is primarily focused within cleared farm paddocks that has been subject to high levels of landscape modification. The proposed development footprint largely avoids any areas of native vegetation where cultural values may still be present.

9.0 Statutory Controls and Legislative Requirements

The following provides an overview of the relevant State and Federal legislation that applies for Aboriginal heritage within the state of Tasmania.

9.1 State Legislation

In Tasmania, the *Aboriginal Heritage Act 1975* (the Act) is the primary Act for the treatment of Aboriginal cultural heritage. The Act is administered by the Minister for Aboriginal Affairs, through Aboriginal Heritage Tasmania (AHT). AHT is the regulating body for Aboriginal heritage in Tasmania and '[n]o fees apply for any application to AHT for advice, guidance, lodgement or permit application'.

The Act applies to 'relics' which are any object, place and/or site that is of significance to the Aboriginal people of Tasmania (as defined in section 2(3) of the Act). The Act defines what legally constitutes unacceptable impacts on relics and a process to approve impacts when there is no better option. Aboriginal relics are protected under the Act and it is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. It is illegal to sell or offer for sale a relic, or to cause or permit a relic to be taken out of Tasmania without a permit (section 2(4) qualifies and excludes 'objects made, or likely to have been made, for purposes of sale').

Section 10 of the Act sets out the duties and obligations for persons owning of finding an Aboriginal relic. Under section 10(3) of the Act, a person shall, as soon as practicable after finding a relic, inform the Director or an authorised officer of the find.

It should be noted that with regard to the discovery of suspected human skeletal remains, the *Coroners Act 1995* takes precedence. The *Coroners Act 1995* comes into effect initially upon the discovery of human remains, however once determined to be Aboriginal the *Aboriginal Heritage Act* overrides the *Coroners Act.*

In August 2017, the Act was substantively amended and the title changed from the *Aboriginal Relics Act 1975*. As a result, the AHT *Guidelines to the Aboriginal Heritage Assessment Process* were replaced by the *Aboriginal Heritage Standards and Procedures*. The Standards and Procedures are named in the statutory *Guidelines* of the Act issued by the Minister under section 21A of the Act. Other amendments include:

- An obligation to fully review the Act within three years.
- Increases in maximum penalties for unlawful interference or damage to an Aboriginal relic. For example, maximum penalties (for deliberate acts) are 10,000 penalty unites (currently $1.57 million) for bodies corporate other than small business entities and 5,000 penalty units (currently $785,000) for individuals or small business entities; for reckless or negligent offences, the maximum penalties are 2,000 and 1,000 penalty units respectively (currently $314,000 and $157,000). Lesser offences are also defined in sections 10, 12, 17 and 18.
- Prosecution timeframes have been extended from six months to two years.

- The establishment of a statutory Aboriginal Heritage Council to advise the Minister.

Section 21(1) specifies the relevant defence as follows: “It is a defence to a prosecution for an offence under section 9 or 14 if, in relation to the section of the Act which the defendant is alleged to have contravened, it is proved … that, in so far as is practicable … the defendant complied with the guidelines”.

9.2 Commonwealth Legislation

There are also a number of Federal Legislative Acts that pertain to cultural heritage. The main Acts being; *The Australian Heritage Council Act 2003*, *The Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and the *Environment Protection and Biodiversity Conservation Act 1999.*

Australian Heritage Council Act 2003 (Comm)

The *Australian Heritage Council Act 2003* defines the heritage advisory boards and relevant lists, with the Act’s Consequential and Transitional Provisions repealing the Australian Heritage Commission Act 1975. The Australian Heritage Council Act, like the Australian Heritage Commission Act, does not provide legislative protection regarding the conservation of heritage items in Australia, but has compiled a list of items recognised as possessing heritage significance to the Australian community.

***The Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.**

This Federal Act was passed to provide protection for the Aboriginal heritage, in circumstances where it could be demonstrated that such protection was not available at a state level. In certain instances, the Act overrides relevant state and territory provisions.

The major purpose of the Act is to preserve and protect from injury and desecration, areas and objects of significance to Aborigines and Islanders. The Act enables immediate and direct action for protection of threatened areas and objects by a declaration from the Commonwealth minister or authorised officers. The Act must be invoked by, or on behalf of an Aboriginal or Torres Strait Islander or organisation.

Any Aboriginal or Torres Strait Islander person or organization may apply to the Commonwealth Minister for a temporary or permanent 'Stop Order' for protection of threatened areas or objects of significant indigenous cultural heritage.

The Commonwealth Act 'overrides' State legislation if the Commonwealth Minister is of the opinion that the State legislation (or undertaken process) is insufficient to protect the threatened areas or objects. Thus, in the event that an application is made to the Commonwealth Minister for a Stop Order, the Commonwealth Minister will, as a matter of course, contact the relevant State Agency to ascertain what protection is being imposed by the State and/or what mitigation procedures have been proposed by the landuser/developer.

In addition to the threat of a 'Stop Order' being imposed, the Act also provides for the following:

- If the Federal Court, on application from the Commonwealth Minister, is satisfied that a person has engaged or is proposing to engage in conduct that breaches the 'Stop Order', it may grant an injunction preventing or stopping such a breach (s.26). Penalties for breach of a Court Order can be substantial and may include a term of imprisonment;
- If a person contravenes a declaration in relation to a significant Aboriginal area, penalties for an individual are a fine up to $10,000.00 and/or 5 years gaol and for a Corporation a fine up to $50,000.00 (s.22);
- If the contravention is in relation to a significant Aboriginal object, the penalties are $5,000.00 and/or 2 years gaol and $25,000.00 respectively (s.22);
- In addition, offences under s.22 are considered 'indictable' offences that also attract an individual fine of $2,000 and/or 12 months gaol or, for a Corporation, a fine of $10,000.00 (s.23). Section 23 also includes attempts, inciting, urging and/or being an accessory after the fact within the definition of 'indictable' offences in this regard.

The Commonwealth Act is presently under review by Parliament and it is generally accepted that any new Commonwealth Act will be even more restrictive than the current legislation.

Environment Protection and Biodiversity Conservation Act 1999 (Comm)
This Act was amended, through the Environment and Heritage Legislation Amendment Act (No1) 2003 to provide protection for cultural heritage sites, in addition to the existing aim of protecting environmental areas and sites of national significance. The Act also promotes the ecologically sustainable use of natural resources, biodiversity and the incorporation of community consultation and knowledge.

The 2003 amendments to the *Environment Protection and Biodiversity Conservation Act 1999* have resulted in the inclusion of indigenous and non-Indigenous heritage sites and areas. These heritage items are defined as:
'*indigenous heritage value of a place means a heritage value of the place that is of significance to indigenous persons in accordance with their practices, observances, customs, traditions, beliefs or history*;

Items identified under this legislation are given the same penalty as actions taken against environmentally sensitive sites. Specific to cultural heritage sites are §324A-324ZB.

Environment and Heritage Legislation Amendment Act (No1) 2003 (Comm)
In addition to the above amendments to the *Environment Protection and Biodiversity Conservation Act 1999* to include provisions for the protection and conservation of heritage, the Act also enables the identification and subsequent listing of items for the Commonwealth and National Heritage Lists. The Act establishes the *National Heritage List*, which enables the inclusion of all heritage, natural, Indigenous and non-Indigenous, and the *Commonwealth Heritage List*, which enables listing of sites nationally and internationally that are significant and governed by Australia.

In addition to the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*, amendments made to the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* enables the identification and subsequent listing of indigenous heritage values on the Commonwealth and/or National Heritage Lists (ss. 341D & 324D respectively). Substantial penalties (and, in some instances, gaol sentences) can be imposed on any person who damages items on the National or Commonwealth Heritage Lists (ss. 495 & 497) or provides false or misleading information in relation to certain matters under the Act (ss.488-490). In addition, the wrongdoer may be required to make good any loss or damage suffered due to their actions or omissions (s.500).

10.0 Aboriginal Cultural Heritage Management Plan

Heritage management options and recommendations provided in this report are made on the basis of the following criteria.

- Consultation with Rocky Sainty (Aboriginal Heritage Officer).
- The outcomes of the Aboriginal Community Consultation process as documented in Appendix 2.
- The legal and procedural requirements as specified in the *Aboriginal Heritage Act 1975* (The Act), as summarised in section 9 of this report;
- The results of the investigation as documented in section 7 this report; and
- Background research into the extant archaeological and ethno-historic record for the study area and the surrounding region, as presented in sections 3 and 4 of this report.

Recommendation 1

No Aboriginal heritage sites or suspected Aboriginal heritage features were identified during the field survey assessment of the potential overall development area for the Weasel Solar Farm project. A search of the AHR shows that there are no registered Aboriginal sites that are located within or in the immediate vicinity of the site. On the basis of the above, it is advised that the current potential overall development area for the Weasel Solar Farm project will have no impacts on known Aboriginal sites, and therefore there are no Aboriginal heritage constraints, or legal impediments to the project proceeding.

Recommendation 2

Two areas of Potential Archaeological Sensitivity (PAS1 and PAS2) have been identified within the Weasel Solar Farm site. Both PAS areas are situated within the potential overall development area for the Weasel Solar Farm (see Figure 12).

It is recommended that the preferred management option is to amend the current proposed development area for the Weasel Solar Farm to avoid impacting these two PAS areas.

If there is the potential that either PAS area may be impacted by the proposed solar farm development, then it is recommended that a limited sub-surface test pitting program should be implemented within the bounds of the PAS areas. The purpose of this test pitting program will be to confirm the presence absence of artefact deposits in these areas and if artefact deposits are confirmed, then to ascertain the nature and extent of these deposits. The scope and requirements of the sub-surface test pitting program should be ratified with AHT prior to the test pitting being implemented. This would involve the development of an approved Method Statement for these works. The findings of the test pitting program should be presented in a report which would act as an addendum to this report. The report would include management recommendations for any further requirements that may apply to these PAS areas and obligations regarding managing any identified Aboriginal cultural values.

All Aboriginal relics are protected under the *Aboriginal Heritage Act 1975* (The Act) and it is illegal to destroy, damage, deface, conceal or otherwise interfere with a relic, unless in accordance with the terms of a permit granted by the Minister. The two PAS areas are located on Privately owned land. Any test pits excavated on privately owned land will not require a Permit. However, if Aboriginal cultural materials or suspected features are identified during the test pitting program then test pitting works at that test pit location will cease and AHT will be contacted and advised of the find. Test pitting works at the location of the identified find cannot re-commence until such time as a Permit has been obtained.

Recommendation 3

Besides PAS1 and PAS2, it is assessed that there is generally a low to very low potential for undetected Aboriginal heritage sites to occur within the current potential overall development area for the Weasel Solar Farm. However, if, during the course of the proposed development works, previously undetected archaeological sites or objects are located, the processes outlined in the Unanticipated Discovery Plan should be followed (see Appendix 1). A copy of the Unanticipated Discovery Plan (UDP) should be kept on site during all ground disturbance and construction work. All construction personnel should be made aware of the Unanticipated Discovery Plan and their obligations under the *Aboriginal Heritage Act 1975* (the Act). This could be facilitated through the implementation of a Cultural Heritage Awareness induction for contractors and personnel.

Recommendation 4

If the current potential overall development area for the Weasel Solar Farm. changes, then additional survey assessments will need to be undertaken for areas not covered by the current assessment.

Recommendation 5

Copies of this report should be submitted to Aboriginal Heritage Tasmania (AHT) for review and comment.

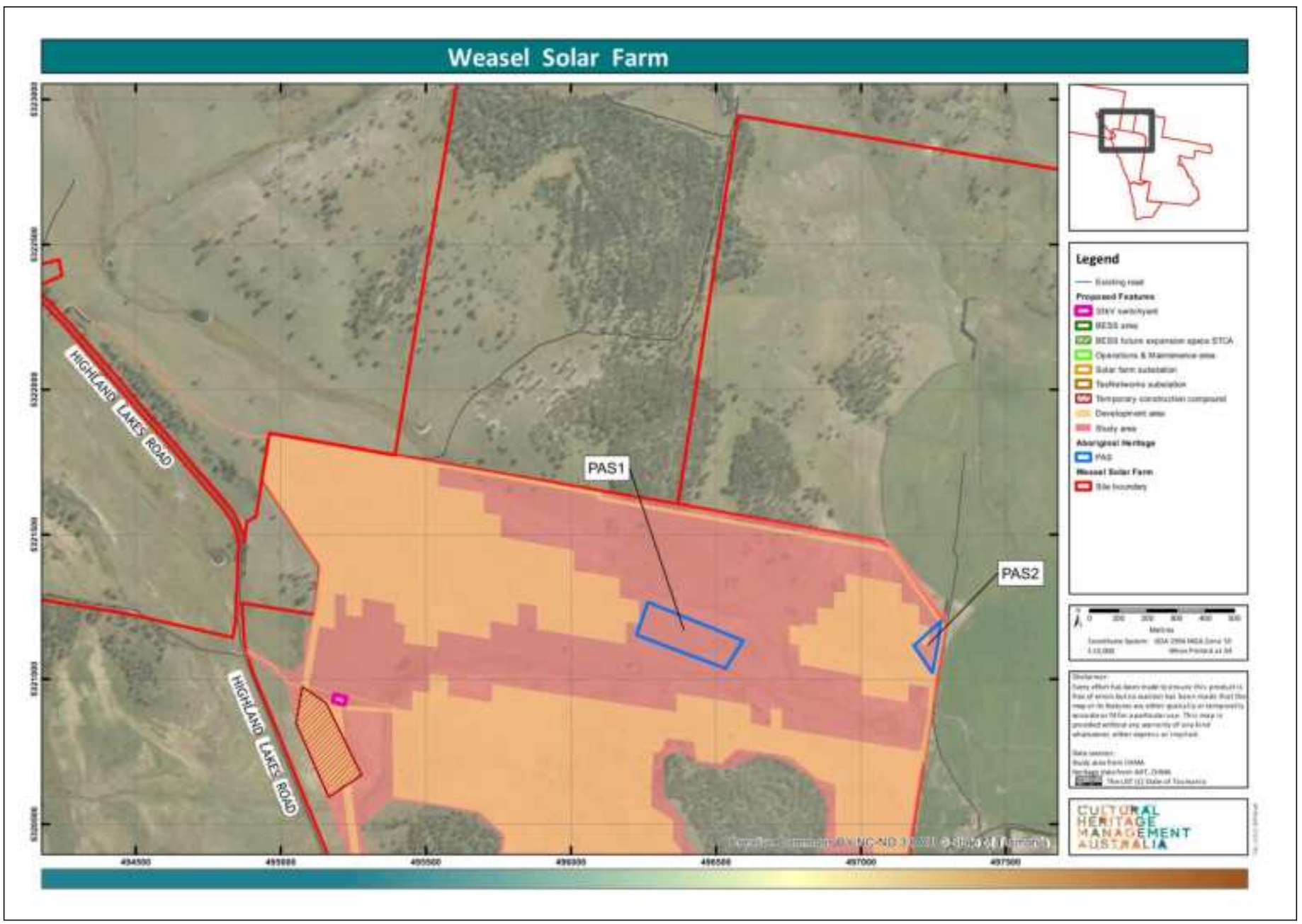


Figure 12: Zoomed in aerial map showing the location of PAS1 and PAS2 in relation to the proposed potential overall development area

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Glossary of Terms

Aboriginal Archaeological Site
A site is defined as any evidence (archaeological features and/or artefacts) indicating past Aboriginal activity, and occurring within a context or place relating to that activity. The criteria for formally identifying a site in Australia vary between States and Territories.

Artefact
A portable object that has been humanly made or modified (see also stone artefact).

Assemblage (lithic)
A collection of complete and fragmentary stone artefacts and manuports obtained from an archaeological site, either by collecting artefacts scattered on the ground surface, or by controlled excavation.

Broken Flake
A flake with two or more breakages, but retaining its area of break initiation.

Chert
A highly siliceous rock type that is formed biogenically from the compaction and precipitation of the silica skeletons of diatoms. Normally there is a high percentage of cryptocrystalline quartz. Like chalcedony, chert was valued by Aboriginal people as a stone material for manufacturing stone tools. The rock type often breaks by conchoidal (shell like) fracture, providing flakes that have hard, durable edges.

Cobble
Water worn stones that have a diameter greater than 64mm (about the size of a tennis ball) and less than 256mm (size of a basketball).

Core
A piece of stone, often a pebble or cobble, but also quarried stone, from which flakes have been struck for the purpose of making stone tools.

Core Fragments
A piece of core, without obvious evidence of being a chunky primary flake.

Cortex
The surface of a piece of stone that has been weathered by chemical and/or physical means.

Debitage
The commonly used term referring to the stone refuse discarded from knapping. The manufacturing of a single implement may result in the generation of a large number of pieces of debitage in an archaeological deposit.

Flake (general definition)

A piece of stone detached from a nucleus such as a core. A complete or substantially complete flake of lithic material usually shows evidence of hard indenter initiation, or occasional bending initiation. The most common type of flake is the 'conchoidal flake'. The flake's primary fracture surface (the ventral or inside surface) exhibits features such as fracture initiation, bulb of force, and undulations and lances that indicate the direction of the fracture front.

Flake fragment
An artefact that does not have areas of fracture initiation, but which displays sufficient fracture surface attributes to allow identification as a stone artefact fragment.

Flake portion (broken flake)
The proximal portion of a flake retaining the area of flake initiation, or a distal portion of a flake that retains the flake termination point.

Flake scraper
A flake with retouch along at least one margin. The character of the retouch strongly suggests shaping or rejuvenation of a cutting edge.

Nodules
Regular or irregular cemented masses or nodules within the soil. Also referred to as concretions and buckshot gravel. Cementing agents may be iron and/or manganese oxides, calcium carbonate, gypsum etc. Normally formed in situ and commonly indicative of seasonal waterlogging or a fluctuating chemical environment in the soil such as; oxidation and reduction, or saturation and evaporation. Nodules can be redistributed by erosion. (See also 'concretion').

Pebble
By geological definition, a waterworn stone less than 64 mm in diameter (about the size of a tennis ball). Archaeologists often refer to waterworn stones larger than this as pebbles though technically they are cobbles.

Quartz
A mineral composed of crystalline silica. Quartz is a very stable mineral that does not alter chemically during weathering or metamorphism. Quartz is abundantly common and was used by Aboriginal people throughout Australia to make light-duty cutting tools. Despite the often unpredictable nature of fracture in quartz, the flakes often have sharp cutting edges.

Quartzite
A hard silica rich stone formed in sandstone that has been recrystallised by heat (metaquartzite) or strengthened by slow infilling of silica in the voids between the sand grains (Orthoquartzite).

Retouch (on stone tools)
An area of flake scars on an artefact resulting from intentional shaping, resharpening, or rejuvenation after breakage or blunting of a cutting edge. In resharpening a cutting edge the retouch is invariably found only on one side (see also 'indeterminate retouched piece', retouch flake' etc).

Scraper
A general group of stone artefacts, usually flakes but also cores, with one or more retouched edges thought to have been used in a range of different cutting and scraping activities. A flake scraper is a flake with retouch along at least one margin, but not qualifying for attribution to a more specific implement category. Flake scrapers sometimes also exhibit use-wear on the retouched or another edge.

Silcrete
A hard, fine grained siliceous stone with flaking properties similar to quartzite and chert. It is formed by the cementing and/or replacement of bedrock, weathering deposits, unconsolidated sediments, soil or other material, by a low temperature physico-chemical process. Silcrete is essentially composed of quartz grains cemented by microcrystalline silica. The clasts in silcrete bare most often quartz grains but may be chert or chalcedony or some other hard mineral particle. The mechanical properties and texture of silcrete are equivalent to the range exhibited by chert at the fine-grained end of the scale and with quartzite at the coarse-grained end of the scale. Silcrete was used by Aboriginal people throughout Australia for making stone tools.

Site Integrity
The degree to which post-depositional disturbance of cultural material has occurred at a site.

Stone Artefact
A piece (or fragment) of stone showing evidence of intentional human modification.

Stone procurement site
A place where stone materials is obtained by Aboriginal people for the purpose of manufacturing stone artefacts. In Australia, stone procurement sites range on a continuum from pebble beds in water courses (where there may be little or no evidence of human activity) to extensively quarried stone outcrops, with evidence of pits and concentrations of hammerstones and a thick layer of knapping debris.

Stone tool
A piece of flaked or ground stone used in an activity, or fashioned for use as a tool. A synonym of stone tool is ‘implement’. This term is often used by archaeologists to describe a flake tool fashioned by delicate flaking (retouch).

Use wear
Macroscopic and microscopic damage to the surfaces of stone tools, resulting from its use. Major use-wear forms are edge fractures, use-polish and smoothing, abrasion, and edge rounding bevelling.

Appendix 1

Unanticipated Discovery Plan

Unanticipated Discovery Plan

Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania

For the management of unanticipated discoveries of Aboriginal relics in accordance with the *Aboriginal Heritage Act 1975* and the *Coroners Act 1995*. The Unanticipated Discovery Plan is in two sections and is issued alongside advice from Aboriginal Heritage Tasmania (AHT) and should not be relied upon in isolation without accompanying advice.

If in doubt, please contact AHT for advice: call **1300 487 045** or email **aboriginalheritage@dpac.tas.gov.au**

Discovery of Aboriginal Relics other than Skeletal Material

Step 1:

Any person who believes they have uncovered Aboriginal relics should notify all employees or contractors working in the immediate area that all earth disturbance works must cease immediately.

Step 2:

A temporary 'no-go' or buffer zone of at least 10m should be established around all visible Aboriginal relics to protect the suspected Aboriginal site, where practicable. No unauthorised entry or works should be allowed within this 'no-go' zone until the suspected Aboriginal relics have been assessed by a consulting archaeologist, Aboriginal Heritage Officer or AHT staff member.

Step 3:

Contact AHT on 1300 487 045 as soon as possible but no later than 48hrs from the discovery of the relic and inform them of the discovery. Documentation of the find should be emailed to aboriginalheritage@dpac.tas.gov.au as soon as possible. AHT will then provide further advice in accordance with the *Aboriginal Heritage Act 1975*.

Discovery of Skeletal Material

Step 1:

Call the Police (or if practical, a coroner) immediately. Under no circumstances should the suspected skeletal material be touched or disturbed. It is advisable to immediately treat the area as a potential crime scene, and remove all personnel and equipment that may contaminate the area.

Step 2:

Any person who believes they have uncovered skeletal material should notify all employees or contractors working in the immediate area that all earth disturbance works cease immediately.

Step 3:

A temporary 'no-go' or buffer zone of at least 50m should be established to protect the suspected skeletal material, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected skeletal remains have been dealt with under the *Coroners Act 1995* or the *Criminal Code Act 1924*.

Step 4:

Should the skeletal material be determined to be Aboriginal, the Coroner will contact the Aboriginal organisation approved by the Attorney-General, as per the *Coroners Act 1995* and Aboriginal Heritage Tasmania as per the *Aboriginal Heritage Act 1975*.

Guide to Aboriginal site types

Stone Artefact Scatters

A stone artefact is any stone or rock fractured or modified by Aboriginal people to produce cutting, scraping or grinding implements. Stone artefacts are indicative of past Aboriginal living spaces, trade and movement throughout Tasmania. Aboriginal people used hornfels, chalcedony, spongelite, quartzite, chert and silcrete depending on stone quality and availability. Stone artefacts are typically recorded as being 'isolated' (single stone artefact) or as an 'artefact scatter' (multiple stone artefacts).

Shell Middens

Middens are distinct concentrations of discarded shell that have accumulated as a result of past Aboriginal camping and food processing activities. These sites are usually found near waterways and coastal areas, and range in size from large mounds to small scatters. Tasmanian Aboriginal middens commonly contain fragments of mature edible shellfish such as abalone, oyster, mussel, warrener and limpet, however they can also contain stone tools, animal bone and charcoal.

Rockshelters

An occupied rockshelter is a cave or overhang that contains evidence of past Aboriginal use and occupation, such as stone tools, middens and hearths, and in some cases, rock markings. Rockshelters are usually found in geological formations that are naturally prone to weathering, such as limestone, dolerite and sandstone.

Quarries

An Aboriginal quarry is a place where stone or ochre has been extracted from a natural source by Aboriginal people. Quarries can be recognised by evidence of human manipulation such as battering of an outcrop, stone fracturing debris or ochre pits left behind from processing the raw material. Stone and ochre quarries can vary in terms of size, quality and the frequency of use.

Rock Marking

Rock marking is the term used in Tasmania to define markings on rocks which are the result of Aboriginal practices. Rock markings come in two forms; engraving and painting. Engravings are made by removing the surface of a rock through pecking, abrading or grinding, whilst paintings are made by adding pigment or ochre to the surface of a rock.

Burials

Aboriginal burial sites are highly sensitive and may be found in a variety of places, including sand dunes, shell middens and rock shelters. Despite few records of pre-contact practices, cremation appears to have been more common than burial. Family members carried bones or ashes of recently deceased relatives. The Aboriginal community has fought long campaigns for the return of the remains of ancestral Aboriginal people.

Further information on Aboriginal heritage is available from:

Aboriginal Heritage Tasmania
Community Partnerships and Priorities
Department of Premier and Cabinet
GPO Box 123 HOBART TAS 7001

Telephone 1300 487 045
Email aboriginalheritage@dpac.tas.gov.au
Web www.aboriginalheritage.tas.gov.au

This publication may be of assistance to you but the State of Tasmania and its employees do not accept responsibility for the accuracy, completeness, or relevance to the user's purpose, of the information and therefore disclaims all liability for any error, loss or other consequence which may arise from relying on any information in this publication.

Tasmanian Government

Appendix 2

Aboriginal Community Consultation Results

ABORIGINAL COMMUNITY CONSULTATION – WEASEL SOLAR FARM

Organisation		**Response**	**Meeting Date**	**Summary of Comments and Feedback**
Tasmanian Aboriginal Centre (TAC) *Heather Sculthorpe*	Initial email sent 7/7/24	No response	N/A	N/A
Parrdarrama Pungenna Aboriginal Corporation Peter MacDonald	Initial email sent 7/7/24	No response	N/A	N/A
South East Tasmanian Aboriginal Corporation (SETAC) James Shaw	Initial email sent 7/7/24	No response	N/A	N/A
Weetapoona weetapoona@hotmail.com	Initial email sent 7/7/24	No response	N/A	N/A
Karadi Aboriginal Corporation ceo@karadi.org.au	Initial email sent 7/7/24	No Response	N/A	N/A

LIST OF ORGANISATIONS

from: **Rocky Sainty** <rockysainty@gmail.com>

to:

bcc: Heather Sculthorpe <heather.s@tacinc.com.au>, ceo@karadi.org.au, petermac.ppac@gmail.com, james.shaw@setac.org.au, weetapoona Aboriginal Corporation <weetapoona@hotmail.com>, Stuart Huys <stuart@chma.com.au>

date: Jul 7, 2024, 9:15 AM

subject: Fwd: Weasel Solar Farm

Dear Organisations

The Weasel Solar Farm is a large-scale solar project. The proposed site for the Weasel Solar Farm is located around 9km north of the town of Bothwell, in the Central Highlands Region of Tasmania and is in the Local Government Area of the Central Highlands Council. The site is situated on two rural properties:

- *'The Weasel' – 3415 Highland Lakes Road Bothwell TAS 7030 (Title Ref. 140433/1).*
- *'Weasel Plains' - 3236 Highlands Lakes Road Bothwell TAS 7030 (Title Ref 140581/1).*

The potential overall development area for the Weasel Solar Farm encompasses approximately 440ha plus internal transmission corridors (see Figures 2 and 3).

Robert Luxmoore has been engaged by the proponent (TasFlo Pty Ltd) to undertake the design, planning and approvals process for the Weasel Solar Farm project.
As part of this process, CHMA Pty Ltd and myself have been engaged to undertake an Aboriginal heritage assessment for the Weasel Solar Farm project. This report presents the findings of the Aboriginal heritage assessment.

We did not identify any Aboriginal heritage sites during the survey of the proposed footprint for the Weasel Solar Farm site, and our AHR search shows that there are no registered sites located in this area.
We did identify two areas where the archaeologist (Stuart Huys) and I agree that there is an increased chance that Aboriginal cultural deposits may be present. These have been termed as areas of Potential Archaeological Sensitivity (PAS1 and 2) in this report. Both PAS areas are situated close to the margins of Weasel Plains Creek. It is my opinion that there is a reasonable possibility that our ancestors would have selected these areas as occasional camp site locations. Because Weasel Plains Creek is a relatively minor water course which drains a small valley, I think it is very unlikely that either location would have been a major camp location. These are more likely to have been focused within the larger river valley systems, where there were more available resources.

Given the potential for Aboriginal heritage values to be present at these two PAS areas, it is my preference that the proposed development footprint for the solar farm is amended so as to exclude development within these two areas of potential sensitivity. If avoidance is not possible then I support the recommendations in this report to undertake test pitting in these two PAS areas in order to clarify whether cultural deposits are present and if so, in what densities. The proponent has indicated that both areas can be avoided.

Based on my observations made during the field survey, I am satisfied that there is generally a low to very low potential for Aboriginal heritage values to be present across the remainder of the proposed development footprint for the Solar Farm. We covered a large area with our field survey, and despite reasonable conditions of surface visibility we didn't identify any sites. This provides a very clear indication to me that this area was not a focal point of activity for our Old People. Our ancestors would certainly have occasionally hunted and camped in the hills and plains area around Weasel Plains Creek. However, they are unlikely to have stayed in this area for any long duration of time. Instead, they are more likely to have had their major camp locations at certain favoured spots within the major river valleys such as the Clyde, Shannon, Ouse and Derwent Rivers, and to have travelled along these valley systems as part of their seasonal movement through Country.

Even if the site of the project proposal
contains no evidence of Aboriginal heritage there is always the cultural resources (flora, fauna, aquacultur e or any other resource values that the earth may offer)
and the living landscape, which highlight the high significance to the Aboriginal cultural heritage values of the country. The proposed site for the Solar Farm is primarily focused within cleared farm paddocks that has been subject to high levels of landscape modification. The proposed development footprint largely avoids any areas of native vegetation where cultural values may still be present.

I look forward to receiving your comments by August 2 2024.
Rocky Sainty
Aboriginal Heritage Consultancy Services

Mobile: *0437 372 000*

AHR Instrument: AHA692

Applicant: Emanuele Raffaele (TasFlo)

Date: 26 August 2024

RECORD OF ADVICE FROM ABORIGINAL HERITAGE TASMANIA ON AN ABORIGINAL HERITAGE ASSESSMENT REPORT

This document provides a record of advice relating to an assessment undertaken in accordance with the *Aboriginal Heritage Standards and Procedures*, as adopted by the Guidelines issued under section 21A of the *Aboriginal Heritage Act 1975*.

Report title: Weasel Solar Farm Project, Central Highlands Region - Final V1 - August 2024 - Stuart Huys and Rocky Sainty

Advice: Please see next page.

All Aboriginal heritage is protected under the *Aboriginal Heritage Act 1975*. It is an offence to destroy, damage, deface, conceal, or otherwise interfere with a relic (Aboriginal heritage) without a permit granted by the Minister. If at any time Aboriginal heritage is suspected, the process outlined in the Unanticipated Discovery Plan should be followed as there is an obligation to report findings of Aboriginal heritage as soon as practicable.

As explained in the Guidelines, obtaining this record of advice does not exempt a person from their obligations under the Act but is an important element of the actions summarised in the Guidelines. To be sure that you have "in so far as is practicable … complied with the guidelines" (s.21(1) of the *Aboriginal Heritage Act 1975*), be sure to read the relevant part and take any other action that may be relevant to your situation.

This advice is valid for two years and only for the activity as described in the Aboriginal Heritage Assessment Report specified above.

Please contact Aboriginal Heritage Tasmania on 1300 487 045 or aboriginalheritage@dpac.tas.gov.au if you require further information.

Disclaimer *The advice contained within this document is based on information available to Aboriginal Heritage Tasmania at the time of its preparation and is provided in good faith. It does not constitute legal advice, is not intended to be a substitute for legal advice and should not be relied upon as such. Proponents should seek specialist legal advice, if required, regarding the Aboriginal Heritage Act 1975 when applying the information to their specific needs.*

BL12008

Further advice or comments:

AHT acknowledge the findings and recommendations of the assessment. For the purposes of the Aboriginal Heritage Act 1975, the report conforms to the assessment standards outlined in the Aboriginal Heritage Standards and Procedures.

All works should proceed in accordance with the recommendations made within the report.

It is noted that the consultants have recommended that the proposed development footprint should be amended to avoid two areas of potential archaeological sensitivity and if this is not feasible, that archaeological sub-surface testing should occur.

If sub-surface assessment does occur, it should comply with AHT's Aboriginal Heritage Standards and Procedures. All works should be carried out by a suitably qualified consulting archaeologist and Aboriginal Heritage Officer, in consultation with AHT. Any proposed sub-surface testing methodology should be reviewed by AHT prior to commencement.



Bushfire Impact Statement

Proposed Weasel Plains Agri – Solar Farm

For Robert Luxmoore Pty Ltd / Weasel Solar Farm Pty Ltd

26th September 2024

Ground Proof Mapping Pty Ltd Commercial in Confidence

GROUND PROOF MAPPING P/L
PO Box 1027 | Launceston | Tasmania| 7250
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www.groundproofmapping.com.au | ABN 75 159 326 735

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Appendices to this BIS

Appendix No.	Document Name	Requirement
Appendix No. 1	Solar Farm Bushfire Mitigation Overview Map	Planning
Appendix No. 2	Bushfire Mitigation Plan (BMP) Incorporates a Bushfire Hazard Management Plan (BHMP) and a Bushfire Emergency Management Strategy BEMS)	Planning
Appendix No. 3.1	BHMP Site 1 – Northern Construction Compound & Switchyard	Planning
Appendix No. 3.2	BHMP Site 2 – North Eastern Switchyard	Planning
Appendix No. 3.3	BHMP Site 3 – Central/Main Infrastructure Area	Planning
Appendix No. 3.4	BHMP Site 4 – Southern Construction Compound	Planning

Glossary of Terms

Term	Definition
Assets	Anything valued by people which includes buildings, crops, and forests and in many cases the environment.
BAL	A means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per square metre, which is the basis for establishing the requirements for construction to improve protection of building elements from attack by a bushfire (AS 3959-2018).
BAL ratings	Used as the basis for establishing the requirements for construction to improve protection of a (proposed) building from bushfire attack. There are 6 BAL ratings; low, 12.5, 19, 29, 40 and FZ.
Burn plan	The plan which is approved for the conduct of prescribed burning. It contains a map identifying the area to be burnt and incorporates the specifications and conditions under which the operation is to be conducted.
Burning program	A program of prescribed burns scheduled for a designated area over a nominated time, normally looking ahead over one fire season (for the coming spring to the following autumn), but can also look ahead five years or more.
Burning rotation	The period between reburning of a prescribed area for management purposes.
Burning unit	A specified land area for which prescribed burning is planned.

Bushfire Risk Assessment Model (BRAM)	A computer-based modelling tool that uses a series of inputs to assess the risk of bushfires to a specific area. The BRAM has a capacity to produce a series of outputs. It was developed and is managed by Tasmanian Parks & Wildlife Service.
Bushfire	Unplanned vegetation fire. A generic term which includes grass, forest and scrub fires both with and without a suppression objective.
Bushfire management	All those activities directed to prevention, detection, damage mitigation, and suppression of bushfires. Includes bushfire legislation, policy, administration, law enforcement, community education, training of fire fighters, planning, communications systems, equipment, research, and the multitude of field operations undertaken by land managers and emergency services personnel relating to bushfire control.
Bushfire-prone area	Means: land that is within the boundary of a bushfire-prone area shown on an overlay on a planning scheme map; and where there is no overlay on a planning scheme map, or where the land is outside the boundary of a bushfire-prone area shown on an overlay on such a map, land that is within 100m of an area of bushfire-prone vegetation equal to or greater than 1 hectare.
Bushfire-prone vegetation	Means contiguous vegetation including grasses and shrubs but not including maintained lawns, parks and gardens, nature strips, plant nurseries, golf courses, vineyards, orchards or vegetation on land that is used for horticultural purposes.
Community Bushfire Protection Plan (CPP)	A bushfire plan for community members, to support their personal Bushfire Protection Plans. The focus of this plan is on safety options.
Community Bushfire Response Plan (CRP)	A bushfire incident plan for Incident Management Teams, TFS brigades and emergency management agencies. This plan is designed to assist response, management, planning and recovery.
Consequence	Consequences are defined as a qualitative rating of damage from fire to values.
Defendable space	An area of land around a building where vegetation is modified and managed to reduce the effects of flame contact and radiant heat associated with a bushfire.
Elevated fuel	The standing and supported combustibles not in direct contact with the ground and consisting mainly of foliage, twigs, branches, stems, bark and creepers.

Fine fuel	Fuel such as grass, leaves, bark and twigs less than 6mm in diameter that ignite readily and are burnt rapidly when dry.
Fire behaviour potential	The factors that affect the development and propagation of a fire.
Fire break	Any natural or constructed discontinuity in a fuel bed used to segregate, stop, and control the spread of a bushfire, or to provide a fire line from which to supress fire.
Fire Danger Index (FDI)	A relative number denoting an evaluation rate of the potential fire rate of spread, or fire suppression difficulty for specific combinations of temperature, relative humidity, wind speed and drought effects.
Fire Danger Rating (FDR)	A relative class denoting an evaluation of fire rate of spread, or fire suppression difficulty for specific combinations of temperature, relative humidity, drought effects and wind speed. Rated as no rating, moderate, high, extreme or catastrophic indicating the relative evaluation of bushfire danger.
Fire frequency	A general term referring to the recurrence of fire in a given area over time.
Fireground	The area in the vicinity of a fire suppression operations, and the area immediately threatened by the fire. It includes burning and burnt areas; constructed and proposed fire lines; the area where firefighters, vehicles, machinery and equipment are located when deployed; roads and access points under traffic management control; tracks and facilities in the area surrounding the actual fire; and may extend to adjoining area directly threatened by the fire.
Fire line intensity	The rate of energy release per unit length of fire front usually expressed in kilowatts per metre (Kw/m).
Fire regime	The history of fire use in a particular vegetation type or area including the frequency, intensity and season of burning.
Fire risk	Processes, occurrences or actions that increase the likelihood of fires occurring.
Fire season	The period during which wildfires are likely to occur, spread and do sufficient damage to warrant organised fire control.
Fire trail	A formed track which provides access for firefighting vehicles, is built to specific standards, has no other intended purpose and is not generally available for public access
Forest	An area, incorporating all living and non-living components, that is dominated by trees having usually a single stem and a mature or potentially mature stand height exceeding 2 metres and with existing or potential crown cover of overstorey strata about equal to or greater than 20%.

Fuel	Any material such as grass, leaf litter and live vegetation which can be ignited and sustains a fire. Fuel is usually measured in tonnes per hectare.
Fuel continuity	The degree or extent of continuous or uninterrupted distribution of fuel particles in a fuel bed thus affecting a fire's ability to sustain combustion and spread. This applies to aerial fuels as well as surface fuels.
Fuel load	The oven dry weight of fuel per unit area. Commonly expressed as tonnes per hectare.
Hazard management zone / area	Means the zone / area, between a habitable building or building area and bushfire-prone vegetation, which provides access to a fire front for firefighting, which is maintained in a minimal fuel condition and in which there are no other hazards present which will significantly contribute to the spread of a bushfire.
Likelihood	Likelihood is defined as a qualitative method to assess the likelihood rating to the consequences occurring.
Low intensity fire	A fire which travels slowly and only burns lower storey vegetation, like grass and lower tree branches, with an average intensity of less than 500 kW.m-1 and flame height less than 1.5m. Usually causes little or no crown scorch and is easily controlled.
Mitigation Plan	Plan or document to identify, articulate and manage risk at area level.
Mosaic	Used in reference to the spatial arrangement of burnt and unburnt fuels at either a local or a landscape scale.
Patch burning	Burning in patches to prepare sites for group planting or sowing or to form a barrier to subsequent fires.
Prescribed burning	The controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity, and rate of spread required to attain planned resource management objectives. It is undertaken in specified environmental conditions.
Preparedness	The results of measures to ensure, if an emergency occurs, that communities, resources and services are capable of responding to, and coping with the effects.
Prevention	The results of measures taken in advance of an emergency aimed at decreasing or eliminating its impact on the community and the environment.
Response	The results of strategies and services to control, limit or modify the emergency to reduce its consequences.
Risk	The exposure to the possibility of such things as economic or financial loss or gain, physical damage, injury or delay, as a

	consequence of pursuing a particular course of action. The concept of risk has two elements, i.e., the likelihood of something happening and the consequences if it happens.
Risk acceptance	The informed decision to accept a risk, based on the knowledge gained during the risk assessment process.
Risk analysis	A systematic use of available information to determine how often specific events may occur and the magnitude of their likely consequences.
Risk assessment	The systematic process of identifying, analysing and evaluating risk.
Risk criteria	Standards (or statements) by which the results of risk assessments can be assessed. They are inexact and should be seen as guidelines rather than rules.
Risk evaluation	The process of comparing the outcomes of risk analysis to the risk criteria in order to determine whether a risk is acceptable or tolerable.
Risk identification	The process of recognising, identifying and describing risks.
Risk treatment	A process to select and implement appropriate measures undertaken to modify risk.
Slope	The slope under the classified vegetation.
Wildfire	All unplanned vegetation fires. A generic term which includes grass fires, forest fires and scrub fires.
Woodland	A subset of forest plant communities in which the trees form only an open canopy (between 20% and 50% crown cover), the intervening area being occupied by lower vegetation, usually grass or scrub



Figure 1: Example of Agri Solar

Abbreviations

Abbreviation	Description
APZ	Asset Protection Zone
BAL	Bushfire Attack Level
BEP	Bushfire Emergency Plan
BEMS	Bushfire Emergency Management Strategy
BESS	Battery Energy Storage Systems
BHMP	Bushfire Hazard Management Plan
BMP	Bushfire Mitigation Plan
BIS	Bushfire Impact Statement
BRAM	Bushfire Risk Assessment Modelling
CFA	Country Fire Authority (VIC)
FMAC	Fire Management Area Committee
GPM	Ground Proof Mapping Pty Ltd
HMA	Hazard Management Area
NRE	Department of Natural Resources and Environment Tasmania
OFH	Overall Fuel Hazard
OHS	Occupational Health & Safety
PPE	Personal Protection Equipment
PV System	Photovoltaic System
PWS	Parks and Wildlife Service
SFMC	State Fire Management Council
STT	Sustainable Timbers Tasmania
TFS	Tasmania Fire Service
The Guidelines	Design Guidelines and Model Requirements, Renewable Energy Facilities, CFA, V4.0, August 2023

Executive Summary

This Bushfire Impact Statement (BIS) provides an analysis and evaluation of the bushfire potential at a local and landscape level surrounding the proposed 250Mwp Weasel Agri-Solar Farm and associated transmission line routes and a battery energy storage system (BESS). Factors including, however not limited to, vegetation types and flammability, topographical layout, fire weather, fire history, current land use, proposed land use and proposed infrastructure have been assessed.

This BIS has identified whilst there is potential for a bushfire to impact the site, predominantly by ember transfer, there is a lack of bushfire prone vegetation connectivity across the proposed site, resulting in fire severity that is unlikely to be a significant threat to the proposal site. It should be also noted that as the proposal is Agri-Solar, the majority of the site will be grazed by sheep on a continual basis, minimising any grass fire risk.

The BIS has also addressed the potential fire risk emanating from the proposed development, both during construction and operational phases at a localised level. Buildings, battery energy storage and associated sources of fire have been identified and deemed as low risk, providing mitigation measures are in place.

The BIS has determined that the bushfire risk surrounding the and including the site has been considered in detail and proposed recommended mitigation measures to moderate the risk to an acceptable level. Mitigation measures will be specified in the form of a Bushfire Mitigation Plan (BMP) appended to this BIS.

The BMP addresses the facility location and design (hazard management areas, access, bushfire fighting water supply and firebreaks) for the entire development and provides bushfire mitigation strategies to be implemented. The BMP also cover the construction (vegetation & fuel management, machinery usage, fuel storage, semi-permanent office & storage buildings) and production phases.

In the absence of any Tasmanian guidelines, the BMP is based on the 'Design Guidelines and Model Requirements, Renewable Energy Facilities, CFA, V4.0, August 2023. Where there are higher standards for Tasmania as specified in the Tasmanian Planning Scheme – Central Highlands Local Provision Schedule 2023, C13.0 Bushfire-Prone Areas Code, then these have been defined as the minimum standard required.

With respect to this BIS, the proposal has been assessed under the Tasmanian Planning Scheme – Central Highlands Local Provision Schedule 2023, and more specifically, C13.0 Bushfire-Prone Areas Code. Although Battery Use/Storage is not clearly defined in the Planning Scheme as a hazardous use, it is considered as a hazardous use under the Bushfire Prone Areas Code. Therefore, a Bushfire Hazard Management Plan (BHMP) has been completed and is part of the BMP.

Additionally, a Bushfire Emergency Management Strategy (BEMS) has been incorporated, to ensure that the facility is prepared in the event of an unplanned fire, providing for safety of site personnel, emergency responders and the community. This will cover the construction and production phases. This BEMS will guide the formation of a Bushfire Emergency Plan (BEP) to be prepared at Building Approval stage.

Introduction & Context

Purpose

The purpose of this report (BIS) is to provide a comprehensive assessment and analysis of the bushfire risk associated with this development proposal at the subject site at Weasel Plains, with respect to a large Agri-Solar Farm and associated infrastructure (including battery storage).

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Last updated: 26th September 2024, Version 1.0

Report Author: Justin Cashion

Disclaimer

The information and data collected in the preparation of this report is current as of the date of onsite inspections and various external data, reports and documentation supplied by Robert Luxmoore Pty Ltd. Given the discretionary and independent assessment process under the Resource Management Planning System in Tasmania, GPM cannot guarantee a planning approval will be received from the Central Highlands Council for any planning application submitted to Council, especially in regards to fire management.

As part of the research contained within this report, GPM has not approached the Central Highlands Council to determine if there are any outstanding orders, notices or compliance matters associated with the subject site. These are outside the scope of this report. In the event that advice is required in these areas, it is recommended that legal advice is sought from a barrister & solicitor who specialises in local government and development (including planning and building) law within the state of Tasmania. This report does not constitute legal advice.

No other GPM client benefits from the information or recommendations contained within this report.

Request for Fire Consultancy Services

GPM was approach by the client's Project Manager, Robert Luxmoore Project Management in December 2023 to provide a Request for Proposal for fire and bushfire consultancy services. GPM was engaged on the 23rd February 2024.

Project Scope

This report is in the form of a BIS, which will support a planning application to the Central Highlands Council. The BIS will address the fire risk emanating from and potentially threatening from an external source, the proposed development at both a localised and landscape level.

In support of the BIS report, a BMP has been developed, with recommendations provided to mitigate the fire risk outlined in the BIS.

The BMP addresses the facility location and design (hazard management areas, access, bushfire fighting water supply and firebreaks) for the entire development and provides bushfire mitigation strategies to be implemented. The BMP also covers the construction (vegetation & fuel management, machinery usage, fuel storage, semi-permanent office & storage buildings) and production phases.

In absence of any Tasmanian guidelines, the BMP has been based on the 'Design Guidelines and Model Requirements, Renewable Energy Facilities, CFA, V4.0, August 2023. The BMP will cover the construction (vegetation & fuel management, machinery usage, fuel storage, semi-permanent office & storage buildings), commissioning and production phases.

Several BHMP's and a BEMS has also been developed for the site to ensure that the facility is prepared in the event of an unplanned fire, providing for safety of site personnel, emergency responders and the community. This will cover the construction and production phases and will guide a site BEP to be prepared at the Building Approval stage.



Figure 2: Example of Agri Solar.

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The Proposed Development

Weasel Solar Farm Pty Ltd seeks to develop part of their landholding into a long-term renewable energy asset in the form an Agri-Solar farm. General project information is listed in the table below:

Table 1: Table of Assumptions.

Client	Weasel Solar Farm Pty Ltd
Project Name	Weasel Solar Farm
Project Description	The Weasel Solar Farm is a large-scale solar project, with a nameplate capacity of up to 250MWp. It will be accompanied by a battery energy storage system (BESS) and electricity infrastructure including inverters and a switchyard containing an electrical substation to feed into the existing 220kV transmission line. The proposal includes land for construction, maintenance, and operation, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, and landscaping.
Project Context	The Weasel Solar Farm is part of a larger 'Highlands Renewable Energy Hub' concept – a multifaceted landowner-led renewable energy concept with the aim to create local jobs and lower electricity costs for Bothwell and the Central Highlands region. The Highlands Renewable Energy Hub comprises of this project, along with other potential renewable energy project yet to be determined. This project is solely focused on the solar and BESS application (including connection to the grid, access roads and associated works).
Development Area	Approximately 435Ha
Study Area	Development Area
Site Title Details	Address 1 • 'The Weasel' - 3415 Highland Lakes Road, Bothwell, TAS, 7030 • Parcel Size (Ha) - 918.8 • Property Id - 2538314 • Title Ref - 140433/1 Address 2 • 'The Weasel' - 3236 Highland Lakes Road, Bothwell, TAS, 7030 • Parcel Size (Ha) - 1775.9 • Property Id - 2538322 • Title Ref - 140581/1 Address 3 • 'Rockford' - 3759 Highland Lakes Road, Bothwell, TAS, 7030 • Parcel Size (Ha) - 1146.7 • Property Id - 5014022 • Title Ref - 104298/1
Local Government	Central Highlands Council

Planning Zone	Agriculture Zone Utilities Zone - Highland Lakes Road
Renewable Energy Zone	Central Highlands Renewable Energy Zone (T3) AEMO
Planning Use Class	'Utilities' is the most appropriate definition in the planning scheme ('Discretionary' Use Class)
Code Overlays	Mapped Overlay Codes: • C4.0 Electricity Transmission Infrastructure Protection (partial) • C7.0 Natural Assets (partial) • C10.0 Bushfire-prone Area (whole) • C15.0 Landslip Hazard Code (partial) Other Applicable Codes: • C2.0 Parking and Sustainable Transport • C3.0 Road and Railway Assets
Access Points	The site is currently accessed via Weasel Plains Road, off Highland Lakes Road. Two additional construction and emergency access points have been assessed. A third evacuation route has been identified.
Battery Storage	The BESS component will likely be located within the western portion of the site. The capacity is in the order of 4hr/144MW (576MWh).
Grid Connection	The project will be connected to the National Energy Market (NEM) via an interconnection to the existing TasNetworks 220 kV transmission line that lies within the western boundary of the site, parallel to Highland Lakes Road.
Agri solar & Agriculture	Sheep grazing will continue below solar panels. The nature of solar array construction on raised 'benches' means that total land loss is negligible. Solar arrays also diversifying farm income.
Key Site Characteristics	The potential infrastructure areas of the solar farm are relatively flat; however, the surrounding area is quite undulating. The site is relatively cleared of vegetation (with some large patches of vegetation) and the project will largely avoid the woodland/forest areas within the site. Most of the site is used for broadacre grazing, with some irrigated cropping to the east of the development area. Weasel Plains Creek transects the northern portion of the site. Other minor creeks, minor tributaries and drainage lines exist across the site. The existing 220 kV transmission line (Waddamana to Lindisfarne) runs within the western boundary of the site, adjacent to Highland Lakes Road. There are no agricultural buildings or other structures of significance within the development investigation areas. The site can be accessed via Weasel Plains Road, an unsealed track that bisects the subject land and directly connects to Highland Lakes Road.
Key Site Context	The site is predominantly surrounded by large farming properties and some forestry plantations to the west. The site is approximately 9km north of the town centre of Bothwell (499 residents) and 72 km north of Hobart.

<table>
<tr><td></td><td>There are several rural residential properties within the vicinity of the site, varying in distance to the different PV area boundaries. Most of those dwellings are owned by landowners involved in the project (including the nearest dwelling, approximately 150m east of the ‘North’ PV area. Excluding dwellings located within properties of involved landowners (Dungrove, Cluny and Weasel Plains), there are only two dwellings within 2km of the Development Area that are owned by a non-involved person. Those two dwellings are approximately 600m-1km southwest of the site boundary.

Cattle Hill Wind Farm is approximately 18 kilometres NW of the site. The proposed St Patrick’s Plains Wind Farm is approximately 26 kilometres NW of the site.</td></tr>
<tr><td>Construction Jobs FTE (Tas only)</td><td><table><tr><th></th><th>Direct</th><th>Indirect</th><th>Total</th></tr><tr><td>Employment</td><td>301</td><td>500</td><td>801</td></tr></table></td></tr>
<tr><td>Operational Jobs FTE (Tas only)</td><td><table><tr><th></th><th>Direct</th><th>Indirect</th><th>Total</th></tr><tr><td>Employment</td><td>8</td><td>12</td><td>20</td></tr></table></td></tr>
<tr><td>Construction Length</td><td>Estimated 18-month construction period, without staging</td></tr>
<tr><td>Solar Components</td><td>PV panels – assume LONGI LR5-72HBD PV Module (or similar equivalent)

Inverters – assume SMA SC4200UP (or similar equivalent)

Single-axis Tracker – assume FTC Voyager Tracker (or similar equivalent)</td></tr>
</table>

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A plan showing the study area and site of the project is shown below:

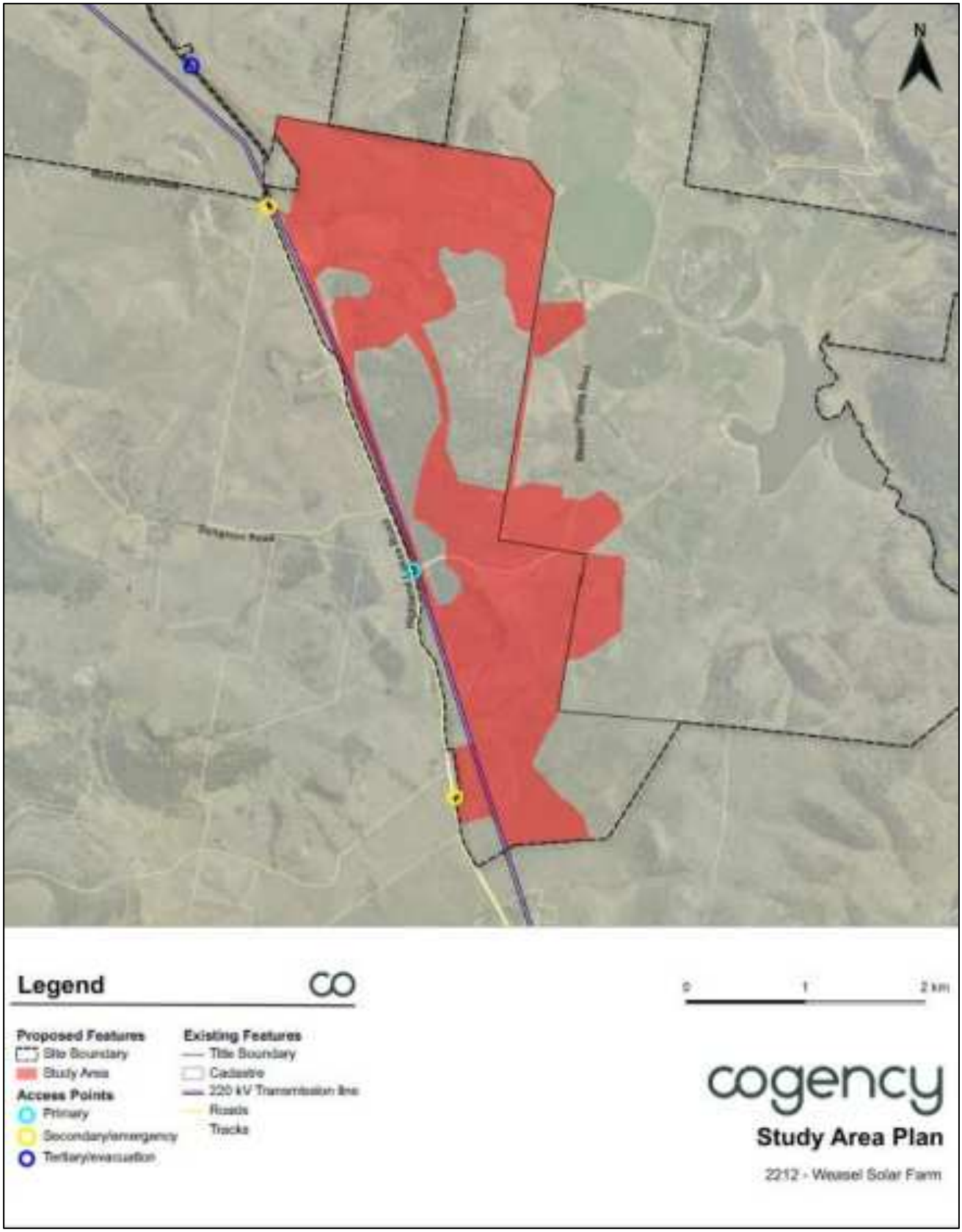


Figure 3: Overall Site & Study Area Plan.

A plan showing the design layout of the project is shown below:

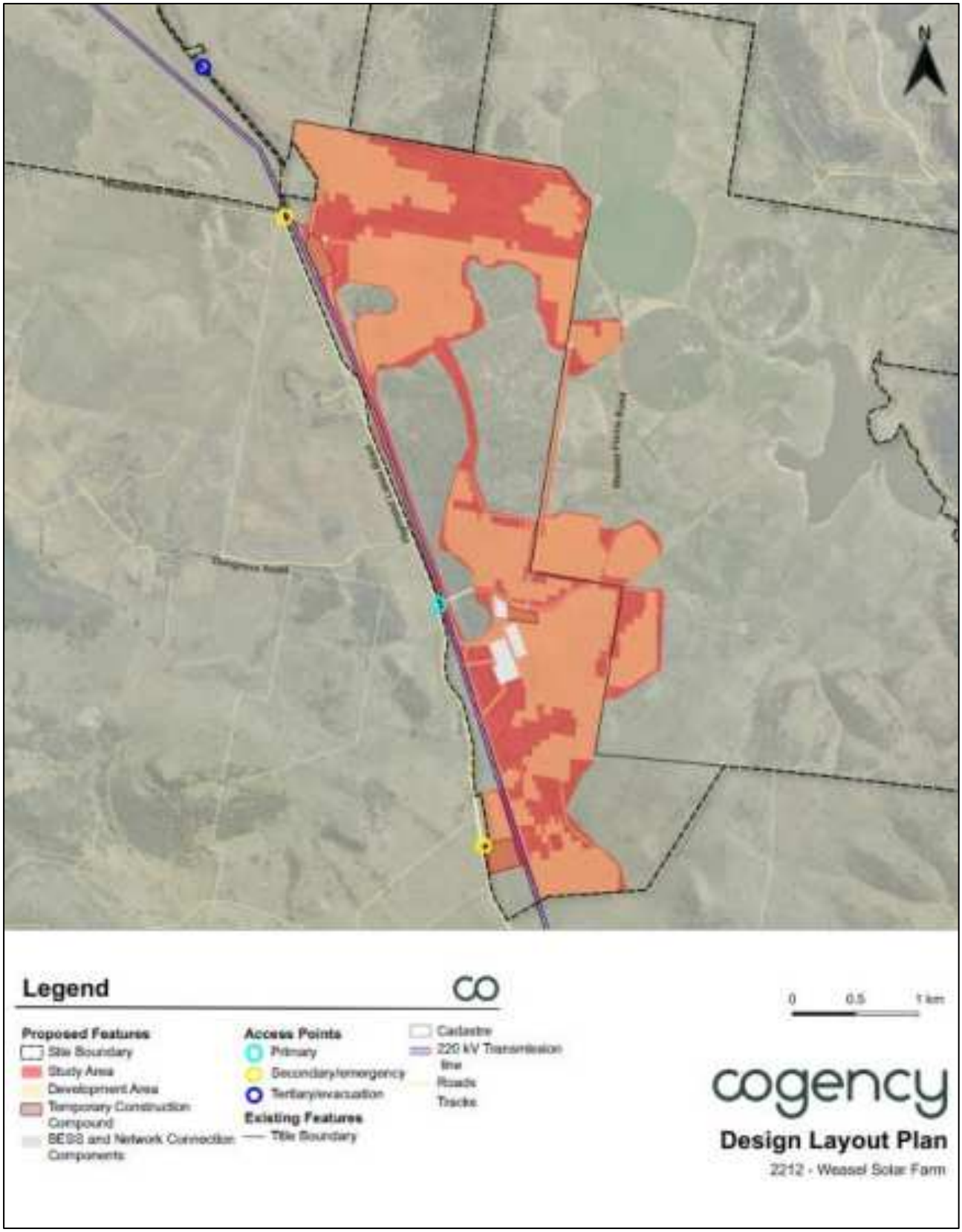


Figure 4: Design Layout Plan of the Project Site.

Applicable Planning Scheme Zone Use and Development Standards

The site is zoned as 'Agriculture' Zoning under the Tasmanian Planning Scheme – Central Highlands Local Provision Schedule 2023 and the intended use is broadly defined as 'Utilities'. Given that the power generated by the proposed Agri-Solar Farm and associated infrastructure is not intended solely for existing uses, under which minor 'Utilities' do not require a permit, the proposed development is deemed as 'Discretionary,' thus the proposal is permissible, subject to Council approval.

With respect to this BIS, the proposal has been assessed under the Tasmanian Planning Scheme – Central Highlands Local Provision Schedule 2023, and more specifically, C13.0 Bushfire-Prone Areas Code. The purpose of the Bushfire-Prone Areas Code is to ensure that use and development is appropriately designed, located, serviced, and constructed, to reduce the risk to human life and property, and the cost to the community, caused by bushfires. This code applies to:

(a) subdivision of land that is located within, or partially within, a bushfire-prone area; and

(b) a use, on land that is located within, or partially within, a bushfire-prone area, that is a vulnerable use or **hazardous use.**

Hazardous use, means a use where:

(a) hazardous chemicals of a manifest quantity are stored on a site; or

(b) explosives are stored on a site and where, classified as an explosives location or large explosives location as specified in the Explosives Act 2012.

As per the Tasmanian Work Health and Safety Regulations 2022, Chapter 7, Part 7.1, the Explosives Act 2012 and the Tasmanian Planning Scheme – Central Highlands Local Provision Schedule 2023, and more specifically, C13.0 Bushfire-Prone Areas Code – C1.5.2 – P1(e – other advice, if any, from the TFS), it has been determined that both the battery storage compounds and compounds for diesel storage (construction and operating phases) will exceed the manifest quantities. Although exact quantities are unknown, the project manager provided the following advice:

Construction Phase:

- Expected to have 20kL+ bulk storage for diesel during earthworks, utilised to fill mobile vehicles with 400L to 1000L storage capacity.

Operational Phase:

Substations

- 2 x 220/33kV Transformers – 70kL of mineral oil per transformer, bunded and typically drained through some form of oil water separator, either parallel plate separator or buried separation tank with a hydrocarbon discharge of <5ppm.
- Other equipment – only minor quantities (<200L per item) for CVT's, diesel generator.

Battery Energy Storage System (BESS)

- Capacity is expected to be in the order of 4hr/144MW (576MWh).

The following extract from the Tasmanian Planning Scheme – State Planning Provisions - C13.5 Hazardous uses and refers to the Objective, Acceptable Solutions and Performance Criteria for Hazardous Use, and illustrates the project's compliance against the criteria:

Table 2: Compliance with the Tasmanian Planning Scheme.

Objective:	That hazardous uses can only be located on land within a bushfire-prone area where tolerable risks are achieved through mitigation measures that take into account the specific characteristics of both the hazardous use and the bushfire hazard.	
Acceptable Solutions:	**Performance Criteria:**	**Project Compliance:**
A1 - No Acceptable Solution.	P1 - A hazardous use must only be located in a bushfire-prone area if a tolerable risk from bushfire can be achieved and maintained, having regard to: (a) the location, characteristics, nature and scale of the use; (b) whether there is an overriding benefit to the community; (c) whether there is no suitable alternative lower-risk site; (d) the emergency management strategy (hazardous use) and bushfire management plan; and (e) other advice, if any, from the TFS.	• **The proposed location of the development is in a suitable site on a title where there is an excellent resource to generate electricity from solar. The risk from bushfire is considered tolerable as long as the measures proposed in this BIS, the BMP and the BHMP are adhered to.**
A2 - An emergency management strategy (hazardous use) endorsed by the TFS or accredited person.	P2 - No Performance Criterion.	• **A BEMS has been developed.** • **All hazardous substances must be stored and signed as per requirements under the Work Health & Safety Act 2012, the Explosives Act 2012, and AS1940, AS3780 & AS2187 to limit the risk of exposure to a hazardous substance in a bushfire emergency** • **All hazardous materials storage must be ember proof** • **All hazardous chemicals will be stored in bunded areas, which will assist in preventing any spill entering the surrounding landscape and contributing to the nearby bushfire threat** • **A local ignition event could lead to there not being enough time to leave**

		the site and so occupants may need to take refuge on site in areas away from the hazardous materials, the site office facilities are the recommended location until the Operation and Maintenance building is constructed, which will then take over as the shelter in place facilities
A3 - A bushfire hazard management plan that contains appropriate bushfire protection measures that is certified by the TFS or an accredited person.	P3 - No Performance Criterion.	• A BMP has been prepared for the entire site • A BHMP has been developed and a HMA has been designed (where each known hazardous use is located) and endorsed by an accredited person (as part of the BMP) • Any buildings within the hazardous use sites storing hazardous materials must be constructed to BAL 12.5 standards as a minimum • HMAs have designed with setbacks from each location's boundaries, with all land within the boundary also required to be managed as part of the HMA. The HMA for each location also incorporates all other site infrastructure, access, and the proposed water supply • Site access across the project site will be adequate for bushfire purposes and for evacuation purposes • A static water supply that is compliant with Table C13.5 of the Code must be installed at each hazardous use site.

Existing Site Conditions and Establishing the Bushfire Threat

Location

'Weasel Plains' is a large standing of private property located in the Southern Midlands area of Tasmania, ±9km north of Bothwell. The entire estate is defined as being in a Bushfire Prone Area under the Tasmanian Planning Scheme – Central Highlands Local Provisions Schedule. There is currently one main access point to the property, that links onto Highland Lakes Road. Two additional construction and emergency access points have been proposed (one each accessing the northern and southern parts of the development area). A third evacuation route has been identified inn the northern area. It is important to note that this route traverses an existing track and is to be utilised for egress only.



Figure 5: Location map.

Property Land Use

'Weasel Plains' is a large sheep-grazing property, consisting of agricultural grassland interspersed with consolidated patches of native grassland, woodland and forest vegetation. Much of the farming land adjoining to the west, east and south of the property is under irrigation, resulting in minimal fire risk. Land adjoining top the north, whilst not irrigated, is agricultural grassland. This is the direction of where the predominant fire weather comes from during the summer bushfire period, thus, also resulting in minimal fire risk. Ignition sources from these areas would be limited to occurrences such as escapes from burning of stubble from crops or fire from farm harvesting machinery.



Figure 6: Typical of agricultural grassland areas across the areas of development.

There are consolidated patches of *Eucalyptus pauciflora* forest and woodland not on dolerite (DPO) that exist across the development site and adjoining the site in all directions. Tree height ranges from 8 to 18m, with a midstorey that is sparse and formed by scattered native cherry (*Exocarpos cupressiformis*), blackwood (*Acacia melanoxylon*) and silver wattle (*Acacia dealbata*). The ground layer varies from being solely comprised of exotic species through to a sparse but native species dominated ground layer including small shrubs, herbs, heaths, grasses and sedges.

Lowland grassland complex (GCL) also exists across and surrounding the development site. This vegetation is dominated by sedges such as sagg (*Lomandra longifolia*) and *Lepidosperma species* interspersed with grasses within the property and adjoining to the north of the proposed Solar Farm site. Scattered eucalypts such as *Eucalyptus pauciflora*, and *Eucalyptus rubida* are present in small numbers. Further vegetation assessment and findings are available in the Weasel Solar Farm Ecological and Natural Assets Code Assessment undertaken by Van Diemens Consulting.

It is recommended that the large section of native forest to the north of the central section, has a fuel reduction burn applied to the area, when fuel hazard assessments show an overall fuel hazard of 'high' or above, reducing the fine fuels to a 'low' fuel hazard rating, thus reducing the intensity of any wildfire from the north/northwest direction (predominant fire weather direction). Current fuel hazard assessment indicates this area has 'moderate' fuel hazard rating, thus would not require this treatment for 5+ years depending on seasonal characteristics. An indicative burn rotation schedule would be between 15 and 25 years. This mitigation approach would need to be carefully planned and balanced against the floristic and ecological values of the vegetation as well as the fire management objectives.

Other small remnant patches of natural native on higher areas or knolls. These areas are small enough in size, with broken connectivity, that they pose very little risk in relation to fire spread.

In summary, the fire risk is more likely to come from internally within the property. Please note that an ignition source is required for this vegetation to burn. Potential ignition sources may be lightning, arson, fire escape from adjoining property and fire from farm machinery.



Figure 7: Typical of forested areas adjoining the areas of development.

Adjoining Land Use

The land surrounding the site for several kilometres is zoned as agriculture. This land is primarily used for mixed enterprise farming purposes including grazing and cropping and forestry, with scattered residential dwellings and associated infrastructure such as outbuildings and sheds etc.

Establishing the Bushfire Threat

Bushfire threat has been considered by considering the following components:

- Influences on fire behaviour (topography, fuel moisture, atmospheric stability)
- Vegetation type, flammability & sensitivity.
- Fuel hazard ratings.
- Onsite weather characteristics.
- Prevailing fire weather conditions

Topography

Topography is a combination of site characteristics including, slope, steepness, elevation, aspect and landscape pattern. This inadvertently effects fire behaviour. The issue of the influence of slope on fire spread rate was modelled by McArthur (1967) who predicted that the rate of fire spread would double for every 10º of slope uphill and halve for every 10º of slope downhill. McArthur (1967) also states that on fires burning in undulating country, the effect of spotting across lee slopes onto the next uphill slope will overcome the effects fires burning slowly down lee slopes before burning rapidly up the next upslope and hence, during these fires the effect of slope can be ignored.

Steep land also increases wind at the heads of gullies and hence can increase fire behaviour. Wind channelling can also occur on areas with steep slopes. North facing slopes are drier than south facing slopes, and consequently fuels on north facing slopes can ignite and burn more easily than those on south facing slopes.

The identified development sites consist of undulating topography with slopes that range from 0 – 10°, with some slopes of 15°, mainly surrounding watercourses. These slopes can be considered quite moderate, thus pose minimal risk in heightening fire behaviour. Elevation range is varying between 450m and 500m across the proposed development site.

Fuel Moisture

For fire management purposes, the term fuel moisture is the fuel moisture content of dead fine fuel which has a diameter of less than six millimetres. Fuel moisture is calculated as the percentage weight of water in the fuel to its oven dry weight.

The most important factors influencing the fuel moisture are relative humidity, dew point temperature, amount of solar radiation (which is in turn influenced by the cloud cover, season, slope and aspect) and recent rainfall. By itself, temperature only has very minor influences on fuel moisture and hence, fire behaviour.

In dry eucalypt forests such as those identified across the proposed development site, fires will normally fail to sustain (i.e., keep burning) when the fuel moisture exceeds about 30%, and typically only burn at low intensity when the fuel moisture exceeds about 20 to 25%. However, these forests have the potential to burn with high rates of spread, high intensity and with a high risk of spot fires when the fuel moisture is less than about 10% (Tolhurst and Cheney 1999).

Site specific changes in fuel moisture also occur within vegetation types as a result of changes in aspect and/or slope. For example, gullies or south facing slopes may be shaded and/or have denser vegetation resulting in their having higher dead fuel moistures than flat areas, ridges and north facing slopes. These areas with higher fuel moistures therefore have the potential to act as natural fire boundaries if their moisture contents are sufficiently high to make them non-flammable.

Atmospheric Stability

For more than 50 years atmospheric stability has been recognised as a major factor influencing fire behaviour (e.g., Byram 1959; McArthur 1967; Luke and McArthur 1979; Hines 1988; Bally 1995; Tolhurst and Chatto 1999; Mills and McCaw 2010). Fires burning under unstable atmospheric conditions have increased probabilities that large-scale fire convection columns will develop, which have the potential to result in enhanced surface wind speeds, the drawing down of low humidity air from aloft down to the ground surface and the possibility of downdrafts causing abrupt changes in wind speed and fire behaviour.

Fuel Hazard Rating

The most important fuel factor influencing fire behaviour is the percentage of dead fuel followed by fuel structure which is in turn, more important than fuel load (see Marsden Smedley and Catchpole 1995a, 1995b, DEH 2012; Hines et al. 2010; Cheney et al. 2012, Gould et al. 2007a, 2007b). This is because by itself, the fuel load only has very minor influences on fire spread rate, although it does have significant influences on fire intensity. In order to address this issue, fuel hazard assessment systems have been developed which incorporate the different influences of different fuel factors into easily utilised ratings.

When fuel hazards are assessed, the level of fuel hazard is based on a combination of the surface, near-surface, elevated and bark fuels. Each of these stratums are assessed on a five-point scale between low and extreme (Hines et al. 2010) as shown in the diagram below:

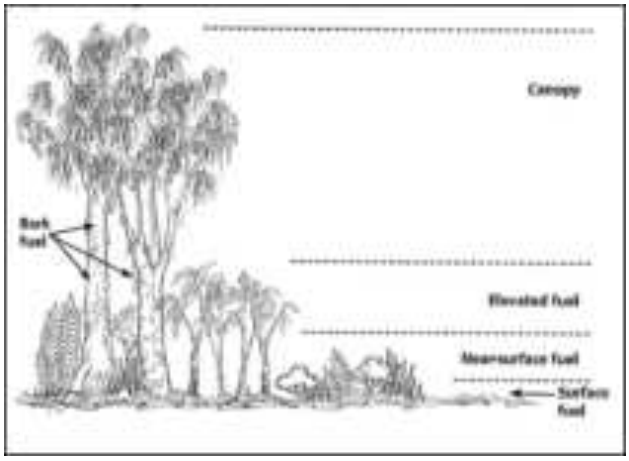


Figure 8: Fuel hazard assessment pictorial.

The surface fuel stratum is comprised of: dead grass; leaves; bark; and twigs; predominantly in a horizontal orientation and in contact or close to contact with the soil surface. Surface fuels often contain much of the fuel load and often have elevated fuel moistures and relatively low aeration. This results in these fuels having minor influences on rates of spread, but major influences on fire intensity.

The near-surface fuel stratum consists of live and dead fuels above the surface fuel stratum, and comprises both vertical and horizontal material. In some sites, the surface and near-surface fuel stratums integrate. Near-surface fuels are typically about 10 to 30 centimetres deep, but may be as high as one metre in some situations. Due to their proximity to the surface fuels, near-surface fuels will normally be burnt in a fire. Near surface fuels consist of fine fuel including: pasture grasses; native grasses; suspended bark; leaf litter; low shrubs; bracken; tussock grasses; and sedges and rushes.

The elevated fuel stratum consists of shrubs, immature overstorey species and tall bracken. The fuels in this stratum are primarily vertical in their orientation and are typically about one to two metres tall, but may be 8 to 10 metres tall in wet eucalypt forests. This stratum has a major influence on flame height and the development of crown fires (Gould et al. 2007a; Cheney et al. 2012).

The main bark types affecting fire behaviour are: smooth or gum barks; platy bark; and stringy bark. Gum bark (also known as candle bark) consists of long, coiled bark strips which may burn for extended periods and be lofted in the fire's convection column, resulting in the potential to for long distance spotting (i.e., greater than two kilometres). Platy bark (i.e., the bark tends to form small "plates") from peppermints, ironbark's and pines is characterised by layers of dead bark which can flake off and cause short to medium range spotting (i.e., up to about two kilometres). Stringy bark's form fibrous wads which can be removed by fire and can result in extensive short to medium range spotting.

Vegetation Types & Existing Fuels Onsite

The dominant vegetation types across the development site is agricultural grassland, woodland and forest. These fuel types are classified as fine fuels, fuels that burn in the continuous flaming zone at the fires edge. They contribute the most to the fires rate of spread and flame height. Typically, they are the dead material, such as leaves, grass, bark and twigs thinner than 6mm thick, and live plant material thinner than 3mm thick.

A desktop vegetation assessment of the site was undertaken utilising TasVeg 4.0 Mapping (DPIPWE) then cross referenced against the Weasel Solar Farm Ecological and Natural Assets Code Field Assessment undertaken by Van Diemens Consulting. Utilising site assessment findings and assessing available information such as the flammability ratings and fuel loads of different TasVeg types (as outlined by Pyrke and Marsden-Smedley 2005), an outline of fuel flammability (likelihood) and sensitivity for the vegetation types on and surrounding the development sites is outlined in the table below:

Table 3: Onsite Vegetation Fuel Flammability & Sensitivity.

Onsite Vegetation Fuel Flammability & Sensitivity				
Location	Vegetation Community Description	Fire Attribute	Flammability (Likelihood)	Sensitivity
Large consolidated patches across and adjoining the development site.	*Eucalyptus pauciflora* forest and woodland not on dolerite (DPO)	Dry sclerophyll forest	Mod	Mod
Large consolidated patches across and adjoining the development site.	Agricultural land FAG)	Agricultural land and miscellaneous types	Moderate, High	Low
Large consolidated patches across and adjoining the development site.	Lowland grassland complex (GCL)	Native grassland	High	Low

Most occurrences are on the valley flats and in association with watercourses, depressions, agricultural drains and around dams.	Regenerating cleared land (FRG)	Agricultural land and miscellaneous types	Moderate	Low

Onsite Weather Characteristics & Prevailing Fire Weather Conditions

The climate at 'Weasel Plains' can be classified as temperate and is generally wet with a maritime influence. The climate is characterised by warm summers and cold winters. The mean maximum annual temperature for Bothwell (±12.5km to the south/southeast) is 16.7°C, ranging from 16.9°C in October to 23.2°C in February. The mean 1500hrs windspeed is 15.0km/hr, ranging from 7.3km/hr in June to 16km/hr in January. 30+% of the time, the wind direction is from the southwest. These weather outputs are depicted in the charts below:



Figure 9: Mean annual temperature chart for development location.



Figure 10: Mean annual windspeed chart for development location.

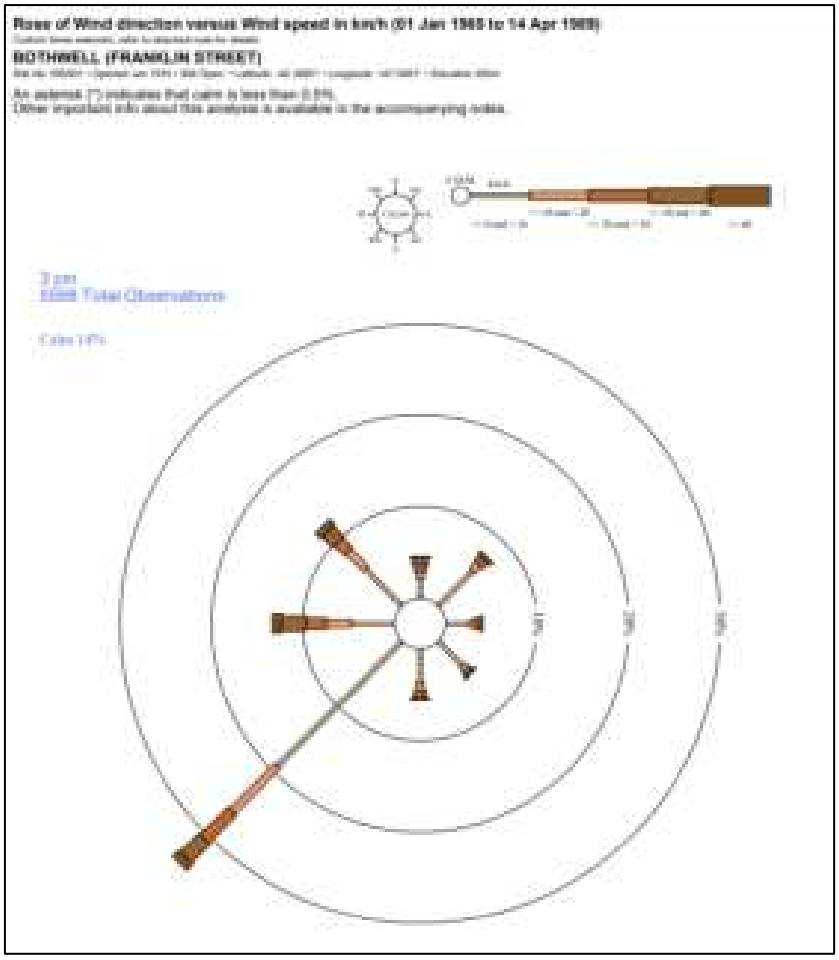


Figure 11: Wind rose for development location.

A fire season is defined as the period of time in which fires are most likely to occur. Fire seasons can vary geographically across Tasmania and the season traditionally occurs from November through to March, however in the past 10 years this period has extended from October through to April.

During the fire season, strong westerly to north westerly winds that often precede cold fronts can contain dry air from the interior of the Australian Mainland. This combination of strong winds and low relative humidity creates the ideal meteorological conditions for major bushfires. If a high-pressure system is blocked in the Tasman Sea, strong, hot north westerly winds can persist for several days and be followed by a "Blow Up" day when large fires cannot be controlled. These north and westerly winds are usually followed by a cooler west to south westerly change when the front passes, often associated with some rain. This wind change can turn the previous flank of the bushfire into the head fire which can continue to burn with high intensity until the cooler temperatures and higher humidity, brought by the change increased fuel moisture levels. This weather situation is shown on the synoptic chart below:

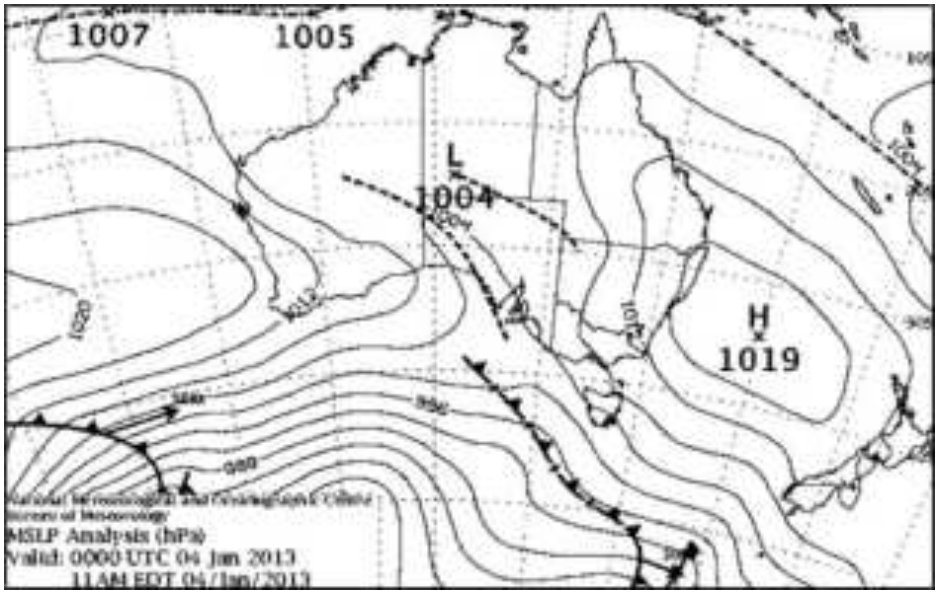


Figure 12: Weather chart depicting potential elevated fire weather conditions.

The prevailing fire weather conditions have been considered when determining site specific bushfire risk and mitigation options.

Fire Frequency, History and Ignition Causes

Fire frequency is defined as the total number of fires that occurred in the same area. Fire frequency records for the area have been obtained from records provided by the TFS, PWS and STT but the records are incomplete. There have been many fires recorded in the area of 'Weasel Plains' in recent decades. Fire history in relation to the 'Weasel Plains' property is shown in the table below (please note that only large fires 50ha+, within a 20km radius over the past 20 years have been listed):

Table 4: Fire History Data.

Fire Name	Location	Cause	Distance Range	Date	Size
Bushrangers Creek	Dennistoun Road	Undetermined - unknown	Within 6km to the northeast of the subject property	December 2006	±4440ha
Great Pine Tier	Waddamana Road	Natural - Lightning	Within 8km to the northwest of the subject property	January 2019	±51200ha
Blue Hill	Devils Back	Undetermined - unknown	Within 4.5km to the southwest of the subject property	November 2008	±360ha
Meadsfield Road	Meadsfield Road	Undetermined - unknown	Within 1.5km to the east of the subject property	December 2022	±416ha
Dennistoun Road Bothwell	Dennistoun Road	Undetermined - unknown	Within 12.5km to the northeast of the subject property	October 2019	±970ha

Bashan Road	Bashan Road	Undetermined - unknown	Within 14.5km to the northwest of the subject property	October 2015	±175ha
Bradys Lake Complex	Bradys Lake, Lanes Tier, Mentmore Tier, Victoria Valley & Osterley	Undetermined - unknown	Within 19km to the southwest of the subject property	February 2024	5000+

As can be seen from the above records, one of the largest and most recent fires that started in close proximity to the property was due to natural causes and more specifically, dry lightning. Others listed above that have a cause of undetermined, also have a high probability of being caused by dry lightning as well. This aligns with climate change predictions of a higher chance of fires starting through dry lightning strikes. These records also align with Bushfire Risk Assessment Modelling (BRAM) outputs discussed in Section 7 – Bushfire Risk Assessment.

Potential Ignition Causes

The following have been identified as potential sources of ignition:

- PV Panels – Low Risk
- Battery Energy Storage System (BESS) – Low Risk
- Substation – Low Risk
- Transmission Line & Associated Easement – Low Risk
- Plant & Machinery (during construction and production phases) – High Risk
- Vegetation within and surrounding the development sites – Moderate to High Risk (dependant on location)
- Human induced ignitions (accidental and deliberate – arson) – Moderate Risk
- Natural ignitions (i.e., lightning) – Low to Moderate Risk

All of the potential ignition causes listed above, can have a level of mitigation applied through prescriptions identified in the BMP to either minimise the ignition to start with or at a minimum, reduce the impact from that ignition.

Fires in Solar Farms

As solar farms are relatively new in Australia, there is limited information is relating to fires within Photovoltaic (PV) solar farms. There are some examples from the US and even few from within Australia. This section will address the following topics:

- Examples of fires in solar farms.
- The flammability of major components.
- Ignition risks during construction and decommissioning.
- Risk to firefighters.
- The risk of fire spread within a solar farm.

Historical Examples

A recent report by Firetrace International, July 2022, found that the solar industry is potentially underestimating the risk of fire at solar farms, partly due to a shortage of data on solar farm fires. The report also said that research into the issue has given rise to suspicions that fires at solar farms have been under-reported. As quoted by Ross Paznokas, global business development manager, clean energy at Firetrace International, "To be clear, fire risk is present across all utility scale, high voltage, renewable energy from wind to solar to battery storage systems, fire risks cannot be totally engineered out ".

A comprehensive literature review by BRE (2017) [13] suggested that the reasons for this could be two-fold: firstly, the number of overall incidents is low; and secondly, there could be several unreported incidents. This implies that any such unreported incidents are likely to have been controlled effectively, without resulting in significant damage to buildings, or harm to people.

[12] Building Research Establishment (BRE) National Solar Centre, 2017. *Fire and Solar PV System – Investigations and Evidence. Available at:* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/630639/fire-solar-pv-systems-investigations-evidence.pdf.

In January 2022, a fire at Finley Solar Farm compromised an area of around 5 hectares in New South Wales. The NSW Fire Brigade and other relevant Fire Fighting Brigades spent around one hour and a half to monitor and end the fire episode. A final determination on the cause of this fire has not yet been released.



Figure 13: Aerial imagery showing Finley solar farm fire.

Older examples of fires in solar facilities that have been fully investigated are listed below. It should be noted that the following listed examples are of fires that started from separate sources.

The first example is a fire on a solar farm that came from an external ignition source, in the form of a grass fire, whilst the second example is a fire that started as part of the internal componentry of a large battery storage system (not a solar farm, however, a plant that involves similar battery storage componentry).

Example 1:

The most relevant Australian example was a fire that threatened the 35MW Brigalow Solar Farm in Yarranlea, near Pittsworth in Queensland in September 2019. Damage was reported to have occurred to the solar panels. It is believed that there was sufficient and continual vegetation on the ground that supported a ground surface fire, that needed to be extinguished by emergency personnel. This could be an indicator that the vegetation under the panels was not maintained and was sufficient to generate enough radiant heat to ignite plastics and cabling associated with the panels. It is worth noting that this solar farm was not Agri solar, where fuels are or should be maintained to low levels, primarily by grazing.

Example 2:

This fire occurred at Tesla's Big Battery in Victoria in July 2021. A liquid coolant leak caused thermal runaway in battery cells, which started a fire at the 300MW/450MWh plant. A single pre-manufactured 3MWh Megapack unit caught fire on 30 July 2021, spreading to a neighbouring Megapack. The spread stopped there and the fire burned itself out over a six-hour period. This was in line with guidance offered by the manufacturer to emergency responders to let burning Megapacks consume themselves while monitoring other possible exposures at a safe distance.

It was reported that that a leak within the first Megapack's liquid cooling system caused arcing within the battery modules. Heat created then took battery cells into thermal runaway. The Megapack is a lithium-ion battery energy storage system (BESS) consisting of battery modules, power electronics, a thermal management system, and control systems all pre-manufactured within a single cabinet that is approximately 7.2 meters (m) in length, 1.6 m deep and 2.5 m in height (23.5 feet [ft] x 5.4 ft x 8.3 ft). The investigation of the fire identified several gaps in Tesla's commissioning procedures, electrical fault protection devices and thermal roof design. Since the fire, Tesla has implemented several procedural, firmware, and hardware mitigations to address these gaps.

In an interview, Paul Rogers of ESRG, one of the company's principals and a former firefighter that elected to become a battery storage safety subject matter expert, said that battery fires are likely to be extremely rare events, but that every possible care needs to be taken to address both the risk and what to do in the event they do happen, as they can be extremely serious otherwise.

Combustibility of Solar Farm Components and Ignition Potential

Though solar farm fires are rare, they are not impossible. Any high-power electrical equipment, including a solar power plant, presents a risk for fire. When a fire starts at a solar farm, it rarely begins with the solar panel itself. The cables and connectors going into the panel, though, are a common place that fires start. Fires in solar facilities can potentially have serious consequences to the environment such as starting a bushfire, burnt out solar panels, batteries, other electrical equipment. The environmental pollution that may be caused by the fire smoke and the toxic materials that could leak and contaminate the ground, could have a serious impact on biodiversity and can be hard to measure, as identified in the 'Design Guidelines and Model Requirements, Renewable Energy Facilities, CFA, V4.0, August 2023.

Fires at a solar farm can start within the DC combiner boxes or inverters, which manage and convert the electricity. There are five main parts that make up a solar farm:

- Solar Panels/DC Generators: When sunlight hits the generators, the electrons within the panel gain more energy to move. This creates a one-direction electric current known as direct current (DC).

- Inverter: Solar panels generate DC current, but the power grid relies on alternating current (AC). The inverter is therefore an essential part of the solar farm, where the energy from the solar panels is converted to AC if needed.
- Transformer/Substation: A transformer changes the voltage so that the power going into the grid is not too strong or too weak. Substations, owned and operated by utility companies or private energy companies, can also be used to lower the voltage and connect the solar farm to the grid— if they are close enough.
- Switchyard: A switchyard is an alternative method to connect the solar farm to the local grid. Switchyards direct the electricity coming out of the solar farm to a high-voltage line which is already part of the grid.
- Battery Energy Storage System (BESS): Please note that this component will be dealt with as a hazardous use, and will be addressed with requirements under the Planning Scheme, through the BMP, BHMP and BAL Report.

Battery Energy Storage Systems (BESS)

A comprehensive review by XTRALIS (Honeywell Inc) 2023[1], provides valuable reference information and guidance in regards to BESS fires and potential solutions.

Lithium-ion (Li-ion) batteries are one of the main technologies behind the growth of BESS. With higher energy density, faster charging and longer life than traditional batteries, they provide significant benefits to BESS operators. Without appropriate safety measures in place, though, Li-ion batteries may pose a serious fire hazard, which is often a consequence of thermal runaway. There are advantages to deploying Li-ion technology in grid-scale applications. Despite their benefits, using Li-ion batteries can come with risks. The main reason for this is that these batteries feature a highly flammable, organic electrolyte and store significant amounts of energy.

Unless they are constantly kept within specific environmental conditions and electrical parameters, Li-ion cells are prone to failing. This can lead to a process known as thermal runaway. Thermal runaway is an exothermic reaction that causes the Li-ion battery's internal temperature to rise and may eventually ignite the electrolyte. If the electrolyte catches fire, it may lead to catastrophic fires, which can be extremely hard to extinguish. Thermal runaway events can easily escalate into dangerous and damaging fires. A single failing cell can quickly overheat the surrounding cells, causing them to go into thermal runaway in their turn. Battery failure happens in four stages:

1. Battery Abuse: This could be electrical, thermal or mechanical abuse and what starts a potential fire event. Electrical abuse is caused by exceeding the battery voltage limits during charge or discharge. Thermal abuse is caused by the operational temperature exceeding the temperature limits of the batteries, due to overcharging or overheating. Mechanical abuse is caused by physical or mechanical damage such as a crush, indentation or puncture.
2. Electrolyte Solvent Vapours (Off-Gas): If the abuse factor continues, more of the liquid electrolyte will continue to convert to electrolyte solvent vapours, including diethyl carbonate, dimethyl carbonate or other carbonate species used in electrolyte solvents. This will cause an internal pressure build-up inside the battery.
3. Smoke: As gas continues to be generated, the internal pressure continues to rise. Eventually, it will melt down and rupture the separator, causing the release of smoke. At this stage thermal runaway is imminent and can no longer be prevented.
4. Fire: When a battery catches fire, this is what is often referred to as thermal runaway. A single cell can cause severe thermal abuse to surrounding cells, meaning that a total system failure can result from a single cell failure.

The Ultimate Guide to Fire Prevention in Lithium-Ion Battery Energy Storage Systems, 2023 [1] Available @

https://xtralis.com/page/1134/li-ion-tamer-make-green-power-safe-power

The full extent and impact of fire incidents involving stationary Li-ion based BESS remains largely unknown due to limited research in this field. Li-ion BESS fires present unique challenges, which can potentially put first responders, workers and members of the public in harm's way.

Prevention Measures:

Fire Safety Codes, Standards & Regulations

There are different standards and regulations mandating minimum fire safety requirements for stationary BESS. In the absence of a specific Australian Standard for large-scale battery energy storage system facilities, the current versions of the following should be used in the design and operation of battery energy storage systems, except where varied by the 'Design Guidelines and Model Requirements, Renewable Energy Facilities, CFA, V4.0, August 2023:

- NFPA 855: Standard for the Installation of Stationary Energy Storage Systems
- UL 9540: Energy Storage System Requirements
- UL 9540A: Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems
- FM Global Property Loss Prevention Data Sheet 5-33 Electrical Energy Storage Systems

Battery Management Systems

Battery Management Systems (BMS's) are an essential part of a large-scale energy storage system. They are designed to monitor voltage, current, and temperature as well as to prevent abuse to the batteries. Relying on them as the only layer of defence against thermal runaway is not enough. One of the main limitations of a battery management system can be the inability to resolve single cell temperatures or voltages, if the system is not properly designed. It is noted that some BMS's now have the ability to does monitor every single cell and can switch off/isolate them remotely if they move a fraction outside expected temperature range. Even with temperature sensors on every cell, there could be hot spots that go undetected. Additionally, faults can occur in utility-scale BESSs with hundreds of thousands of Li ion battery cells and sensors.

Traditional detection technologies; such as smoke and fire, or carbon monoxide and hydrogen monitoring can also be part of a comprehensive safety solution. It is important to note that these approaches are not effective until thermal runaway has already occurred. Smoke and fire are not present until a cell has reached thermal runaway. Additionally, carbon monoxide and hydrogen are not dependably present until thermal runaway and are often not present in large enough concentrations to be detectable until several cells have failed.

In summary, all these solutions are reactive to thermal runaway instead of proactive. Even if a single cell has reached the point where it starts emitting smoke or fire, it may already be too late to prevent it from spreading to surrounding cells.

Fire Suppression Systems

Suppression is a BESS' last line of defence against fire. It becomes vital when all preventative measures fail. However, it is important to note that none of the main suppression methods are proven as entirely effective in containing BESS fires.

- Smothering: as oxygen is often already present in battery components, this method has little effect.

- Cooling: using a continuous water mist to cool the battery is a more effective tactic but can cause short circuits, propagating thermal runaway further.
- Chemical suppression: conventional fire extinguishers are unable to arrest thermal runaway and can only suppress open flames outside the battery; additives have proven more effective but can produce hydrogen fluoride (HF) at high temperatures, which is extremely toxic and corrosive.

In addition, even after initial suppression, there is a high risk of reignition as the exothermic chemical processes inside the cells may continue.

Electrolyte Vapor Detection

Electrolyte vapor detection is an application-specific gas monitoring solution for Li-ion batteries that gives BESS operators indication at the earliest presence of electrolyte solvent vapours. Li-ion batteries go through two stages of gas release, the first being when the cell starts venting and the second when thermal runaway occurs. Understanding when a cell starts venting gas is critical. It enables the prevention of thermal runaway, ultimately avoiding destructive fires.

Electrolyte solvent vapor detection solutions are designed to a BESS' specific characteristics, including geometry, volume, cell type, spatial layout, and air flow patterns. Electrolyte solvent vapor detection is a critical solution which enables access to the earliest indication of failure but also serve as a barrier to potential catastrophic failure and thermal runaway.

Other Components

It has been found that here are three root causes for photovoltaic fires, namely, error in the design system, a faulty product/s, or poor installation practice. The inverters, DC combiner boxers, connectors, and cables are the most common places where solar farm fires start. Electrical shorts, flying sparks, and extreme heat build up inside the equipment are some of the leading causes. This is why regular maintenance and code inspections are so essential.

When a solar farm catches fire, what happens next depends on several variables, including the presence or absence of a fire suppression system. With a fire suppression system in place, the fire is likely to be contained within the electrical cabinet or inverter enclosure at the point of system failure. The fire suppression systems release an agent that suppresses the fire without damaging the electronics and leaves no residue. Without such a system, the fire can spread within the inverter or to other equipment and the surrounding environment.

It is imperative to reduce fire risks in these systems through strategic, targeted action through fire mitigation. To minimise the risk of solar farm fires igniting from internal componentry, the following procedures are recommended:

- Ensure solar systems are regularly tested by independent third parties.
- Incorporate additional safety components everywhere possible.
- Create standardised quality assurance measures.
- Ensure defective or prematurely aged components are promptly replaced.

Other than addressing the vegetation risks to the internal componentry above, internal componentry fire issues will be addressed by other suppression systems external to this report.

Much of a solar farm by area is comprised of the arrays (the panels and their supporting tracking system). The panels are considered to have a low level of combustibility due to their high volume of glass (approximately 76% by weight). Indeed, as stated by the NC Clean Energy Technology Centre:

"…concern over solar fire hazards should be limited because only a small portion of materials in the panels are flammable, and those components cannot self-support a significant fire. Flammable components of PV panels include the thin layers of polymer encapsulates surrounding the PV cells, polymer back sheets (framed panels only), plastic junction boxes on rear of panel, and insulation on wiring. The rest of the panel is composed of non-flammable components, notably including one or two layers of protective glass that make up over three quarters of the panel's weight."

Provided that there is a limited heat source under the panel (which can be achieved through vegetation management), their low combustibility means that fires at a solar farm are not likely to be supported by fuels associated with the panels themselves.

Supporting the solar panels is the tracking system which is typically comprised of galvanized steel and therefore has very low combustibility. The tracking system is in turn supported on galvanized steel piles which are driven into the ground.

Cables within the array area may be exposed to flame contact if a fire were to spread within the solar farm beneath the panels, again emphasising the importance of vegetation management. Due to this risk, it is recommended that the design should consider the following features:

- Cables should be installed underground where practical; and/or
- Above ground cables and circuitry should be installed as high as practicable.

The design of the proposal includes DC wiring between panels that runs along the tracker at panel height. Wiring between individual trackers, from the trackers to the inverters, and from the inverters to the substation is designed to be installed underground. These measures significantly reduce fire risk associated with cabling.

It is noted that all electrical equipment must comply with relevant construction standards and design; installation of electrical equipment such as junction boxes, inverters, transformer and electrical cabling is to be in accordance with AS 3000:2007 'Wiring Rules'.

Other main components of the Proposal are the inverters, the substation and battery area, and the operations buildings.

The inverters, substation components, and battery units are critical electrical infrastructure that support the operation of a Solar Farm which must comply with the relevant Australian Standards. Design consideration should be given to worker and firefighter safety through sufficient access and egress and by ensuring that each component can be isolated both electrically and physically.

To support the safety of Solar Farm Workers, all buildings will be constructed to comply with the National Construction Code, AS 3959:2018 Construction of Buildings in Bushfire Prone Areas and the Directors Determination Bushfire Hazard-Areas V1.1 2021. This will be addressed at the Building Approval stage.

Transmission Line Easement Route, Internal 33kV corridors and Ignition Potential

The project will be connected to the National Energy Market (NEM) via an interconnection to the existing TasNetworks 220 kV transmission line that lies within the western boundary of the site, parallel to Highland Lakes Road.

Internal 33kv corridors will link into the existing TasNetworks distribution lines and ultimately feed into the substation location. Installation of these internal 33kv lines and associated easements, provide no real increase in fire risk.

Future vegetation management should comply with the Tasmanian Electricity Code, November 2022, and more specifically, Chapter 8A, Distribution Powerline Vegetation Management. In summary, there is no further heightened risk to the existing transmission line route from this development.



Figure 14: Existing 220kV transmission line on the western boundary of the development site.

Ignition Sources During Construction Phase

Activities associated with construction that may cause or increase the risk of bushfire include:

- Smoking and careless disposal of cigarettes on Site.
- Hot works activities such as welding, soldering, grinding and use of a blow torch.
- Use of petrol-powered tools.
- Operating a petrol, LPG or diesel-powered motor vehicle over land containing combustible material.
- Operating plant fitted with power hydraulics on land containing combustible material.
- Electrical faults during testing and commissioning.
- Unsafe storage of chemicals or hazardous materials.

These risks should be mitigated appropriately through the implementation of fire management strategies covered under the BMP and specifically the BEMS, which will ultimately guide the BEP.

Ignition Sources During Operation Phase

As PV solar farms are electrical in nature there is inherent fire risk from electrical faults. Most of the research identifies electrical faults as the key cause of fires involving Solar Panels. This could occur in solar farms through short circuits and arc faults caused by:

- Incorrect connecting of the inter module connectors.
- Corroded inter module connectors caused from incorrect storage of modules on site.
- Electrical connections on isolators / DC combiners.
- Mismatch of inter module connectors causing insufficient electrical connections.

The issues listed above can be the result of incorrect installation and should be diagnosed during the DC testing phases of the installation, or during ongoing operational maintenance and testing. It is conceivable that arc faults could melt components in wiring within or adjacent to the panels, and if conditions were suitable, ignite grass fuels under or surrounding installations. As noted, this is unlikely if active vegetation management is in place. The use of remote sensing systems through the system would reduce this risk further and enable a quick response to fire ignitions, with the intention of preventing the instance of fire ignitions leading to an uncontrolled fire. Whilst these systems are not specifically for the purpose of detecting fires, they do detect rises in temperature and automatically notify the appropriate personnel.

Summary of Combustibility of Solar Farm Components and Ignition Potential

The occurrence of fires within Solar Farms is low. This is demonstrated in part by the lack of material discussing Solar Farm fires, and that potentially unreported incidents are likely to have had effectively managed outcomes if they were not reported.

The research outlines that there are several management actions that can be taken during the design, construction and operation of a solar farm to mitigate bushfire risk and fire risk generally. In the context of the proposal, the key opportunity to limit the potential for fires to spread is through the management of ground fuels, specifically under the solar panels.

Other mitigation management actions are discussed in detail in the BMP and will result in an overall reduction in the level of fuel at the site.

The research has identified that Solar Farms, when appropriately managed, can be considered low risk. In the event of a fire, there are numerous risks and challenges expected, however, with appropriate mitigation actions, this risk can be effectively managed.

Bushfire Risk Assessment

This Section provides a bushfire risk assessment for the proposal against relevant legislation, standards, guidelines and other information. The outcomes of these assessments are utilised to develop mitigation recommendations for the design, construction and operational phases of the proposal and are documented through the BMP, BHMP, BEMS and the Tasmanian Planning Scheme - Northern Midlands Local Provision Schedule, and more specifically, C13.0 Bushfire-Prone Areas Code.

BRAM Modelling

What is Bushfire Risk?

'The combination of factors that contribute to the probability of a bushfire spreading (we call this likelihood) and having negative consequences'

Consequences:

- Values and assets that can be impacted by bushfire (people, economy, environment, public administration, social setting).

Likelihood (annual exceedance probability):

- Weather
- Neighbouring fuels
- Topography
- Ignition sources
- Flammability of value
- Suppression capability

Analysing the Bushfire Risk Utilising Bushfire Risk Assessment Modelling (BRAM):

There are a variety of risk assessment processes and systems available, however the BRAM developed and managed by PWS (DPIPWE) has been identified in Tasmania as the most appropriate. It is a computer based geographical information system (GIS) modelling tool that uses a series of inputs (spatial data, fire behaviour equations & climate records etc.) to assess the spatial risk of a bushfire to a specific area. The BRAM has a capacity to produce a series of outputs outlined below and these results have been produced from a detailed run of the model, utilizing 90 percentile BOM reanalysis gridded weather data 2000 - 2019 (by Chris Emms PWS / DPIPWE on July 02nd, 2024).

Bushfire risk has been considered spatially, assessing a combination of likelihood and consequence (PWS 2024). The Bushfire Risk Assessment Model (BRAM) model data was used to analyse the landscape level risk for the plan area. To determine overall risk the National Emergency Risk Assessment Guidelines (NERAG) and Tasmanian Emergency Risk Assessment Guidelines (TERAG) were used. The level of risk is determined by combining consequences and likelihood.

It must be noted that the BRAM and therefore the consequences, likelihood and risk outputs are based on available spatial data. The analysis has been undertaken on a state-wide basis, and maps are presented as complete for Tasmania. Notwithstanding limitations, the model does provide an objective spatial analysis of bushfire risk in a landscape consequence.

Likelihood:

Likelihood is defined as a qualitative method to assess the likelihood rating to the consequences occurring. The likelihood of an event was generated by the average combinations of the output generated from the following spatial information: ignition potential, suppression capabilities and fire behaviour potential, followed by assigning these output values to categories in a likelihood matrix. This is taken to mean the likelihood of a fire occurring in a specific area which surpasses the ability of the fire agencies to contain within the first 24 hours.

Consequences (values at risk):

Consequences are defined as a qualitative rating of damage from fire to values. The consequences were taken directly from the output generated through the Values at Risk spatial layer output. Values

at Risk are defined as objects or locations that hold a relative economic, social or environmental worth. These values are further broken down into the following categories:

1. Constructed – values that have been built or constructed by humans including structures both historical and modern.
2. Forestry/Agriculture – this is a relative economic value classification of managed land, research monitoring plots along with locations of production sites.
3. Natural – the items in this classification are specific flora, fauna or geo-conservation locations which have been identified that require special protection from impacts of wildfires.

A representation of risk is developed when you combine the factors of likelihood and consequence. The generated output map of risk shows qualitative areas of risk, not areas of perceived risk. The model assists in objectively defining areas where genuine risk is present.

BRAM Summary for Weasel Solar Farm Pty Ltd – Proposed Development Site

In summary, the overall risk profile for the assessment area ranges from "Low" to "Extreme" category with the average across the block of "High" and the 90-percentile range being "Extreme".

The risk profile is heavily influenced by both the values at risk (VAR) profile and the likelihood profile. The VAR profile is heavily influenced by the constructed values (TasNetworks high voltage transmission lines asset). These assets run adjacent to the Highlands Lake Road with the model grids across these assets extending into the assessment area.

The overall likelihood of ignition across the assessment area ranges from "Likely" to "Almost Certain." The average across the area being in the "Almost Certain" range with the 90th percentile grids also being in the "Almost Certain" range.

The likelihood grids for ignition potential are rated high, influenced by a number of nearby historical bushfires, historical lightning strikes as well as the moderate to highly flammable vegetation type across the site. Response times from aircraft are longer with access for ground crews across the site limited. Detection across the entire site from nearby fire towers for early detection is also limited.

Treatment of vegetation within and adjacent to the site through fuel reduction burning as well as mechanical treatment options and fire breaks will contribute to reducing the overall risk to the area.

Overall Bushfire Risk (NERAG): A range of Low to Extreme risk profile across the assessment area. Mean Average BRAM score for site is 3 which is a High mean rating. The 90-percentile score for the site is 4 being "Extreme".

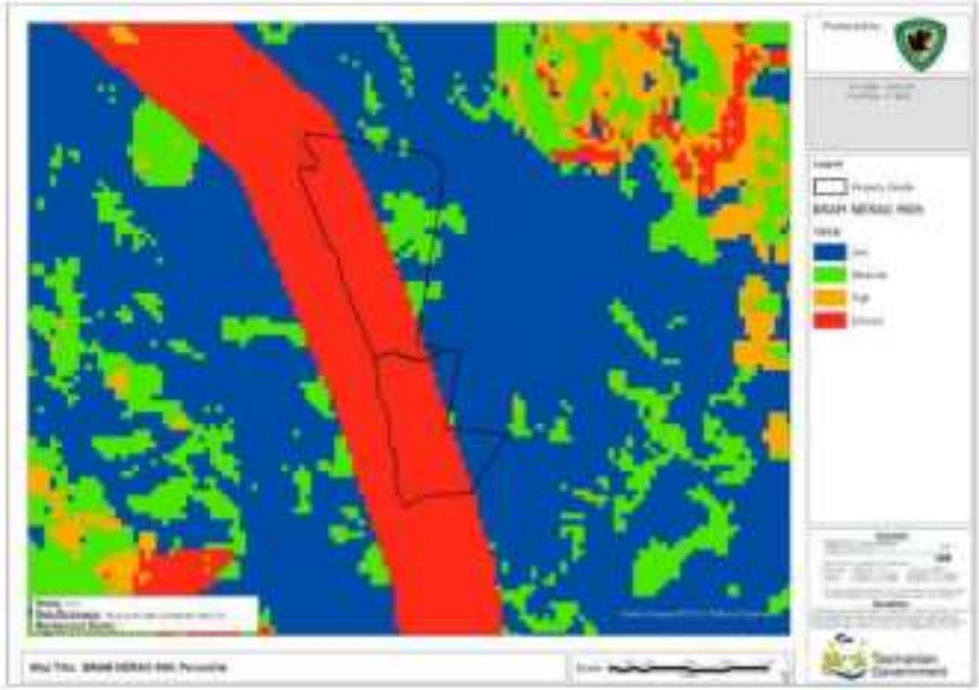


Figure 15: BRAM/NERAG Outputs.

Overall Bushfire Risk (TERAG): A range of Low to Extreme risk profile across the assessment area. Mean Average BRAM score for site 4 which is a High mean rating. The 90-percentile score for the site is 5 being “Extreme”.

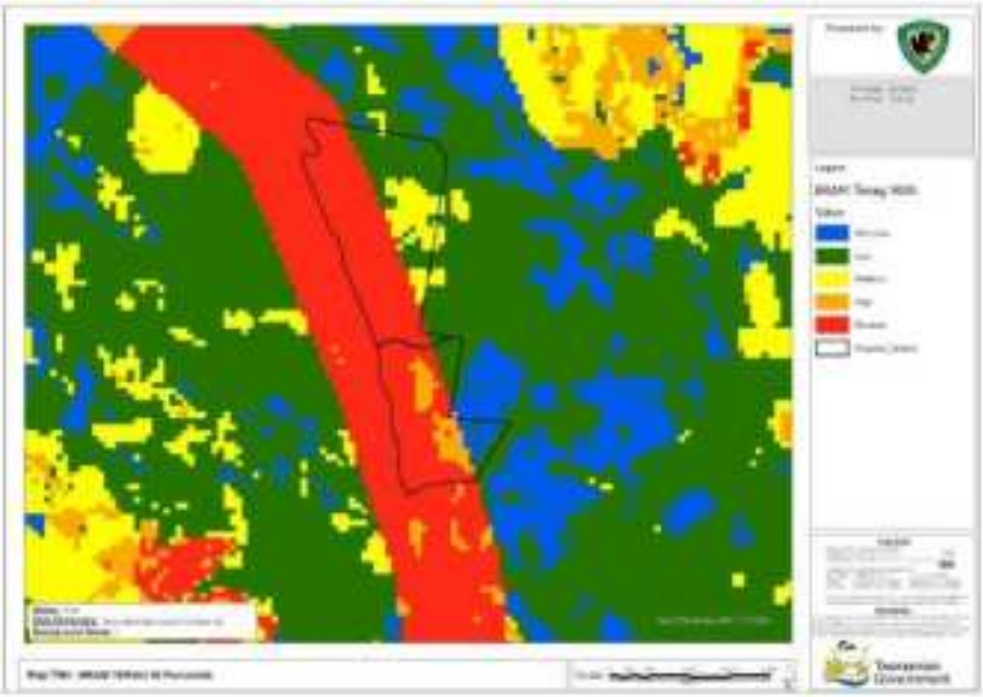


Figure 16: BRAM TERAG Outputs.

Risk Management Assessment

This section addresses the Occupation Health & Safety (OH&S) requirements for eliminating or at a minimum, reducing the risk so far as reasonably practical, via the following process:

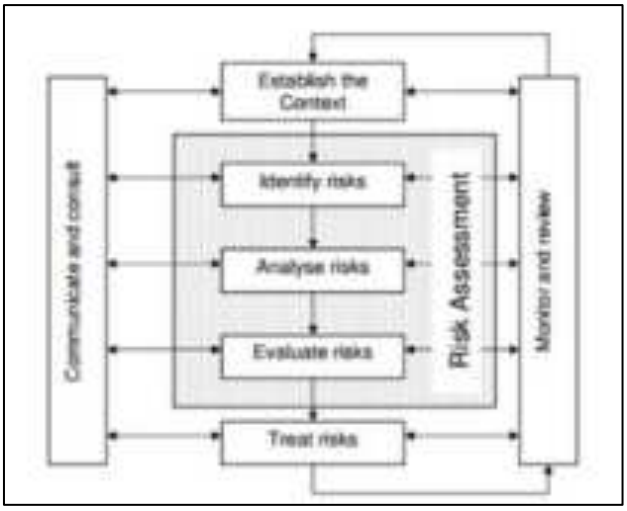


Figure 17: Risk management process.

1. Establish the Context: Manage fire and minimise the risk of wildfires.
2. Identify Risks: Ignition potential, suppression capabilities, fire behaviour & potential values at risk.
3. Analyse Risks: BRAM modelling.
4. Evaluate Risks: Desktop exercise and field surveys and data collection.
5. Treat/Mitigate Risks: Prevention measures, preparedness and operational implementation (BIP, BEPS, Directors Determination Bushfire Hazard-Areas V1.1 2021 and the Tasmanian Planning Scheme - Northern Midlands Local Provision Schedule, and more specifically, C13.0 Bushfire-Prone Areas Code).
6. Communicate and Consult: Internal and external.
7. Monitor and Review: Evaluation of performance and documentation.

Risk Identification

Onsite hazards are shown in the table below:

Table 5: Risk Identification – Potential Hazards Table.

Potential Hazards		
Risk Category	Risk Subcategory	Type of Ignition Risk
Onsite Fire Event	• Construction and Assembly • Operation and Maintenance • Other	• Electrical Faults; • Damage; • Technological Failure (Firmware); • Battery Faults; • PV Fire Hazard;
Localised Fire Event	• Construction and Assembly • Operation and Maintenance • Natural Hazard • Other	• Escalation of onsite event; • Human Induced (arson, equipment, machinery etc); • Natural Event (lightning etc);
Landscape Scale Fire Event	• Construction and Assembly • Operation and Maintenance • Natural Hazard • Other	• Human Induced (arson, equipment, machinery etc); • Natural Event (lightning etc);

Risk Analysis, Evaluation & Mitigation

The following table breaks evaluates the identified risks and outlines specific mitigation measures/strategies, to effectively mitigate the threat by either eliminating the risk, or completely or modifying the risk level to an appropriate level.

Table 6: Risk Mitigation Table.

Risk Category	Ignition Risk	Potential Consequence(s)	Risk Assessment Matrix (Refer to Risk Matrix Table)			Recommended Mitigation Measures
			People	Environment	Infrastructure	
Onsite Fire	Electrical Fault	• Localised fire • Landscape scale fire • Loss of revenue • Reduced output • Injury and/or death • Adverse environmental impacts • Community infrastructure damage	Low Chance of Occurrence (B3)	Low Chance of Occurrence (B1)	Moderate Chance of Occurrence (C2)	• Appropriate Personal Protective Equipment (PPE) • All employees to ensure safe work practices are being implemented • Operational, maintenance and routine checks of relevant equipment to be undertaken by suitably qualified staff • Equipment to be checked and serviced regularly • Familiarity with BEMS and BEP • Ensure all staff on site have undergone appropriate training • Report all potential hazards, damage, accidents and/or injuries and unsafe work practices to relevant authority • TFS local brigades to be trained in planning for the complexity of safe and effective response by firefighters facing incidents at renewable energy facilities and specifically BESS's.
	Structural Damage	• Electrical fire • Injury and/or death • Loss of revenue • Reduced output • Onsite infrastructure damage	Low Chance of Occurrence (B3)	Never Occurs (A0)	Moderate Chance of Occurrence (C2)	• Appropriate Personal Protective Equipment (PPE) • All employees to ensure safe work practices are being implemented • Equipment to be checked and serviced regularly • Ensure all staff on site have undergone appropriate training • Report all potential hazards, damage, accidents and/or injuries and unsafe work practices to relevant authority • Familiarity with BEMS and BEP • Familiarity with Emergency Management Plan

		• Community infrastructure damage • Adverse environmental impacts				• TFS local brigades to be trained in planning for the complexity of safe and effective response by firefighters facing incidents at renewable energy facilities and specifically BESS's.
	Equipment failure (including technical failure)	• Electrical fire • Injury and/or death • Loss of revenue • Reduced output • Onsite infrastructure damage • Community infrastructure damage	Low Chance of Occurrence (B3)	Never Occurs (A0)	Low Chance of Occurrence (B3)	• Appropriate Personal Protective Equipment (PPE) • All employees to ensure safe work practices are being implemented • Equipment to be checked and serviced regularly • Ensure all staff on site have undergone appropriate training • Report all potential hazards, damage, accidents and/or injuries and unsafe work practices to relevant authority • TFS local brigades to be trained in planning for the complexity of safe and effective response by firefighters facing incidents at renewable energy facilities and specifically BESS's.
	Battery Fault	• Injury and/or death • Equipment failure • Onsite fire • Landscape scale fire • Loss of revenue • Reduced output	Low Chance of Occurrence (B3)	Low Chance of Occurrence (B3)	Low Chance of Occurrence (B3)	• Appropriate Personal Protective Equipment (PPE) • Operation of all equipment to be undertaken by qualified staff • All employees to ensure safe work practices are being implemented • Equipment to be checked and serviced regularly • Ensure all staff on site have undergone appropriate training • Familiarity with BEMS and BEP • Report all potential hazards, damage, accidents and/or injuries and unsafe work practices to relevant authority

						• TFS local brigades to be trained in planning for the complexity of safe and effective response by firefighters facing incidents at renewable energy facilities and specifically BESS's.
	PV System Failure	• Onsite fire • Landscape scale fire • Injury and/or death • Onsite infrastructure damage • Community infrastructure damage • Loss of revenue • Reduced output	Low Chance of Occurrence (B3)	Low Chance of Occurrence (B3)	Low Chance of Occurrence (B3)	• Employing safe work practices • Equipment to be checked and serviced regularly • Operation of all equipment to be undertaken by qualified staff • Ensure all staff on site have undergone appropriate training • Report all potential hazards, damage, accidents and/or injuries and unsafe work practices to relevant authority • Familiarity with BEMS and BEP • TFS local brigades to be trained in planning for the complexity of safe and effective response by firefighters facing incidents at renewable energy facilities and specifically BESS's.
	Structural Fire	• Electrical fault • Battery fault • PV system fault • Onsite infrastructure damage • Community infrastructure damage • Landscape scale fire	Low Chance of Occurrence (B1)	Never Occurs (A0)	Low Chance of Occurrence (B3)	• Report all potential hazards, damage, accidents and/or injuries and unsafe work practices to relevant authority • Familiarity with BEMS and BEP • Review and revision of the BEP on an annual basis prior to the fire season • Ensure vegetation is managed in a 'low threat' condition at all times as per the BMP & BHMP to ensure that fuel for any potential fire is minimised • Implementation of HMA's as per BMP & BHMP to ensure fire can be contained on site.

		• Localised fire • Onsite fire • Equipment failure • Injury and/or death • Closure of site				• Ensure vegetation is always managed in a 'low threat' condition under the PV panels as per the BMP & BHMP to ensure that the spread of any fire event is not promoted • Provision of water and access as per the BMP & BHMP for firefighting purposes • TFS local brigades to be trained in planning for the complexity of safe and effective response by firefighters facing incidents at renewable energy facilities and specifically BESS's.
Localised Fire Event	Grassfire (natural event i.e., lightning strike)	• Battery fault • PV system fault • Onsite infrastructure damage • Community infrastructure damage • Landscape scale fire • Equipment failure • Injury and/or death • Closure of site	Moderate Chance of Occurrence (C3)	Moderate Chance of Occurrence (C3)	Moderate Chance of Occurrence (C3)	• Equipment to be checked and serviced regularly • Appropriate Personal Protective Equipment (PPE) • Ensure all staff on site have undergone appropriate training • Familiarity with BEMS and BEP • Review and revision of the BEP on an annual basis prior to the fire season • Monitor conditions, radio and emergency applications during period of fire danger • Ensure vegetation is always managed in a 'low threat' condition as per the BMP & BHMP to ensure that fuel for any potential fire is minimised • Implementation of HMA's as per BMP & BHMP to ensure fire can be contained on site. • Ensure vegetation is always managed in a 'low threat' condition under the PV panels as per the BMP & BHMP to ensure that the spread of any fire event is not promoted • Provision of water and access as per the BMP & BHMP for firefighting purposes
	Spread of fire from onsite event	• Electrical fault • Battery fault • PV system fault	Low Chance of Occurrence (B3)	Low Chance of Occurrence (B3)	Low Chance of Occurrence (B3)	• Familiarity with BEMS and BEP • Review and revision of the BEP on an annual basis prior to the fire season

						• Ensure vegetation is always managed in a 'low threat' condition as per the BMP & BHMP to ensure that fuel for any potential fire is minimised • Implementation of HMA's as per BMP & BHMP to ensure fire can be contained on site. • Ensure vegetation is always managed in a 'low threat' condition under the PV panels as per the BMP & BHMP to ensure that the spread of any fire event is not promoted • Provision of water and access as per the BMP & BHMP for firefighting purposes • Monitor conditions, radio and emergency applications during period of fire danger • TFS local brigades to be trained in planning for the complexity of safe and effective response by firefighters facing incidents at renewable energy facilities and specifically BESS's.
Landscape Scale Fire Event	Grassfire	• Onsite infrastructure damage • Community infrastructure damage • Injury and/or death • Loss of revenue • Reduced output • Equipment failure • Closure of site	Moderate Chance of Occurrence (C3)	Moderate Chance of Occurrence (C3)	Moderate Chance of Occurrence (C3)	• Equipment to be checked and serviced regularly • Ensure all staff on site have undergone appropriate training • Appropriate Personal Protective Equipment (PPE) • Familiarity with BEMS and BEP • Review and revision of the BEP on an annual basis prior to the fire season • Ensure vegetation is always managed in a 'low threat' condition as per the BMP & BHMP to ensure that fuel for any potential fire is minimised • Implementation of HMA's as per BMP & BHMP to ensure fire can be contained on site. • Ensure vegetation is managed in a 'low threat' condition at all times under the PV panels as per the BMP & BHMP to ensure that the spread of any fire event is not promoted

		• Arson				• Provision of water and access as per the BMP & BHMP for firefighting purposes
	Bushfire	• Onsite infrastructure damage • Community infrastructure damage • Injury and/or death • Loss of revenue • Reduced output • Equipment failure • Closure of site • Arson	Moderate Chance of Occurrence (C3)	Moderate Chance of Occurrence (C3)	Moderate Chance of Occurrence (C3)	• Equipment to be checked and serviced regularly • Ensure all staff on site have undergone appropriate training • Appropriate Personal Protective Equipment (PPE) • Report all potential hazards, damage, accidents and/or injuries and unsafe work practices to relevant authority • Familiarity with BEMS and BEP • Review and revision of the BEP on an annual basis prior to the fire season • Ensure vegetation is always managed in a 'low threat' condition as per the BMP & BHMP to ensure that fuel for any potential fire is minimised • Implementation of HMA's as per BMP & BHMP to ensure fire can be contained on site. • Ensure vegetation is always managed in a 'low threat' condition under the PV panels as per the BMP & BHMP to ensure that the spread of any fire event is not promoted • Provision of water and access as per the BMP & BHMP for firefighting purposes

Table 7: Risk Matrix Table.

Consequences				Likelihood				
Severity	People	Environment	Infrastructure	A Never Occurs	B Low Chance of Occurrence	C Moderate Chance of Occurrence	D High Chance of Occurrence	E Very High Chance of Occurrence
0	No Impact	No Impact	No Impact					
1	Slight Impact	Slight Impact	Slight Impact					
2	Minor Impact	Minor Impact	Minor Impact					
3	Major Impact	Major Impact	Major Impact					
4	Fatalities	Fatalities	Massive Impact					

Conclusion, Recommendations and Residual Risk

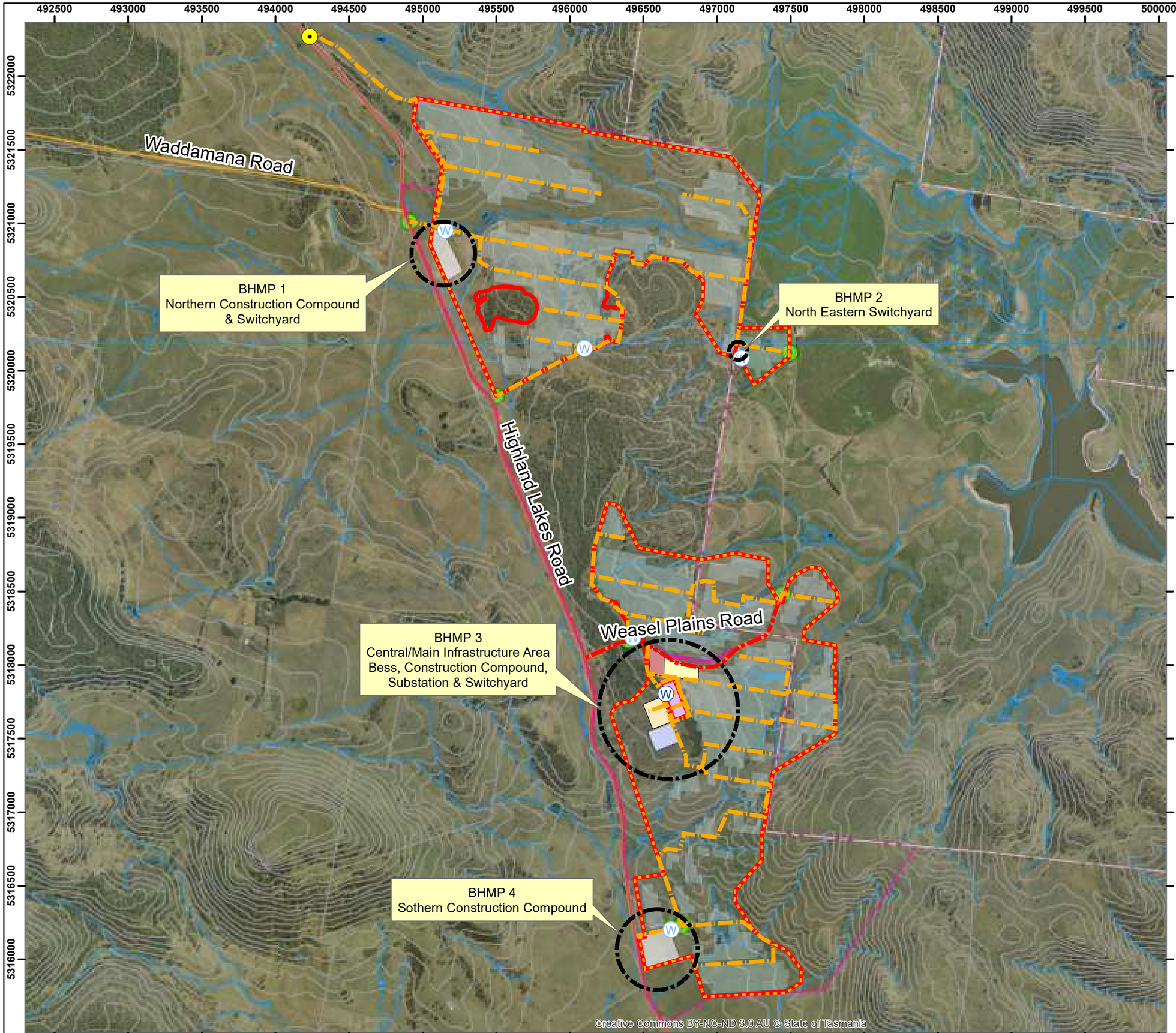
The Bushfire Impact Statement (BIS) has identified and assessed bushfire risk to the development including both bushfire emanating from the site and bushfire impacting the site from an external source.

Whilst the site is shown as being in a Bushfire Prone Area and there is potential for bushfire threat, the overall risk is deemed low, especially if specific recommended measures are taken to mitigate the risk.

Recommended mitigation measures to moderate the risk to an acceptable level are listed below:

1. Implement all measures and strategies as listed in the Bushfire Mitigation Plan (BMP) specific to the facility location and design (hazard management areas, access, bushfire fighting water supply and firebreaks) for the entire development. These measures have been included in the design iteration.
2. Implement all measures and strategies as listed in the BMP specific to the construction (vegetation & fuel management, machinery usage, fuel storage, semi-permanent office & storage buildings) and production phases. These measures have been included in the design iteration.
3. As part of the BMP, provide a Bushfire Hazard Management Plan (BHMP) and more specifically a Hazard Management Area (HMA) for all identified hazardous uses, to meet the requirements Tasmanian Planning Scheme – Central Highlands Local Provision Schedule 2022, and more specifically, C13.0 Bushfire-Prone Areas Code.
4. As part of the BMP, incorporate a Bushfire Emergency Management Strategy (BEMS) to ensure that the facility is prepared in the event of an unplanned fire, providing for safety of site personnel, emergency responders and the community. This will cover the construction and production phases. This BEMS will guide the formation of a Bushfire Emergency Plan (BEP) to be prepared at Building Approval stage.
5. Implement all recommended mitigation measures as defined in Table 5 of this BIS.
6. It is recommended that the large section of native forest to the north of the central section, has a fuel reduction burn applied to the area, when fuel hazard assessments show an overall fuel hazard of ‘high’ or above, reducing the fine fuels to a ‘low’ fuel hazard rating, thus reducing the intensity of any wildfire from the north/northwest direction (predominant fire weather direction). Current fuel hazard assessment indicates this area has ‘moderate’ fuel hazard rating, thus would not require this treatment for 5+ years depending on seasonal characteristics. An indicative burn rotation schedule would be between 15 and 25 years.

Any residual risk remaining, after ensuring that the above mitigation measures are implemented or undertaken, would be minimal. It should be noted that bushfire risk in this landscape situation cannot be fully reduced as vegetation still exists within and surrounding the site area. Further risk management should focus on the situation if a fire was to occur on site and how that is managed to reduce the impact.



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GPM GROUND PROBE MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

Weasel Solar Farm Pty Ltd
Proposed Agri Solar Farm
BMP Overview Map - Appendix No. 1

Map Type: Project Overview Map

Location: Weasel Plains

Address: 3415 Highland Lakes Road
Bothwell TAS 7030

PID No(s).: 2538314, 2538322 & 5014022

Map Production: GPM P/L

Production Date: 24/09/2024

Client: Robert Luxmore P/L / Weasel Solar Farm P/L

Notes:

Please refer to Solar Farm Site -
General Arrangement/Overall Layout
Drawing:10500480 CI-0001-01 for more detail.

Legend

- Cadastre
- Site Boundary - Secondary Parcel (Bowden)
- Site Boundary - Primary Parcel (Downie)
- Indicative Solar Farm Panel Areas
- BHMP Area
- Main Office & Amentities Area
- Construction Phase Compound Offices & Amenities
- Construction Phase Compound Area
- Switch Yard & Storage Shed & Amenities Building
- BESS Area
- Substation
- Switchyard
- Primary Access Roads
- General Site Access Roads
- Perimeter Road
- Main 10m Wide Non Combustible Firebreak
- Access Points
- Tertiary Egress Evacuation Point
- 1 x 288000ltr Static Water Supply Tank
- 1 x 45000ltr Static Water Supply Tank
- 10m Contours Statewide
- Watercourse

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 240 480 720 960 Metres

SCALE 1:25000 (at A3 Print Size)

N

Appendix No. 2

Bushfire Mitigation Plan (BMP)



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Bushfire Mitigation Plan (BMP) 1

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Figure 19: PV Tracker Plan & Elevations. 25

Bushfire mitigation measures, identified through the BIS, will be specified in this BMP. The BMP addresses the facility location and design (hazard management areas, access, bushfire fighting water supply and firebreaks) for the entire development. The BMP also covers the construction (vegetation & fuel management, machinery usage, fuel storage, semi-permanent office & storage buildings) and production phases.

New and emerging renewable energy technology has outpaced the development of standards and guidance in relation to fire and emergency management. In the absence of any Tasmanian guidelines, the BMP will be based on the 'Design Guidelines and Model Requirements, Renewable Energy Facilities, CFA, V4.0, August 2023. Where there are higher standards for Tasmania as specified in the Tasmanian Planning Scheme – Central Highland Local Provision Schedule, C13.0 Bushfire-Prone Areas Code, then these have been defined as the minimum standard required.

Guidelines

The guidelines are designed to:

- Facilitate consideration of fire risk management in the design, construction and operation of renewable energy facilities.
- Reduce the occurrence and consequences of fire at renewable energy facilities through risk-based design, and enable safe and effective emergency response through the provision of fire protection systems.
- Inform fire and risk management processes for all phases of a facility's lifespan, through the preparation of Risk Management Plans and Fire Management Plans by facility operators.
- Support operators to prepare Emergency Management Plans that effectively consider bushfire.
- Support operators to prepare Emergency Plans that effectively consider fire risk from the facility, and bushfire.

Principles

The principles to be applied:

1. Effective identification and management of hazards and risks specific to the siting, infrastructure, layout, and operations at the facility.
2. Siting of renewable energy infrastructure so as to eliminate or reduce hazards to emergency responders.
3. Safe access for emergency responders in and around the facility, including to renewable energy and firefighting infrastructure.
4. Provision of adequate water supply and firefighting infrastructure to allow safe and effective emergency response.
5. Vegetation sited and managed so as to avoid increased bushfire and grassfire risk.
6. Prevention of fire ignition on-site and spreading to adjoining properties.
7. Prevention of fire spread between site infrastructure (solar panel banks, battery containers/enclosures).
8. Prevention of external fire impacting and igniting site infrastructure.
9. Provision of accurate and current information for emergency responders during emergencies.
10. Effective emergency planning and management, specific to the site, infrastructure and operations.

Bushfire Risk Management

Bushfire risk has been identified in the BIS and the measures to eliminate or reduce its occurrence and consequences are incorporated into the facility design and operations through this BMP. **The BIS addresses issues such as, but not limited to the following:**

- The hazards and risks at and to the facility and their proposed management.
- Any safety issues for firefighters responding to emergencies at the facility.
- Safe access to and within the facility for emergency vehicles and responders, including to key site infrastructure and fire protection systems.
- The adequacy of proposed fire detection and suppression systems (e.g., water supply) on-site.
- Natural and built infrastructure and on-site processes that may impact or delay effective emergency response.

Factors Influencing Facility Design

The following factors have been considered in the risk-based design of this plan as identified in the BIS:

Location and siting within the landscape. Is the site in a designated Bushfire Prone Area? Is there a risk of grassfire from neighbouring properties? Is there peat on the property? Is the site located near hazardous industry?

Layout. Does the proposed layout of the site impact fire risk? Is fire service infrastructure safely accessible? Are there hazards or infrastructure that may impact safe evacuation?

Fuel load and vegetation on-site. Does the prevalence, type, density or location of vegetation (including screening vegetation) impact fire risk?

Infrastructure - electrical, chemical, technological. Does the infrastructure on site contribute to fire risk, or potentially impede firefighting operations? Are dangerous goods stored on site?

Site activities and operations. What activities undertaken on-site contribute to fire risk? How is electricity infrastructure de-energised and isolated? How often is critical maintenance undertaken?

Site occupancy. Will the facility be occupied or unoccupied? Will there be vulnerable occupants?

Local weather conditions. What is the prevailing wind speed and direction? Rainfall during the year? Humidity and temperature during the Fire Danger Period?

Specific Fire Hazards Identified through the BIS

The following fire hazards have been identified for this proposed solar facility:

- Electrical hazards, such as panel/inverter electrical faults; power surges; lightning strikes; water ingress; retained DC electricity in solar panels after shut-down/isolation.
- Potential fire spread and limited emergency response due to proximity of panel banks to each other, on-site infrastructure and vegetation (including screening vegetation).
- Landscape hazards, such as bushfire/grassfire ignition from fire within the facility, or external ignition of site infrastructure.

And more specifically in relation to the battery storage system:

- Electrical hazards, such as battery faults; overcharging; rapid discharge; loss of remote monitoring systems; internal short circuits; overheating; water ingress; lightning strike (leading to thermal events/runaway).
- Chemical hazards, such as the inherent hazards of the stored dangerous goods; spills and leaks of transformer oil/diesel spills/leaks, refrigerant gas/coolant; chemical reactions.
- Explosions, from ignition of venting gases.
- Potential fire spread due to proximity of batteries (and containers/enclosures) to each other, on-site infrastructure and vegetation (including screening vegetation).
- Mechanical damage to battery containers/enclosures due to vehicular impact.
- Landscape hazards, such as bushfire/grassfire ignition from fire within the facility, or external ignition of site infrastructure from embers, radiant heat and flame contact.

Facility Location

As identified in the BIS, the proposed development is in an area defined as being 'Bushfire Prone,' as per the Tasmanian Planning Scheme – Central Highlands Local Provision Schedule. Such a development in a bushfire prone environment presents increased safety risks that may impact on effective firefighting operations. **The bushfire mitigation measures outlined in this BMP have considered this heightened risk by addressing the following:**

- The impact of any ignitions arising from the infrastructure (solar panels, battery energy storage systems, electrical infrastructure) on nearby communities, infrastructure and assets.
- The impact of bushfire on the infrastructure (e.g., ember attack, radiant heat impact, flame contact).
- Assessment of whether the proposal will lead to an increase in risk to adjacent land and how the proposal will reduce risks at the site to an acceptable level.

Emergency Vehicle Access

The aim is to provide adequate vehicle access to and within facilities of the site to:

a) allow safe access and egress for workers, fire fighters and emergency service personnel;
b) provide access to the bushfire-prone vegetation that enables both, the property to be defended when under bushfire attack, and for hazard management works to be undertaken;
c) are designed and constructed to allow for fire appliances to be manoeuvred;
d) provide access to water supplies for fire appliances; and
e) are designed to allow connectivity, and where needed, offering multiple evacuation points.

<u>The following design and construction requirements apply:</u>

a) Construction of a four (4) metre perimeter road within the perimeter fire break;
b) Must be of all-weather construction;
c) Load capacity of at least 20t, including for bridges and culverts;
d) Minimum carriageway width of 4m;
e) Minimum vertical clearance of 4m;
f) Minimum of horizontal clearance of 0.5m from the edge of the carriageway;
g) Cross falls of less than 3° (1:20 or 5%);
h) Dips less than 7° (1:8 or 12.5%) entry and exit angle;
i) Curves with a minimum inner radius of 10m;

j) Maximum gradient of 15° (1:3:5 or 28%) for sealed roads, and 10° (1:5:5 or 18%) for unsealed roads;

k) Terminate with a turning area for fire appliances provided by one of the following:
   I. a turning circle with a minimum outer radius of 10m or;
   II. an access road encircling any building;
   III. a hammerhead "T" or "Y" turning head 4m wide and 8m in length.

l) Roads must incorporate passing bays at least every 200 metres, which must be at least twenty (20) metres long and have a minimum trafficable width of six (6) metres.

m) Road networks must enable responding emergency services to access all areas of the facility, including fire service infrastructure, buildings, and battery energy storage systems and related infrastructure, substations and grid connection areas.

n) The provision of at least two (2) but preferably more access points to each part of the facility, to ensure safe and efficient access to and egress from areas that may be impacted or involved in fire.

o) Vehicle access to a hardstand should be designed to allow for a fire truck to leave the hardstand in a forward direction. This can be achieved with loop roads, perimeter roads and the like. Where this cannot be achieved, the maximum distance that a fire truck can be expected to reverse safely is 60m.

p) Where vehicle access to a hardstand is greater than 60m, such as dead-end roads or a single access, a turning area complying with one of the following options shown below, should be provided. No parking is permitted in the turning area and appropriate 'NO PARKING' signage is to be provided.

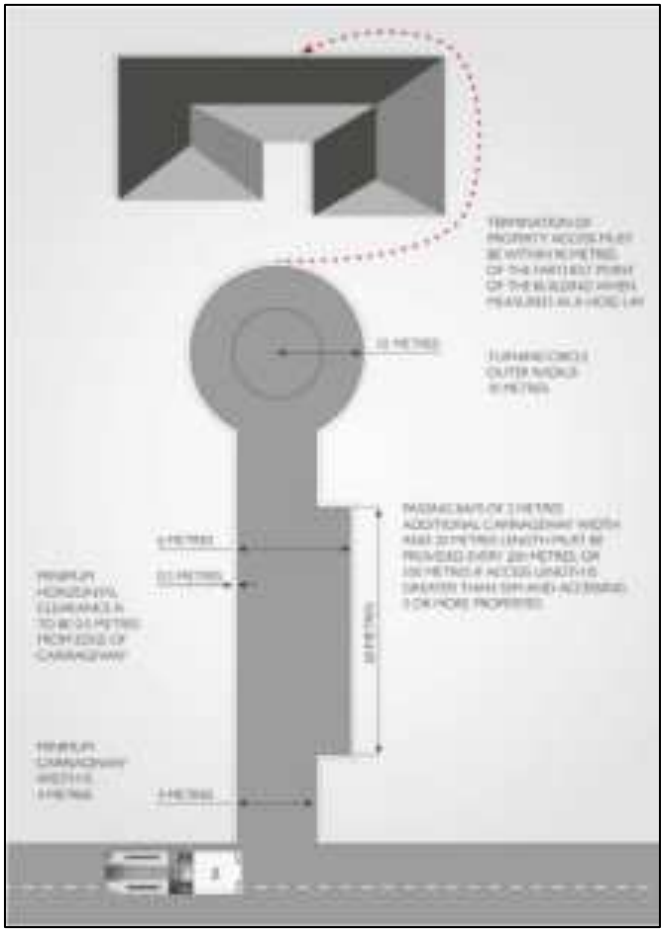


Figure 1: Court-bowl style, minimum 10m radius and passing bay layout.

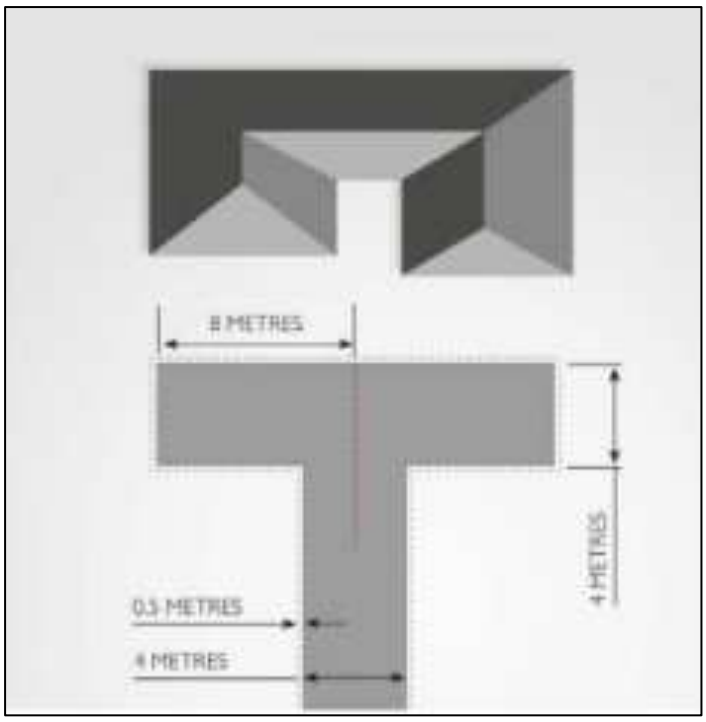


Figure 2: 'T' head style.

Firefighting Water Supply

In the event of a fire (structure fire, grassfire or bushfire), an adequate, accessible and reliable water supply for the purposes of firefighting is necessary to allow for the protection of life and property associated with the development. It is important that emergency responders and fire vehicles are able to access the site and undertake fire suppression in a safe, timely and effective manner and are not hindered in any way.

As the site is not in an area of reticulated water supply, a static water supply is required.

Firefighting Water Supply for Habitable Buildings

The following design and construction requirements apply to all habitable buildings:

As per Director's Determination – Requirements for Building in Bushfire-Prone Area, Table 3B, Requirements for Static Water Supply for Firefighting:

Element A: Distance between building area to be protected and water supply

Requirement: The following requirements apply:

a) The building area to be protected must be located within 90 metres of the water connection point of a static water supply; and
b) The distance must be measured as a hose lay, between the water connection point and the furthest part of the building area.

Element B: Static Water Supplies

Requirement: A static water supply:

a) May have a remotely located offtake connected to the static water supply;
b) May be a supply for combined use (firefighting and other uses) but the specified minimum quantity of firefighting water must be available at all times;
c) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including firefighting sprinkler or spray systems;
d) Must be metal, concrete or lagged by non-combustible materials if above ground; and
e) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2009, the tank may be constructed of any material provided that the lowest 400 mm of the tank exterior is protected by:
    i. metal;
    ii. non-combustible material; or
    iii. fibre-cement a minimum of 6 mm thickness.

Element C: Fittings, pipework and accessories (including stands and tank supports)

Requirement: Fittings and pipework associated with a water connection point for a static water supply must:

a) Have a minimum nominal internal diameter of 50mm;
b) Be fitted with a valve with a minimum nominal internal diameter of 50mm;
c) Be metal or lagged by non-combustible materials if above ground;
d) Where buried, have a minimum depth of 300mm (compliant with AS/NZS 3500.1-2003 Clause 5.23);
e) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to firefighting equipment;
f) Ensure the coupling is accessible and available for connection at all times;
g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length);
h) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and
i) Where a remote offtake is installed, ensure the offtake is in a position that is:
    i. Visible;
    ii. Accessible to allow connection by firefighting equipment;
    iii. At a working height of 450 – 600mm above ground level; and
    iv. Protected from possible damage, including damage by vehicles.

Element D: Signage for static water connections

Requirement: The firefighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location:

The sign must comply with the Tasmanian Fire Service Water Supply Signage Guideline, Version 1.0, February 2017, published by the Tasmania Fire Service.

Element E: Hardstand

Requirement: A hardstand area for fire appliances must be provided:

a) No more than three metres from the water connection point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like);
b) No closer than six metres from the building area to be protected;
c) With a minimum width of three metres constructed to the same standard as the carriageway; and
d) Connected to the property access by a carriageway equivalent to the standard of the property access.

Firefighting Water for Solar Energy Facilities

The following are additional design and construction requirements that apply to the development site as a solar energy facility:

a) A minimum of at least 1 x 45,000 litre static water tank for every 100ha (over and above the minimum 10,000 litre per habitable building required).
b) Fire water must be provided to cover buildings, control rooms, substations and grid connections.
c) The static water tank(s) must be capable of being completely refilled automatically or manually within 24 hours.
d) Static water storage tanks must be located at all designated vehicle access points to the facility and must be positioned at least 10m from any infrastructure (solar panels, battery energy storage systems etc.
e) The road access and hardstand areas must be kept clear at all times.
f) An external water level indicator must be provided to the tank and be visible from the hardstand area.
g) Signage must be provided at the from entrance to the facility, indicating direction to the static water tank(s).
h) Additional fire protection systems or equipment required under any Australian Standards for dangerous goods must be provided as prescribed.

Firefighting Water for Solar Energy Facilities with Battery Energy Storage Systems

The following are additional design and construction requirements that apply to the development site as a solar energy facility with battery energy storage systems (Centralised or Stand-Alone Facilities):

A fire protection system suitable for the risks and hazards must be provided. For battery energy storage systems, the water quantity must:

- Enable effective cooling of surrounding infrastructure.
- Account for reasonable duration of fire events based on the proposed battery chemistry.
- Account for local weather conditions and potential fire weather conditions.
- Provide for the safety of firefighters.

To achieve the above, the fire protection system must include at a minimum (considering where no reticulated water is available):

i. The fire water supply must be of a quantity no less than 288,000L or as per the provisions of AS2419.1-2021: Fire hydrant installations, Table2.2.5(D) for open yards flowing for a period of no less than four hours at 20L/s, whichever is the greater.

ii. The quantity of static fire water storage is to be calculated from the number of hydrants required to flow from AS 2419.1-2021: Fire hydrant installations, Table 2.2.5(D).
iii. Fire hydrants must be provided and located so that every part of the battery energy storage system is within reach of a 10m hose stream issuing from a nozzle at the end of a 60m length of hose connected to a fire hydrant outlet.
iv. The fire water supply must be located at vehicle entrances to the facility, at least 10m from any infrastructure (electrical substations, inverters, battery energy storage systems, buildings). Please note that where they are not located exactly at the vehicle entry point, static water location signage must be erected at the entrance point and show direction and distance to that point.
v. The fire water supply must be reasonably adjacent to the battery energy storage system and shall be accessible without undue danger in an emergency. (e.g., Fire water tanks are to be located closer to the site entrance that the battery energy storage system).
vi. The fire water supply must comply with AS2419.1-2021: Fire hydrant installations, Section 5: Water storage tanks.

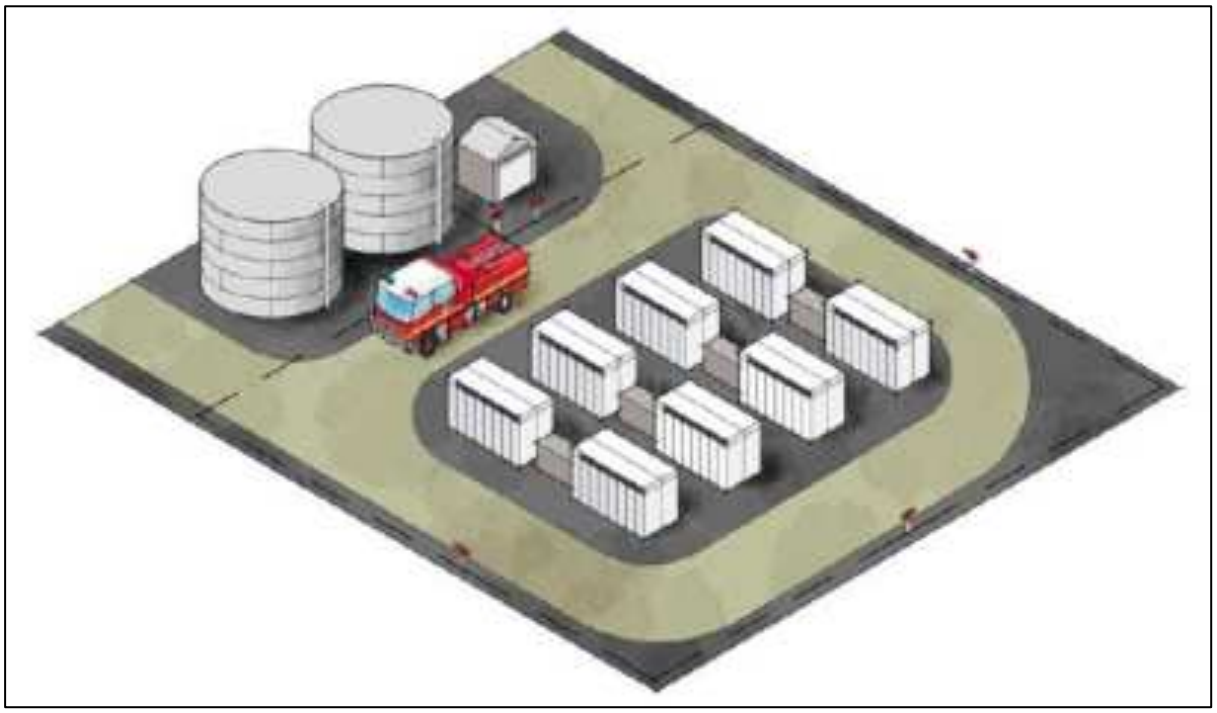


Figure 3: Indicative BESS layout (conceptual BESS design layout for this facility is shown in detail in Figure 13).

Landscape Screening and Onsite Vegetation

All vegetation, proposed and existing has been considered for its potential to intensify and propagate fire within and away from the site.

Landscape screening may be utilised throughout parts and or all of the development site. It may be provided for screening in relation to visual amenity and to prevent visual glare from the facility. The design has of screening has considered potential increase in fire risk due to the type (species), density, height, location and overall width of the screening. The facility has been designed to ensure that the radiant heat flux (output) from vegetation does not create the potential for ignition of onsite infrastructure or other vegetation. This has been mitigated by through:

- Vegetation removal (where required and permitted).
- Separation from nearby infrastructure (e.g.; firebreaks).
- The provision of thermal barriers at nearby infrastructure.
- Thought should be given to low flammability landscaping species such as those listed in the "Fire Resisting Garden Plants" booklet produced by the Tasmania Fire Service (TFS).

Firebreaks

A fire break is a gap in fuel (vegetation) that reduces the potential for fire to enter or leave an area. Fire breaks may also be used for emergency vehicle access. A fire break must be established and maintained around:

a) The perimeter of the facility, commencing from the boundary of the facility or from the vegetation screening inside the property boundary.
b) The perimeter of control rooms, electricity compounds, substations and all other buildings onsite.
c) Construction of a 4m perimeter road within the perimeter firebreak.

The width of the fire breaks is to be a minimum of 10m, and at least the distance where radiant heat flux (output) from the vegetation does not create the potential for ignition of on-site infrastructure. Where screening or other vegetation is a width of 20m or less (open density as per AS 3959-2018), or 15m or less (closed density as per AS 3959-2018), a fire break of 10m may be appropriate to prevent radiant heat from vegetation fully involved in fire becoming an ignition source for on-site infrastructure. Outside of these parameters, separation must be at least the distance where radiant heat flux (output) from the vegetation does not create the potential for ignition of on-site infrastructure.

The width of the vegetation includes any existing vegetation from neighbouring properties or road reserves abutting the proposed or existing vegetation for the renewable energy facility. Vegetation has been classified as per AS 3959-2018: Construction of buildings in bushfire-prone areas for the purposes of determining radiant heat flux (output).

Fire breaks must be:

- Non-combustible, constructed of concrete, mineral earth or non-combustible mulch such as crushed rock.
- Free of vegetation and obstructions at all times. No plant or equipment of any kind is to be stored in fire breaks.
- The perimeter of the facility, commencing from the boundary of the facility or from the vegetation screening inside the property boundary.
- The perimeter of control rooms, electricity compounds, substations and all other buildings onsite.
- In addition to radiant heat flux (output) from vegetation, the width of fire breaks between vegetation and battery energy storage systems must be at least the distance where the radiant heat flux (output) from the battery energy storage system fully involved in fire does not create the potential for ignition of vegetation.
- A fire break must be established and maintained around battery energy storage systems and related infrastructure.

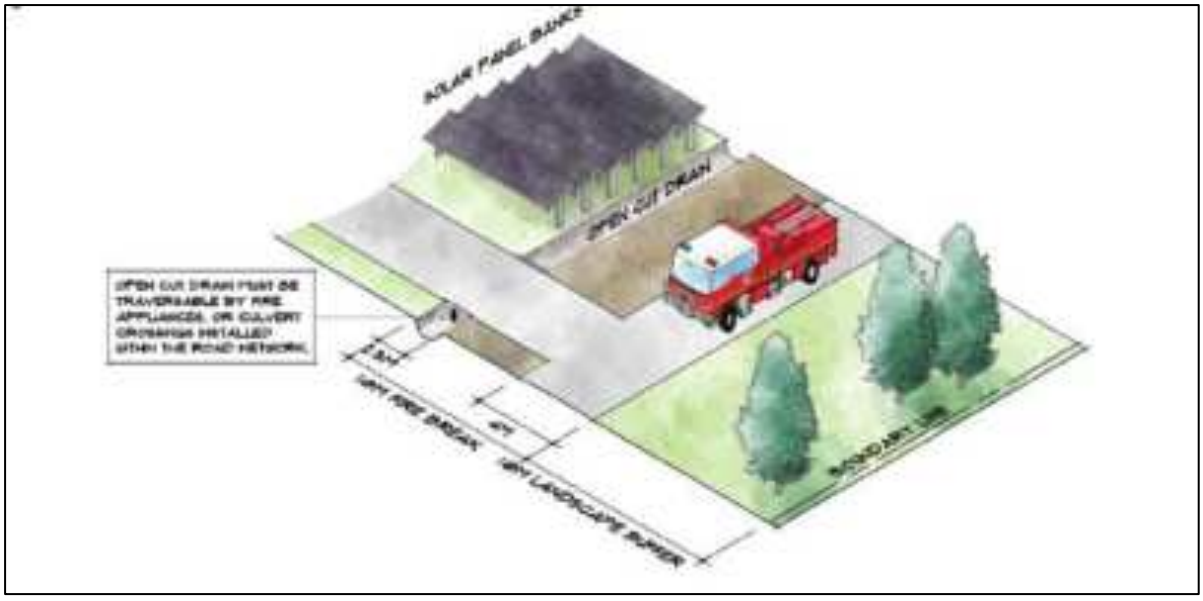


Figure 4: Indicative firebreak layout.

Design Specific Requirements for Solar Energy Facilities

Solar Panel Banks:

Adequate separation of solar panel banks facilitates safe and effective firefighting operations. Solar energy facilities are to have a minimum six (6) metre separation between solar panel banks. Long runs of solar panel arrays without breaks due to natural site features or access roads can pose hazards to firefighters, prolong incidents and increase the potential for asset damage.

CFA recommends that separation wherever possible:

- Is between each 'bank' of solar panels, where a 'bank' is that connected to a single power conversion unit/inverter, or
- Is provided so that no unbroken area of solar panels is greater than 25ha.

This zone is to be cleared of trees and scrub and grass must be no more than 100mm during the Fire Danger Period.

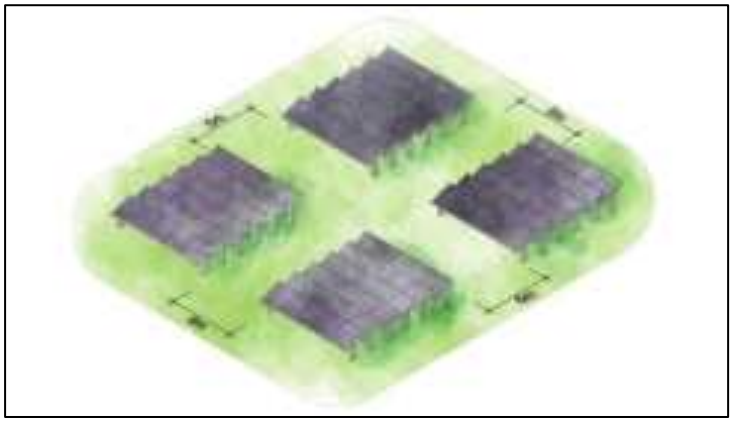


Figure 5: Indicative solar bank layout.

Battery Energy Storage Systems:

It is acknowledged that battery technologies are continually evolving, and that not all battery energy storage systems have the same level of fire risk. The following requirements are based on lithium battery chemistry.

Facilities with battery energy storage systems must be designed with an ultimate goal of fire prevention. Facility design can reduce the potential for ignition and the consequences of fire should it occur. Facility design can reduce the potential for ignition and the consequences of fire should it occur. Facilities with battery energy storage systems must be designed with an ultimate goal of fire prevention. The battery management and safety systems within the chosen battery technology will largely dictate whether thermal runaway will occur and its initial management.

CFA recommends that consideration is to be given to the provision of non-combustible, floor-to-ceiling partition 'walls' (thermal barriers) between battery racks (stacked modules) within battery containers/enclosures. In the absence of a specific Australian Standard for large-scale battery energy storage system facilities, the current versions of the following should be used in the design and operation of battery energy storage systems, except where, varied by this BMP.

- NFPA 855: Standard for the Installation of Stationary Energy Storage Systems.
- UL 9540: Energy Storage System Requirements.
- UL 9540A: Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems.
- FM Global Property Loss Prevention Data Sheet 5-33 Electrical Energy Storage Systems.

The design of the battery storage facility must incorporate:

a) A separation distance that prevents fire spread between battery containers/enclosures and:
   - Other battery containers/enclosures.
   - Onsite buildings.
   - Substations.
   - The site boundary.
   - Any other site buildings.
   - Vegetation.

   Separation must be at least the distance where the radiant heat flux (output) from a battery energy storage system container/enclosure fully involved in fire does not create the potential for ignition of these site elements.

b) A fire break around the battery energy storage system and related infrastructure, of a width of no less than 10m, or greater, where determined in this Plan.

   Fire breaks must be non-combustible, constructed of concrete, mineral earth or non-combustible mulch such as crushed rock. The width must be calculated based on the ignition source being radiant heat of surrounding vegetation, including landscaping.

c) A layout of site infrastructure that:
   I. Considers the safety of emergency responders.
   II. Minimises the potential for grassfire and/or bushfire to impact the battery energy storage system.
   III. Minimises the potential for fires in battery containers/enclosures to impact onsite and offsite infrastructure.

Battery energy storage systems must be:

a) Located so as to be reasonably adjacent to a site vehicle entrance (suitable for emergency vehicles).
b) Located so that the site entrance and any fire water tanks are not aligned to the prevailing wind direction (therefore least likely to be impacted by smoke in the event of fire at the battery energy storage system).
c) Provided with in-built detection and suppression systems. Where these systems are not provided, measures to effectively detect and/or suppress fires within containers.
d) Provided with explosion prevention via sensing and venting, or explosion mitigation through deflagration panels.
e) Provided with suitable ember protection to prevent embers from penetrating battery containers/enclosures.
f) Provided with suitable access roads for emergency services vehicles, to and within the site, including to battery energy storage system(s) and fire service infrastructure.
g) Installed on a non-combustible surface such as concrete.
h) Provided with suitable ventilation.
i) Provided with impact protection to at least the equivalent of a W guardrail-type barrier, to prevent mechanical damage to battery containers/enclosures.
j) Provided with enclosed wiring and buried cabling, except where required to be above-ground for grid connection.
k) Provided with spill containment that includes provision for management of fire water runoff.

CFA recommends that infrastructure is provided for the containment and management of contaminated fire water runoff from battery energy storage systems. Infrastructure may include bunding, sumps and/or purpose-built, impervious retention facilities. A fire water management plan may consist of the containment and disposal of contaminated fire water. CFA recommends a containment and management capacity equivalent to the on-site fire protection system. Containment is to be provided as per AS 4681- 2000: The storage and handling of class 9 dangerous goods, Section 7.3.9: Control of run-off.

Battery Energy Storage System Compliance with the Tasmanian Planning Scheme – Central Highlands Local Provision Schedule, and more specifically, C13.0 Bushfire-Prone Areas Code is required. From a Tasmanian Fire Service (TFS) perspective, battery storage is deemed as a 'hazardous use.' 'Hazardous use,' means a use where:

(a) hazardous chemicals of a manifest quantity are stored on a site; or
(b) explosives are stored on a site and where, classified as an explosives location or large explosives location as specified in the *Explosives Act 2012.*

The BIS illustrates compliance with the Tasmanian Planning Scheme – State Planning Provisions - C13.5 Hazardous uses and refers to the Objective, Acceptable Solutions and Performance Criteria for Hazardous Use.

The Bushfire Hazard Management Plans (BHMP's) illustrated below, defines the required setbacks from surrounding vegetation for the Northern Construction Compound and Switchyard, North Eastern Switchyard, Central/Main Infrastructure Area (consisting of the BESS, Central Construction Compound, Substation and Switchyard) and the Southern Construction Compound considering both CFA and Tasmanian Bushfire Prone Area Code requirements.

BHMP Site 1 – Weasel Agri Solar Farm Northern Construction Compound Laydown Area and Switchyard (flammable liquid storage):

Please refer to Appendix 3.1 for BHMP.

Bushfire Attack Level (BAL) – Steps 1 to 5 Summary Results.

For calculations based on Tasmania's FDI of 50, please refer to Table 1 below for the development:

	North	East	South	West
Vegetation to 100m	Grassland	Grassland	Grassland	Grassland
Vegetation Classification	G	G	G	G
Slope	Downslope 0 - 5°	Downslope 0 - 5°	Downslope 0 - 5°	Level/Upslope
Current BAL	BAL FZ	BAL FZ	BAL FZ	BAL FZ
Proposed BAL	BAL 12.5	BAL 12.5	BAL 12.5	BAL 12.5
HMA for BAL 12.5	16m+	16m+	16m+	14m+



Figure 6: Landscape photo of BHMP Development Site 1.

BHMP Site 2 – Weasel Agri Solar Farm North Eastern Switchyard:

Please refer to Appendix 3.2 for BHMP.

Bushfire Attack Level (BAL) – Steps 1 to 5 Summary Results.

For calculations based on Tasmania's FDI of 50, please refer to Table 1 below for the development:

	North	East	South	West
Vegetation to 100m	Managed Ground (Solar Panels) & Grassland >50m	Managed Ground (Solar Panels)	Woodland	Managed Ground (Solar Panels) & Grassland >50m
Vegetation Classification	Low Threat*	Low Threat*	B	Low Threat*
Slope	Downslope 0 - 5°	Downslope 0 - 5°	Level/Upslope	Level/Upslope
Current BAL	BAL FZ	BAL FZ	BAL FZ	BAL FZ
Proposed BAL	BAL N/A	BAL N/A	BAL 12.5	BAL N/A
HMA for BAL 12.5	N/A	N/A	22m+	N/A

***2.2.3.2:**

(e) Exclusions – Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.

(f) Exclusions—Low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.



Figure 7: Photo of BHMP Development Site 2.

BHMP Site 3 – Weasel Agri Solar Farm Main Infrastructure Area (including BESS, Central Construction Compound Laydown Area, Substation and Switchyard):

Please refer to Appendix 3.3 for BHMP.

Bushfire Attack Level (BAL) – Steps 1 to 5 Summary Results.

For calculations based on Tasmania's FDI of 50, please refer to Table 1 below for the development:

	North	East	South	West
Vegetation to 100m	Managed Ground & (Solar Panels) & Grassland	Managed Ground & (Solar Panels) & Grassland	Woodland & Grassland	Woodland & Grassland
Vegetation Classification	Low threat* & G	Low threat* & G	B & G	B & G
Slope	Downslope 0 - 5°	Downslope 0 - 5°	Downslope 0 - 5°	Grassland - Downslope 0 - 5° & Woodland – Level/Upslope
Current BAL	BAL FZ	BAL FZ	BAL FZ	BAL FZ
Proposed BAL	BAL 12.5	BAL 12.5	BAL 12.5	BAL 12.5
HMA for BAL 12.5	16m+	16m+	26m+ (Woodland) 16m+ (Grassland	22m+ (Woodland) 16m+ (Grassland

***2.2.3.2:**

(e) Exclusions – Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.

(f) Exclusions—Low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.



Figure 8: Photo of Main Office, Amenities & Construction Phase compound area (BHMP Development Site 3).



Figure 9: Landscape Photo of BESS area (BHMP Development Site 3).



Figure 10: Photo of Switchyard, Storage Shed & Amenities Site (BHMP Development Site 3).



Figure 11: Photo looking at Construction Phase Compound, Offices and Amenities Site (BHMP Development Site 3).

BHMP Site 4 – Weasel Agri Solar Farm Southern Construction Compound Laydown Area (flammable liquid storage):

Please refer to Appendix 3.4 for BHMP.

Bushfire Attack Level (BAL) – Steps 1 to 5 Summary Results.

For calculations based on Tasmania's FDI of 50, please refer to Table 1 below for the development:

	North	East	South	West
Vegetation to 100m	Managed Ground (Solar Panels)	Grassland	Grassland	Woodland
Vegetation Classification	Low Threat*	G	G	G
Slope	Level/Upslope	Level/Upslope	Downslope 0 - 5°	Downslope 0 - 5°
Current BAL	BAL FZ	BAL FZ	BAL FZ	BAL FZ
Proposed BAL	BAL N/A	BAL 12.5	BAL 12.5	BAL 12.5
HMA for BAL 12.5	N/A	14m+	16m+	16m+

***2.2.3.2:**

(e) Exclusions – Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.

(f) Exclusions—Low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.



Figure 12: Photo of Construction Phase Compound Site (BHMP Development Site 4).

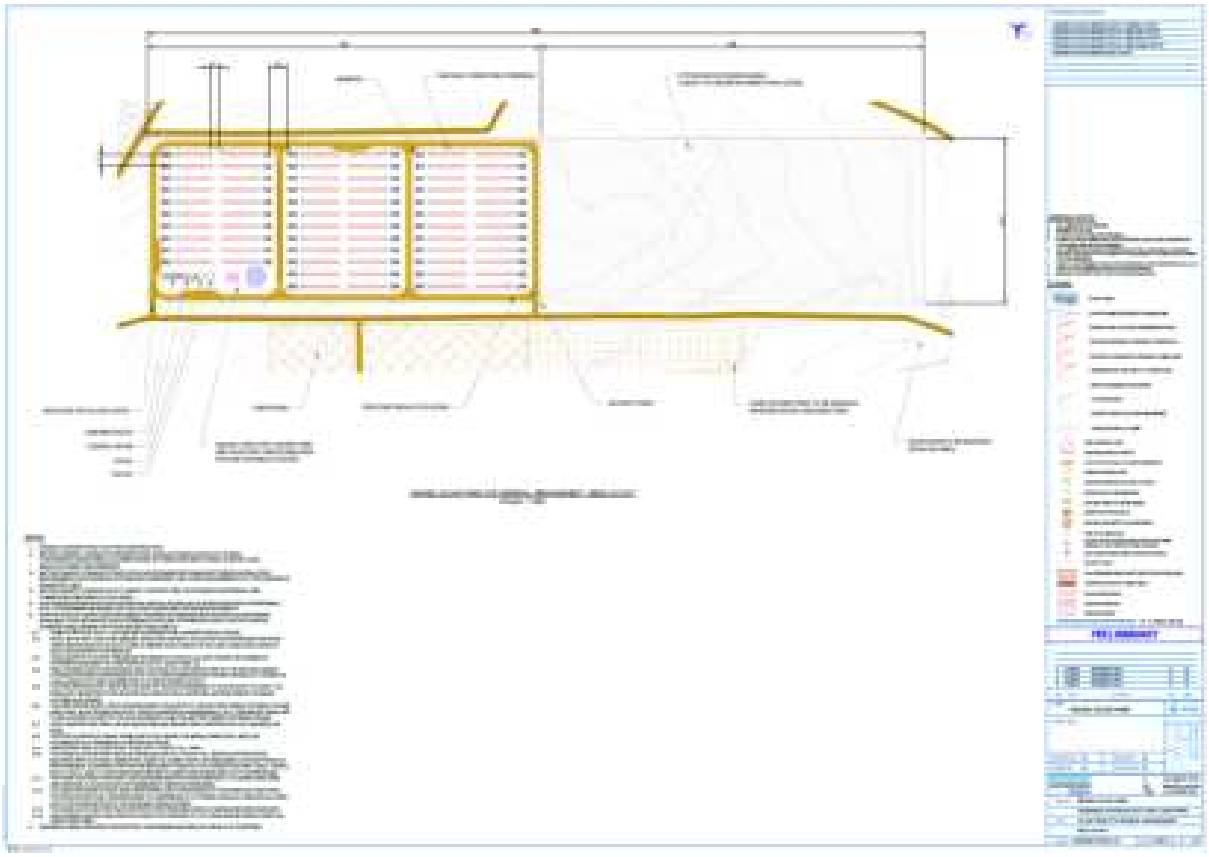


Figure 13: BESS Layout.

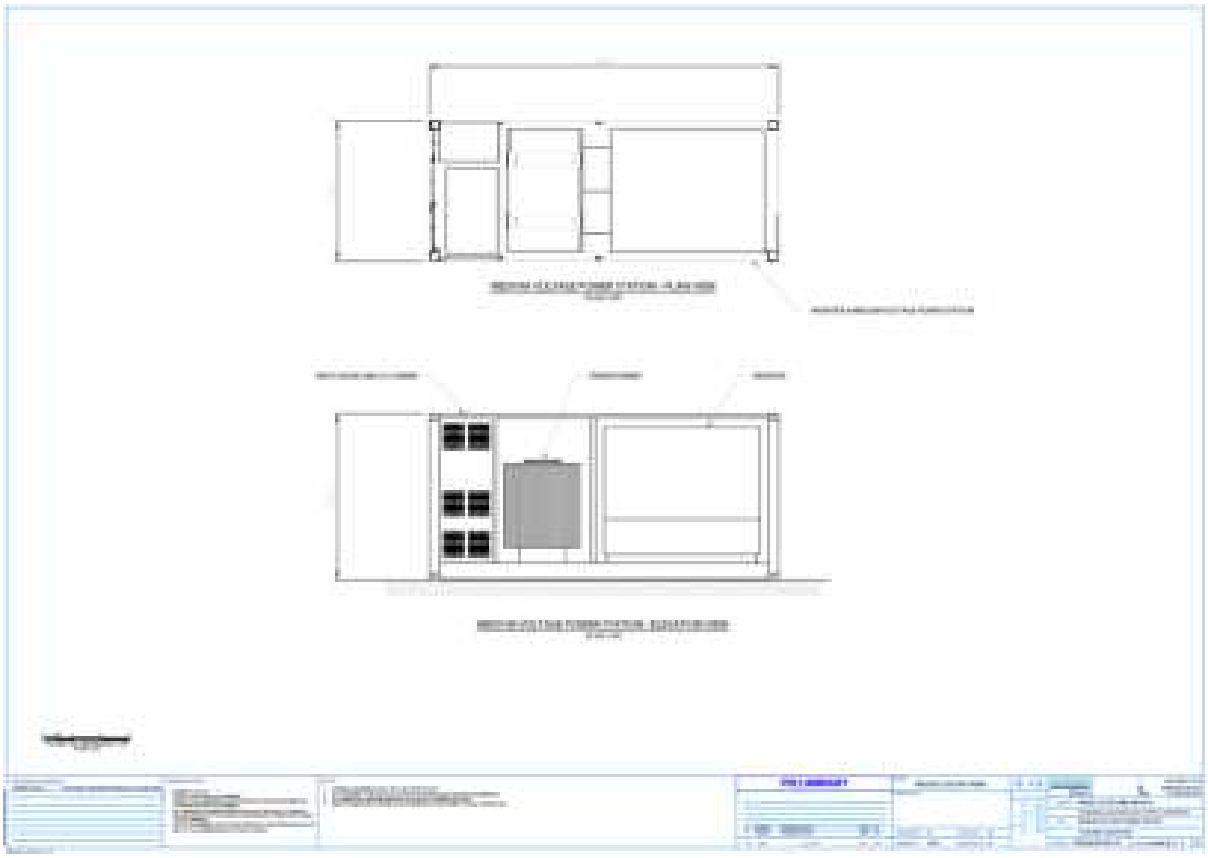


Figure 14: Medium Voltage Power Station Plan & Elevations.

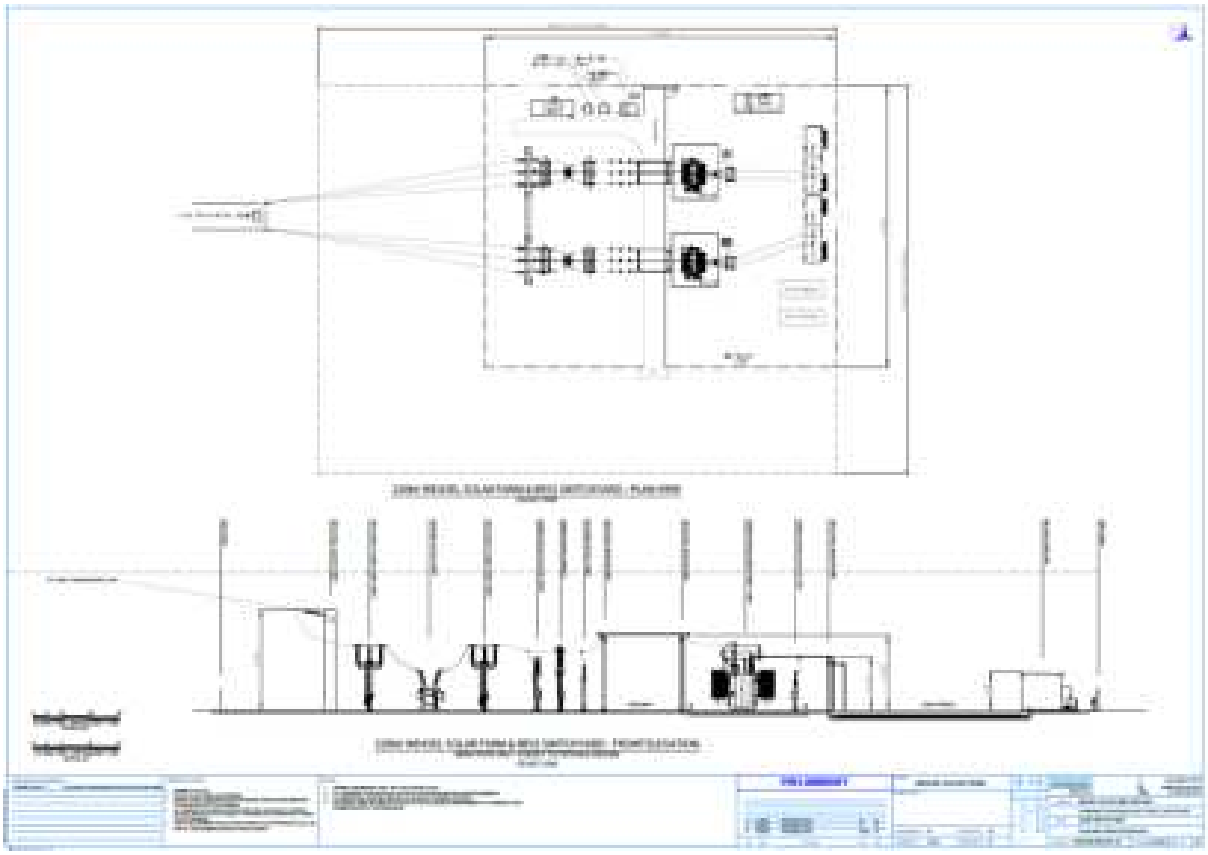


Figure 15: 220kV Switchyard Plan & Elevation.

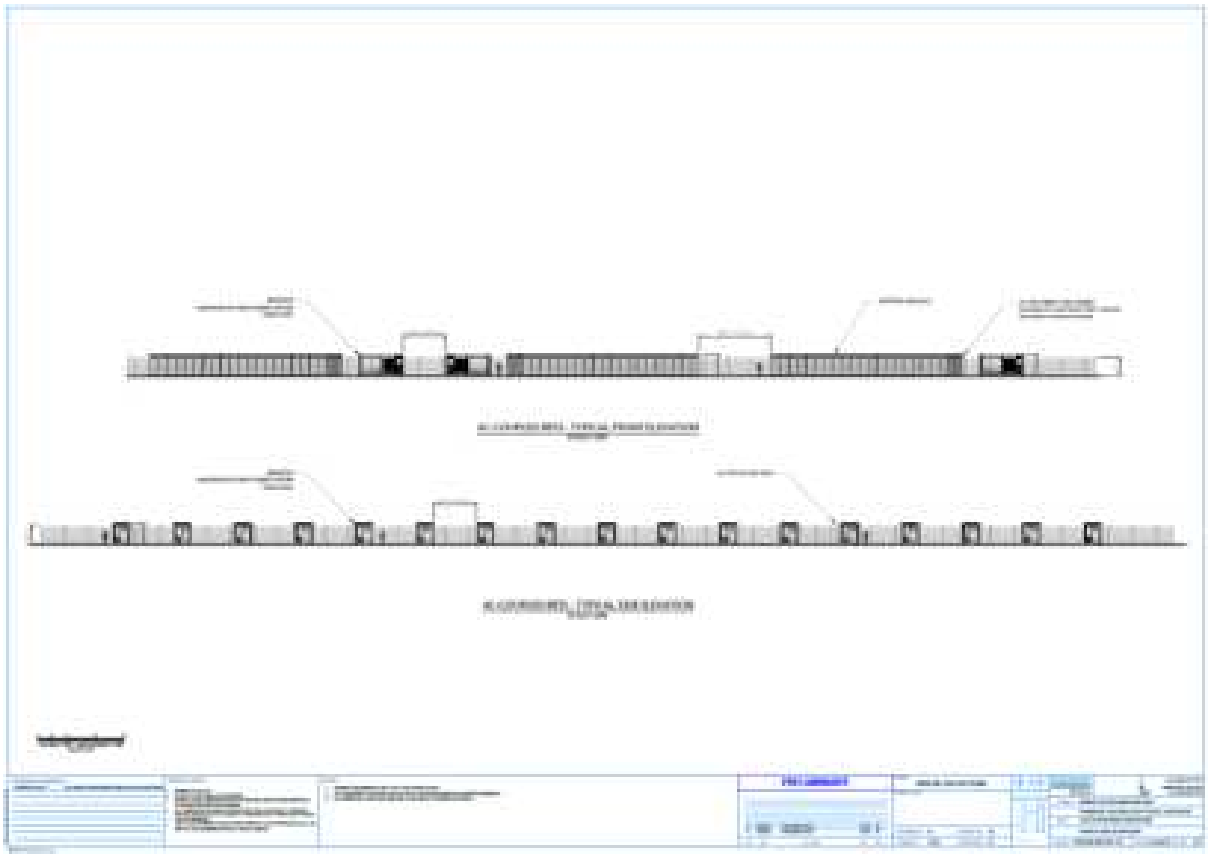


Figure 16: Ac-Coupled BESS Elevations.

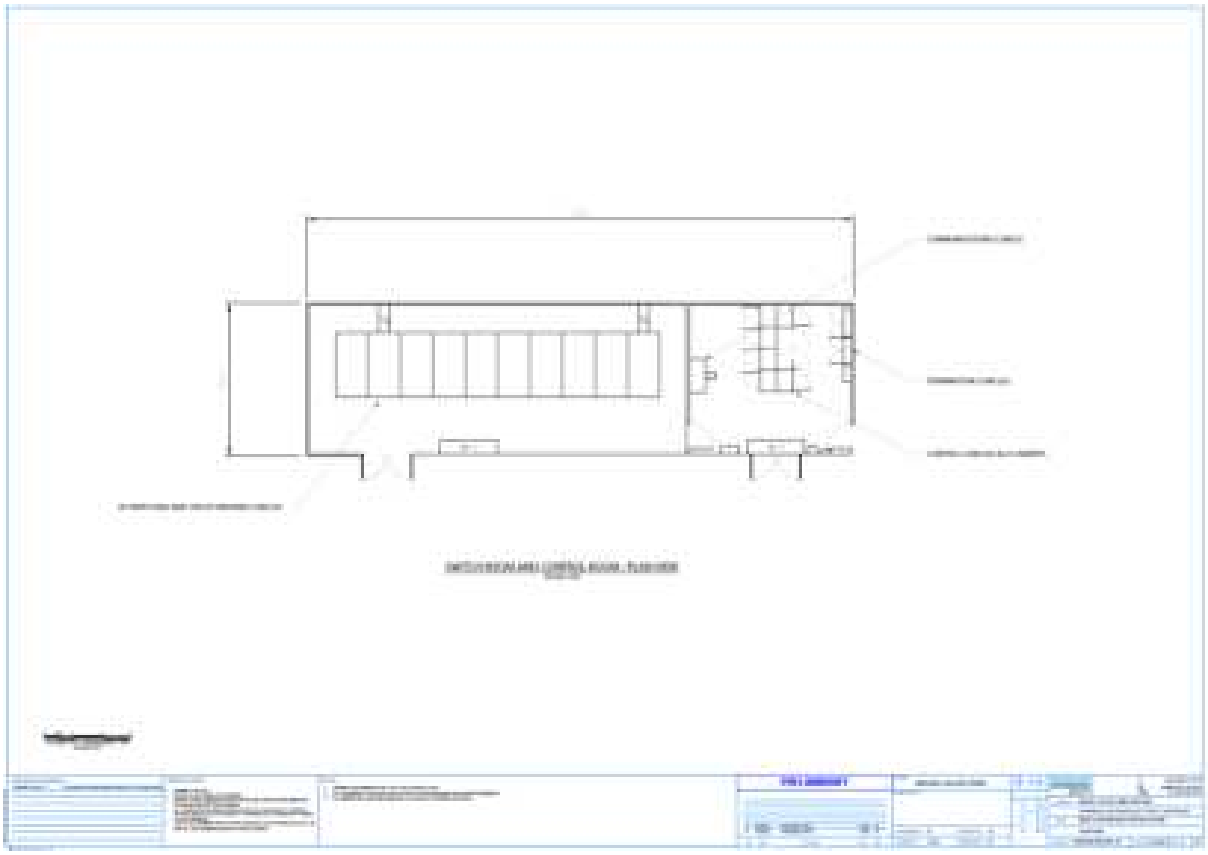


Figure 17: Switch Room & Control Room Plan View.

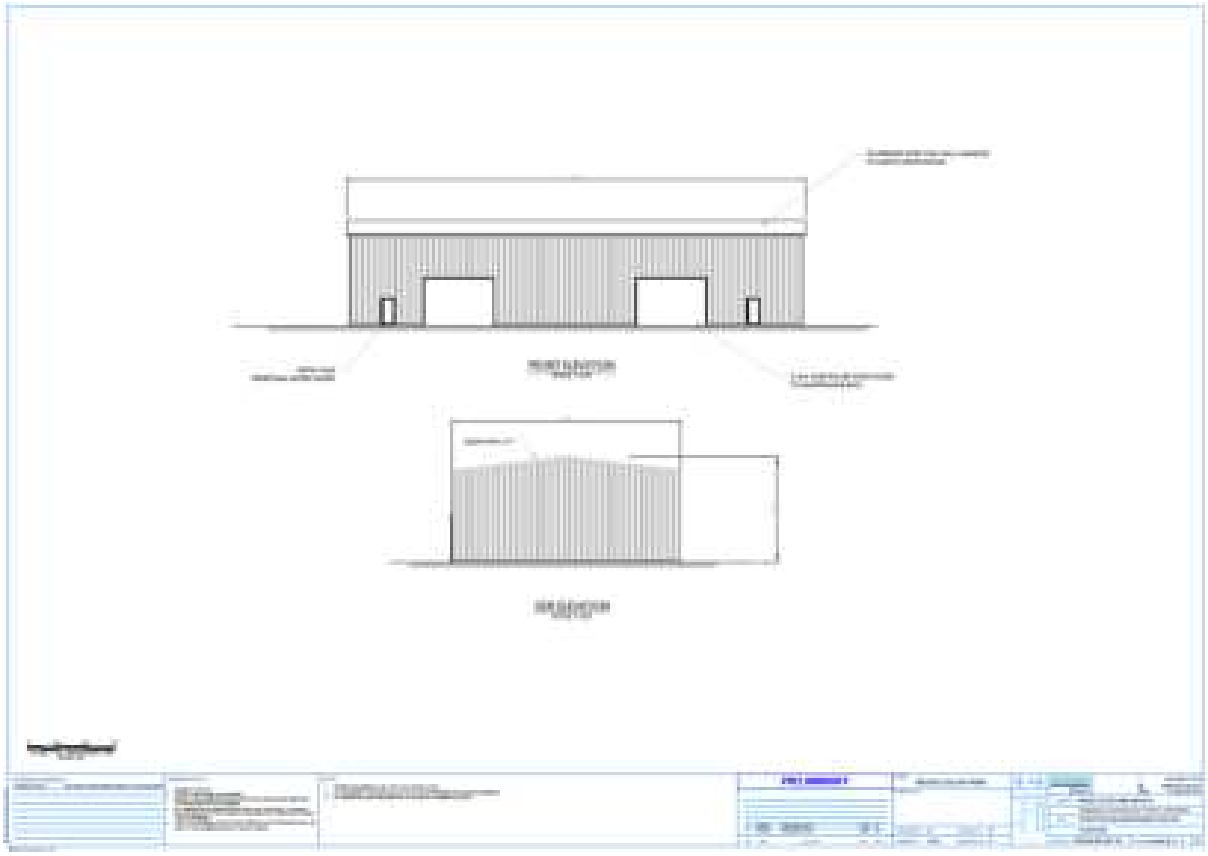


Figure 18: Operations & Maintenance Building Elevations.

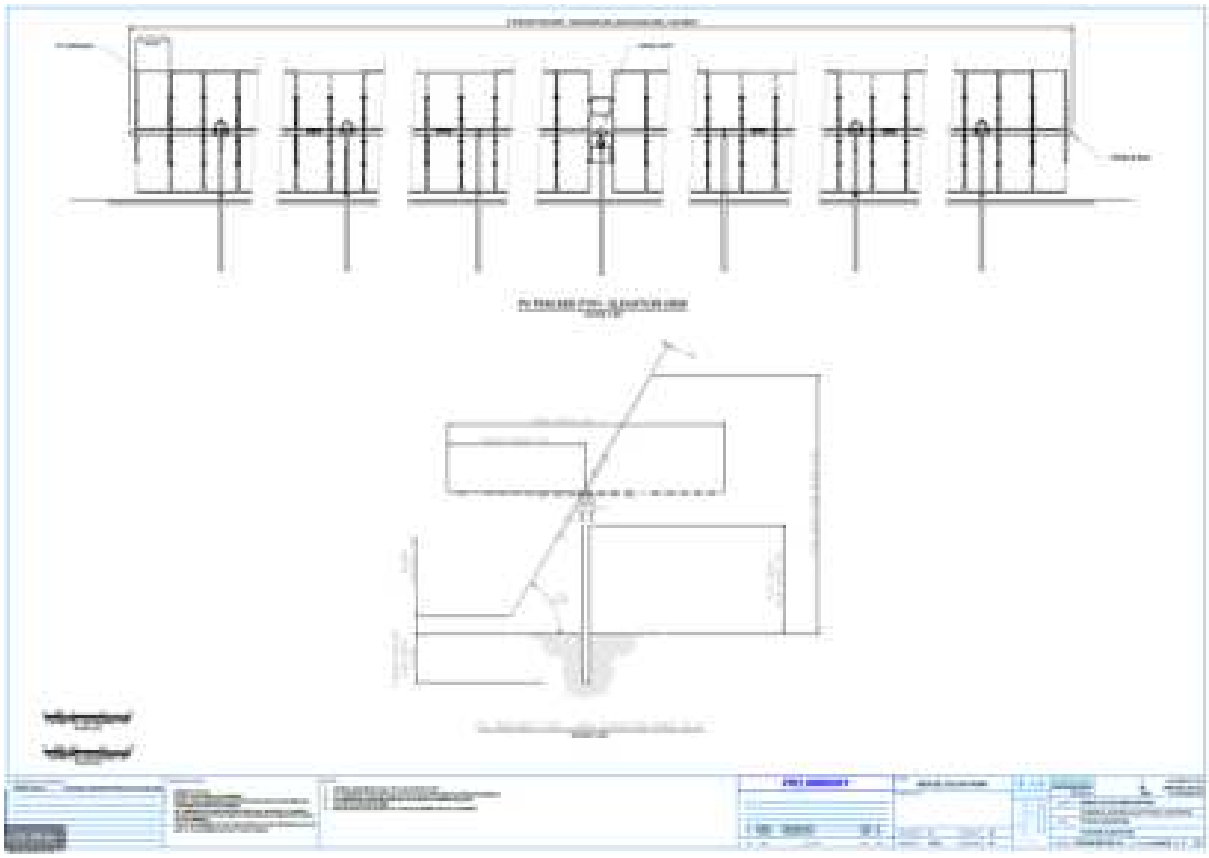


Figure 19: PV Tracker Plan & Elevations.



Bushfire Emergency Plan (BEP)

As part of the compliance with the Tasmanian Planning Scheme – State Planning Provisions - C13.5.2 Hazardous Uses, a Bushfire Emergency Management Strategy (BEMS) has been developed. This BEMS will guide the formation of a Bushfire Emergency Plan (BEP) to be prepared at Building Approval stage.

Bushfire Emergency Management Strategy (BEMS)

This section broadly identifies the proposed emergency management arrangements that will be formed into a detailed Bushfire Emergency Plan (BEP), for the purposes of a planning permit for a Hazardous Use. It is based on risks identified in the Bushfire Impact Statement (BIS).

The purpose of this Bushfire Emergency Management Strategy (BEMS) is to demonstrate how risk to occupants will be managed to a tolerable level through contextualised emergency procedures. The emergency management strategy informs the more detailed Bushfire Emergency Plan (BEP), which is required at the building permit stage. Identified roles and responsibilities will be designated in the final BEP.

Identified Hazardous Use Buildings/Facilities

The following facilities of the proposed Agri Solar Farm meet the thresholds to be classed as a Hazardous Use under the Tasmanian Planning Scheme – Central Highlands Local Provision Schedule, and more specifically, C13.0 Bushfire-Prone Areas Code.

- Battery Energy Storage Systems Containers/Enclosure Compound
- Hazardous Chemical Storage (e.g.; Fuel) Laydown Compounds
- Substations & Switchyards

Emergency Management Structure

As part of the (BIS), a hazard identification risk assessment has been completed in line with the requirements in AS/NZS 4360:1999 Risk Management. The proponent has committed to work with local authorities and emergency services to develop an emergency management plan. The management objects for the site emergency management plan will be:

- Develop a plan that is simple in structure, easily understood, and user friendly;
- The plan would be held by all site staff and other responsible persons who may need to initiate a response;
- Dry runs of completed plans will be undertaken in mock scenarios to ensure functionality of the plan;
- A Fire Response Plan will be developed and integrated in the overarching Emergency Response Plan. The State Emergency Services (SES), Tasmania Fire Service (TFS), and local police may be engaged with to develop this and will be provided with a final copy of the plan.

Occupancy Characteristics

Construction Phase

Construction of the project is expected to take up to ±1.5 years to complete. During this time, there is expected to be ±301 FTE people employed to complete the works. Works will be occurring across the entire ±435 ha project site, so only some of the workers will be located at the Hazardous Use sites. Exact numbers will vary on a daily basis. It is reasonable to assume that there will consistently be people present at each of the Hazardous Use sites during construction, although at the refuelling station, this will only be for short periods while staff are refuelling vehicles and machinery.



Operational Phase

Once the project is operational, it is anticipated that up to ±8 FTE people will be employed on site to perform ongoing work and operational maintenance.

Building and/or Facilities Site Vulnerability and Site-Specific Protection Measures

These include the following:

- Battery Energy Storage Systems (BESS) Compound
- Hazardous Chemical Storage (e.g.; Fuel) Laydown Compounds
- Substations/Switchyards

The main centrally located infrastructure area will include a site office (Construction Phase) and will consist of temporary buildings for office space, workshop and warehouse facilities (likely containers), parking space, and a laydown area for vehicles and machinery.

- There will be hazardous chemicals stored within these facilities that will potentially exceed prescribed manifest quantities, as described in Schedule 11 of the Work Health and Safety Regulations 2022. This will most likely be Category 2 flammable liquids.
- Sites are surrounded by bushfire-prone vegetation; thus, a Bushfire Hazard Management Area (HMA) must be developed in between both site boundaries and the adjacent bushfire-prone vegetation. The HMA setbacks are to comply with BAL 12.5 setback requirements. Furthermore, all land within the facilities must be managed in a low fuel state at all times.
- Sites will be accessed from one of the main property access routes via Highland Lakes Road on the project site, providing several options for evacuation, if required.
- All buildings associated with development will be temporary structures. This means they may not be subject to bushfire specific measures. However, any structures that store hazardous materials will be signed and will be required to be compliant with Australian Standard AS 1940-1993 – The Storage and Handling of Flammable and Combustible Liquids and/or AS 3780-1994 - The Storage and Handling of Corrosive Substances. This will also dictate minimum setbacks of other buildings within the facility. It has also been made a requirement in the Bushfire Hazard Management Plan that any buildings at the hazardous use sites storing hazardous materials must be constructed to BAL 12.5 standards as a minimum.
- All hazardous materials will be stored in fenced off, bunded areas.
- Sufficient static water supply, at least 10,000L of water which is dedicated for bushfire fighting purposes within 90m as the hose lays of all areas of the facility, is required for each site. This may require multiple static water supply tanks in multiple locations and could either be stationary or mobile units.
- Any further specific management measures specified by Material Safety Data Sheets (MSDS) for all dangerous good will be followed.
- Any further specific management measures as outlined in the BMP.

Refuelling Stations (Construction Phase)

There will be dedicated refuelling site developed at the construction laydown compounds. All diesel and petrol for vehicles and machinery will be stored at this location.

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On behalf of Chief Officer
Tasmania Fire Service
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- Petrol is a Category 2 flammable liquid and it is anticipated that more than 2,500L will be stored on site, which is greater than the Manifest Quantity prescribed in Schedule 11 of the Work Health and Safety Regulations 2022. While diesel is a Category 4 flammable liquid, it is anticipated to be stored at a level above the Manifest Quantity (100,000L).
- The hazardous materials will be signed and will be required to be compliant with Australian Standard AS 1940-1993 – The Storage and Handling of Flammable and Combustible Liquids. This will also dictate minimum setbacks of other buildings and uses from the facility.
- The refuelling facilities will be bunded and have a capacity to hold 1.5 times the amount of fuel located within the area.
- The site is surrounded by bushfire-prone vegetation; thus, a Bushfire Hazard Management Area (HMA) must be developed between the site boundary (site bunding) and the adjacent bushfire prone vegetation. The HMA setbacks are to comply with BAL 12.5 setback requirements. Furthermore, all land within land within the facilities must be managed in a low fuel state at all times.
- The site will be accessed from one of the main property access routes via Highland Lakes Road on the project site, providing several options for evacuation, if required.
- Sufficient static water supply, at least 10,000L of water which is dedicated for bushfire fighting purposes within 90m as the hose lays of all areas of the facility, is required for each site. This may require multiple static water supply tanks in multiple locations and could either be stationary or mobile units.
- Any further specific management measures specified by Material Safety Data Sheets (MSDS) for all dangerous good will be followed.
- Any further specific management measures as outlined in the BMP.

Operational Phase (Hazardous Uses)

This includes the following:

- Battery Energy Storage Systems (BESS) Compound
- Hazardous Chemical Storage (e.g.; Fuel) Laydown Compounds
- Substations/Switchyards

The Main Solar Farm Operation and Maintenance Building will be the base of operations once the project is operational. All hazardous chemicals (hydrocarbons) will be stored at this site.

- Fuel for machinery and vehicles will be stored within the complex in a bunded area.
- Small volumes of oils, paints, solvents, disinfectants, and cleaning chemicals will be stored in a dedicated fenced and bunded area with suitable signage and ventilation within the complex.
- Bunded areas will be large enough to hold at least 1.5 times the materials stored within the areas.
- The hazardous materials will be signed and will be required to be compliant with Australian Standard AS 1940-1993 – The Storage and Handling of Flammable and Combustible Liquids. This will also dictate minimum setbacks of other buildings and uses from the facility.
- The site is surrounded by bushfire-prone vegetation; thus, a Bushfire Hazard Management Area (HMA) must be developed between the site boundary and the adjacent bushfire prone vegetation. The HMA setbacks are to comply with BAL 12.5 setback requirements. Furthermore, all land within the facility must be managed in a low fuel state at all times.

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- The site will be accessed from one of the main property access routes via Highland Lakes Road providing several directions for evacuation, if required.
- Sufficient static water supply, at least 10,000L of water which is dedicated for bushfire fighting purposes within 90m as the hose lays of all areas of the facility, is required for each site. This may require multiple static water supply tanks in multiple locations and could either be stationary or mobile units.
- Any further specific management measures specified by Material Safety Data Sheets (MSDS) for all dangerous good will be followed.
- Any further specific management measures as outlined in the BMP.

Possible Bushfire Scenarios/Risk Assessment

There is risk of bushfire occurring from all directions under 'high' and above fire danger ratings.

The primary action is to evacuate the site to the nominate location of Bothwell.

There is a risk of local ignition occurring in adjacent vegetation, causing a fire that effect egress before any of the sites can be evacuated. Such an event also has the potential to carry ash embers and smoke across the site.

Under this scenario, occupants would need to shelter in place as the secondary action. It is anticipated that this would be less likely for the refuelling stations, as these sites will be used solely for refuelling and will not have staff permanently located on them. They will also be close to other facilities where there will be buildings that can be used for sheltering in place if required.

There is also a risk of the area being subject to a larger-scale bushfire across the whole project site. Under this scenario, the site would ideally be evacuated as the primary action or would not be occupied if there was prior knowledge of the bushfire in the area.

Complementary Bushfire Protection Strategies

As contained in this report.

Preparations Prior To Bushfire Season

- Maintain the Hazard Management Area; grass to be mown to under 100mm in height and kept green when water supply allows.
- All access is clear and usable.
- Static water supply is accessible.
- Fire equipment such as extinguishers, pumps, hoses, and mobile fire units are current and serviceable.
- Roofs and gutters are kept clear of leaves.
- The defendable space between the hazardous uses, associated infrastructure, and bushfire-prone vegetation is maintained in a low fuel state.
- Visual inspection of buildings to be undertaken to ensure there are no obvious issues that would undermine the buildings performance during a bushfire event (e.g., screens are in place over windows, windows are intact, weather seals are in place, no gaps in cladding have opened up).

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- Any further specific management measures as outlined in the BMP.

Primary Actions

In the event of a major bushfire event in the area, it is considered likely that there will be enough time to evacuate the site. Evaluation of bushfire risk and the safety of employees and occupants has determined that the PRIMARY action to follow under normal bushfire conditions is to evacuate to a designated off-site refuge. Key procedures in this situation would be:

1. Monitor the watch and act bushfire alerts for the area and liaise with TFS as needed to ensure evacuation occurs as early as possible.
2. Have all occupants proceed to the designated evacuation point.
3. Ensure all occupants are accounted for.
4. Evacuate to the designated safe place. The most logical safe place would is the township of Bothwell and more specifically, the Bothwell Recreation Ground (±9km to the south). This site is capable of holding a large mass of people, and is easily accessible from the site.

Secondary Action

There is some risk that a localised fire could occur and there may not be enough time for evacuation, thus a Secondary Action of sheltering onsite has been considered. Although the finalised design features of buildings are not fully known, key considerations that need to be addressed include:

1. All habitable buildings (Class 1, 2, 3, 8 & 9) that are constructed onsite, either permanent or temporary (whilst only onsite) will be constructed to a minimum of BAL 12.5 construction standards (with appropriate vegetation setbacks). Any other class of buildings constructed, if to be utilised for the Secondary Action of sheltering in will also be required to be constructed to a minimum of BAL 12.5 construction standards (with appropriate vegetation setbacks).
2. Once known, all sites for sheltering in will need to be documented clearly and access from across the development area to these sites need to be clearly documented.
3. There needs to be sufficient space for to cater for all people on the development site in the nominated shelter in building(s) during both construction and working phases.
4. Need to ensure that there is adequate separation for all shelter in place buildings from buildings/areas storing hazardous materials.
5. Ensure that all shelter in buildings are accessible at all times.

Pre-Emptive Procedures

1. Keep across forecast weather conditions during bushfire season, especially extreme and catastrophic fire conditions. In these situations, potentially consider closing the site.
2. Place occupants on alert if there are existing fires nearby and consider evacuating early or closing the site if there is even a small risk.

The responsibility of the various Emergency Management Plan actions will be determined through consultation with the proponent as the Emergency Management Plan for the entire development is developed.



Battery Energy Storage System Safety and Protective Systems

It is recommended that battery energy storage systems are equipped with the following elements:

- **Battery management/monitoring systems** for monitoring the state of battery systems to ensure safe operation.
- **Detection systems** for smoke, heat (thermal), fire and toxic gas (off-gassing) within battery containers.
- **Suppression systems** for fire within battery containers.
- **Systems to prevent heat/fire spread** within battery containers (such as thermal barriers, shut-down separators, isolation systems, cooling systems).
- **Systems to prevent explosion** within battery containers (such as ventilation, pressure relief and exhaust systems).
- **Warning and alarm systems** within the battery containers, and/or the facility, to enable early warning for faults, operation of the battery energy storage system above 'normal'/safe parameters, smoke, off-gassing, and fire.

Facility Construction and Commissioning

The construction of facilities comes with additional risks, including fire risks. During the construction phase, CFA's expectation is that a risk management process is undertaken to effectively identify risks and develop and implement appropriate and effective controls.

CFA recommends the following risk controls for the construction of facilities. This is not an exhaustive list and must be supplementary to the outcomes of the site-specific risk management process and any relevant requirements under legislation.

Fire Detection and Suppression Systems:

In addition to fire water supplies, suitable fire detection and suppression equipment must be provided at the facility. This includes first-aid fire protection equipment such as fire extinguishers and fire hose reels. Suitable fire detection and suppression equipment must be provided:

a) For on-site buildings and structures, according to the requirements of the National Construction Code.
b) For storages of dangerous goods, according to the requirements of any Australian Standards for storing and handling of dangerous goods.
c) For electrical installations, a minimum of two (2) suitable fire extinguishers must be provided within 3m-20m of each PCU.
d) In all vehicles and heavy equipment, each vehicle must carry at least a nine (9)-litre water stored-pressure fire extinguisher with a minimum rating of 3A, or other firefighting equipment as a minimum when on-site during the Fire Danger Period.

Fire Risk Management:

a) Obtain appropriate permits (if applicable) for work during the Fire Danger Period, and ensure that any conditions on permits are adhered to.
b) Adhere to restrictions on Total Fire Ban or days of high fire danger according to the TFS website.
c) During the Fire Danger Period, ensure vehicle operators are instructed to remain on tracks and are not permitted to drive through paddocks.



d) Restrict smoking to prescribed areas and provide suitable ash and butt disposal facilities.
e) Provide remotely-accessible site/system security monitoring at the facility.
f) Machinery operations should be subject to the TFS Machinery Operations Guideline, A Basis for Safe Work in Dry Vegetation, TFS 2020, 200211, V2/2020, May 2021.

Personnel Training:

a) Provide training for personnel in the use of onsite first aid, firefighting equipment, and responsibilities during emergencies.
b) Ensure personnel are familiar with the BEMS and BEP.

Emergency Management:

Emergency management planning is addressed in the BEMS and BEP.

Occupational Health and Safety:

CFA recommends the development of safe work procedures for the facility, encompassing but not limited to:

a) Electricity and chemical management.
b) Vegetation management.
c) Site security.
d) Ignition source control, including hot works.
e) Infrastructure, equipment and vehicle maintenance.
f) Emergency management.

Facility Operation

Vegetation and Fuel Management:

The effective management of vegetation and fuel can reduce both the risk of fire entering your facility, and the consequences of fire. All renewable energy facilities that are constructed within the Bushfire Management Overlay or a Bushfire Prone Area must maintain the vegetation to the prescriptions listed within this BMP and the BHMP.

Additionally, facility operators must undertake the following measures during the Fire Danger Period:

a) Machinery operations should be subject to the TFS Machinery Operations Guideline, A Basis for Safe Work in Dry Vegetation, TFS 2020, 200211, V2/2020, May 2021.
b) Adhere to restrictions on Total Fire Ban or days of high fire danger according to the TFS website.
c) Long grass and/or deep leaf litter must not be present in areas where heavy equipment and machinery will be working, during construction or operational phases.
d) Must have grass maintained to <100mm under solar panels at all times.
e) Ensure that solar facilities subject to Agri Solar (grazing underneath the panels) are meeting the point (d) above, and if not, alternative vegetation management practices are implemented prior to and for the duration of the Fire Danger Period, to achieve this outcome.
f) Containers/enclosures and infrastructure for battery energy storage systems must be maintained to be clear of vegetation, including grass for a minimum of 10m on all sides.
g) Vegetation management within any electric line easement is to be such that falling trees would not impact the transmission lines, towers and associated infrastructure.



Additionally, facility operators must undertake the following maintenance measures during the Fire Danger Period:

a) Ensuring that facility infrastructure, equipment and vehicles are maintained in safe, effective working order contributes to efficiency, reliability and importantly, fire safety.
b) Inspection, maintenance and any required repair activities must be conducted for all infrastructure, equipment and vehicles at the facility. Maintenance must be in line with any relevant Australian Standards and the manufacturer's requirements.
c) A procedure, including a schedule and relevant personnel accountabilities, must be developed in relation to the inspection and maintenance of all infrastructure, equipment and vehicles.
d) Any activities that involve flame cutting, grinding, welding or soldering (hot works) must be performed under a 'hot work permit' system or equivalent job safety hazard or risk management process.
e) Battery energy storage systems, including the battery management system and any associated safety systems, must be regularly serviced to the manufacturer's specifications.
f) A procedure, including a schedule and relevant personnel accountabilities, must be developed in relation to the inspection of battery energy storage systems.
g) Battery energy storage systems are to be regularly inspected for:
    I. Any signs of mechanical damage to the external containers/enclosures.
    II. Any accumulation of combustible materials (including leaf litter) in or within 10m of any battery energy storage systems and related infrastructure.
    III. Ensure that any identified issues are immediately rectified.

<u>Dangerous Goods Storage and Handling:</u>

a) Signage and labelling compliant with the Dangerous Goods (Storage and Handling) Regulations 2012 and the relevant Australian Standards must be provided at the site entrance, dangerous goods storage locations, and storage tanks where applicable.
b) Appropriate material for the clean-up of dangerous goods spills and leaks (including absorbent, neutralisers, tools, disposal containers and personal protective equipment) must be provided and available on-site.
c) Training must be provided for site personnel on the hazards, safe use and emergency response for spills, leaks and fire involving dangerous goods.
d) All dangerous goods stored on-site must have a current Safety Data Sheet (SDS). Safety Data Sheets must be provided within the facility's Emergency Information Book(s), in the Emergency Information Container(s).
e) The requirements of the dangerous goods legislative framework, and all relevant Australian Standards must be complied with for all facilities, including facilities with battery energy storage systems.

<u>Facility and System Monitoring:</u>

Appropriate monitoring for facility infrastructure must be provided, to ensure that any shorts, faults or equipment failures with the potential to ignite or propagate fire are rapidly identified and controlled, and any fire is notified to 000 immediately.

For battery energy storage systems, appropriate monitoring and intervention measures must be provided to ensure that the following are rapidly identified and notified to 000 immediately:

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- Any shorts, faults, temperature increases above normal parameters (e.g., precursor to thermal events/runaway).
- Equipment failures with the potential to ignite or propagate fire.
- Off-gassing, smoke or fire.

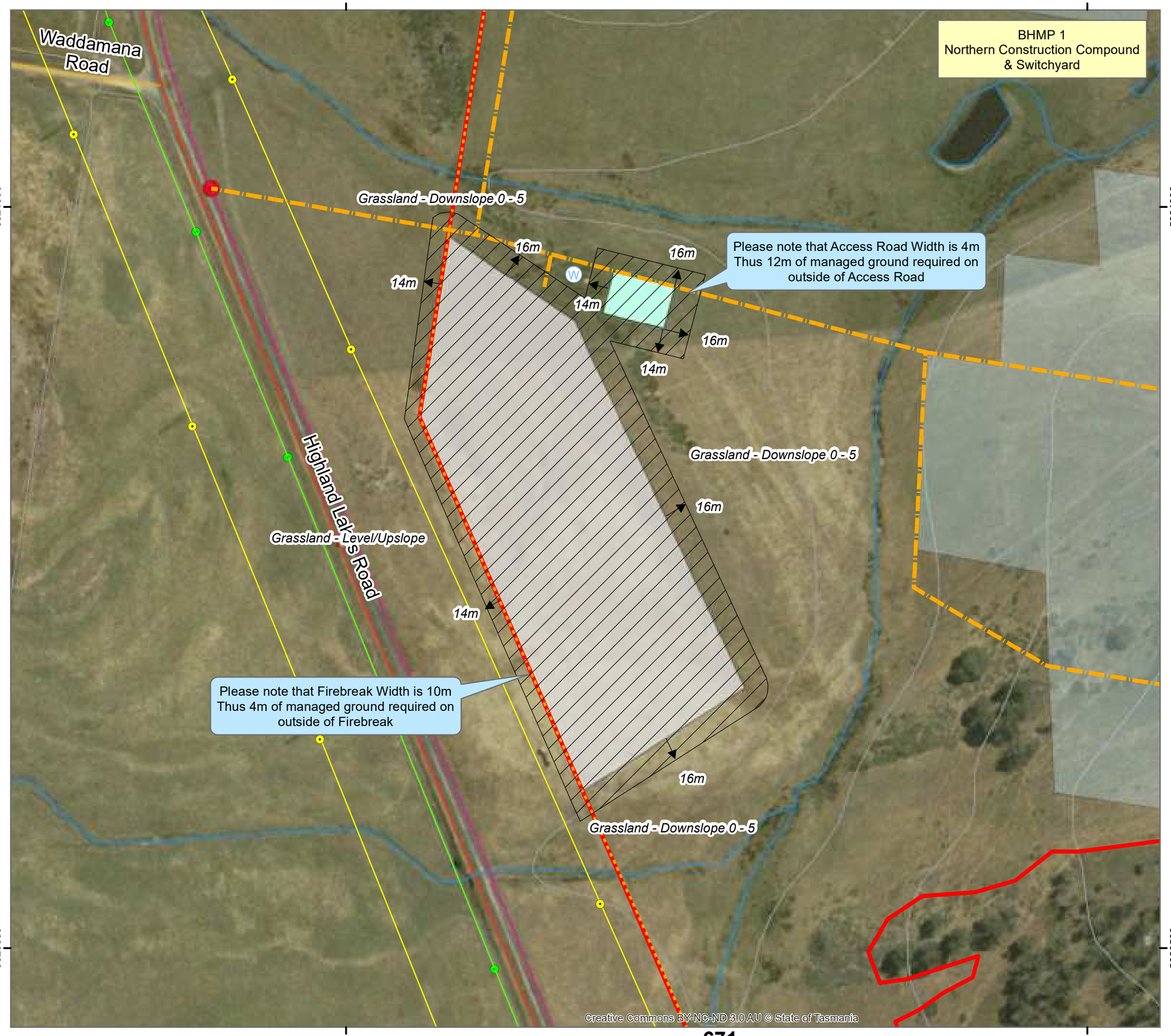
The provision for direct alarm monitoring to the local TFS brigade for battery energy storage system automatic detection systems should be considered.

Risk Management Review:

Fire risk must be effectively managed to meet obligations for providing a safe workplace under the OHS Act.

It is recommended that facility operators:

- Review the BIS, to ensure that all hazards and risks are identified and effectively managed. This must incorporate an assessment of the existing fire protection systems and equipment and their adequacy for the facility.
- Review this BMP, to ensure that all of the activities to eliminate or reduce the potential for ignition and consequences of fire.
- Review the BEMS and BEP, to ensure that it accurately captures the emergency arrangements on-site.
- Arrange for the above documents to be peer reviewed by a suitably qualified, independent third party.



GPM GROUND PROBE MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

BHMP Site 1 - Northern Construction Compound & Switchyard (Appendix 3.1)

Map Type: BHMP Site 1

Location: Weasel Plains

Address: 3415 Highland Lakes Road
Bothwell TAS 7030

PID No(s).: 2538314 & 2538322

Map Production: GPM P/L

Production Date: 24/09/2024

Client: Robert Luxmore P/L / Weasel Solar Farm P/L

Notes:

Please refer to Solar Farm Site - General Arrangement/Overall Layout Drawing:10500480 CI-0001-01 for more detail.

Legend

- Cadastre
- Site Boundary - Secondary Parcel (Bowden)
- Site Boundary - Primary Parcel (Downie)
- BHMP Site 1 Hazard Management Area
- Indicative Solar Farm Panel Areas
- Main Office & Amentities Area
- Construction Phase Compound Offices & Amenities
- Construction Phase Compound Area
- Switch Yard & Storage Shed & Amenities Building
- BESS Area
- Substation
- Switchyard
- Access Points
- Primary Access Roads (6m)
- General Site Access Roads (4m)
- Perimeter Road
- Main 10m Wide Non Combustible Firebreak
- 1 x 288000ltr Static Water Supply Tank
- 1 x 45000ltr Static Water Supply Tank
- Transend Transmission Towers
- Transend Transmission Lines
- Aurora High Voltage Conductor
- Aurora Power Poles
- 10m Contours Statewide
- Watercourse

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 20 40 60 80 Metres

SCALE 1:2500 (at A3 Print Size)

N

497000

BHMP 2
North Esatern Switchyard

Managed Ground - Solar Panels

Managed Ground - Solar Panels

Managed Ground - Solar Panels

22m+

Please note that Firebreak Width is 10m
Thus 12m of managed ground required on
outside of Firebreak

Woodland - Level/Upslope

5320000

5320000

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497000

672

GPM GROUND PROOF MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

BHMP Site 2 - North Easterm Switchyard (Appendix 3.2)

Map Type: BHMP Site 2 Map

Location: Weasel Plains

Address: 3415 Highland Lakes Road
Bothwell TAS 7030

PID No.: 2538314 & 2538322

Map Production: GPM P/L

Production Date: 24/09/2024

Client: Robert Luxmore P/L / Weasel Solar Farm P/L

Notes:

Please refer to Solar Farm Site - General Arrangement/Overall Layout Drawing:10500480 CI-0001-01 for more detail.

Legend

- Cadastre
- Site Boundary - Secondary Parcel (Bowden)
- Site Boundary - Primary Parcel (Downie)
- BHMP Site 2 Hazard Management Area
- Indicative Solar Farm Panel Areas
- Main Office & Amentities Area
- Construction Phase Compound Offices & Amenities
- Construction Phase Compound Area
- Switch Yard & Storage Shed & Amenities Building
- BESS Area
- Substation
- Switchyard
- Primary Access Roads
- General Site Access Roads
- Perimeter Road
- Main 10m Wide Non Combustible Firebreak
- 1 x 288000ltr Static Water Supply Tank
- 1 x 45000ltr Static Water Supply Tank
- 10m Contours Statewide
- Watercourse

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 10 20 30 40 Metres

SCALE 1:1500 (at A3 Print Size)

N

BHMP 3
Central Infrastructure Area

Weasel Plains Road

Highland Lakes Road

16m+
14m+
22m+
26m+

Please note that Firebreak Width is 10m, thus already have 10m of Managed Ground

Please note that Access Road Width is 4m, thus already have 4m of Managed Ground

496500
497000
5318000
5317500

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GPM GROUND PROBE MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

BHMP Site 3 - Central Infrastructure Area (Appendix 3.3)

Map Type: BHMP Site 3 Map

Location: Weasel Plains

Address: 3415 Highland Lakes Road
Bothwell TAS 7030

PID No.: 2538314 & 2538322

Map Production: GPM P/L

Production Date: 24/09/2024

Client: Robert Luxmore P/L / Weasel Solar Farm P/L

Notes:

Please refer to Solar Farm Site - General Arrangement/Overall Layout Drawing:10500480 CI-0001-01 for more detail.

Legend

- Cadastre
- Site Boundary - Secondary Parcel (Bowden)
- Site Boundary - Primary Parcel (Downie)
- BHMP Site 3 Hazard Management Area
- Indicative Solar Farm Panel Areas
- Main Office & Amentities Area
- Construction Phase Compound Offices & Amenities
- Construction Phase Compound Area
- Switch Yard & Storage Shed & Amenities Building
- BESS Area
- Substation
- Switchyard
- Primary Access Roads
- General Site Access Roads
- Perimeter Road
- Main 10m Wide Non Combustible Firebreak
- 1 x 288000ltr Static Water Supply Tank
- 1 x 45000ltr Static Water Supply Tank
- Transend Transmission Lines
- Transend Transmission Towers
- Aurora High Voltage Conductor
- Aurora Power Poles
- 10m Contours Statewide
- Watercourse

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania

0 30 60 90 120 Metres

SCALE 1:4000 (at A3 Print Size)

N

496500

497000

BHMP 4
Southern Construction
Compound

Managed Ground - Solar Panels

Grassland - Level/Upslope

Highland Lakes Road

14m+

Grassland - Downslope 0 - 5

16m+

16m+

Please note that Firebreak Width is 10m
Thus 6m of managed ground required on
outside of Firebreak

Grassland - Downslope 0 - 5

5316000

5316000

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496500

674

497000

GPM GROUND PROBE MAPPING

Important:

PROJECTION: Universal Transverse Mercator (UTM).

HORIZONTAL DATUM: Geocentric Datum of Australia 1994(GDA94)

MAP GRID: Mapping Grid of Australia (MGA94)

GDA

Disclaimer:

Whilst GPM (and its agents) make every reasonable effort to locate and identify features on the land which is the subject of this map not all features either above or below the surface have been located. Users are advised to independently verify all data for accuracy and completeness prior to use.

BHMP Site 4 - Southern Construction Compound (Appendix 3.4)

Map Type: BHMP Site 4 Map

Location: Weasel Plains

Address: 3415 Highland Lakes Road
Bothwell TAS 7030

PID No.: 2538314 & 2538322

Map Production: GPM P/L

Production Date: 24/09/2024

Client: Robert Luxmore P/L / Weasel Solar Farm P/L

Notes:

Please refer to Solar Farm Site - General Arrangement/Overall Layout Drawing:10500480 CI-0001-01 for more detail.

Legend

- Cadastre
- Site Boundary - Secondary Parcel (Bowden)
- Site Boundary - Primary Parcel (Downie)
- BHMP Site 4 Hazard Management Area
- Indicative Solar Farm Panel Areas
- Main Office & Amentities Area
- Construction Phase Compound Offices & Amenities
- Construction Phase Compound Area
- Switch Yard & Storage Shed & Amenities Building
- BESS Area
- Substation
- Switchyard
- Primary Access Roads
- General Site Access Roads
- Perimeter Road
- Main 10m Wide Non Combustible Firebreak
- 1 x 288000ltr Static Water Supply Tank
- 1 x 45000ltr Static Water Supply Tank
- Transend Transmission Lines
- Transend Transmission Towers
- Aurora Power Poles
- Aurora High Voltage Conductor
- 10m Contours Statewide
- Watercourse

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0 20 40 60 80 Metres

SCALE 1:2500 (at A3 Print Size)

N

pitt&sherry

Weasel Solar Farm

Traffic Impact Assessment

Prepared for

Weasel Solar Farm Pty Ltd
c/- Robert Luxmoore Pty Ltd

Client representative

Emanuele Raffaele

Date

21 May 2025

Rev03



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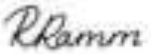
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Appendix A — Preliminary Design Plans
Appendix B — Potential Access Points Memo
Appendix C — Concept Plans of Site Accesses
Appendix D — Department of State Growth Consultation
Appendix E — Swept Paths

Prepared by — Sandra Diaz		**Date —** 21 May 2025
Reviewed by — Rebekah Ramm		**Date —** 21 May 2025
Authorised by — Rebekah Ramm		**Date —** 21 May 2025

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
A	Draft Traffic Impact Assessment	S Diaz	R Ramm	R Ramm	19/04/2024
00	Traffic Impact Assessment	S Diaz	R Ramm	R Ramm	17/07/2024
01	Updated Plans and Site Access C Added	S Diaz	R Ramm	R Ramm	16/9/2024
02	Inclusion of Site Access Plans	S Diaz	R Ramm	R Ramm	28/02/2025
03	Update of Site Access Plans	S Diaz	R Ramm	R Ramm	21/05/2025

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1. Introduction

1.1 Background

Weasel Solar Farm Pty Ltd is seeking to develop a portion of their land in the Central Highlands, Tasmania into a large-scale solar farm. The development will include approximately 435Ha of solar panels (approximately 250MWp AC). It will be accompanied by a battery energy storage system (BESS) and electricity infrastructure including inverters and a switchyard containing an electrical substation to feed into the existing 220kV transmission line. The proposal includes land for construction, maintenance, and operation, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, and landscaping.

The site is located approximately 9km north of Bothwell on Highland Lakes Road. The land is conveniently sited alongside existing TasNetworks 220 kV transmission lines that run parallel to the Highland Lakes Road on the western boundary of the site.

1.2 Traffic Impact Assessment (TIA) scope

Robert Luxmoore Project Management, on behalf of Weasel Solar Farm Pty Ltd, has engaged pitt&sherry to prepare a Traffic Impact Assessment (TIA) to investigate the impacts from the proposed Weasel Solar Farm development for submission as part of the Development Application (DA).

This report has been prepared in accordance with the *Department of State Growth (State Growth)'s Publication Traffic Impact Assessment (TIA) Guidelines* and with reference to the *Tasmanian Planning Scheme – Central Highlands* (the Planning Scheme).

2. Existing conditions

2.1 Site location

Weasel Solar Farm site is located on Highland Lakes Road, approximately 9 km north of Bothwell (Figure 1). The development area is spread across three titles: 3415 Highland Lakes Road ('The Weasel', Property ID 2538314; Title Reference 140433/1), 3236 Highland Lakes Road ('Weasel Plains', Property ID 2538322; Title Reference 140581/1) and 3759 Highland Lakes Road ('Rockford', Property ID 5014022; Title Reference 104298/1).

The site has land use classification 21.0 – Agriculture and surrounding land is a combination of 21.0 – Agriculture, 20.0 – Rural and 26.0 – Utilities (Highland Lakes Road). An electricity transmission corridor runs adjacent to the west boundary of the site and approximately follows the Highland Lakes Road in this section.



Figure 1: Weasel Solar farm location

2.2 Existing operation

The southern properties ('The Weasel' and 'Weasel Plains') are currently accessed via Weasel Plains Road, an unsealed track off the Highland Lakes Road. There are two additional farm accesses with gated entrances off Highland Lakes Road: opposite the Waddamana Road intersection; and at the Natural Resources and Environment (NRE Tas) laydown area.

The 'Rockford' property at the north of the development straddles the Highland Lakes Road and has various accesses. The access relevant to this project is a farm access with gated entrance off Highland Lakes Road, approximately 1.5km north of the Highland Lakes Road/ Waddamana Road intersection.

Most of the land is currently used for broadacre sheep grazing, with some irrigated cropping to the east of the development. The site is relatively cleared of vegetation and the project will largely avoid the woodland/forest areas within the site. Two houses located on Weasel Plains Road are outside of the development area and there are no existing agricultural buildings or structures of significance within the development area.

2.3 Surrounding road network

2.3.1 Weasel Plains Road

The initial 1.4km of Weasel Plains Road is a Central Highlands Council (Council) Access Road[1] (Figure 2 and Figure 3). After this point it continues as a private farm access road (Figure 4). Weasel Plains Road is 4.1m wide, unsealed, and subject to the Tasmanian unsealed rural road default speed limit of 80 km/h. A 4.1m wide cattle grid is installed near the start of Weasel Plains Road (Figure 5) and the road appears to carry very low traffic volumes. It will be utilised as the primary site access for the proposed Weasel Solar Farm.



Figure 2: Weasel Plains Road, looking east



Figure 3: Weasel Plains Road, looking west



Figure 4: Weasel Plains Road continues as a private road



Figure 5: cattle grid at entrance to Weasel Plains Road

[1] Transport Class based on the LISTmap Road Centrelines layer.

2.3.2 Highland Lakes Road

Highland Lakes Road (A5), also known as Lake Secondary Road, is a Department of State Growth (State Growth) Category 5[2] road under the State Road Hierarchy, and has a speed limit of 100km/h. Highland Lakes Road typically runs in a north-south direction between Deloraine in the north of Tasmania, to the Midland Highway just past Bothwell in the south of Tasmania and is a significant arterial route and the secondary arterial route between the south and north-west of Tasmania after the Midland and Bass Highways. In the vicinity of the site, the road traverses gently rolling countryside and has long straights interspersed with gentle curves and undulations. The sealed road is configured with one lane in each direction and carries approximately 340 vehicles per day[3] near the site, of which approximately 18% are heavy vehicles[3]. At the intersection with the Midland Highway, Highland Lakes Road carries approximately 1,000 vehicles per day[4]. South of Weasel Plains Road, the road had 3.0m lanes plus 1.0m sealed shoulders (Figure 6). North of Weasel Plains Road, the sealed road measured 6.0 – 7.0m with unsealed shoulders (Figure 7). This section of Highland Lakes Road is conditionally approved for 26m B-Double access[5].



Figure 6: Highland Lakes Road near the south of the site, looking north



Figure 7: Highland Lakes Road near Waddamana Road intersection, looking north

[2] Road hierarchy sourced from the Department of State Growth *State Road Hierarchy* publication.

[3] Traffic data sourced from State Growth's traffic data website: station ID A2100140, Lake Secondary Road 100m S of Waddamana Rd. AADT based on 2022 traffic counts. %HV from 2021.

[4] Traffic data sourced from State Growth's traffic data website: station ID A2100102P, Lake Secondary Road 200m W of Midland Hwy. AADT based on 2021 traffic counts.

[5] Tasmanian 26 metre B-double network.

2.3.3 Waddamana Road

Waddamana Road is an unsealed council owned Collector Road[1] subject to the Tasmanian unsealed rural road default speed limit of 80km/h. Waddamana Road intersects Highland Lakes Road opposite the northern part of the Weasel Solar Farm site.



Figure 8: Waddamana Road, looking west

2.4 Traffic volumes

2.4.1 Traffic data

The traffic data available on State Growth's traffic counts website station ID A2100140, Lake Secondary Road 100m S of Waddamana Rd, indicates that weekday peak hours for Highland Lakes Road are:

- AM peak hour 10:00am to 11:00am; and
- PM peak hour 3:00pm to 4:00pm.

2.4.2 Traffic volumes

Current Highland Lakes Road traffic volumes were estimated using the traffic counter data from station ID A2100140, Lake Secondary Road 100m S of Waddamana Rd recorded from 3 – 10 June 2021. The data shows AADT for 2021 of 340 vehicles per day. Applying a compounding growth rate of 3% per year (typical regional growth), the AADT for 2024 is estimated to be 372 vehicles per day.

The percentage of heavy vehicles was recorded as 18.4% and this value has been assumed for this assessment.

A summary of the estimated current traffic parameters on Highland Lakes Road in the vicinity of the Weasel Solar Farm site, are shown below in Table 1.

Table 1: 2024 traffic estimates

Location	AADT	% Heavy Vehicles	AM peak volume (AM peak hour)	PM peak volume (PM peak hour)
Highland Lakes Road	372	18 %	37 (10.00am – 11.00am)	35 (3.00pm – 4.00pm)

2.5 Road safety

State Growth have provided crash data for the most recent 10-year period on Highland Lakes Road within 1km of the site. The crash history shows that six crashes have occurred in the last 10 years, one of these was a fatality, and the other five were first aid or property damage only. Table 2 shows the crash severity and classifications of the crashes and the crash locations are shown in Figure 9, below.

Table 2: Crash history on Highland Lakes Road in the vicinity of Weasel Solar Farm

Crash Severity	Crash Type	Count
Fatal	189 - Other curve	1
First Aid	179 - Other straight	1
	181 - Off right bend into object/parked vehicle	1
Property Damage Only	189 - Other curve	3
Total		6



Figure 9: Crash locations

A cluster of four crashes has occurred on a minor bend in Highland Lakes Road south of Weasel Plains Road. This location was inspected during the site visit. It was observed to be a gentle curve, with moderate downhill gradient for southbound traffic, a V-drain on the east side and a sloping embankment on the west side. The road is a sealed road with 100km/h posted speed limit and all four crashes occurred during daylight hours. The four crashes were minor (first aid or property damage only) – this was not the location of the fatality.



Figure 10: previous crash site on Highland Lakes Road, looking north

2.6 Public transport

A school bus route is signed on Highland Lakes Road. No other public transport is known to operate in the area.

2.7 Pedestrian and cycling infrastructure

No existing pedestrian or cycling infrastructure in the vicinity of the site.

3. Proposed development

3.1 Overview

Weasel Solar Farm development is a large-scale solar project of approximately 435Ha. The site will accommodate solar panels, a Battery Energy Storage System (BESS), internal 33kV transmission, substation, internal access roads and construction compound area. The proposed site layout is shown in Figure 11, below, and the design layout plan is included in Appendix A.

The project will be connected to the National Energy Market (NEM) via an interconnection to the existing TasNetworks 220 kV transmission line that lies within the western boundary of the site, parallel to Highland Lakes Road. The development has been assessed under the “Utilities” use class.

The land is currently used primarily for sheep grazing, and this will continue post construction.

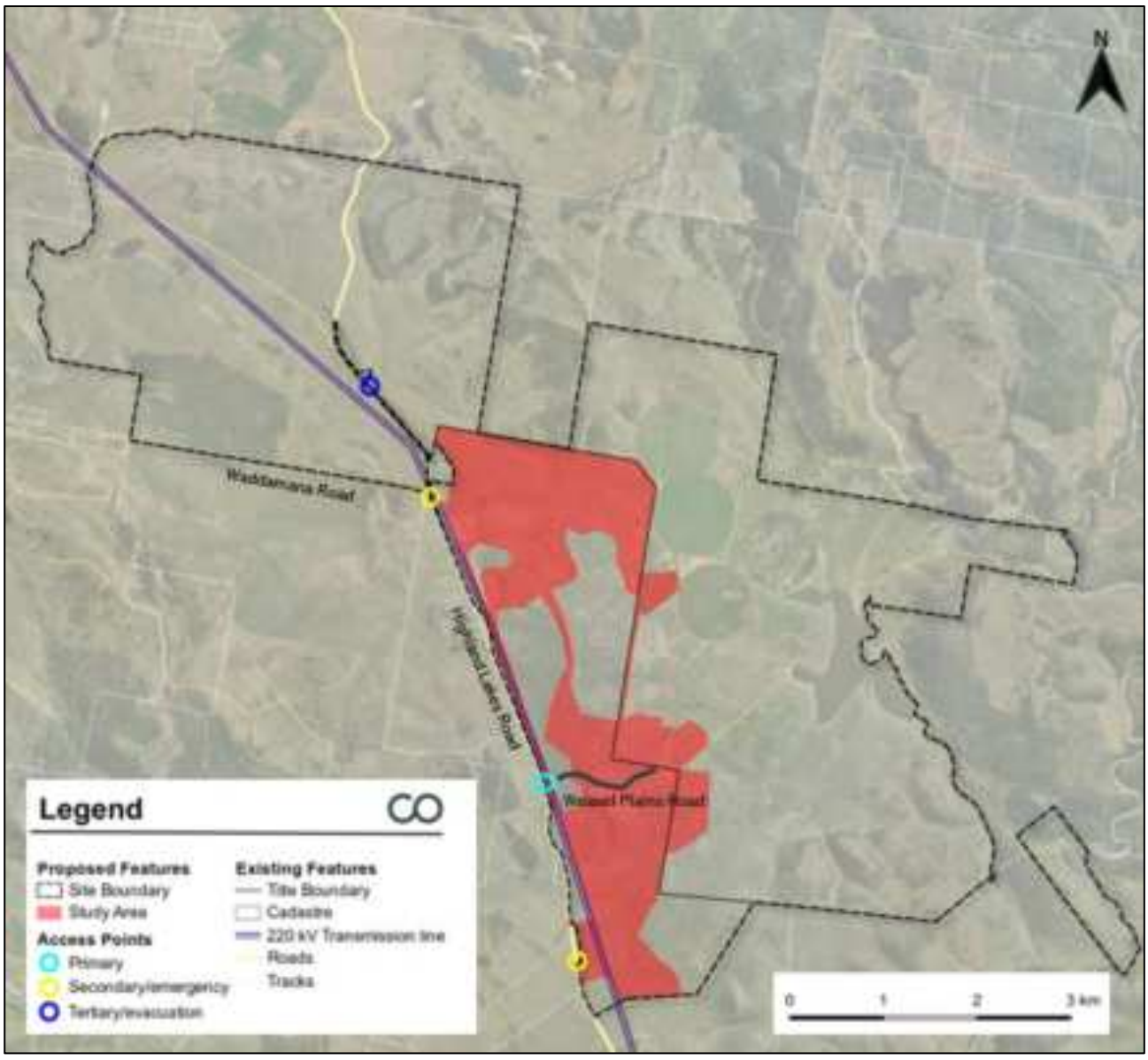


Figure 11: Weasel Solar farm site layout

3.1.1 Construction phase

Construction of the Weasel Solar Farm is expected to take approximately 18 months and involve up to 245 workers onsite at the peak[6]. Proposed site hours are shown in Table 3. Employees are expected to carpool or travel by bus to and from the site with most vehicles coming from Hobart. Deliveries will be expected throughout the day.

Table 3: Site hours

Day of week	Site hours
Monday to Friday	6.00am – 6.00pm
Saturday	8.00am – 6.00pm
Sunday and Public holidays	10.00am – 6.00pm

3.1.2 Operation phase

Once construction is complete and the solar farm is operational, the ongoing access requirements will reduce dramatically.

Onsite functions relating to the solar operation will require minimal staff. Operational jobs are estimated at 8 direct jobs[7]. The agricultural operations of the properties will continue similar to how they were prior to construction of the solar farm.

[6] Contractor estimates based on similar sized projects

[7] Extracted from draft Urban Enterprise Socioeconomic report.

4. Construction phase assessment

4.1 Site access

Weasel Plains Road will be used as the primary access for construction traffic to the site (northern and southern parts). Two additional access points are proposed for use during construction and as emergency accesses once the solar farm is operational, and a third access is a tertiary or emergency evacuation access. All four access points are shown in Figure 12 below. The summary of additional possible access points considered for the project is included in Appendix B.

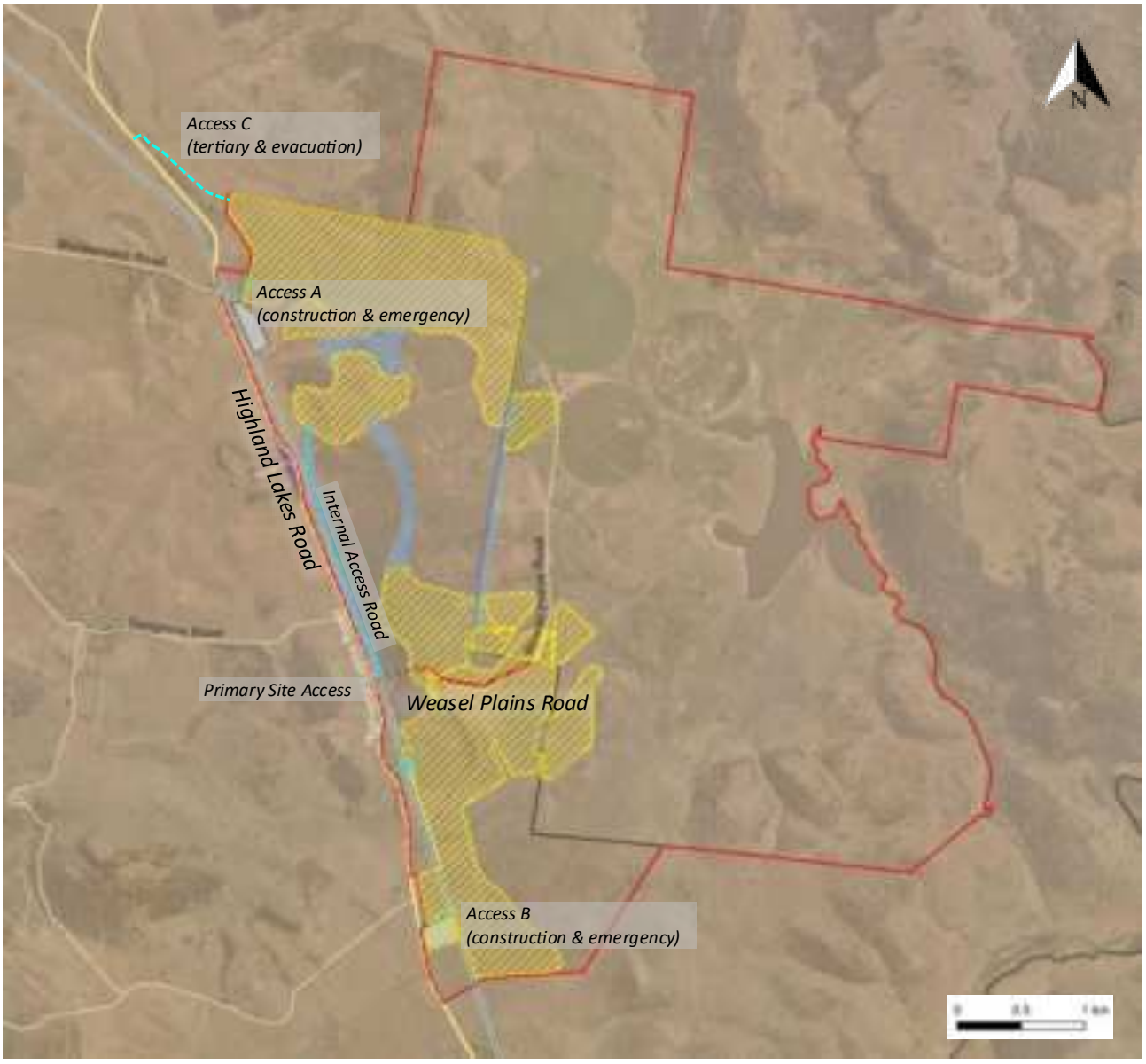


Figure 12: Weasel Solar Farm site access points

4.1.1 Weasel Plains Road – Primary access

Weasel Plains Road junction off Highland Lakes Road has a wide unsealed entrance. A 4.1m wide cattlegrid is installed near the entrance.

Sight distance is sufficient in both directions. Weasel Plains Road will provide primary access to the Weasel Solar Farm site for all vehicles during both the construction phase and operational phase.

The entrance to Weasel Plains Road should be sealed for the length of the longest vehicle that accesses the site to prevent tracking of mud or gravel onto Highland Lakes Road. If a B-double truck is the largest vehicle that exits the site, then the seal should extend for the first 30m of Weasel Plains Road. Concept plans of the proposed access are included in Appendix C.

It is also suggested that the existing transverse culvert opposite the entrance is lengthened to resolve the narrowing of the unsealed shoulder at the junction (refer Appendix D).



Figure 13: Weasel Plains Road entrance



Figure 14: Highland Lakes Road, south approach to Weasel Plains Road



Figure 15: Highland Lakes Road, north approach to Weasel Plains Road

4.1.2 Construction and Emergency Access A

An existing 4.1m wide farm gate is installed opposite the Waddamana Road intersection and provides access to the Weasel Solar Farm site.

Sight distance is excellent in both directions along Highland Lakes Road, and also up Waddamana Road. Note that realignment of existing road signage would be recommended to prevent visual obstructions.

A suitable all-weather access should be constructed and the entrance sealed to prevent tracking of mud or gravel onto Highland Lakes Road. Concept plans of the proposed access are included in Appendix C.



Figure 16: Entrance of Access A, opposite Waddamana Road intersection (image source: Google Maps street view)



Figure 17: Highland Lakes Road, south approach to Access A, opposite Waddamana Road



Figure 18: Highland Lakes Road, north approach to Access A, opposite Waddamana Road

4.1.3 Construction and Emergency Access B

Near the south of the site, an existing access services a laydown area constructed on land owned by Department of Natural Resources and Environment (NRE Tas). At the rear of the laydown is an existing gated entrance to the Weasel Solar Farm site.

The existing access is located on a long straight on Highland Lakes Road and sight distance is excellent in both directions.

The entrance should be sealed to prevent tracking of mud or gravel onto Highland Lakes Road. Concept plans of the proposed access are included in Appendix C.



Figure 19: Access B entrance



Figure 20: Highland Lakes Road, south approach to Access B



Figure 21: Highland Lakes Road, north approach to Access B

4.1.4 Tertiary and Evacuation Access C

To the north of the Weasel Solar Farm site, a 4.1m farm gate provides access from Highland Lakes Road to an existing farm track.

Sight distance is excellent in both directions.

The entrance should be sealed to prevent tracking of mud or gravel onto Highland Lakes Road. Concept plans of the proposed access are included in Appendix C.



Figure 22: North-A access entrance



Figure 23: Highland Lakes Road, south approach to North-A access



Figure 24: Highland Lakes Road, north approach to North-A access

4.1.5 Swept paths

A swept path assessment has been undertaken for the primary construction access Weasel Plains Road, considering 19.0m semi-trailer and B-double trucks. The swept paths for B-double trucks are shown in Figure 25 and full plans for each vehicle type are included in Appendix E.



Figure 25: swept paths for B-double trucks entering and exiting Weasel Plains Road and the proposed site access road

The swept paths demonstrate that widening of the access into Weasel Plains Road will be required, and this will require relocation of the existing timber structure and extension of the corresponding longitudinal culvert to suit.

The plans also show indicative swept paths for the proposed site access road and an indicative entrance into the approximate location of the proposed site compound. These new entrances should be constructed to suit the swept paths of the largest vehicles expected to access the site.

4.1.6 Sight distance assessment

The Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* (AGRD Part 4A) specifies that "*Desirably, sight distances at accesses should comply with the sight distance requirements for intersections*".

The Safe Intersection Sight Distance (SISD) at each access point has been assessed against the requirements of the AGRD Part 4A. The SISD was measured and recorded on site on 18 March 2024 in accordance with AGRD Part 4A.

The speed limit on Highland Lakes Road is 100km/h resulting in a required sight distance of 248m. The default speed limit on Weasel Plains Road (unsealed) is 80km/h resulting in a required sight distance of 181m.

It is noted that vehicle speed refers to the 85th percentile speed vehicles travel throughout the site, which was observed during the site visit.

The SISD requirements and the observed sight distances for each access are shown below in Table 4.

Table 4: Safe intersection sight distance (SISD) assessment of Weasel Solar Farm site accesses

Access	**Approach**	**Speed**	**SISD Requirement – Austroads** *(with desirable 2s reaction time)*	**Observed sight distance**	**Meets Requirements?**
Primary Accesses					
Weasel Plains Road	North	100	248m	>300m	✓
	South	100	248m	260m	✓
Construction and Emergency Accesses					
Access A	North	100	248m	>300m	✓
	South	100	248m	>300m	✓
Access B	North	100	248m	>300m	✓
	South	100	248m	>300m	✓
Access C	North	100	248m	>300m	✓
	South	100	248m	>300m	✓

4.2 Transport routes

4.2.1 Staff vehicles

All staff vehicles will enter and exit the site via the site accesses described above. Routes taken to access the site by staff vehicles will depend on their origin, with the majority expected to travel from the south, predominantly Hobart and surrounding townships.

4.2.2 Freight vehicles

Standard heavy vehicles

Heavy vehicles will be required for transporting materials, plant, and equipment to site. Most heavy vehicles are expected to travel to and from Hobart along the Midland Highway. Resources from the mainland may arrive by sea to Burnie or Devonport ports and travel along the Bass Highway. Any vehicles travelling to or from Launceston are likely to utilise Cressy Road/ Poatina Road.

Heavy vehicles will utilise the approved Tasmanian 26 metre B-double network of roads where possible. The majority of vehicles accessing the site will be trucks up to the size of a 26 metre B-double. At the time of writing this report, there do not appear to be any restrictions for access using the Midland Highway, Bass Highway, Cressy Road and Poatina Road which are approved B-double routes. This should be checked closer to the construction date including any load limits on bridges.

Highland Lakes Road in the vicinity of Weasel Solar Farm is a conditionally approved B-Double access route with the following condition:

> *Not to be used as a through road - For pick up from or delivery to properties or side roads connecting Highland Lakes Road between intersections with Poatina Road and Midland Highway.*

The northern stretch of Highland Lakes Road between Deloraine and Miena is a conditionally approved B-Double access route with the following condition applying to several sections:

> *Maximum speed 80km/hr unless signage indicates a lower maximum. Access is suspended during prolonged rain where the 24 hour rainfall from 9 am exceeds 10mm (as measured at Liawenee station) with suspension of travel of 1 day following the rainfall event.*

The preferred primary transport routes for the Weasel Solar Farm project are shown in Figure 26, below:

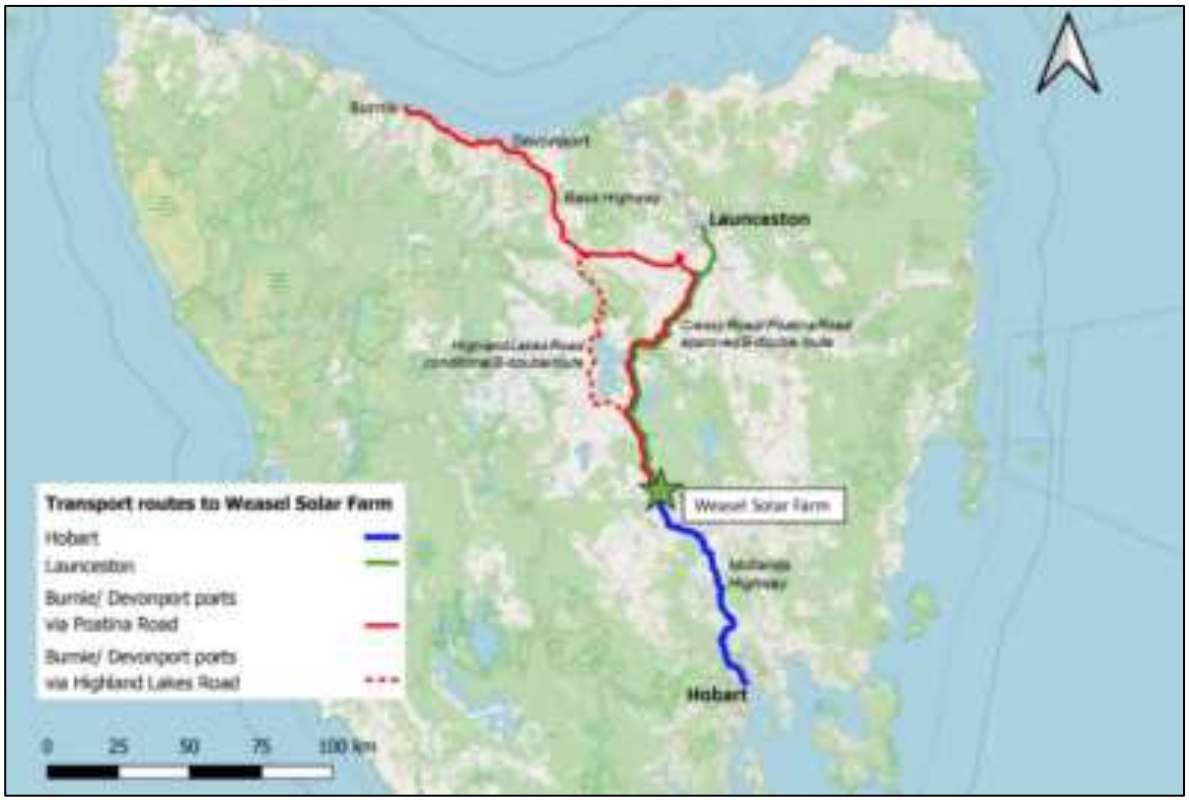


Figure 26: Transport routes to Weasel Solar Farm

Over Size Over Mass (OSOM)

It is understood that the following OSOM components are required to enter the site:

- Poles up to 30m in length; and
- Transformers in the vicinity of 90 tonnes in weight.

The following assessments should be completed for OSOM vehicles:

- An OSOM route assessment, completed by a suitably qualified person, which assesses the suitability of routes for the proposed OSOM vehicle and if there are any modifications that are required to be made to the road and nearby infrastructure (e.g. moving powerlines, widening pavements, removing traffic islands, moving/ removing signage)
- A construction traffic management plan which considers the impact to traffic operation
- A structural assessment of any impacted bridges to determine their suitability; and
- A dilapidation report may be required for Macquarie Road.

OSOM movements should occur on the highest order roads and B-double approved routes as much as possible as shown in Figure 26.

4.3 Internal access roads

It is understood that internal access roads throughout the site will provide access to all sections of the solar farm.

The network of internal roads should ensure all vehicles can access site and turn around to safely egress the site in a forward direction. Internal road design has not been finalised and swept paths have not been assessed for the internal access roads. Due to the size of the site, it is expected there will be sufficient space for vehicles to turn around on site.

The internal roads will be all weather access tracks constructed 4m wide, to suit 20 tonne vehicles and with passing bays every 200m to allow two-way use.

The following guidance has been provided for the design of the internal access roads:

- New access roads should be developed with a width of 5.5m to provide two-way access, or minimum of 4m for one-way access (based on Tasmania Fire Service requirements)
- Vehicular traffic must be able to enter and leave a major road in a forward direction as per *Clause A1.5 of C3.0 Roads and Railway Assets Code* of the planning scheme
- New access roads providing access for articulated vehicles must not exceed a grade of 1:6.5 (15.4%) and the rate of change of grade must not exceed 1:16 (6.25%) as specified in AS2890.2
- A minimum turning radius for an articulated vehicle must not exceed 12.5m as specified in AS2890.1; and
- Swept paths should be completed along all access roads for the largest vehicle travelling through the site to determine where additional widening is required around bends or at intersections.

4.4 Parking and loading bays

Construction compound areas are proposed for the site close to each of the primary and secondary accesses (see the Preliminary design plans, Appendix A, and Concept site access plans, Appendix C).

The parking area should be sized to accommodate the parking requirements of the construction vehicles. Car parking should be designed in accordance with AS2890.1 – Off street car parking. Some example parking requirements are shown in Table 5.

Table 5: Example car parking requirements

Item	**Employee Car Parking (User Class 1A)**	**Visitor Car Parking (User Class 2)**
Car parking space width	2.4m	2.5m
Car parking space length	5.4m	5.4m
Aisle width	6.2m	5.8m
Car park crossfall	1:16 (6.25%)	

A sample car park layout has been overlaid on each construction lay down area to demonstrate that the space available will exceed the expected parking requirements of the construction staff. As show, the size of each construction compound is large enough to allow ample space for unloading areas, storage of plant and materials, and circulation of heavy vehicles. Laydown areas should be sited to allow delivery vehicles to be clear of other circulating vehicles during unloading.

The ground conditions onsite have not been assessed but compacted gravel hardstands are expected to be sufficient. If oversized or heavy loads are required, specific checks should be carried out to confirm ground capacity and prevent bogging or overturning onsite.

4.5 Traffic impact assessment – construction phase

4.5.1 Traffic generation

Traffic impacts at the site are expected to predominantly occur during the construction phase. Construction of the project is estimated to take approximately 18 months. Each activity will have varying requirements for traffic access, and the client has provided estimates of traffic movements during construction, shown in Table 6 below.

Table 6: Weasel Solar Farm estimated construction traffic

Construction Activity	Duration	Work force	Light Vehicle	Medium Truck	Large Truck
	(weeks)	(workers per day)	(vehicle movements per day)		
Logistics	27	20	10		20
Civil	34	40	20		20
Mechanical	39	90	30	4	
Electrical	39	75	30	2	
Completion and Commission	25	20	10		
TOTAL		**245**	**100**	**6**	**40**

Construction activities will overlap, so for the purposes of this traffic impact assessment we have based the peak construction traffic generation on the total of all stages. This is a conservative approach, as it is more likely that demands from each stage will be staggered.

4.5.2 Traffic distribution and assignment

Construction traffic is expected to predominantly access the site from Weasel Plains Road.

Light vehicle movements are likely to occur clustered, with vehicles arriving 6:00am-7:00am and departing 6.00pm-7.00pm, coinciding with the hours of operation of the construction site.

It has been assumed that trucks will access and egress the site throughout the day from 6:00am to 6:00pm on weekdays, 8:00am – 6:00pm on Saturday and 10:00am – 6:00pm on public holidays or Sunday.

4.5.3 Traffic impacts – during construction

The traffic impact of the construction phase of the Weasel Solar Farm development has been assessed based on the following assumptions:

- A growth rate of 3% per year has been applied to the recorded traffic volumes along Highland Lakes Road to calculate existing traffic volumes (see Section 2.4.2)
- No other significant developments in the immediate vicinity of the site are expected to be constructed concurrently with this development; and
- Construction staff would travel to and from the site outside the current Highland Lakes Road peak times and therefore would not contribute to the current peak hour traffic flows.

Conservatively, up to 100 light vehicle movements plus approximately 46 medium and heavy vehicle movements could potentially travel to and from the site per day during peak construction. An increase of 146 vehicle movements per day on Highland Lakes Road would represent an increase in daily traffic volumes of 40%. The Planning Scheme states that the maximum acceptable increase in AADT from vehicles travelling to and from site is 20% of vehicle movements per day (for both light vehicles and for vehicles longer than 5.5m) (as per Table C3.1 of the Planning Scheme). The estimated traffic generated by the proposed Weasel Solar Farm development will exceed these criteria during the construction phase, however given that the surrounding roads are currently operating well below capacity, the additional traffic associated with the development is not anticipated to adversely affect the function or safety of the local network for the relatively short period of construction (18 months). Post-construction, the operational traffic generated by the development is expected to meet the planning scheme requirement (see Operational phase assessment in Section 5). The local road network is comprised of rural roads with low existing traffic flows operating well below capacity. It is not anticipated that the additional traffic produced by the Weasel Solar Farm development during the construction phase will negatively impact the function or safety of the local network.

Heavy vehicle flows are likely to be spread across the day and the contribution to the AM and PM peak flows is estimated to be small (4 heavy vehicles per hour).

Light vehicle movements are expected to be clustered between 6:00am-7:00am (entering site) and 6.00pm-7.00pm (exiting site) in line with the construction site hours. During the peak hours, there is potential for up to 50 additional light vehicle movements plus 4 heavy vehicles will access or egress the site. The current AM and PM peak hours on Highland Lakes Road are 37 and 35 vehicles per hour. Therefore, the Weasel Solar Farm construction traffic could generate new peak hours on the local network during the construction period. Existing traffic at these times is very low (6 and 8 vehicles per hour respectively[8]). Maximum peak flows during construction could potentially be up to 60 vehicles per hour from 6:00am – 7:00am and 62 vehicles per hour from 6:00pm – 7:00pm. Actual peaks are likely to be lower as it is unlikely that all construction phases would overlap and if staff work hours vary and start and finish times are staggered for different work crews.

[8] Traffic data sourced from State Growth's traffic data website: station ID A2100140, Lake Secondary Road 100m S of Waddamana Rd. 2021.

To increase the safety on Highland Lakes Road during the construction period, it is recommended to install Trucks Crossing or Entering advisory signs () on Highland Lakes Road to improve awareness of increased vehicle movements, including slow-moving heavy vehicles, either entering or exiting from the construction accesses:



Figure 27: W5-22 Trucks Crossing or Entering Advisory Sign



Figure 28: W8-17-1 Next km sign

Install W5-22 Trucks entering or crossing signs with W8-17-1 NEXT 6km (Figure 28) on Highland Lakes Road for the duration of the construction period (as shown on Concept access key plan, Appendix C):

- 150 metres south of Access B, facing northbound traffic; and
- 150 metres north of Access A, facing southbound traffic.

4.5.4 Road safety impacts

The crashes recorded in the vicinity of the site in the previous 10 years showed a cluster of four crashes located on Highland Lakes Road approximately 750m south of the Weasel Plains Road/ Highland Lakes Road intersection.

The site accesses for the proposed development have been situated clear of the historical cluster of crashes, and all site distances have been assessed as having sufficient sight distances in both directions.

The expected traffic generation of the proposed development both during construction, post development and 10-years post development is not expected to increase the risk or severity of crashes in the vicinity of the site.

5. Operational phase assessment

5.1 Site access and parking

Given the significantly lower traffic volumes anticipated during operations compared with during construction, it is assumed that the construction site accesses established for construction access will more than adequately meet the site's ongoing operational requirements. Concept plans of the proposed site accesses are included in Appendix C.

Similarly, the parking demand for daily operations of the solar farm will be significantly less that during the construction phase. It is estimated that 5 -10 car parking spaces would be sufficient, and there is ample space on the site to provide this. It is noted that there is no requirement for car parking for Utilities use class developments under the Planning Scheme.

5.2 Traffic generation

Operation of the solar farm requires very little labour and once construction is complete, the ongoing access requirements will reduce dramatically. Onsite functions relating to solar operations are limited to servicing and maintenance and the agricultural operations of the properties will continue similar how they were prior to construction of the solar farm.

The ongoing operation of the solar farm is estimated to generate $12 million in total economic output and support 20 (FTE) jobs per annum, which includes 8 direct jobs (FTE)[9]. As a conservative estimate it has been assumed that 10-15 vehicle movements per day are generated by the site post-development during more significant maintenance periods.

5.3 Traffic impacts – post-development

The impact of traffic generated by the ongoing operation of the Weasel Solar Farm development is expected to be minimal during both the AM and PM peak hours and throughout the day.

The 10-15 daily vehicle movements to and from the site will likely occur earlier than the current AM peak (11:00am-12:00pm) or later than the PM peak (3:00pm-4:00pm). Heavy vehicles required to access or egress the site, post construction, are expected to be negligible.

The additional traffic generated by the development post-construction represents less than 5% of the existing traffic on Highland Lakes Road and is not expected to impact the function or operation of the surrounding network or affect the existing crash risk.

5.4 Turning treatments

It is not considered necessary to provide left or right turn treatments at the site accesses for the following reasons:

- There are low traffic volumes on Highland Lakes Road
- The proposed development will generate traffic volumes that can be safely accommodated on the existing roads during the 18 months of construction and very low traffic volumes in the operational phase
- There is good sight distance at all proposed access points; and
- Construction is occurring for an 18 month period, after which there would be minimal traffic accessing the site.

[9] Extracted from draft Urban Enterprise SocioEconomic report.

6. Planning Scheme Assessment

6.1 Summary

The Weasel Solar Farm development has been assessed against the Tasmanian Planning Scheme – Central Highlands (the Planning Scheme). A summary of the relevant Planning Scheme clauses is shown in Table 7, below.

Table 7: Planning Scheme clauses summary

Clause	Description	Compliance	Comment Location Reference
C2.5 Parking and Sustainable Transport Code – Use Standards			
C2.5.1	Car parking numbers	Complies with Acceptable Solution A1	Section 5.1
C2.5.2	Bicycle parking numbers	Complies with Acceptable Solution A1	Section 5.1
C2.5.3	Motorcycle parking numbers	Complies with Acceptable Solution A1	Section 5.1
C2.5.4	Loading bays	Complies with Acceptable Solution A1	Section 5.1
C2.5.5	Number of car parking spaces within the General Residential Zone and Inner Residential Zone	Not applicable	-
C2.6 Parking and Sustainable Transport Code – Development Standards			
C2.6.1	Construction of parking areas	Complies with Acceptable Solution A1	Section 4.4
C2.6.2	Design and layout of parking areas	Satisfies Performance Criteria P1	Section 4.4
C2.6.3	Number of accesses for vehicles	Satisfies Performance Criteria P1	Section 5.1
C2.6.4	Lighting of parking areas within the General Business Zone and Central Business Zone	Not applicable	-
C2.6.5	Pedestrian access	Satisfies Performance Criteria P1	Section 4.4
C2.6.6	Loading bays	Satisfies Performance Criteria P1 and Complies with Acceptable Solution A2	Section 4.4
C2.6.7	Bicycle parking and storage facilities within the General Business Zone and Central Business Zone	Not applicable	-
C2.6.8	Siting of parking and turning areas	Not applicable	-
C3.5 Road and Railway Assets Code – Use Standards			
C3.5.1	Traffic generation at a vehicle crossing, level crossing or new junction	Complies with Acceptable Solution A1	Section 4.5 and 4.3

6.2 C2.5 Parking and Sustainable Transport Code – Use Standards

C2.5.1 Car parking numbers	
Objective: That an appropriate level of car parking spaces are provided to meet the needs of the use.	
Acceptable Solution/ Performance Criteria	**Comment**
Acceptable Solution A1 The number of on-site car parking spaces must be no less than the number specified in Table C2.1.	**Complies with Acceptable Solution A1** Utilities Use Class – there is no requirement for car parking spaces (as per Table C2.1). The site is large and there is expected to be sufficient space for all vehicles associated with the Weasel Solar Farm to park onsite. During the construction phase the three construction compounds will provide ample car parking areas for construction vehicles as demonstrated by the indicative car park spaces overlaid on the Construction access drawings (Appendix C). In the operational phase, daily operations of the solar farm are expected to require very little parking. It is estimated that 5 -10 car parking spaces would be sufficient, and there is ample space on the site to provide this.
C2.5.2 Bicycle parking numbers	
Objective: That an appropriate level of bicycle parking spaces are provided to meet the needs of the use.	
Acceptable Solution/ Performance Criteria	**Comment**
Acceptable Solution A1 Bicycle parking spaces must: a) be provided on the site or within 50m of the site; and b) be no less than the number specified in Table C2.1.	**Complies with Acceptable Solution A1** Utilities Use Class – there is no requirement for bicycle parking spaces (as per Table C2.1) Travel to site by bicycle is considered unlikely.
C2.5.3 Motorcycle parking numbers	
Objective: That the appropriate level of motorcycle parking is provided to meet the needs of the use.	
Acceptable Solution/ Performance Criteria	**Comment**
Acceptable Solution A1 The number of on-site motorcycle parking spaces for all uses must: a) be no less than the number specified in Table C2.4; and b) if an existing use or development is extended or intensified, the number of on-site motorcycle parking spaces must be based on the proposed extension or intensification, provided the existing number of motorcycle parking spaces is maintained.	**Complies with Acceptable Solution A1** Utilities Use Class – there is no requirement for motorcycle parking spaces (as per Table C2.4) The site is large and there is expected to be sufficient space for any motorcycles associated with the Weasel Solar Farm to park at the three construction compounds.

C2.5.4 Loading bays	
Objective: That adequate access for goods delivery and collection is provided, and to avoid unreasonable loss of amenity and adverse impacts on traffic flows.	
Acceptable Solution/ Performance Criteria	**Comment**
Acceptable Solution A1 A loading bay must be provided for uses with a floor area of more than 1000m² in a single occupancy.	**Complies with Acceptable Solution A1** The Weasel Solar Farm development does not have a floor area of >1000m², therefore no requirement applies. However, as the site is large there is expected to be sufficient space for required vehicle loading within the construction compounds.

6.3 C2.6 Parking and Sustainable Transport Code – Development Standards

C2.6.1 Construction of parking areas

Objective:

That parking areas are constructed to an appropriate standard.

Acceptable Solution/ Performance Criteria	Comment
Acceptable Solution A1 All parking, access ways, manoeuvring and circulation spaces must: a) be constructed with a durable all weather pavement; b) be drained to the public stormwater system, or contain stormwater on the site; and c) excluding all uses in the Rural Zone, Agriculture Zone, Landscape Conservation Zone, Environmental Management Zone, Recreation Zone and Open Space Zone, be surfaced by a spray seal, asphalt, concrete, pavers or equivalent material to restrict abrasion from traffic and minimise entry of water to the pavement.	**Complies with Acceptable Solution A1** Internal access ways, parking areas and turning areas etc, will be required to be suitably constructed including appropriate drainage, and well maintained to ensure all weather access to site, particularly throughout the wetter months. Weasel Solar Farm is in an Agriculture zone and therefore sealing of the access ways is not required, other than the first 30m back from Highland Lakes Road, as shown in the Concept site access plans (Appendix C). The compacted gravel construction compounds will provide adequate parking for construction vehicles, and accommodate turning circles to facilitate vehicles to circulate.

C2.6.2 Design and layout of parking areas

Objective:

That parking areas are designed and laid out to provide convenient, safe and efficient parking.

Acceptable Solution/ Performance Criteria	Comment
Acceptable Solution A1.1 Parking, access ways, manoeuvring and circulation spaces must either: a) comply with the following: i. have a gradient in accordance with *Australian Standard AS 2890 - Parking facilities, Parts 1-6;* ii. provide for vehicles to enter and exit the site in a forward direction where providing for more than 4 parking spaces; iii. have an access width not less than the requirements in Table C2.2; iv. have car parking space dimensions which satisfy the requirements in Table C2.3; v. have a combined access and manoeuvring width adjacent to parking spaces not less than the requirements in Table C2.3 where there are 3 or more car parking spaces; vi. have a vertical clearance of not less than 2.1m above the parking surface level; and	**Satisfies Performance Criteria P1** Detailed design of the construction compounds and access ways is not yet finalised but the concept site access plans (Appendix C) show the intent to provide suitable accessways, parking and space for vehicles to manoeuvre and circulate.

C2.6.2 Design and layout of parking areas

Objective:

That parking areas are designed and laid out to provide convenient, safe and efficient parking.

Acceptable Solution/ Performance Criteria	Comment
vii. excluding a single dwelling, be delineated by line marking or other clear physical means; or *b)* comply with *Australian Standard AS 2890- Parking facilities, Parts 1-6.* **Acceptable Solution A1.2** Parking spaces provided for use by persons with a disability must satisfy the following: a) be located as close as practicable to the main entry point to the building; b) be incorporated into the overall car park design; and c) be designed and constructed in accordance with *Australian/ New Zealand Standard AS/NZS 2890.6:2009 Parking facilities, Off-street parking for people with disabilities.* **Performance Criteria P1** All parking, access ways, manoeuvring and circulation spaces must be designed and readily identifiable to provide convenient, safe and efficient parking, having regard to: a) the characteristics of the site; b) the proposed slope, dimensions and layout; c) useability in all weather conditions; d) vehicle and pedestrian traffic safety; e) the nature and use of the development; f) the expected number and type of vehicles; g) the likely use of the parking areas by persons with a disability; h) the nature of traffic in the surrounding area; i) the proposed means of parking delineation; and j) the provisions of *Australian Standard AS 2890.1:2004 - Parking facilities, Part 1: Off-street car parking and AS 2890.2 -2002 Parking facilities, Part 2: Off-street commercial vehicle facilities.*	

C2.6.3 Number of accesses for vehicles

Objective:

That:

a) access to land is provided which is safe and efficient for users of the land and all road network users, including but not limited to drivers, passengers, pedestrians and cyclists by minimising the number of vehicle accesses;

b) accesses do not cause an unreasonable loss of amenity of adjoining uses; and

c) the number of accesses minimise impacts on the streetscape.

Acceptable Solution/ Performance Criteria	Comment
Acceptable Solution A1 The number of accesses provided for each frontage must: a) be no more than 1; or b) no more than the existing number of accesses, whichever is the greater. **Performance Criteria P1** The number of accesses for each frontage must be minimised, having regard to: a) any loss of on-street parking; and b) pedestrian safety and amenity; c) traffic safety; d) residential amenity on adjoining land; and e) the impact on the streetscape.	**Satisfies Performance Criteria P1** The four accesses proposed are existing accesses. The primary access will be Weasel Plains Road (existing access). Access A (opposite Waddamana Road) and Access C (in the north) are existing farm accesses, and Access B in the south will extend from the existing access to the Natural Resources and Environment (NRE Tas) laydown area. Accesses A, B and C are construction/ emergency or evacuation accesses only and are not proposed to be used on a regular basis post-construction.

C2.6.5 Pedestrian access

Objective:

That pedestrian access within parking areas is provided in a safe and convenient manner.

Acceptable Solution/ Performance Criteria	Comment
Acceptable Solution A1.1 Uses that require 10 or more car parking spaces must: a) have a 1m wide footpath that is separated from the access ways or parking aisles, excluding where crossing access ways or parking aisles, by: i. a horizontal distance of 2.5m between the edge of the footpath and the access way or parking aisle; or ii. protective devices such as bollards, guard rails or planters between the footpath and the access way or parking aisle; and b) be signed and line marked at points where pedestrians cross access ways or parking aisles.	**Satisfies Performance Criteria P1** Details of parking layout and pedestrian accesses within the construction compounds have not been provided by the client. However, the sites size is such that satisfying the performance criteria should be achievable.

C2.6.5 Pedestrian access	
Objective: That pedestrian access within parking areas is provided in a safe and convenient manner.	
Acceptable Solution/ Performance Criteria	**Comment**
Acceptable Solution A1.2 In parking areas containing accessible car parking spaces for use by persons with a disability, a footpath having a width not less than 1.5m and a gradient not steeper than 1 in 14 is required from those spaces to the main entry point to the building. **Performance Criteria P1** Safe and convenient pedestrian access must be provided within parking areas, having regard to: a) the characteristics of the site; b) the nature of the use; c) the number of parking spaces; d) the frequency of vehicle movements; e) the needs of persons with a disability; f) the location and number of footpath crossings; g) vehicle and pedestrian traffic safety; h) the location of any access ways or parking aisles; and i) any protective devices proposed for pedestrian safety.	

C2.6.6 Loading bays	
Objective: That the area and dimensions of loading bays are adequate to provide safe and efficient delivery and collection of goods.	
Acceptable Solution/ Performance Criteria	**Comment**
Acceptable Solution A1 The area and dimensions of loading bays and access way areas must be designed in accordance with *Australian Standard AS 2890.2–2002, Parking facilities, Part 2: Off-street commercial vehicle facilities*, for the type of vehicles likely to use the site. **Performance Criteria P1** Loading bays must have an area and dimensions suitable for the use, having regard to: a) the types of vehicles likely to use the site; b) the nature of the use; c) the frequency of loading and unloading; d) the area and dimensions of the site;	**Satisfies Performance Criteria P1** Construction compound areas are shown in the development layout plans. They appear suitably sized and located to accommodate deliveries of plant and equipment by heavy vehicles. The site has flat areas suitable for laydown areas and access by delivery vehicles. The construction compounds are positioned to allow loading and unloading to occur clear of circulating vehicles on the access roads.

C2.6.6 Loading bays	
Objective: That the area and dimensions of loading bays are adequate to provide safe and efficient delivery and collection of goods.	
Acceptable Solution/ Performance Criteria	**Comment**
e) the topography of the site; f) the location of existing buildings on the site; and g) any constraints imposed by existing development.	
Acceptable Solution A2 The type of commercial vehicles likely to use the site must be able to enter, park and exit the site in a forward direction in accordance with *Australian Standard AS 2890.2 – 2002, Parking Facilities, Part 2: Parking facilities - Off-street commercial vehicle facilities.* **Performance Criteria P2** Access for commercial vehicles to and from the site must be safe, having regard to: a) the types of vehicles associated with the use; b) the nature of the use; c) the frequency of loading and unloading; d) the area and dimensions of the site; e) the location of the site and nature of traffic in the area of the site; f) the effectiveness or efficiency of the surrounding road network; and g) site constraints such as existing buildings, slope, drainage, vegetation, parking and landscaping.	**Complies with Acceptable Solution A2** The site's size and topography allow ample space for commercial vehicles to enter, park, turn and exit the site in a forward direction. The construction compounds are shaped for large vehicles to circulate to ensure vehicles can exit in a forward direction.

6.4 C3.5 Road and Railway Assets Code – Use Standards

C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction

Objective:

To minimise any adverse effects on the safety and efficiency of the road or rail network from vehicular traffic generated from the site at an existing or new vehicle crossing or level crossing or new junction.

Acceptable Solution/ Performance Criteria	Comment
Acceptable Solution A1.1 For a category 1 road or a limited access road, vehicular traffic to and from the site will not require: a) a new junction; b) a new vehicle crossing; or c) a new level crossing. **Acceptable Solution A1.2** For a road, excluding a category 1 road or a limited access road, written consent for a new junction, vehicle crossing, or level crossing to serve the use and development has been issued by the road authority. **Acceptable Solution A1.3** For the rail network, written consent for a new private level crossing to serve the use and development has been issued by the rail authority. **Acceptable Solution A1.4** Vehicular traffic to and from the site, using an existing vehicle crossing or private level crossing, will not increase by more than: a) the amounts in Table C3.1; or b) allowed by a licence issued under Part IVA of the *Roads and Jetties Act 1935* in respect to a limited access road. **Acceptable Solution A1.5** Vehicular traffic must be able to enter and leave a major road in a forward direction.	**Complies with Acceptable Solution A1** The A1 criteria are addressed below. 1.1. Highland Lakes Road is not a Category 1 or limited access road. 1.2. The Weasel Solar Farm project will make use of existing access points to the site and will not create any new junctions or access points. Department of State Growth has been consulted and their correspondence is included in Appendix D. 1.3. No rail in the vicinity - not applicable 1.4. Amount of increase in annual average daily traffic to and from the site is conservatively estimated to be 10-15 vehicle movements per day (post-development) which is a 5% increase to existing volumes on Highland Lakes Road and satisfies criteria of Table C3.1 of 20% for other roads. During construction daily vehicle movements are estimated at 100 light vehicles and 46 heavy vehicles. These increases exceed the criteria of Table C3.1 of 20% for other roads, however given that the surrounding roads are currently operating well below capacity the additional traffic associated with the development is not anticipated to adversely affect the functioning or safety of the local network, for the relatively short period of construction (18 months). 1.5. The proposed network of internal access roads and construction compounds will enable all vehicles to turn around on site.

7. Conclusion

Robert Luxmoore Project Management, on behalf of Weasel Solar Farm Pty Ltd engaged pitt&sherry to undertake a Traffic Impact Assessment for Weasel Solar Farm. The analysis and discussion presented in this report can be summarised as follows:

- The crash history for Highland Lakes Road in the vicinity of the site did not identify any safety issues at the proposed site access points
- The sight distances at the proposed site accesses meet the Austroads guidelines for safe intersection sight distances
- The proposed transport route is expected to have sufficient capacity to accommodate the additional traffic generated during construction of the proposed development; and
- Operations traffic volumes of the Weasel Solar Farm are estimated to be minimal and are not expected to have any noticeable impact on the safety and function of the surrounding road network after construction.

Recommendations:

- Reposition the existing signs at Highland Lakes Road/ Waddamana Road intersection to prevent obstructing sight lines of vehicles exiting proposed construction and emergency Access A
- Upgrade the entrances to Weasel Plains Road, Access A, Access B and Access C to rural sealed accesses and seal back 30m from the edge of the highway to reduce mud and gravel from tracking onto Highland Lakes Road
- Widen the entrance to Weasel Plains Road to accommodate B-double and semi-trailer swept paths. This will require relocation of the existing timber structure and extension of the corresponding culvert to suit.
- Consider lengthening the culvert opposite the Weasel Plains Road/ Highland Lakes Road intersection to remedy the existing narrowing of the unsealed shoulder at the junction
- Provide sufficient parking for staff and delivery vehicles within the construction compounds, including a loading area which allows delivery vehicles to be clear of other circulating vehicles during unloading
- A traffic management plan should be prepared for all site access points to ensure safe and efficient movement is maintained on public roads
- Install construction vehicle warning signage along Highland Lakes Road during the construction period identifying that there will be an increase in movements; and
- Any vehicles greater than a 26m B-double will require an OSOM assessment including details as discussed in this report.

Important information about your report

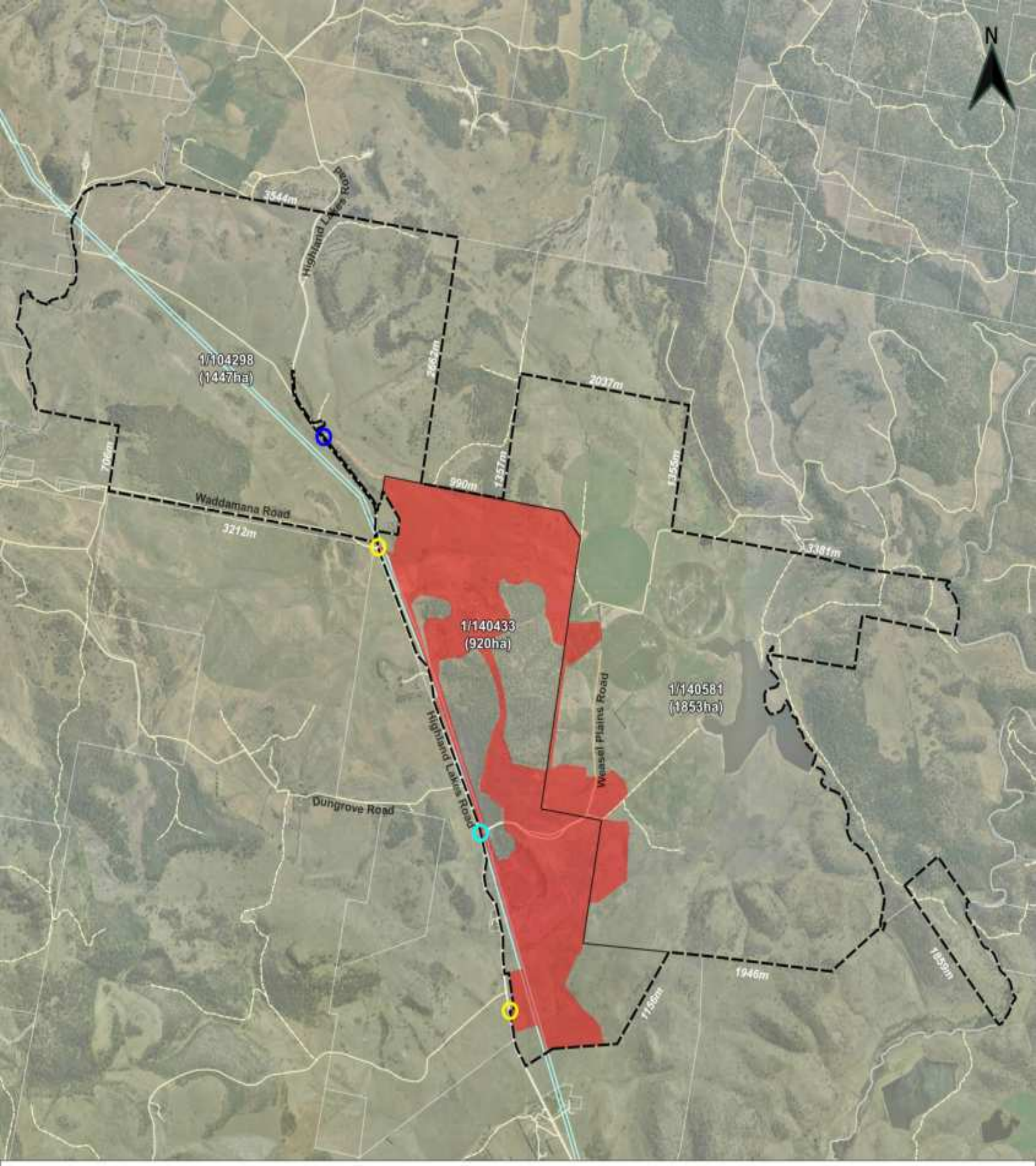
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Preliminary Design Plans

Appendix A

pitt&sherry



Legend

Proposed Features
- Site Boundary
- Study Area

Access Points
- Primary
- Secondary / emergency
- Tertiary / evacuation

Existing Features
- 220 kV Transmission line
- Title Boundary
- Cadastre
- Roads
- Vehicular Track

0 1 2 km

cogency

Site Overview Plan

2212 - Weasel Solar Farm

N

Feature	Area (ha)
Site Boundary	4221
Study Area	683
Development	435
Temporary Construction Compound	13

Legend

Proposed Features
- Site Boundary
- Study Area
- Development Area
- Temporary Construction Compound
- BESS and Network Connection Components

Existing Features
- 220 kV Transmission line
- Title Boundary
- Waterways
- Roads
- Cadastre
- Water Body
- Wetland

- Hills

Dwellings
- Involved
- Not Involved

Access Points
- Primary
- Secondary / emergency
- Tertiary / evacuation

0 1 2 km

cogency

Design Layout Plan

2212 - Weasel Solar Farm

Tertiary / Evacuation Access

Secondary / Emergency / Construction Access

33kV Substation

Construction Compound

Electricity Easement

Construction compound A: to be removed after completion of construction works. See TIA.

Alternate 33kV Substation Location

Under the 2P configuration panels will be spaced approximately 10m to provide sufficient light to pasture, and avoid inter-row shading.

Access vehicles will require access between rows for cleaning and maintenance of the panels, therefore ground over is not excessive.

See Dwg No:10500480 ME-0001-02 for elevation diagram of solar PV.

Proposed Features
- Solar Arrays
- Main Electrical Infrastructure
- Temporary Construction Compound
- Access Tracks
- Fence
- 33 kV Internal Transmission Poles
- 33 KV Internal Transmission Line

Dwellings
- Involved

Existing Features
- Hills
- 220 kV Tranmission Line
- Water Body
- Wetland
- Roads
- Tracks
- Electricity Easement
- Cadastre
- Contours (10m)

Distance from security fence perimeter

0 250 500 m

1:12,000 @A2

cogency

Masterplan - Northern Section

2212 - Weasel Solar Farm

Electricity Easement

Operations & Maintenance

Primary Access

Construction Compound

BESS Area

Solar Farm Substation

Proposed TASNetworks Substation

Secondary / Emergency / Construction Access

Construction Compound

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footprint

Under the 2P c
spaced approx
sufficient light t
row shading.

Access vehicle
between rows f
maintenance o
ground over is

See Dwg No:1
elevation diagr

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Proposed Features
- Solar Arrays
- Main Electrical Infrastructure
- Temporary Construction Compound
- Access Tracks
- Fence
- Proposed TasNetworks Connection
- 33 KV Internal Transmission Line
- 33 kV Internal Transmission Poles

Dwellings
- Involved
- Not Involved

Existing Features
- 220 kV Tranmission Line
- Water Body
- Wetland
- Roads
- Tracks
- Electricity Easement
- Cadastre

- Hills
- Contours (10m)
- Distance to security fence perimeter

0 250 500 m

1:12,000 @A2

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Masterplan - Southern Section

2212 - Weasel Solar Farm

Tertiary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Secondary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Construction compound A: to be removed after completion of construction works. See TIA.

General Notes:

Construction compounds to include sufficient parking for staff and delivery vehicles. Loading area to be included.

Gravel construction (or similar) will include detailed drainage design to ensure no channelling or erosion is created by stormwater runoff.

Drainage, rehabilitation works and timeframes to be prepared within a Construction / Environment Management Plan as a condition of permit.

See Bushfire Mitigation Plan (BMP) (Appendix 2 of Bushfire Impact Statement) for additional details on bushfire risk design measures, including fire breaks, internal tracks, static water supply and grass management.

Primary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/ gravel tracking

Widen entrance, extend culverts at entrance and on the opposite side of highway, and relocate timber structure. See TIA.

Construction compound B: to form part of solar array footprint post construction.

Secondary Access

Upgrade to rural sealed access.

Seal approx. 30m from edge of Highland Lakes Road to prevent mud/gravel tracking. See TIA.

Construction compound C: to form part of solar array footprint post construction works.

Feature	Area (ha)
Site Boundary	4221
Study Area	683
Development	435
Temporary Construction Compound	13

Waddamana Road

Weasel Hills

Dungrove Road

Dungrove Hill

Cluny Hill

N

Legend

0 1 2 km

Proposed Features

- Site Boundary
- BESS & Network Connection Components
- Construction Compound
- Development Area
- Study Area
- Primary Access
- Secondary Access
- Tertiary Access

Existing Features

- Hills
- 220 kV Transmission Line
- Waterways
- Vehicular Track
- Roads
- Cadastre
- Natural Assets Code

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Access & Construction Laydown Overview

2212 - Weasel Solar Farm

Upgrade culvert at access point. See TIA. Subject to detailed design as condition of permit.

General Note:
Internal access roads

4m-wide all-weather tracks for 20-tonne vehicles.

Include passing bays every 200m for two-way traffic.

Subject to detailed design as condition of permit.

Upgrade culvert at access point. See TIA. Subject to detailed design as condition of permit.

Upgrade culvert at access point. See TIA. Subject to detailed design as condition of permit.

General Note:

Internal access roads crossing waterways (Natural Assets Code)

As highlighted in red, the indicative layout for internal tracks includes numerous crossings of waterways.

Design principle commitments include ensuring:

- No concentrated discharge of stormwater into waterways
- Management of construction for sediment control and water quality
- Culvert and swale / drain designs to ensure the existing overland flow paths are maintained (in a 1-in-100 RTA event) and no run-off channelling, erosion or sediment discharge into waterways.
- All internal track waterway crossings will be designed with appropriate culverts and construction techniques/sediment control to ensure that there is no stormwater concentrated into waterways.
- There will be no concentration of flows or channelling, particularly no discharge into waterways.
- Detailed design plans will be prepared (as a condition of permit) for all waterway crossings as a condition of permit, along with the Construction Management Plan (and/or Environment Management Plan) that addresses soil and water management.

Feature	Area (ha)
Site Boundary	4221
Study Area	683
Development	435
Temporary Construction Compound	13

Legend

Proposed Features
- Site Boundary
- BESS & Network Connection Components
- Construction Compound
- Development Area
- Internal Access Tracks
- Primary Access
- Secondary Access
- Tertiary Access

Existing Features
- Hills
- 220 kV Transmission Line
- Waterways
- Vehicular Track
- Roads
- Cadastre
- Natural Assets Code

0 1 2 km

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Internal Tracks & Waterways Overview

2212 - Weasel Solar Farm

Potential Access Points Memo

Appendix B

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Specialist Knowledge.
Practical Solutions.

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Memo

To Emanuele Raffaele

From Sandra Diaz

Date 21 March 2024

RE **Weasel Solar Farm potential access points**

On Monday 18 March 2024, pitt&sherry traffic engineers visited the Weasel Solar Farm site to inspect the local road network and consider suitable access points for construction traffic to access the solar farm.

It is understood that Weasel Plains Road will be used as the primary access for construction traffic to the site (northern and southern parts). Additional access points are expected to be constructed for use as secondary or emergency accesses during construction. The primary access and potential secondary/ emergency access points identified on site are shown in Figure 1 below, and details of each potential access are described below.

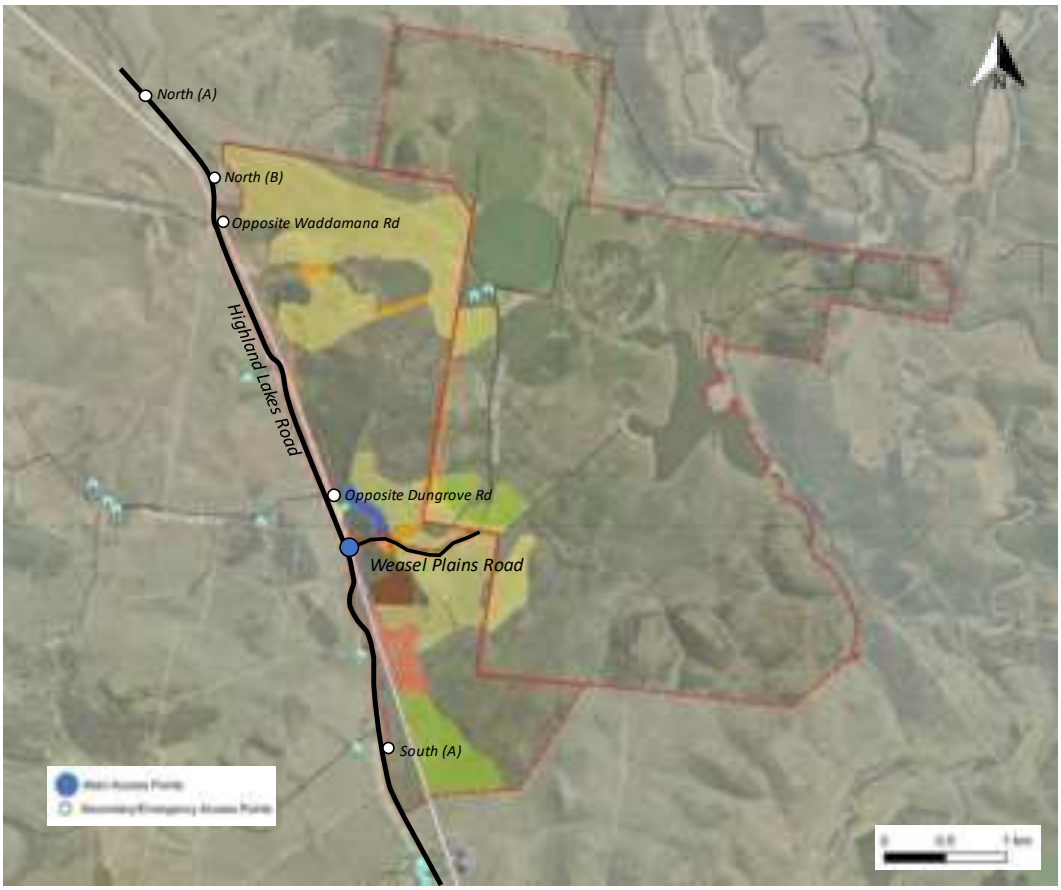


Figure 1: Potential Weasel Solar Farm site access points

1. Weasel Plains Road – primary access

Weasel Plains Road junction off Highland Lakes Road has a wide unsealed entrance. A 4.1m wide cattle grid is installed near the entrance.

Sight distance is limited to the south by a curve in the road and to the north by a crest, but sight distance is sufficient in both directions. Weasel Plains Road will provide primary access to the Weasel Solar Farm site for all vehicles during both the construction phase and operational phase.



Figure 2: Weasel Plains Road entrance



Figure 3: Highland Lakes Road, south approach to Weasel Plains Road



Figure 4: Highland Lakes Road, north approach to Weasel Plains Road

2. North-A access – potential secondary/ emergency accesses

To the north of the Weasel Solar Farm site, a 4.1m farm gate provides access from Highland Lakes Road to an existing farm track.

Sight distance is excellent in both directions.



Figure 5: North-A access entrance



Figure 6: Highland Lakes Road, south approach to North-A access



Figure 7: Highland Lakes Road, north approach to North-A access

3. North-B access – potential secondary/ emergency accesses

To the north of the Waddamana Road intersection, a 4.1m farm gate provides access from Highland Lakes Road to an existing farm track.

The gate is set well back from the road with a wide flat shoulder suitable for constructing an access to the gate. The sight distance would be dependent on the alignment of the access but the entrance is located at the apex of a curve with good visibility along Highland Lakes Road in both directions.



Figure 8: North-B access entrance



Figure 9: Highland Lakes Road, south approach to North-B access



Figure 10: Highland Lakes Road, north approach to North-B access

4. Opposite Waddamana Road – potential secondary/ emergency accesses

A 4.1m wide farm gate is installed opposite the Waddamana Road intersection and provides access to the Weasel Solar Farm site.

Sight distance is excellent in both directions along Highland Lakes Road, and also up Waddamana Road. Note that realignment of existing road signage would be recommended to prevent visual obstruction.

It is noted that an access opposite an intersection does have the potential to increase crash risk.



Figure 11: Entrance opposite Waddamana Road intersection (image source: Google Maps street view)



Figure 12: Highland Lakes Road, south approach to entrance opposite Waddamana Road



Figure 13: Highland Lakes Road, north approach to entrance opposite Waddamana Road

5. Opposite Dungrove Road – potential secondary/ emergency accesses

There is no existing entrance opposite Dungrove Road, but there is a wide gravelled area on each side of the road suitable for heavy vehicles to pull over.

Sight distance excellent in both directions.



Figure 14: Potential entrance location opposite Dungrove Road



Figure 15: Highland Lakes Road, south approach to entrance opposite Dungrove Road



Figure 16: Highland Lakes Road, north approach to entrance opposite Dungrove Road

6. South-A – potential secondary/ emergency accesses

Near the south of the site an existing laydown area is constructed on land owned by Department of Natural Resources and Environment (NRE Tas). At the rear of the laydown is a gated entrance to the Weasel Solar Farm site.

The entrance is located on a long straight on Highland Lakes Road and sight distance is excellent in both directions.



Figure 17: South-A entrance



Figure 18: Highland Lakes Road, south approach to South-A entrance



Figure 19: Highland Lakes Road, north approach to South-A entrance

Sight distance assessment

The Austroads *Guide to Road Design Part 4A: Unsignalised and Signalised Intersections* (AGRD Part 4A) specifies that "*Desirably, sight distances at accesses should comply with the sight distance requirements for intersections*".

The Safe Intersection Sight Distance (SISD) at each potential access point has been assessed against the requirements of the AGRD Part 4A. The SISD was measured and recorded on site on 18 March 2024 in accordance with AGRD Part 4A.

The speed limit on Highland Lakes Road is 100km/h resulting in a required sight distance of 248m. It is noted that vehicle speed refers to the 85th percentile speed that vehicles travel. From traffic speeds observed during the site visit, 100km/h is an appropriate assessment speed.

The SISD requirements and the observed sight distances for each access are shown below in Table 1.

Table 1: Safe intersection sight distance (SISD) assessment of Weasel Solar Farm site accesses

Access	**Approach**	**Speed**	**SISD Requirement – Austroads** *(with desirable 2s reaction time)*	**Observed sight distance**	**Meets Requirements?**
Primary Accesses					
Weasel Plains Road	North	100	248m	>300m	✓
	South	100	248m	260m	✓
Potential Secondary/ Emergency Accesses					
North-A	North	100	248m	>300m	✓
	South	100	248m	>300m	✓
North-B	North	100	248m	>300m	✓
	South	100	248m	>300m	✓
Opposite Waddamana Rd	North	100	248m	>300m	✓
	South	100	248m	>300m	✓
Opposite Dungrove Rd	North	100	248m	>300m	✓
	South	100	248m	>300m	✓
South-A	North	100	248m	>300m	✓
	South	100	248m	>300m	✓

In addition to the potential access points described above, a general assessment of Highland Lakes Road in the vicinity of the site was undertaken. The findings are displayed in Figure 20 below, which highlights the areas which are not recommended for access points due to topography, roadside hazards or insufficient sight distances.

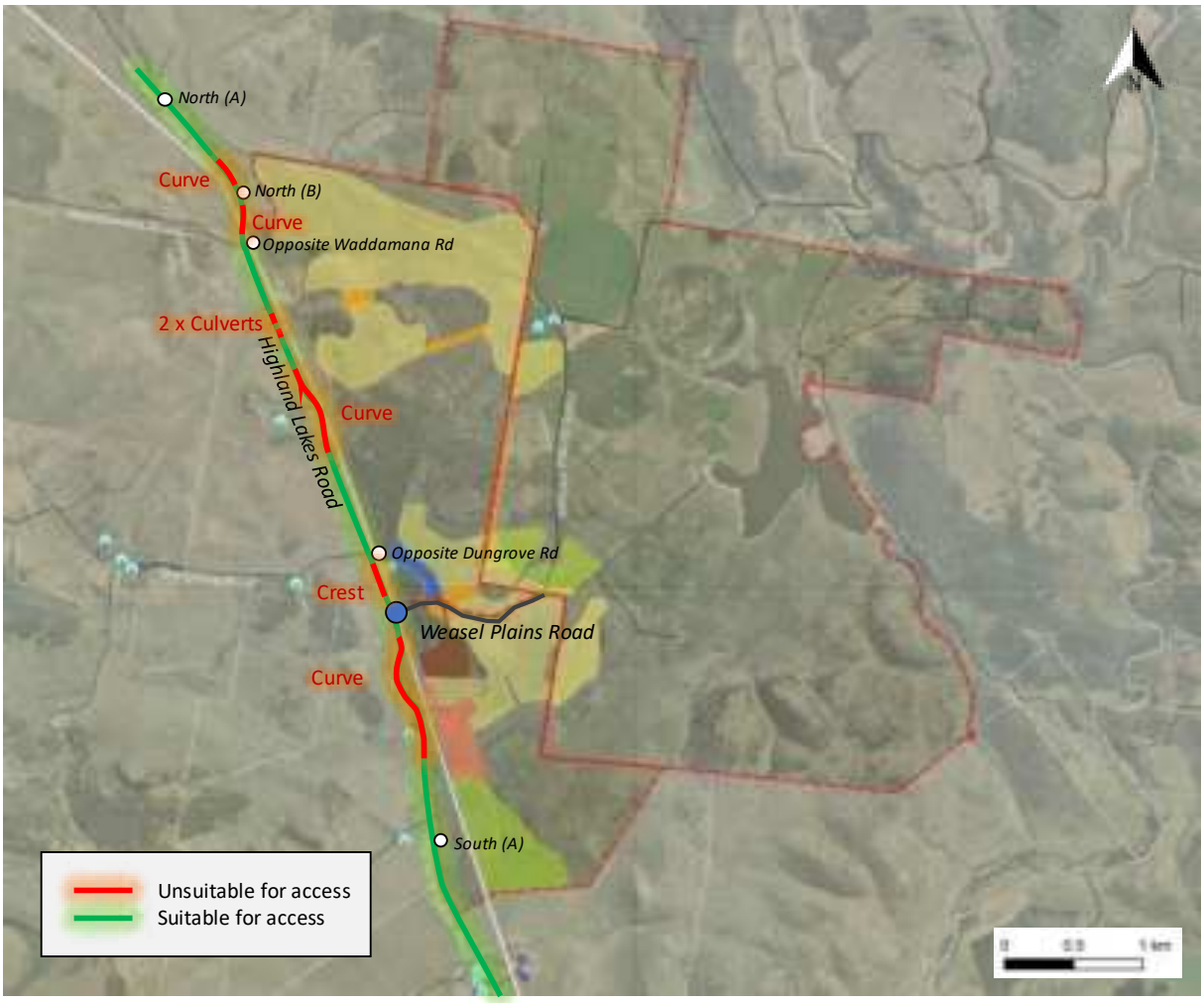


Figure 20: Highland Lakes Road access suitability

Please confirm the locations for site accesses you would like to include in the Traffic Impact Assessment (TIA) for the Weasel Solar Farm development. It is recommended that access points are sited within the 'green zones' shown in Figure 20 to ensure the accesses do not negatively impact road safety on the network.

Note that any new accesses on Department of State Growth roads require their approval. Pitt&sherry is happy to liaise with the Department to obtain their endorsement, once the access points for the development are confirmed.

Yours sincerely

Sandra Diaz
Traffic engineer

Concept Plans of Site Accesses

Appendix C

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WEASEL SOLAR FARM PTY LTD
HIGHLAND LAKES ROAD
WEASEL SOLAR FARM
PROPOSED DEVELOPMENT - ACCESS

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PROJECT: HIGHLAND LAKES ROAD
WEASEL SOLAR FARM - ACCESS

STATUS: **PRELIMINARY**

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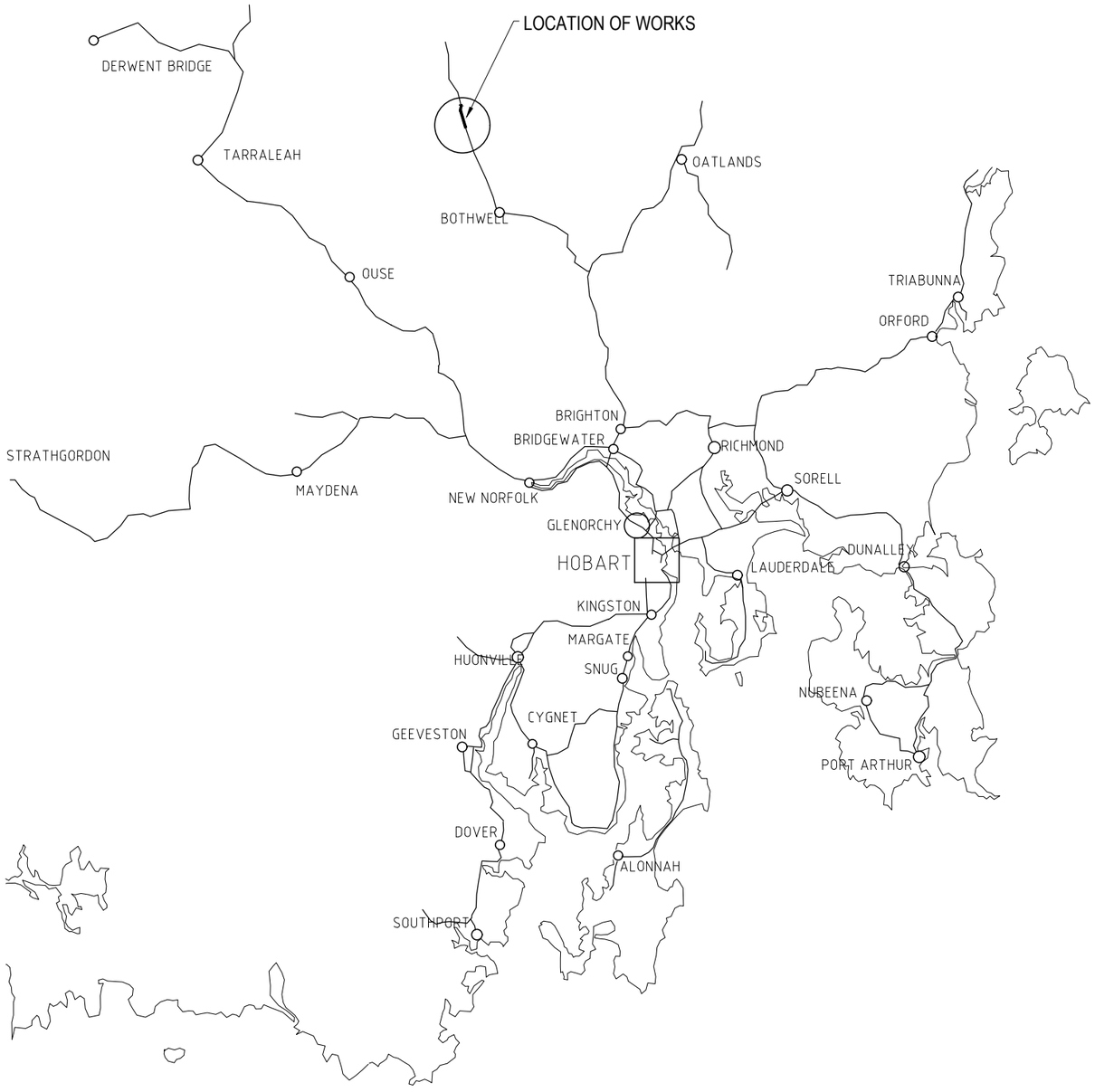


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S-P.23.1660-00-CIV-DRG-011	B	KEY PLAN
S-P.23.1660-00-CIV-DRG-041	B	GENERAL ARRANGEMENTS - ACCESS B - DRG 1
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S-P.23.1660-00-CIV-DRG-047	B	GENERAL ARRANGEMENTS - PRIMARY ACCESS - DRG 2
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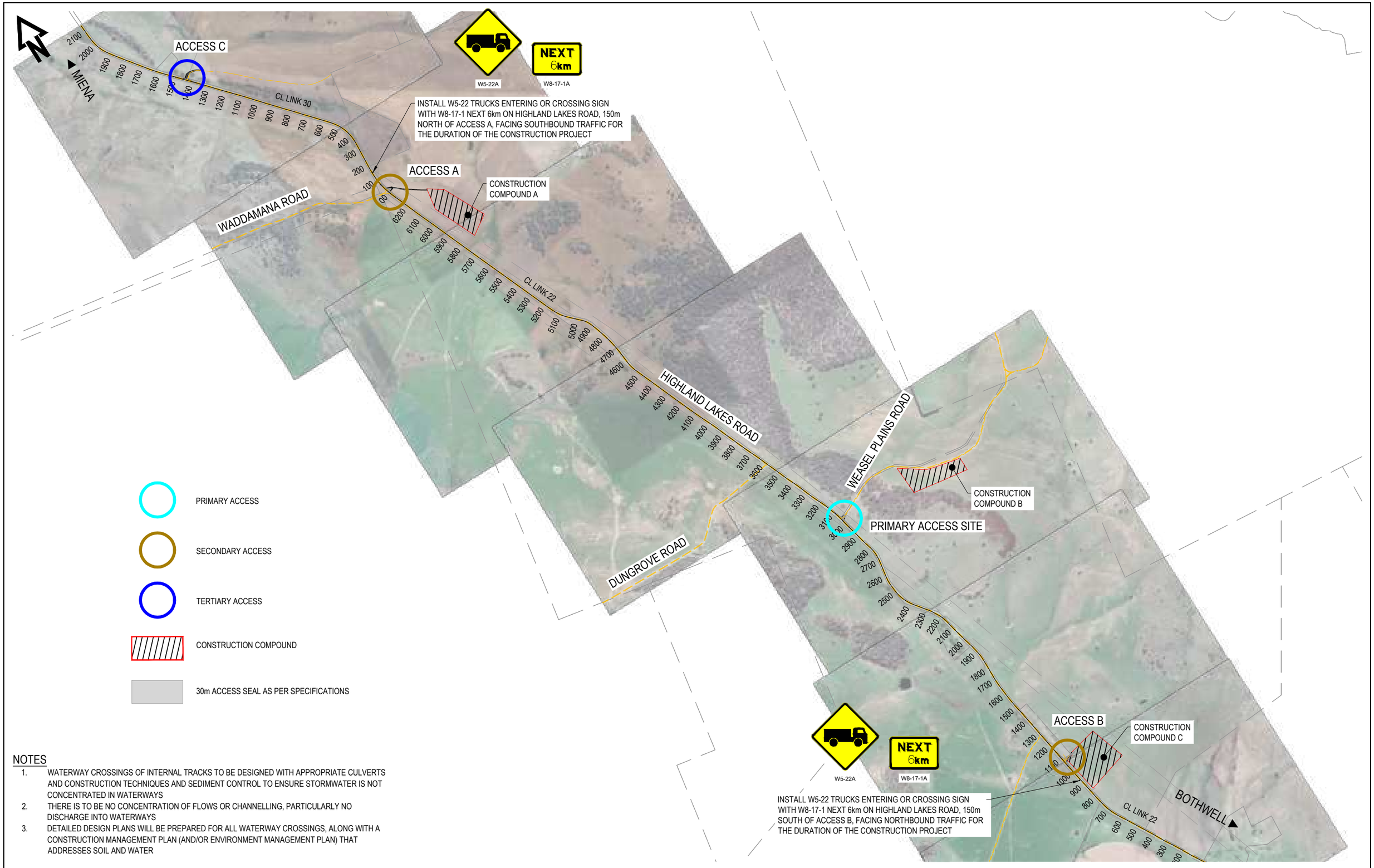
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PRIMARY ACCESS

SECONDARY ACCESS

TERTIARY ACCESS

CONSTRUCTION COMPOUND

30m ACCESS SEAL AS PER SPECIFICATIONS

NOTES

1. WATERWAY CROSSINGS OF INTERNAL TRACKS TO BE DESIGNED WITH APPROPRIATE CULVERTS AND CONSTRUCTION TECHNIQUES AND SEDIMENT CONTROL TO ENSURE STORMWATER IS NOT CONCENTRATED IN WATERWAYS
2. THERE IS TO BE NO CONCENTRATION OF FLOWS OR CHANNELLING, PARTICULARLY NO DISCHARGE INTO WATERWAYS
3. DETAILED DESIGN PLANS WILL BE PREPARED FOR ALL WATERWAY CROSSINGS, ALONG WITH A CONSTRUCTION MANAGEMENT PLAN (AND/OR ENVIRONMENT MANAGEMENT PLAN) THAT ADDRESSES SOIL AND WATER

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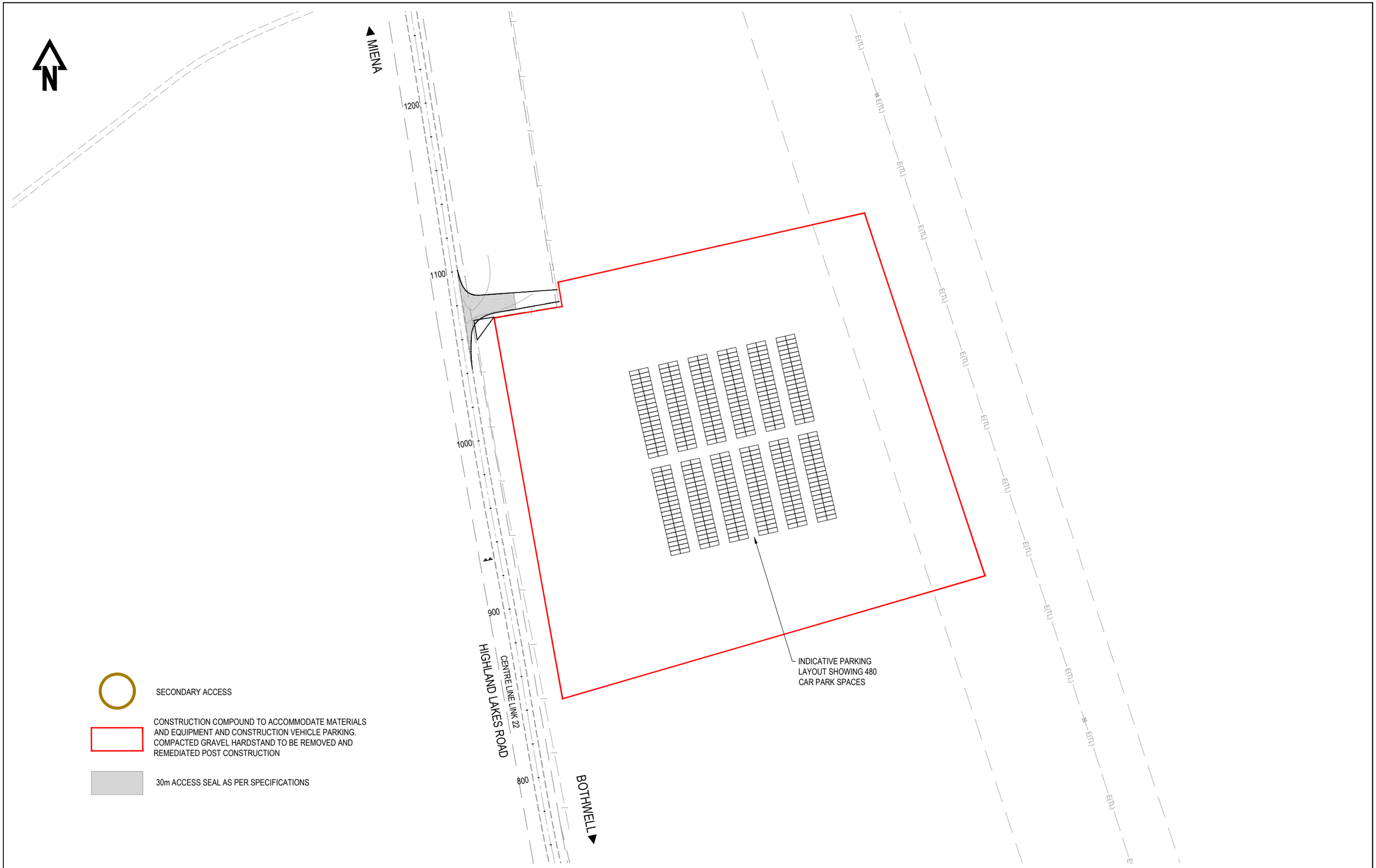
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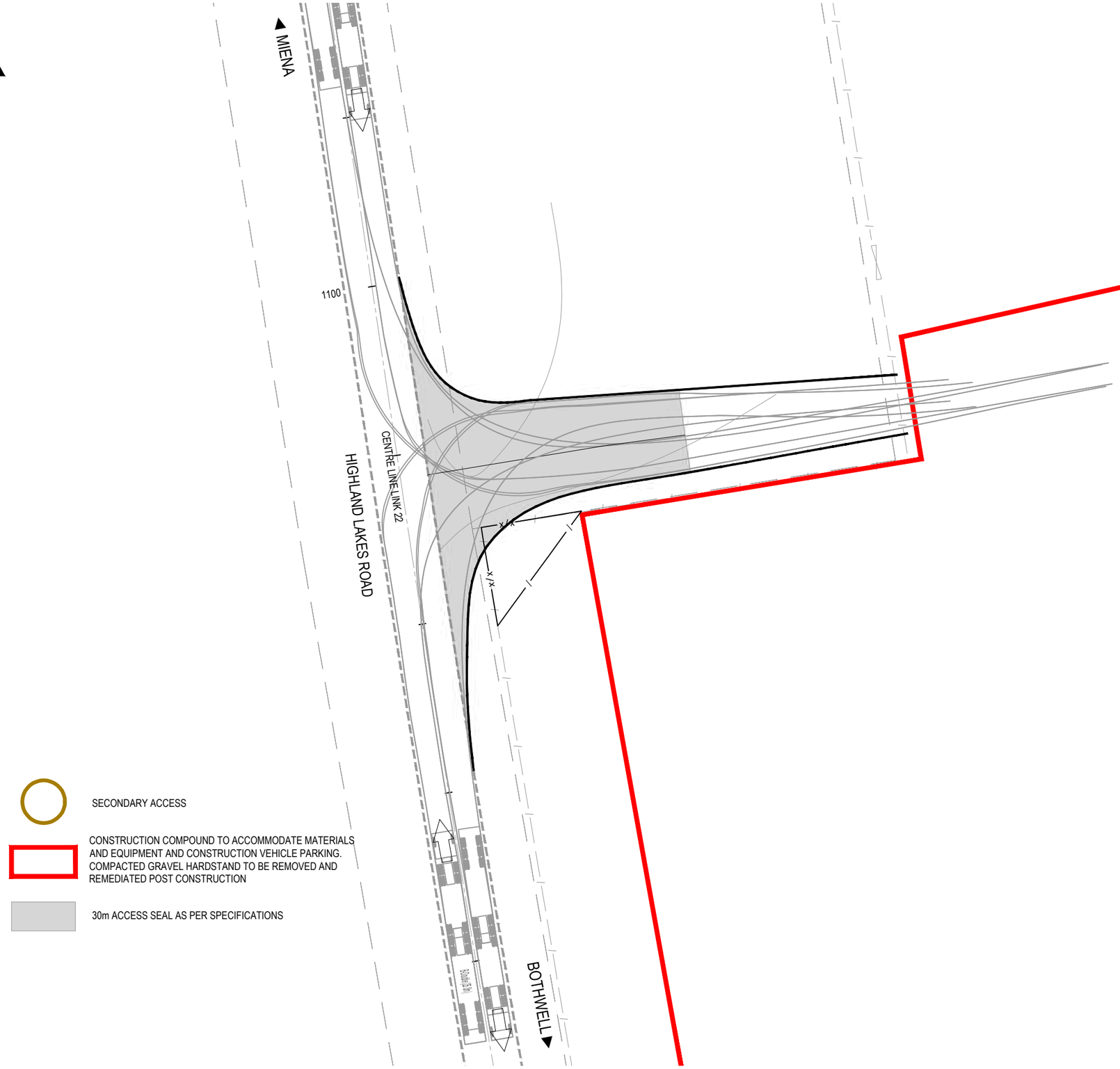
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EXISTING BOUNDARIES

- DIGITAL CADASTRE (ACCURACY 1.0m)
- FENCE
- GATE

PROPOSED BOUNDARIES

- FENCE - GENERAL (POST & WIRE)
- FENCE - REDUNDANT/REMOVED
- GATE

EXISTING ROAD INFRASTRUCTURE

- CENTRE OF ROAD
- DRIVEWAY
- EDGE OF PAVEMENT
- EDGE OF UNSEALED ROAD

PROPOSED ROAD INFRASTRUCTURE (Continued)

- DRIVEWAY/ACCESS

EXISTING BUILDINGS & STRUCTURES

- BUILDING EAVES

EXISTING ELECTRICAL SERVICES

- HIGH TENSION PYLON
- POLE - POWER
- LINE - MAJOR TRANSMISSION (GIS)
- LINE - MINOR TRANSMISSION (GIS)

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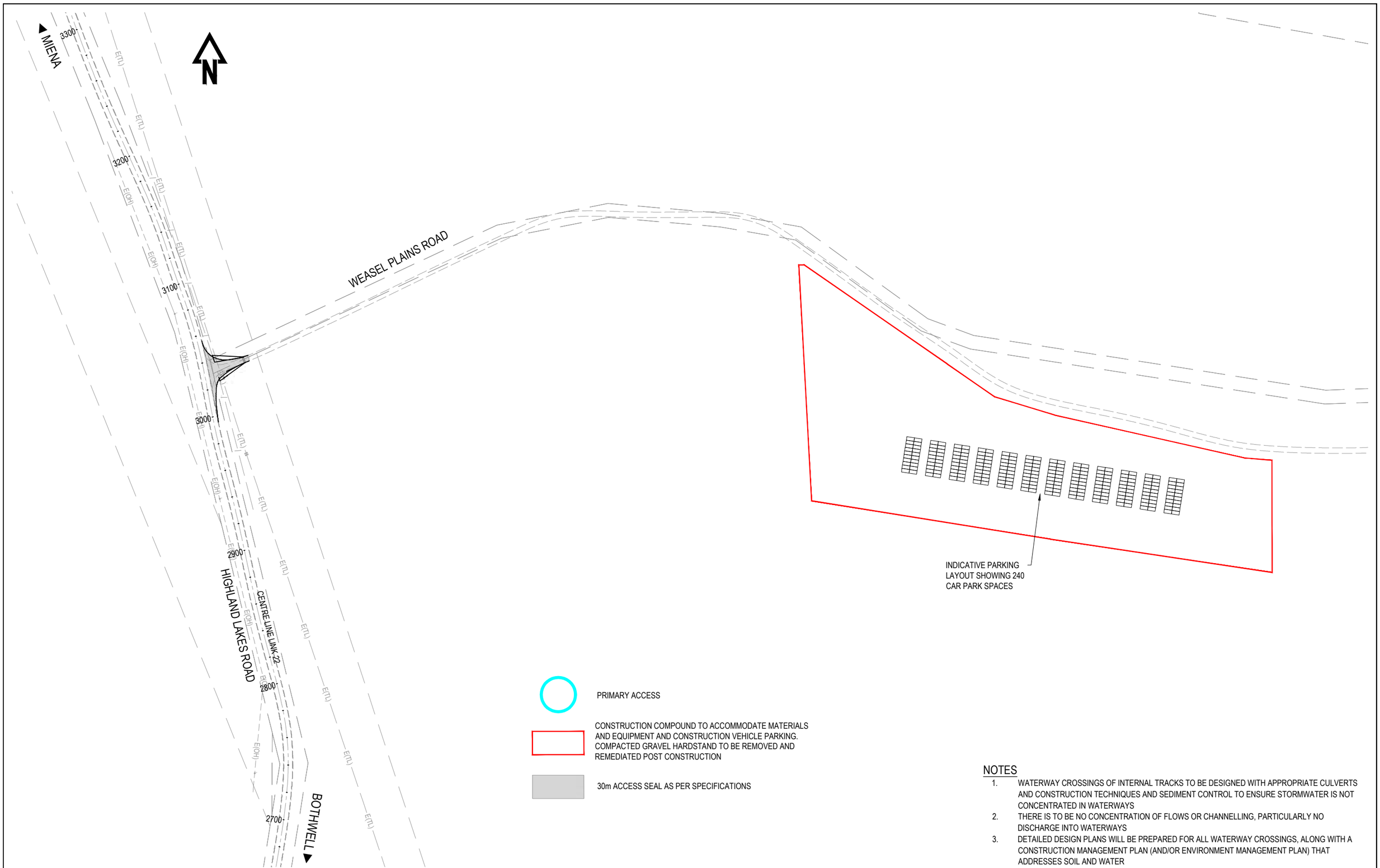
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PRIMARY ACCESS

CONSTRUCTION COMPOUND TO ACCOMMODATE MATERIALS AND EQUIPMENT AND CONSTRUCTION VEHICLE PARKING. COMPACTED GRAVEL HARDSTAND TO BE REMOVED AND REMEDIATED POST CONSTRUCTION

30m ACCESS SEAL AS PER SPECIFICATIONS

NOTES

1. WATERWAY CROSSINGS OF INTERNAL TRACKS TO BE DESIGNED WITH APPROPRIATE CULVERTS AND CONSTRUCTION TECHNIQUES AND SEDIMENT CONTROL TO ENSURE STORMWATER IS NOT CONCENTRATED IN WATERWAYS
2. THERE IS TO BE NO CONCENTRATION OF FLOWS OR CHANNELLING, PARTICULARLY NO DISCHARGE INTO WATERWAYS
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PROJECT: HIGHLAND LAKES ROAD WEASEL SOLAR FARM - ACCESS

STATUS: **PRELIMINARY**

DRAWING TITLE: GENERAL ARRANGEMENTS - PRIMARY ACCESS - DRG 1

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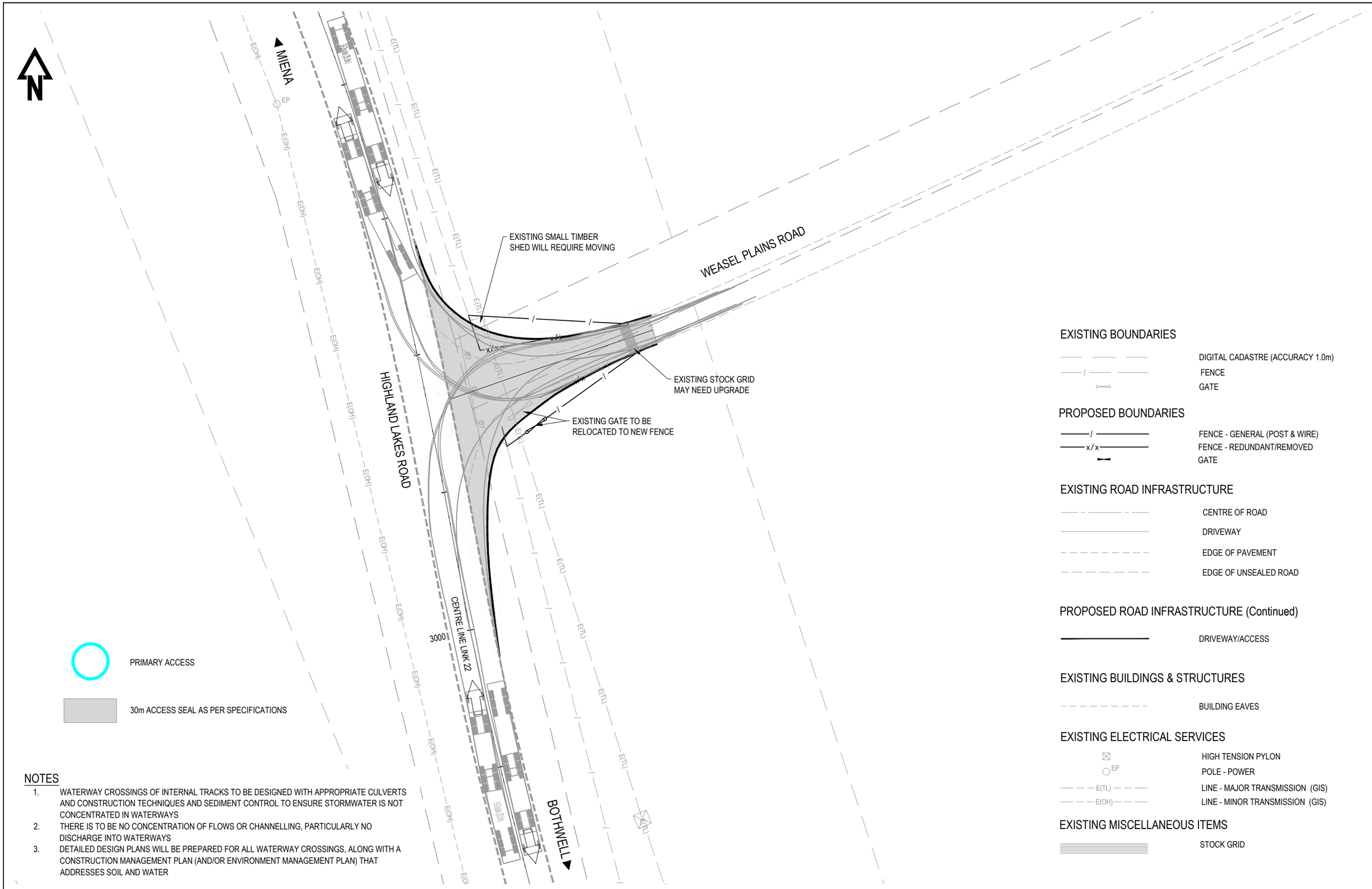
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NOTES

1. WATERWAY CROSSINGS OF INTERNAL TRACKS TO BE DESIGNED WITH APPROPRIATE CULVERTS AND CONSTRUCTION TECHNIQUES AND SEDIMENT CONTROL TO ENSURE STORMWATER IS NOT CONCENTRATED IN WATERWAYS
2. THERE IS TO BE NO CONCENTRATION OF FLOWS OR CHANNELLING, PARTICULARLY NO DISCHARGE INTO WATERWAYS
3. DETAILED DESIGN PLANS WILL BE PREPARED FOR ALL WATERWAY CROSSINGS, ALONG WITH A CONSTRUCTION MANAGEMENT PLAN (AND/OR ENVIRONMENT MANAGEMENT PLAN) THAT ADDRESSES SOIL AND WATER

EXISTING BOUNDARIES

- DIGITAL CADASTRE (ACCURACY 1.0m)
- FENCE
- GATE

PROPOSED BOUNDARIES

- FENCE - GENERAL (POST & WIRE)
- FENCE - REDUNDANT/REMOVED
- GATE

EXISTING ROAD INFRASTRUCTURE

- CENTRE OF ROAD
- DRIVEWAY
- EDGE OF PAVEMENT
- EDGE OF UNSEALED ROAD

PROPOSED ROAD INFRASTRUCTURE (Continued)

- DRIVEWAY/ACCESS

EXISTING BUILDINGS & STRUCTURES

- BUILDING EAVES

EXISTING ELECTRICAL SERVICES

- HIGH TENSION PYLON
- POLE - POWER
- LINE - MAJOR TRANSMISSION (GIS)
- LINE - MINOR TRANSMISSION (GIS)

EXISTING MISCELLANEOUS ITEMS

- STOCK GRID

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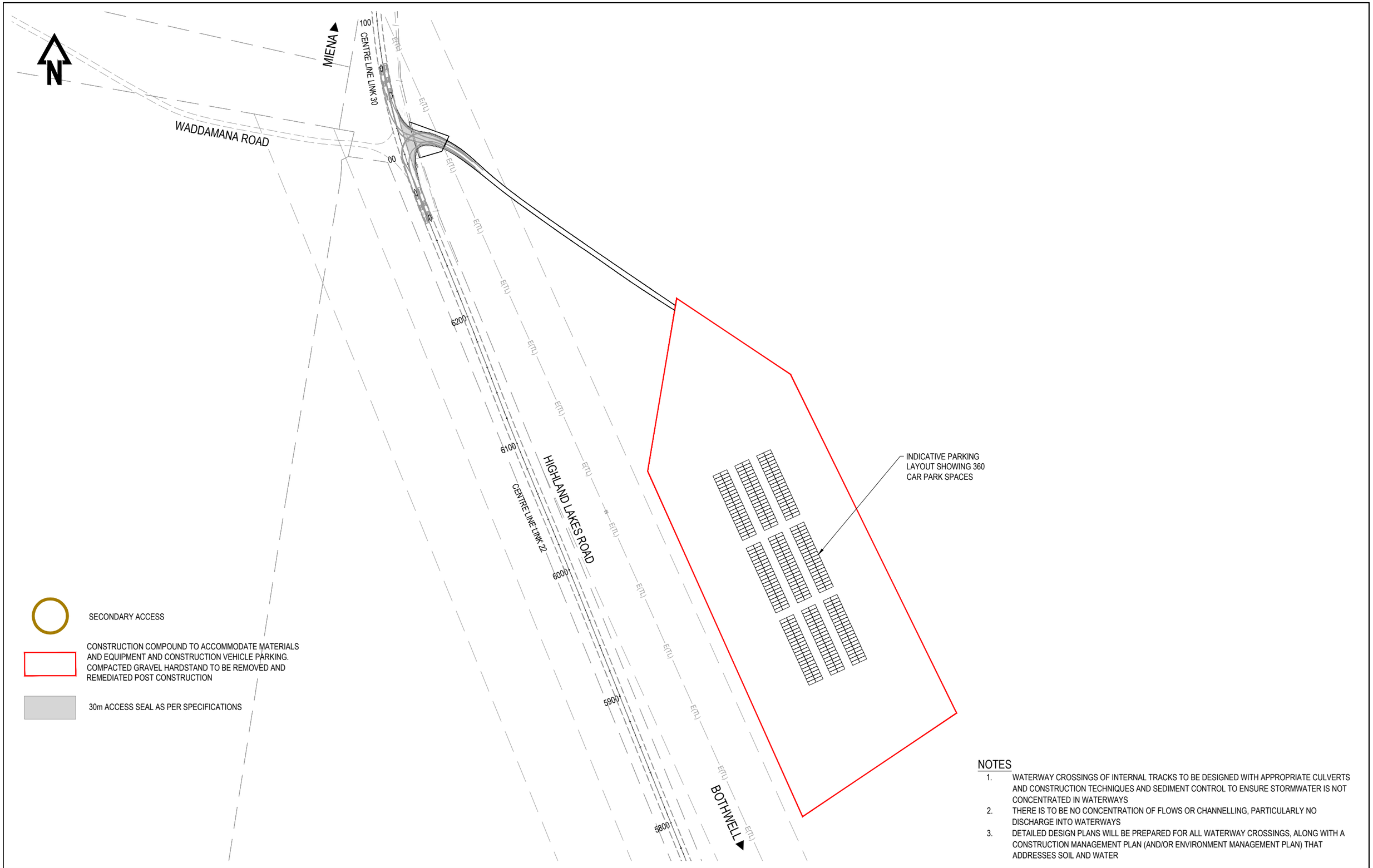
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PROJECT HIGHLAND LAKES ROAD
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N

MIENA

CENTRE LINE LINK 30

WADDAMANA ROAD

CENTRE LINE LINK 22

HIGHLAND LAKES ROAD

BOTHWELL

E(TL)

RELOCATE EXISTING ROAD SIGN CLEAR OF SIGHT LINES OF EXISTING VEHICLES STOCK GRID MAY NEED UPGRADE

SECONDARY ACCESS

30m ACCESS SEAL AS PER SPECIFICATIONS

EXISTING BOUNDARIES

- DIGITAL CADASTRE (ACCURACY 1.0m)
- FENCE
- GATE

PROPOSED BOUNDARIES

- FENCE - GENERAL (POST & WIRE)
- FENCE - REDUNDANT/REMOVED
- GATE

EXISTING ROAD INFRASTRUCTURE

- CENTRE OF ROAD
- DRIVEWAY
- EDGE OF PAVEMENT
- EDGE OF UNSEALED ROAD

PROPOSED ROAD INFRASTRUCTURE (Continued)

- DRIVEWAY/ACCESS

EXISTING ELECTRICAL SERVICES

- HIGH TENSION PYLON
- EP POLE - POWER
- E(TL) LINE - MAJOR TRANSMISSION (GIS)
- E(OH) LINE - MINOR TRANSMISSION (GIS)

NOTES

1. WATERWAY CROSSINGS OF INTERNAL TRACKS TO BE DESIGNED WITH APPROPRIATE CULVERTS AND CONSTRUCTION TECHNIQUES AND SEDIMENT CONTROL TO ENSURE STORMWATER IS NOT CONCENTRATED IN WATERWAYS
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PROJECT HIGHLAND LAKES ROAD
WEASEL SOLAR FARM - ACCESS

STATUS **PRELIMINARY**

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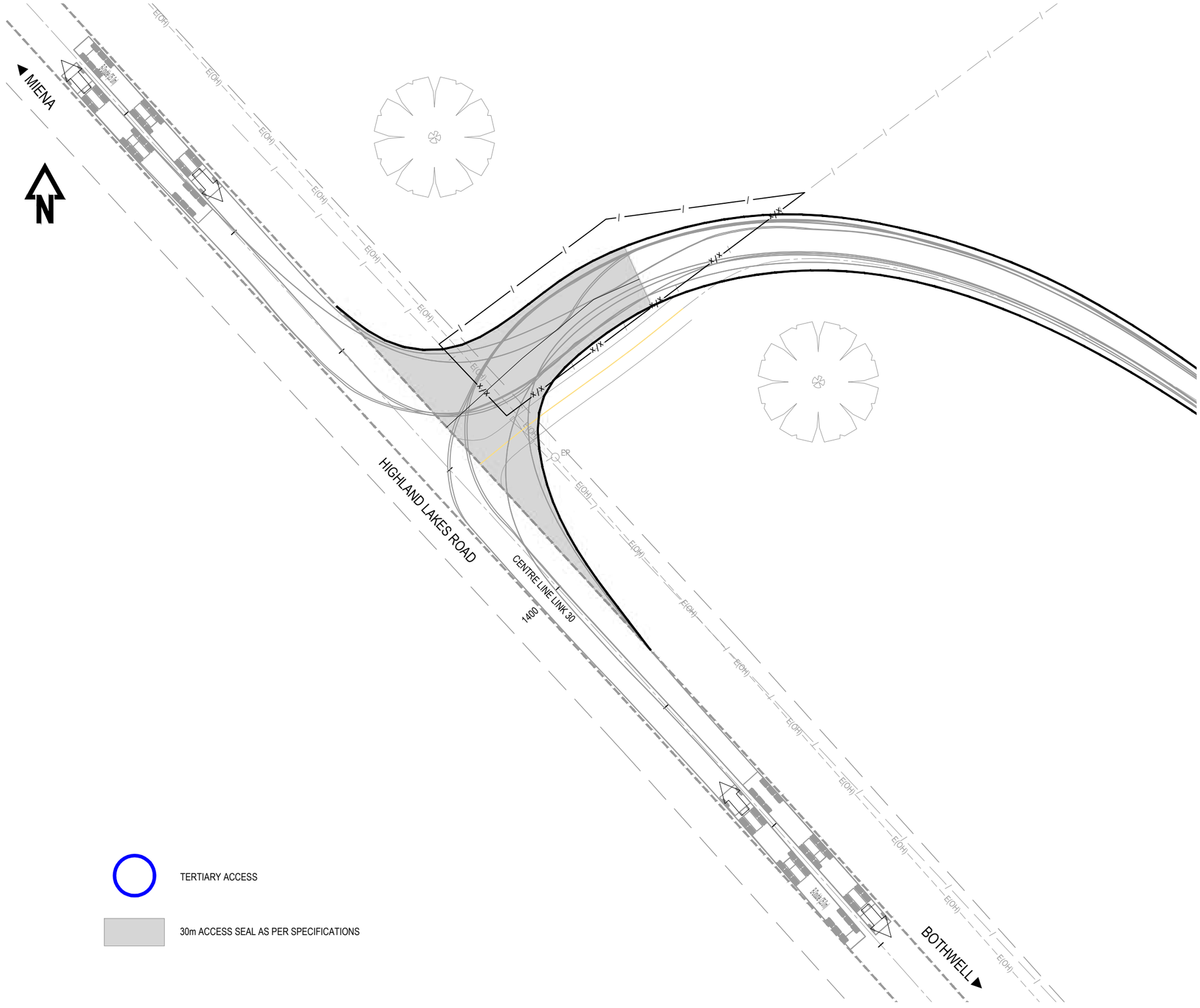
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- FENCE
- GATE

PROPOSED BOUNDARIES

- FENCE - GENERAL (POST & WIRE)
- FENCE - REDUNDANT/REMOVED
- GATE

EXISTING ROAD INFRASTRUCTURE

- CENTRE OF ROAD
- DRIVEWAY
- EDGE OF PAVEMENT
- EDGE OF UNSEALED ROAD

PROPOSED ROAD INFRASTRUCTURE (Continued)

- DRIVEWAY/ACCESS

EXISTING ELECTRICAL SERVICES

- HIGH TENSION PYLON
- POLE - POWER
- LINE - MAJOR TRANSMISSION (GIS)
- LINE - MINOR TRANSMISSION (GIS)

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PROJECT: HIGHLAND LAKES ROAD WEASEL SOLAR FARM - ACCESS
STATUS: **PRELIMINARY**

DRAWING TITLE: GENERAL ARRANGEMENTS - ACCESS C
DATUMS: AHD / MGA
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Department of State Growth Consultation

Appendix D

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Sandra Diaz

From: Volker, Sam <Sam.Volker@stategrowth.tas.gov.au>
Sent: Thursday, 16 May 2024 12:16 PM
To: Rebekah Ramm
Cc: Sandra Diaz
Subject: RE: Weasel Plains Solar Farm

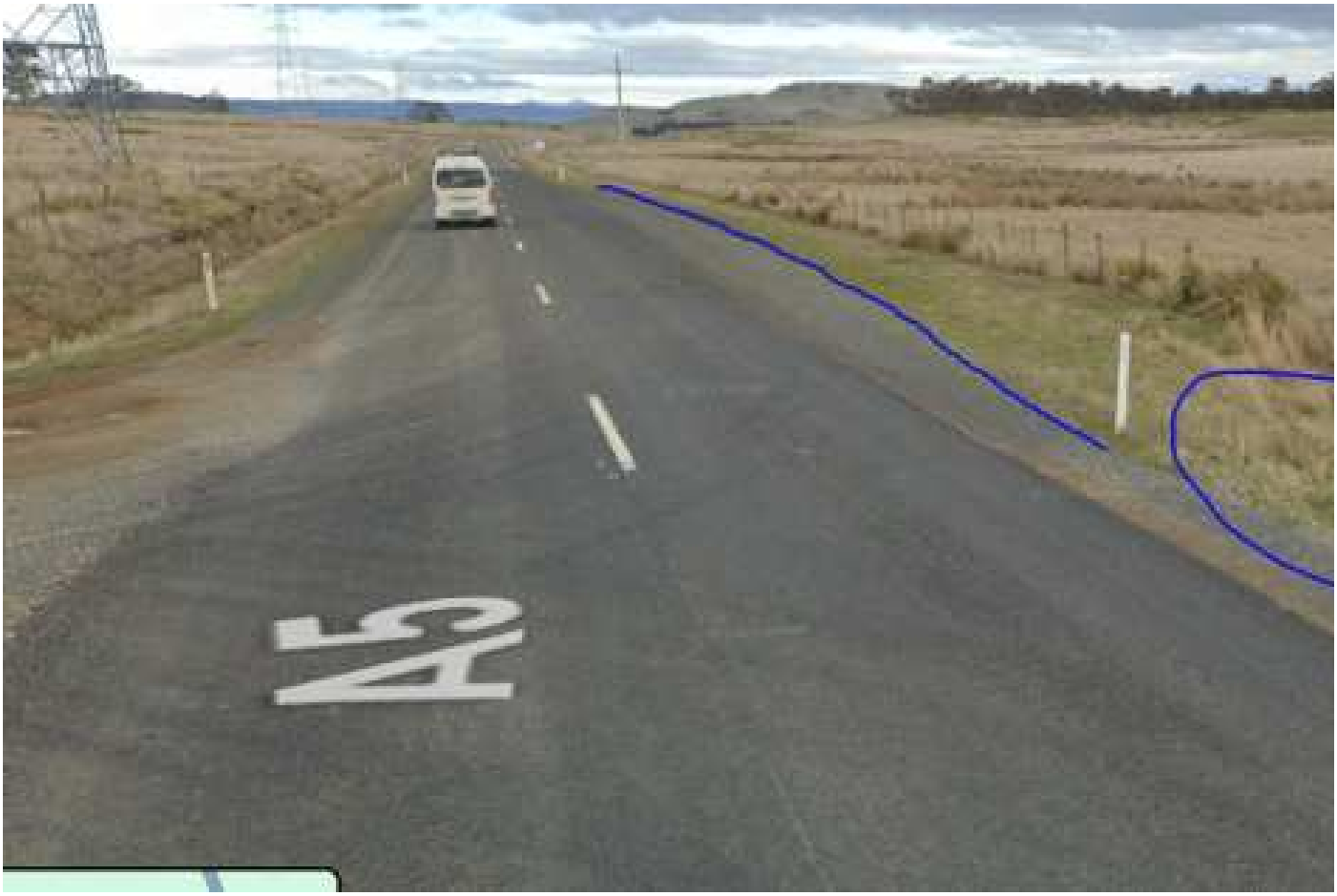
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Hi Bek,
I'm good, about to make a bit of a lateral move in the department to Programming and delivery as a PM soon which should be interesting. Hope you and the family are well?

A Solar Farm is a bit different to the norm for up that way. Typically we hear about wind farms
To answer your questions regarding the legality of the accesses, as the road is not limited access, we wouldn't have any records on whether they are approved or not. just rural farm accesses I guess.
Access A - We would have no objection if it were upgraded to a rural sealed access. You might consider moving it just to the south of the Waddamana road junction that way on the extremely unlikely chance vehicles are turning right at the same time they are not conflicting but this is very nit picky.

Access B no issues with upgrading to a rural sealed access.

Weasel Plains road – agree that there is no need for a BAR facility – just because I need to find one issue - my only concern is that for a northbound driver, there looks to be a bit of unsealed gravel that could be interpreted as widening then at the junction there is a culvert very close to the edge of the road. The proponent could consider lengthening the culvert a couple of metres and backfilling over the top, no need for a sealing though. Weasel plains road should be sealed back from the edge of the highway to reduce mud and debris from tracking onto the road.



Agree Construction phase signage identifying that there could be an increase in movements at particular junctions while in operation would be useful.

Trust this helps
Sam Volker | Traffic Engineering Liaison
Network Management | Department of State Growth
76 Federal Street, North Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Phone: (03) 6165 5205
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

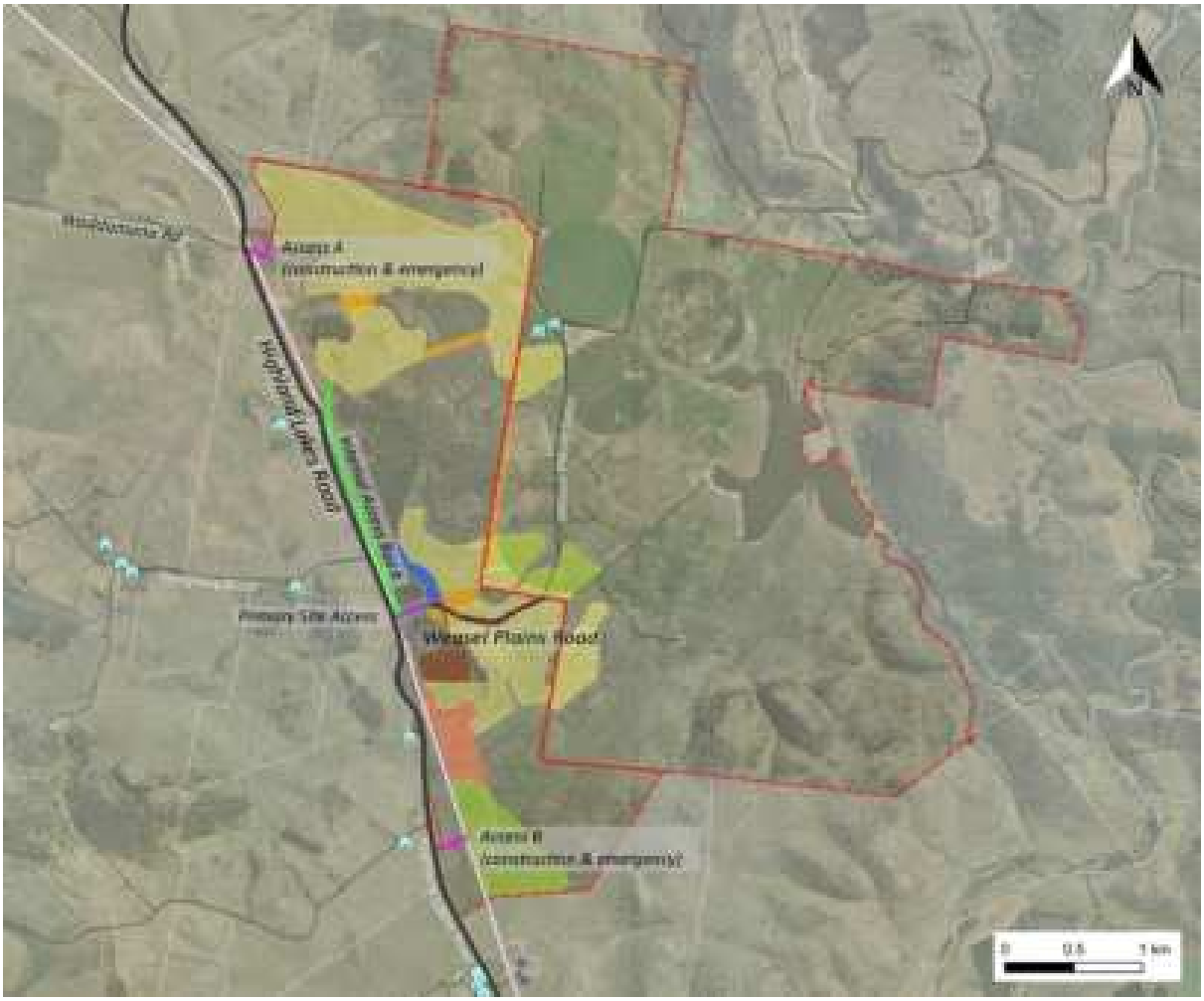
From: Rebekah Ramm <RRamm@pittsh.com.au>
Sent: Thursday, May 16, 2024 10:58 AM
To: Volker, Sam <Sam.Volker@stategrowth.tas.gov.au>
Cc: Sandra Diaz <SDiaz@pittsh.com.au>
Subject: Weasel Plains Solar Farm

You don't often get email from rramm@pittsh.com.au. Learn why this is important

Hi Sam

Hope you're going well!

We are completing a Traffic Impact Assessment for a Solar Farm development at 3415 Highland Lakes Road ('The Weasel', Property ID 2538314; Title Reference 140433/1) and 3236 Highland Lakes Road ('Weasel Plains', Property ID 2538322; Title Reference 140581/1). The project does have some impact to Highland Lakes Road.



The site is currently accessed from Weasel Plains Road which intersects with Highland Lakes Road. The intersection has no turn lanes and Weasel Plains Road carries minimal traffic volumes.

In the vicinity (station ID A2100140) there is 2021 data, we have estimated 2024 volumes in the table below utilising a conservative 3% growth rate.

AADT	% Heavy Vehicles	AM peak volume (AM peak hour)	PM peak volume (PM peak hour)
372	18 %	37 (10.00am – 11.00am)	35 (3.00pm – 4.00pm)

It is proposed to retain the access from Weasel Plains Road as the main access point to the site after completion of the Solar Farm, and also utilise it for construction. Once the Solar Farm site is under operation, traffic movements would be generally in the order of a few movements per week, peaking at 10-15 movements per day during more significant maintenance periods.

There are two new accesses that are proposed to be constructed at the northern and southern ends of the site (Access A and Access B in the image). These will be construction accesses and will be retained for emergency vehicles only during operation.

Access A and B have been specifically selected based on available site distance. They both have existing farm gates and Access B is also at a laydown/ pullover area.

The sight distance at the access locations are shown in the table below.

Access	Approach	Speed	SISD Requirement – Austroads *(with desirable 2s reaction time)*	Observed sight distance	Meets Requirements?
Primary Accesses					
Weasel Plains Road	North	100	248m	>300m	✓
	South	100	248m	260m	✓
Construction and Emergency Accesses					
Access A	North	100	248m	>300m	✓
	South	100	248m	>300m	✓
Access B	North	100	248m	>300m	✓
	South	100	248m	>300m	✓

Weasel Plains Road – Primary access

Weasel Plains Road junction off Highland Lakes Road has a wide unsealed entrance. A 4.1m wide cattlegrid is installed near the entrance.

Sight distance is sufficient in both directions. Weasel Plains Road will provide primary access to the Weasel Solar Farm site for all vehicles during both the construction phase and operational phase.



Weasel Plains Road entrance



Highland Lakes Road, south approach to Weasel Plains Road



Highland Lakes Road, north approach to Weasel Plains Road

Construction and Emergency Access A

An existing 4.1m wide farm gate is installed opposite the Waddamana Road intersection and provides access to the Weasel Solar Farm site.

Sight distance is excellent in both directions along Highland Lakes Road, and also up Waddamana Road. Note that realignment of existing road signage would be recommended to prevent visual obstructions.



Entrance of Access A, opposite Waddamana Road intersection (image source: Google Maps street view)



Highland Lakes Road, south approach to Access A, opposite Waddamana Road



Highland Lakes Road, north approach to Access A, opposite Waddamana Road

Construction and Emergency Access B

Near the south of the site, an existing access services a laydown area constructed on land owned by Department of Natural Resources and Environment (NRE Tas). At the rear of the laydown is an existing gated entrance to the Weasel Solar Farm site.

The existing access is located on a long straight on Highland Lakes Road and sight distance is excellent in both directions.



Access B entrance



Highland Lakes Road, south approach to Access B



Highland Lakes Road, north approach to Access B

Light vehicle movements are likely to occur clustered, with vehicles arriving 6:00am-7:00am and departing 6.00pm-7.00pm, coinciding with the hours of operation of the construction site. These are outside existing peak periods. Heavy vehicles will access the site periodically throughout the day.

The construction phases are shown below, construction will take 18 months and construction phases will overlap – i.e. working on different phases in different sections of the site, so movements will be split between the access points.

Construction Activity	Duration	Work force	Light Vehicle	Medium Truck	Large Truck
	(weeks)	(workers per day)	(vehicle movements per day)		
Logistics	27	20	10		20
Civil	34	40	20		20
Mechanical	39	90	30	4	
Electrical	39	75	30	2	
Completion and Commission	25	20	10		

Based on this I have a few questions:

- Are access points A and B currently approved accesses to Highland Lakes Road?
- We consider this to be a site that could be acceptable with no BAL/BAR at any of the accesses for the following reasons. Could you confirm if you agree?
    - low traffic volumes on Highland Lanes Road
    - no significant crash history in the vicinity of the access points
    - good sight distance at all access points
    - 18 month construction period, after which traffic volumes are very low

It is noted that we would suggest some construction vehicle warning signage along Highland Lakes Road during the construction period.

Please let me know if you need any more info or would like to discuss over the phone.

Kind regards
Rebekah

pitt&sherry

Rebekah Ramm

Capability Lead – Traffic Engineering | Associate Roads and Traffic Engineer
MTrans&Traf, BE-MBA(Hons), CPEng, MIEAust

Phone +61 3 6210 1402 | rramm@pittsh.com.au | Connect on LinkedIn
Hobart (nipaluna) — Level 1, Surrey House, 199 Macquarie Street, Hobart Tasmania 7000
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Office	*Hybrid*	*Office*	*Alternating Office/ Away*	*Hybrid*

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Swept Paths

Appendix E

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CLIENT R. LUXMOORE PROJECT MANAGEMENT

PROJECT WEASEL SOALR FARM
TRAFFIC IMPACT ASSESSMENT

STATUS **PRELIMINARY**

DRAWING TITLE VEHICLE SWEPT PATH ANALYSIS
B-DOUBLE TRUCK - ACCESS/EGRESS

DATUMS: AHD / MGA

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CLIENT: R. LUXMOORE PROJECT MANAGEMENT

PROJECT: WEASEL SOALR FARM
TRAFFIC IMPACT ASSESSMENT

STATUS: **PRELIMINARY**

DRAWING TITLE: VEHICLE SWEPT PATH ANALYSIS
19.0m SEMI TRAILER - ACCESS/EGRESS

DATUMS: AHD / MGA

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Weasel Solar Farm

Traffic Impact Assessment

Pitt & Sherry (Operations) Pty Ltd
ABN 67 140 184 309

Phone 1300 748 874
info@pittsh.com.au
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Located nationally —
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Sydney
Brisbane
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Newcastle
Devonport



Agricultural Assessment of the Weasel Solar Farm Development



pinion ADVISORY

Pinion Advisory was formed in July 2020 by the merger of three Australian consulting firms – Macquarie Franklin, Rural Directions and Sunraysia Agriculture.

Pinion Advisory
112 Wright Street | East Devonport | Tasmania | 7310
Phone: 03 6427 5300 | Fax: 03 6427 0876 | Email: jlynch@pinionadvisory.com
Web: www.pinionadvisory.com.au

Report authors: Jason Lynch B App. Sci. (hort) CPAg
Senior Consultant

An appropriate citation for this report is: *Pinion Advisory, May 2024, Agricultural assessment of the proposed Weasel Solar Farm development.*

Date	Issue number	Document Status	Authorised by
6/5/24	1	Draft	Jason Lynch
11/7/24	2	Final	Jason Lynch
19/9/24	3	Final – revised#1	Jason Lynch

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1 Executive summary

This agricultural assessment report has been instructed by Robert Luxmore Pty Ltd , project management consultants, on behalf Tasflo Pty Ltd to provide an assessment of the agricultural impacts of the proposed Weasel Solar Farm (WSF) development on two properties, as per The Weasel (property title 140433/1) and Weasel Plains (property title 140581/1).

The WSF is a large-scale solar project covering approximately 435 hectares of land, and once fully operational is anticipated to generate approximately 250 megawatts of renewable electricity.

The Weasel Solar Farm development would include various components including:

- Solar array panels
- A battery energy storage system
- Various electricity infrastructure (inverters and an electrical substation).
- Access tracks

The proposal includes land for construction, maintenance, and operation, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, and landscaping.

The WSF development covers open pasture land on The Weasel and Weasel Plains properties, with these areas of the properties currently used for agricultural land use activity, that being for pastoral land use activity to graze sheep and cattle.

For the WSF project, multiple technical studies have been undertaken, including ecological, hydrological, traffic, cultural heritage, fire, planning and landscape and visual impacts.

This agricultural assessment report provides information on:

- The current and future agricultural activities which are, can and could be undertaken on the subject properties.
- The potential for impacting agricultural land use activity on the subject properties as well adjacent and nearby agricultural land.

The proposed development has been planned and designed to allow for a continuation of the current and future potential agricultural land use activities and is anticipated to actually result in a range of ongoing positive operational and management benefits for both properties.

Weasel Solar Farm will have a range of impacts on the subject properties, with the potentially negative impacts effectively managed through a combination of the adoption good construction and operational practices.

The Weasel Solar Farm would result in the permanent loss of 8.22 hectares of pastureland however this loss would be outweighed by the significant ongoing operational and management benefits associated with the proposed development including a likely reduction ewe and lamb mortality and overall improved livestock productivity.

2 Background and purpose

This report has been undertaken on behalf of Tasflo Pty Ltd (the proponent) and will accompany an application to the Central Highlands Council seeking approval for the Weasel Solar Farm (WSF) development.

This report provides information and details of the WSF study area on the subject Weasel and Weasel Plain properties, as well as on local and regional land use.

2.1 Pinion Advisory background

Pinion Advisory is an Australian owned agricultural consultancy company servicing various sectors of red meat, dairy, cropping and horticulture industries, as well as providing farm business and commodity risk management, recycled resource management, irrigation development and environmental assessments.

The Pinion Advisory team is spread across Australia, includes 80 consultants who posses a vast array of skills, knowledge and experience.

2.2 Report author background

In providing the information and opinions enclosed here, it is to be noted that Jason Lynch possesses a B.AppSc(hort), is a member of Australian Institute of Agriculture, Certified Practising Agricultural and has over 25 years experience in the agricultural industry in Tasmania. Jason is skilled to undertake agricultural and development assessments as well as land capability studies.

He has previously been engaged by property owners, developers, independent planners, surveyors and councils to undertake assessments within the Brighton, Burnie, Central Coast, Central Highlands, Circular Head, Clarence, Devonport, Dorset, George Town, Glamorgan Spring Bay, Huonville, Kentish, King Island, Kingston, Latrobe, Launceston, Meander Valley, Northern Midlands, Sorell, Southern Midlands, Tasman, and Waratah-Wynyard municipalities.

Most of these assessments have involved the assessment of land for development purposes, agricultural impact and the potential for conflict with the Tasmanian and/or Interim Council Planning Schemes.

2.3 Planning provisions

The subject properties are located in the Central Highlands municipality and identified within the Agricultural Zone of the Tasmanian Planning Scheme - Central Highlands.

The purpose of the Agricultural Zone is:

- To provide for the use or development of land for agricultural use.
- To protect land for the use or development of agricultural use by minimising:

  a) Conflict with or interference from non-agricultural uses;

  b) Non-agricultural use or development that precludes the return of the land to agricultural use; and

  c) Use of land for non-agricultural use in irrigation districts.

- To provide for use or development that supports the use of the land for agricultural use.

The WSF will need to comply with the relevant Agricultural Zone planning scheme provisions of the Tasmanian Planning Scheme - Central Highlands and obtain a planning permit to cover its development and ongoing operation.

This agricultural assessment report supports the compliance with the relevant Agricultural Zone planning scheme provisions of the Tasmanian Planning Scheme - Central Highlands

3 Development site characteristics

3.1 Property details

This WSF agricultural assessment report has been commissioned by Robert Luxmore Pty Ltd , project management consultants, on behalf Tasflo Pty Ltd to provide an assessment of the agricultural impacts of the proposed WSF on two properties, as per The Weasel and Weasel Plains. Table 1.

Table 1 Property details

Property name	Address	Ownership	Title Reference	Property ID	Hectares (Approx)
The Weasel	3415 Highland Lakes Road, Bothwell, Tas 7030	Dungrove Land Company Pty Ltd	140433/1	2538314	918.8
Weasel Plains	3236 Highland Lakes Road, Bothwell, Tas 7030	Cluny Pty Ltd	140581/1	2538322	1775.9

Both properties are located approximately 10 km north of Bothwell in the Central Highlands municipality.

The Weasel property is farmed as part of a larger land holdings, owned and managed by the Dungrove Land Company Pty Ltd. The Dungrove property, adjacent to the west of The Weasel property, covers 3,700 hectares, has extensive irrigated pasture production infrastructure (680 hectares) and is used to graze cattle and sheep. The Weasel and Dungrove and other highlands Dungrove Land Company Pty Ltd land holdings are operated and managed collectively which provides a significant level of scale and allow for large herds of cattle and sheep to be run on a year round basis.

3.2 Regional and district features

The Central Highlands municipality primary industry features include land used for:

- Low rainfall dryland pasture production to support sheep and beef grazing enterprises.
- Irrigated pasture and cropping production system using irrigation water sourced from the Southern Highlands Irrigation Scheme (SHIS) and the River Clyde and its tributaries which is used to support irrigated pasture production and seasonal cropping.
- Extensive areas of native vegetation, World Heritage Tasmanian Wilderness and plantation forest (hardwood and softwood).
- Significant renewable energy infrastructure including various hydro dams and associated infrastructure (canals, high voltage transmission lines and substations).

Analysis of the Australian Land Use and Activity (ALUM 2016) provides an insight of the type and scale of various agricultural land use activity conducted in the Central Highlands Council (CHC) municipality.

Table 2 ALUM 2016 in the CHC municipality and associated agricultural land use activity.

Agricultural Land Use Activity (ALUM 2016)[1]	Area (hectares)
2. Production from relatively natural environments	33,086
3. Production from dryland agriculture and plantations	132,587
4. Production from irrigated agriculture and plantations	12,275
5. Agricultural Intensive uses	56

Please note that in Table 2, the non-agricultural ALUM "Intensive Uses" have not been included, and this actually covers a considerable amount of the land within the municipality associated with hydro power generation (dams and associated generation infrastructure).

Refer to Appendix A, Table 7, for further details on the ALUM land use activities.

3.3 Adjacent land use

The land use activity adjacent to the properties involved in the WSF includes:

- North:
  - "Rockford" property which covers 1,710 hectares and is used for grazing sheep and cattle on dryland pasture.
- South:
  - "East Cluny" property which covers 350 hectares and is used for grazing sheep and cattle on dryland pasture.
- East
  - Additional land holdings of the "Weasel Plains" property which covers 2,020 hectares and is used for grazing sheep and cattle on dryland pasture. This property is owned by the same owner, Cluny Pty Ltd, as the Weasel Plains property subject to the WSF.
- West:
  - "Cluny" property which covers 885 hectares and is used for grazing sheep and cattle on dryland and irrigated pasture and seasonal irrigated cropping.
  - "Dungrove property which covers 3,700 hectares and is used for grazing sheep and cattle on dryland and irrigated pasture and seasonal irrigated cropping. This property is owned by the same owner, Dungrove Land Company Pty Ltd, as The Weasel property.

A location of the properties adjacent to The Weasel property is attached in Appendix B Figure 1.

[1] Extracted from DAFF https://www.agriculture.gov.au/abares/aclump/land-use/alum-classification

3.4 Climate

The climate associated with the subject properties can be characterised as having cold winters and warm summers.

The Weasel Plains property had a Bureau of Meteorology weather station (station number 96053) which operated from 1965 until 2013, and lieu of the lack of current climate data a SILO[2] meteorological dataset has been used to provide the average monthly rainfall, evapotranspiration (ET) and minimum and maximum temperatures. Table 3.

On average these properties receive 525mm of rainfall and can be subject to extended periods of particularly low rainfall and drought events.

Table 3 Annual climate value for the Weasel and Weasel Plains properties (SILO dataset, latitude -42.3 and longitude 146.95)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Average Rainfall (mm)	43.4	30.7	35.9	39.6	37.3	39.5	44.0	58.1	48.2	54.0	48.2	46.2	525.2
ET (mm)	162.4	124.9	98.8	55.3	31.1	18.8	23.2	36.6	59.9	92.5	119.3	149.5	972.3
Average Max T (^{o}c)	22.1	21.5	19.3	15.6	12.2	9.6	9.0	10.1	12.3	14.9	17.6	19.7	
Average Min T (^{o}c)	8.2	7.9	6.5	4.4	2.5	0.8	0.4	0.7	2.1	3.5	5.3	6.7	

The more elevated areas of both properties experience up to 20 annual frost events, whilst the lower lying ground is subject to cool air pooling and can experience up to 65 annual frost events.[2]

Both properties typically receive up to 700 growing day degrees (base 10^{o}c) from October to April, and accumulates up to 1,700 chill hours (0-7^{o}c).[2]

A combination of the prevailing low rainfall conditions and cold winter results in a relatively short 6 month dryland pasture growing season (mid-September to mid-December and mid-March to late May).

3.5 Topography

The Weasel property features gently sloping (1-5^o) open plains and rolling topography on the central and northern areas which leads down to flat and lower lying ground associated with the Weasel Plains Creek whilst the southern and far northern areas are covered by gentle/moderate sloping (5-15^o) rolling south facing ground. The highest point on the property is 611m ASL (Stone Jug Hill on the far south east boundary) and lowest 430m ASL (far south west boundary area).

[2] Extracted from SILO https://www.longpaddock.qld.gov.au/silo/point-data/#responseTab2

The Weasel Plains features flat to gently sloping (0-5^{o}) open plain topography on the western, central and northern areas of the property with the southern, eastern and far northern areas covered by moderate/steep sloping (5-35^{o}) hilly ground. The highest point on the property is 670m ASL (central far eastern boundary) and lowest 445m ASL (base of the irrigation dam wall on the central eastern boundary).

The WSF study area can be considered as being covered by land with a gently rolling topography.

3.6 Vegetation

The vegetation present on The Weasel property is dominated by open modified agricultural land[3] consisting of dryland pasture land and areas of native vegetation.

At the time of the visit (late summer) The Weasel property appeared to relatively free of common pasture weeds, with the exception of the presence of typical pasture broadleaf (e.g. various flat weeds and thistles) and grass (Brown Top, Sweet Vernal and Barley Grass) and some patches of bracken were observed to be distributed on the central and southern areas.

The vegetation present on the Weasel Plains property is dominated by modified agricultural land consisting of dryland pasture land, centre pivot irrigated land with areas of native vegetation present as well as approximately 2,200m of *Macrocarpa* pine shelter belts are located throughout the property.

At the time of the visit (late summer) the area of the Weasel Plains property subject to the WSF appeared to relatively free of common pasture weeds, with the exception of the presence of typical pasture broadleaf (e.g. flat weeds and thistles) and grass (Brown Top, Sweet Vernal and Barley Grass).

Overall, the land present on the Weasel and Weasel Plains properties associated with the WSF are relatively weed free.

A detailed flora and fauna survey of the WSF development area has been conducted by Van Diemen Consulting, covering both The Weasel and Weasel Plains properties which provides detailed information on the type of native vegetation present and associated land coverage. Highlights of this report[3] includes:

- No threatened Ecological Communities or Threatened Native Vegetation Communities are present in the survey area.
- Three species listed on Threatened Species Protection Act 1995 were observed in the survey area.
- No species listed in the Environmental Protection and Biodiversity Conservation Act 1999 were observed in the survey area.

[3] Barnes R., & McCoull C. ((2024) WEASEL SOLAR FARM, ECOLOGICAL AND NATURAL ASSETS CODE ASSESSMENT.

- No fauna species listed in the Threatened Species Protection Act 1995 the Environmental Protection and Biodiversity Conservation Act 1999 were observed in the survey area.
- Declared weed species listed on the Biosecurity Act 2019 were observed in the survey area including blackberry (*Rubus anglocandicans*), Californian thistle (*Cirisium arvense*) and Gorse (*Ulex europeaus*).

The WSF is based on covering dryland pasture, and whilst some individual paddock trees will be removed as part of the construction process it is not anticipated that vegetation communities will be cleared and removed. The WSF has been planned to be sensitively designed for a minimal disruption and degradation to the vegetation (e.g. pasture and native vegetation) present within the study area and this extends to minimal land clearing and soil disturbance during the construction phase.

3.7 Geology and soils

The geology present on The Weasel property is dominated by glaciomarine sequences of pebbly mudstone and sandstone and limestone, with smaller areas of dolerite and quartz sandstone on the far south east area[4].

The soils present on The Weasel property are dominated by grey/brown duplex soil consistent with the chromosol[5] soil type, which features a sandy loam topsoil over a sandy clay subsoil, with small areas of brown clay loam soils consistent with the dermosol[5] soil type on the far south eastern area and black cracking heavy clay soil which is consistent with the vertosol[5] soil type on the far northern area associated with the land adjacent to the Weasel Plains Creek.

The geology present on the Weasel Plains property is a complex of glaciomarine sequences of pebbly mudstone and sandstone and limestone on the northern and western boundary area, dolerite on the central and eastern area and smaller areas of quartz and freshwater sandstone on the central and southern areas[4].

The soil present on the Weasel Plains property associated with the WSF is a grey/brown duplex soil consistent with the chromosol[5] soil type.

The soils present on The Weasel and Weasel Plains property are suitable for pasture production albeit with productivity constraints relative to the associated land capability present.

The WSF would be located on the lighter textured sandy/sandy loam soils.

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[4] Extracted from the LIST https://maps.thelist.tas.gov.au/listmap/app/list/map

[5] Cotching, B. (2009) Soil Health for Farming in Tasmania. Tasmania. Australia.

3.8 Infrastructure

The Weasel property has infrastructure present which includes:

- Internal and boundary fencing
- Reticulated stock water system
- Stockyards

A 220 kV transmission line runs adjacent to the western boundary and cuts across the far south west area of The Weasel property. The WSF will have no negative impacts on the high voltage transmission line and support towers.

None of the infrastructure present on The Weasel property is anticipated to be degraded and/or diminished as result of the WSF.

The Weasel Plains property has infrastructure present which includes:

- Internal and boundary fencing
- Reticulated stock water system
- 1 set of stockyards
- 5 centre pivots
- Large 5,400 ML irrigation dam and irrigation scheme infrastructure
- Shearing shed
- Stockyards
- 2 residential dwellings
- Various sheds
- Central laneway network which provides access throughout the property.

None of the infrastructure present on the Weasel Plains property is anticipated to be degraded and/or diminished as result of the WSF.

3.9 Waterways and irrigation

The Weasel Plains Creek and its tributaries flows through the northern area of The Weasel property and through the northern and central areas of the Weasel Plains property.

Tributaries of Bark Hut Creek flow through the southern area of the Weasel property.

Based on an assessment using the NRE Water Access Tool[6] no new irrigation water allocations are available from the Weasel Plains Creek or Bark Hut Creek.

[6] Extracted from https://wrt.tas.gov.au/wat/input

No irrigation dams are present, and no irrigation water allocations are on The Weasel property. A number of small stock water dams nominally with a storage capacity of less than 1 ML are present on The Weasel property.

Both The Weasel and Weasel Plains properties are located within the Southern Highlands Irrigation District (SHID) however neither property is serviced by the Southern Highlands Irrigation Scheme (SHIS). The SHIS is fully allocated, and no irrigation is available for new irrigators[7].

It is reasonable to consider that The Weasel property is severely constrained for access to irrigation water and is effectively a dryland property.

The Weasel Plains property has a very large 5,400 ML irrigation dam (dam ID 3671) with a surface area of 96.5 hectares, and this is filled based on a surety 5 5,400 ML irrigation water allocation (allocation ID 2052) from the Weasel Plains Creek.[8]

Water is drawn from the 5,400 ML dam and used to supply 270 hectares of centre pivot irrigated land on the Weasel Plains property.

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[7] Extracted from Tasmanian Irrigation https://www.tasmanianirrigation.com.au/schemes/southern-highlands

[8] Extracted from the LIST https://maps.thelist.tas.gov.au/listmap/app/list/map

4 Land Capability

4.1 Land capability methodology

The currently recognised reference for identifying land capability is based on the class definitions and methodology described in the Land Classification Handbook, Second Edition, C.J Grose, 1999, Department of Primary Industries, Water and Environment, Tasmania.

Most agricultural land in Tasmania has been classified by the Department of Primary Industries Water and Environment at a scale of 1:100,000, according to its ability to withstand degradation.

A scale of 1 to 7 has been developed with Class 1 being the most resilient to degradation processes and Class 7 the least. Class 1, 2 and 3 is collectively termed "prime agricultural land". For planning purposes, a scale of 1:100,000 is often unsuitable and a re-assessment is required at a scale of 1:25,000 or 1:10,000. Factors influencing capability include elevation, slope, climate, soil type, rooting depth, salinity, rockiness and susceptibility to wind, water erosion and flooding.[9]

4.2 Weasel Solar Farm land capability assessment

The official land capability map for the area was produced by the DPIWE in 2002 at a scale of 1:100,000, reported in the Shannon Report[10] and modelling has identified the subject properties to be covered by Class 5 and 6 land.

The report authors' observations on the property visit (February 2024) determined that the area of the properties subject to the WSF are covered by Class 5, 5+6 and 6 land (Figure 6):

Class 5 land is described as:

> *This land is unsuitable for cropping, although some areas on easier slopes may be cultivated for pasture establishment or renewal and occasional fodder crops may be grown. The land may have slight to moderate limitations for pastoral use. The effects of limitations on the grazing potential may be reduced by applying appropriate soil conservation measures and land management practices.*[9]

Class 5+6 land is described as:

> *At least 60% Land unsuited to cropping and with slight to moderate limitations to pastoral use, up to 40% Land well suited to grazing but which is limited to occasional cropping or a very restricted range of crops.*[9]

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[9] Grose C.J. (1999) Land Capability Handbook: Guidelines for the Classification of Agricultural Land in Tasmania. 2nd Edition, DPIWE, Tasmania.

[10] Lynch, S. (2002) Modelled Land Capability Classes of Tasmania, Shannon 1:100,000 map. Department of Primary Industries Water and Environment, Tasmania.

Class 6 land is described as:

> *Land marginally suitable for grazing because of severe limitations. This land has low productivity, high risk of erosion, low natural fertility or other limitations that severely restrict agricultural use.*[9]

The key land capability limitations associated with the property are:

- Soil (s) associated with limitations relating to the shallow duplex nature of the soil (low soil moisture holding capacity and constrained plant root depth) and heavy clay nature of the vertosol soils (prone to waterlogging and challenging to cultivate).
- Erosion (e) associated with the risk of rill and sheet erosion on the steeper land, scouring resulting from wind erosion on bare and exposed soils, and the potential for degraded soil structural due to pugging from livestock movement on waterlogged soils and/or inappropriate and where applicable excessive ground cultivation activities.
- Wetness (w) associated with the land being subject to extended periods of soil waterlogging and possible short term inundation during high waterway flow events which limits overall productivity and utility of the land.

The proposed WSF would be located on predominantly class 5 land.

A land capability map of the WSF study area is attached in Appendix B Figure 2.

Various images of the landforms and general views across the properties is attached in Appendix C.

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[9] Grose C.J. (1999) Land Capability Handbook: Guidelines for the Classification of Agricultural Land in Tasmania. 2nd Edition, DPIWE, Tasmania.

Table 4 Land capability table

Land Capability Class (ha)	Land Characteristics							
	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
5se	Sandy/sandy loam chromosol soil derived from a complex of sandstones (quartz and pebbly types) and pebbly mudstone. Duplex soil, as a brown/grey sandy/sandy loam top soil over a light brown/orangey sandy clay subsoil.	1-5	Flat to gentle sloping and rolling ground. 430-525m ASL.	Moderate Associated with scouring due to wind erosion on bare and exposed soils, the potential for degraded soil structural due to pugging from livestock movement on waterlogged soils (rare and infrequent) and/or inappropriate and excessive ground cultivation activities.	Moderate This land experiences cold winters and warm summer conditions. Receives on average 525mm annual rainfall, experiences up to 65 annual frost events, has 700 GDD (Oct to April) and 1,700 chill hours (May to August).	These soils are typically imperfectly to moderately well drained and have a low soil moisture holding capacity. Topsoil depth ranges from 20-30 cm. Occasional stone and rock fragments are present on the soil surface and in the soil profile.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover.	Unsuitable for cropping and suitable for pastoral use albeit with moderate limitations. This land is unsuitable for perennial horticulture. Due to the erosion prone nature of this land it should be destocked in response to low pasture covers and rested appropriately.

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
5+6se	Sandy/sandy loam chromosol soil derived from a complex of sandstones (quartz and pebbly types) and pebbly mudstone, and dermosol soils derived from dolerite geology. Duplex soil, as a brown/grey sandy/sandy loam top soil over a light brown/orangey sandy clay subsoil. Brown clay loam soils.	5-15	Gentle/moderate sloping and rolling/hilly ground. 460-611m ASL.	Moderate/high Associated with scouring due to wind erosion on bare and exposed soils, the potential for degraded soil structural due to pugging from livestock movement on waterlogged soils (rare and infrequent) and/or inappropriate and excessive ground cultivation activities.	Moderate This land experiences cold winters and warm summer conditions. Receives on average 525mm annual rainfall, experiences up to 20 annual frost events, has 700 GDD (Oct to April) and 1,500 chill hours (May to August).	These soils are typically moderate to well drained and have a low/moderate soil moisture holding capacity. Topsoil depth ranges from 20-30 cm. Stone and rock fragments are present on the soil surface and throughout the soil profile.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover.	Unsuitable for cropping and suitable for pastoral use albeit with moderate/severe limitations. Due to the erosion prone nature of this land it should be destocked in response to low pasture covers and rested appropriately. This land is unsuitable for perennial horticulture.

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
5+6sr	Sandy/sandy loam chromosol soil derived from a complex of sandstones (quartz and pebbly types) and pebbly mudstone. Duplex soil, as a brown/grey sandy/sandy loam top soil over a light brown/orangey sandy clay subsoil.	1-5	Flat to gentle sloping and rolling ground. 470-530m ASL.	Moderate Associated with scouring due to wind erosion on bare and exposed soils, the potential for degraded soil structural due to pugging from livestock movement on waterlogged soils (rare and infrequent) and/or inappropriate and excessive ground cultivation activities.	Moderate This land experiences cold winters and warm summer conditions. Receives on average 525mm annual rainfall, experiences up to 35 annual frost events, has 700 GDD (Oct to April) and 1,600 chill hours (May to August).	These soils are typically imperfectly to moderately well drained and have a low soil moisture holding capacity. Topsoil depth ranges from 20-30 cm. Stone and rock fragments are present on the soil surface and throughout the soil profile. Rocky outcrops and sheet rock are distributed across this land.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover.	Unsuitable for cropping and suitable for pastoral use albeit with moderate limitations. Much of this land is covered by native forest woodland vegetation, is only capable to supporting a low carrying capacity and is used a run country grazing land. This land is unsuitable for perennial horticulture.

Land Capability Class (ha)	Geology & Soils	Slope %	Topography & Elevation	Erosion Type & Severity	Climatic Limitations	Soil Qualities	Main Land Management Requirements	Agricultural Versatility
5+6sw	Clay vertosol soil derived from alluvial sediment. Clay black self-mulching soil.	1-3	Flat to very gentle sloping ground associated with the Weasel Plains Creek riparian and adjacent land. 465-480m ASL.	Low/moderate Associated with structural due to pugging from livestock movement on waterlogged soils and/or inappropriate and excessive ground cultivation activities and possible stream bank erosion during periods of high water flow in the Weasel Plains Creek (rare and infrequent).	Moderate This land experiences cold winters and mild summer conditions. Receives on average 525mm annual rainfall, experiences up to 65 annual frost events, has 700 GDD (Oct to April) and 1,700 chill hours (May to August).	These soils are typically poor/imperfectly to and have a high soil moisture holding capacity. Topsoil depth ranges from 30-40 cm.	Avoid situations that lead to the exposure of bare soil, therefore maintain sufficient ground cover.	Unsuitable for cropping and suitable for pastoral use albeit with moderate limitations. These soils are very challenging to cultivate and renovate, and any ground works must be carefully timed to ensure optimal soil conditions and pasture and pasture establishment.

5 Proposed Development

The WSF is a large-scale solar project covering 435 hectares of land, and incorporates solar array panels, a battery energy storage system and various electricity infrastructure (inverters and an electrical substation).

A plan of the WSF is attached in Appendix D Figure 14, Figure 15 and Figure 16.

The WSF would be connected to the existing 220 kV high voltage transmission line which is located adjacent to the western boundary of the Weasel property.

Once fully operational the WSF is anticipated to generate approximately 250 megawatts of renewable electricity and is part of a larger 'Highlands Renewable Energy Hub.

The current agricultural land use activity would be disrupted during the WSF development phase

Only the land directed involved in and subject to the WSF has been included in this study area assessment:

- Approximately 360 hectares of The Weasel property:
    - Sheep will still be able to graze in and around the solar array.
    - 8.22 hectares of land will be permanently lost due to the WSF as per land covered by the BSES and substation.
- Approximately 75 hectares of the Weasel Plains property:
    - Sheep will still be able to graze in and around the solar array.
    - A negligible amount of land will be permanently lost due to the WSF.

6 Land Use Activity

6.1 Current agricultural land use activity

Currently The Weasel property is used to graze sheep.

Currently the Weasel Plains property is used to graze sheep, cattle and periodic seasonal broadacre cropping.

6.2 Potential land use activity

6.2.1 Cropping land use activity

Theoretically the class 5 land on The Weasel property could be used for cropping, albeit it due to the land capability present and prevailing climate the potential productivity and utility would be severely constrained. In reality due to the complete current and future absence of irrigation water it is reasonable to contend that irrigated land use activity on The Weasel property is not possible.

220 hectares of centre pivot irrigated land is available on the Weasel Plains property, and this occurs on class 5 land which is suitable for cropping on a very limited frequency (e.g. 1-2 times in 10 years) and with a severely restricted range of crops. In reality the centre pivots are predominantly used to grow pasture for grazing by cattle and sheep.

6.2.2 Pastoral land use activity

The Weasel property is and will continue to be used for grazing livestock, and based on the area of available land, type of vegetation present (dryland pasture or native grasslands), rainfall and land capability the total annual carrying capacity of the property is approximately 5,835 DSE[11].

Assuming a total carrying capacity of 5,835 DSE for The Weasel property, this would allow for running approximately 2,080 ewe lamb breeding units (as per a 70 kg liveweight cross bred ewe with a 130% lambing rated at 2.8 DSE/unit).

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[11] DSE is a standard unit used to compare the feed requirements of different classes of livestock to assess the carrying capacity of a farm or paddock. One DSE is defined as the amount of feed required by a two-year-old 50 kg 'dry' Merino sheep (wether or non-lactating, non-pregnant ewe) to maintain its weight.

The Weasel Plains property is and will continue to be used for grazing livestock, and based on the area of available land, if all irrigated land is available for grazing, type of vegetation present (dryland pasture or native grasslands), rainfall and land capability the current total annual carrying capacity of the property is approximately 15,475 DSE .

Assuming a total Weasel Plains property carrying capacity of 15,475 DSE, this would allow for running approximately 5,525 ewe lab breeding units (as per a 70 kg liveweight cross bred ewe with a 130% lambing rated at 2.8 DSE/unit).

The actual number and class of livestock which could be run on The Weasel and Weasel Plain properties will vary depending on the seasonal conditions, age, livestock performance expectations, market conditions and overall enterprise requirements.

6.2.3 Perennial horticulture

Due to the land capability and prevailing climate no land present on The Weasel or Weasel Plains properties is suitable for perennial horticulture including cherries, hazelnuts, grapes (sparkling or table wine) and olives.[12]

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[12] Extracted from the LIST https://maps.thelist.tas.gov.au/listmap/app/list/map

7 Local and regional agricultural significance

The local and regional significance of agricultural land is a function of the land capability (soils, slope, erosion risk, climate), amount of available land, in conjunction with factors such as current and potential irrigation, presence of unique resources or infrastructure, social influences (historical and cultural), and prominence within an industry supply chain.

The Weasel and Weasel Plains properties do hold a level of recognised local and regional agricultural significance in that they are relatively large parcels of agricultural land, however due to the prevailing lower land capability in conjunction with the climate, the actual significance of these land holdings is diminished.

Only the land directed involved in and subject to the WSF has been included in this local and regional significance assessment:

- The Weasel property covers 918.8 hectares, of which the WSF study area would cover approximately 360 hectares:
    - Sheep will still be able to graze under and around the solar array infrastructure and effectively the current level of livestock productivity of this land will be maintained.
    - 8.22 hectares of land will be permanently lost due to the WSF as per land covered by the BSES and substation, and this would equate to an annual loss in carrying capacity of approximately 80 DSE. The BSES area would cover less than 0.9% of The Weasel property and hence represents a negligible area.
- The Weasel Plains property covers 1,775.9 hectares of which the WSF study area would cover approximately 75 hectares:
    - Sheep will still be able to graze under and around the solar array and effectively the current level of livestock productivity of this land will be maintained.
    - No land will be permanently lost due to the WSF infrastructure and effectively the current productivity of this land will be maintained.

Once the service life of the WSF has been realised the solar array could be dissembled and the land remediated back to its current condition.

The local and regional prominence of the subject properties has been considered in context with reference to the CHC municipality and the extent to which the agricultural land associated with the WSF is diminished and/or permanently lost. Refer Table 5.

No prime agricultural land is present on either of the properties.

There is no significant infrastructure present on The Weasel property, irrigation scheme infrastructure (dams, centre pivot, canals or pipelines) which is required and/or supports agricultural land use activity on adjacent and/or nearby properties.

There is no significant infrastructure present on the Weasel Plains property which is required and/or supports agricultural land use activity on adjacent and/or nearby properties, however it should be

noted that the 5,400 ML irrigation dam is a major water resource although the WSF will have no impact on its refill capacity or the application of irrigation water on the property.

Table 5 Relative regional significance of The Weasel and Weasel Plain properties by land area.

Land capability areas	CHC municipality		The Weasel		Weasel Plains	
	Land area (hectares)	% of total municipality area	Land area (hectares)	% of total municipality area	Land area (hectares)	% of total municipality area
Prime class land	0	0	0	0	0	0
Non-prime class land	318,119	39.9	360	0.11	75	0.023
Exempt land	478,901	60.1	0	0	0	0
Land permanently lost			8.22	0.0025	0	0
All land classes	797,100	100	360	0.045	75	0.0094

Approximately 8.22 hectares of pastureland on The Weasel property will be permanently lost due to the WSF which represents 0.0025% of land in the total CHC municipality land capability mapping areas.

A negligible amount of agricultural land will be permanently lost on the Weasel Plains property.

In terms of the potential to impact current and future irrigation development on the subject properties:

- The Weasel:
  - Currently no irrigation occurs on the property.
  - No irrigation dams are present on the property.
  - No irrigation water is available to access and undertake irrigation.
  - It reasonable that based on the lack of irrigation infrastructure and complete absence of irrigation water the potential to undertake irrigation development is severely constrained and effectively negligible.
  - As part of the Dungrove Land Company Pty Ltd land holdings this property is currently and would in the future regardless of the WSF be used for dryland grazing of livestock, and all irrigated agriculture does and would continue to occur on the Dungrove property nearby to the west of The Weasel property.
- Weasel Plains:
  - No currently irrigated land will be impacted by the WSF.
  - The current large irrigation dam will not be impacted by the WSF.
  - A further 947.5 hectares of dryland pasture are present on the balance of the property, 75 hectares (7.9%) of this land would be covered by WSF study area and would allow for ample of amounts of land to be potentially developed for irrigation in the future. Additionally, the WSF would be located on the central western

boundary and far south western area, such that it is sensitively located and would permit future irrigation development without being fettered.

Once built the WSF is anticipated to result in a minimal amount of disruption to the ongoing operation and management for the agricultural use of both properties, and overall the relatively lower local and regional significance of The Weasel and Weasel Plains properties would be preserved.

8 Impact on Agricultural Land Use Activity

A number of aspects of the WSF have been considered which could impact the agricultural land use activity on the subject properties including:

- Impact on adjacent land holdings.
- Permanent loss of land.
- Soil disturbance.
- Weed infestation.
- Fire management.
- Disturbance to livestock.
- Pasture production levels.
- Provision of shelter to ewes during lamb and thereby improve lamb survival rate.
- Improved logistics access to the property.
- Opportunity for enterprise diversification.

8.1 Impact on adjacent land holdings

The Weasel and Weasel Plains properties are surrounded by land holdings with a broadly similar level of agricultural land use activity.

The presence of the WSF is not anticipated to result in negative impacts to the adjacent properties due to:

- The solar array is a passive electricity generation system, and does emit any noise or odours, with the exception of during construction period. The BSES will emit some noise, but all noise emission and acoustic regulations will be met as part of the operation and management of this infrastructure.
- The WSF does not require water to generate steam and run turbines, unlike hydro or coal fired power stations and therefore there will be no impact on the available irrigation allocations in the nearby waterways and SHIS. This is of extremely valuable importance and reassurance to irrigators both in the CHC municipality and downstream for irrigators on the Derwent River.
- No additional electricity transmission lines will be installed over neighbouring properties which could restrict current and future agriculture development.
- The land use activity on properties to the north, east, west and south involves grazing livestock overwhelming on dryland pasture, although irrigated pasture production does occur to the west (200m setback distance to the nearest WSF infrastructure) and further to the south west (400m at the nearest point to the nearest WSF infrastructure).

It is reasonable to consider the WSF will have no discernible negligible impact on the operation, management and productivity of adjacent properties.

8.2 Permanent loss of agricultural land

Once the service life of the WSF has been realised the solar array could be dissembled and the land remediated back to its currently condition.

The WSF will involve the permanent loss of 8.22 hectares of class 5 land which is currently used for grazing purposes on The Weasel property.

The loss of pastoral land is principally associated with the covered by the BSES and substation and would mean an annual loss in carrying capacity of approximately 80 DSE.

A loss of 80 DSE equates to a reduction of 1.37% compared the current overall carrying of the Weasel property, which is a negligible reduction relative to the livestock productivity gains associated with the shelter provided by the solar array infrastructure and certainly offset by the diversified income stream generated by the WSF.

A negligible amount of land will be permanently lost on the Weasel Plains property.

8.3 Disturbance to livestock

During the construction phase of the WSF it is reasonable to consider that a level of disturbance is anticipated to the normal agricultural operations including noise emissions, vehicle movements and general construction activities. The impact during the construction phase would be anticipated to result in the temporary loss of access to areas of pasture.

The construction process will be on a phased basis and through good will, understanding and planning between the landowner, livestock manager and developer the amount of disturbance to the livestock and disruption to normal agricultural operations would be minimised.

Once the WSF is constructed and power generation occurs there is anticipated to be a no negative impacts on the livestock production enterprise from either the operation of the solar arrays and/or the maintenance of the associated infrastructure.

8.4 Soil disturbance and erosion risk.

The WSF would be located on the lighter textured sandy/sandy loam soils , and therefore erosion control is an important feature of the construction phase and ongoing operation of the WSF.

Erosion control measures which would need to be undertaken during the WSF construction phase should include:

- Limit the amount of soil disturbance to the immediate land directly required to install the various elements of WSF infrastructure.
- Cease construction operations during severe weather conditions, such as heavy rainfall, when surface water movement could cause topsoil erosion.
- Undertake land rehabilitation activities and re-establish pasture and/or native vegetation on bare and exposed soils ASAP.

It is accepted that a minimum 70% pasture ground cover target should be maintained in order to minimise the potential for soil erosion.[13] A combination of the WSF construction methods and nature of the infrastructure being installed would ensure that amount of land disturbance and the risk of soil erosion will be minimised.

The solar array could result in a more concentrated point source of rainfall on to the ground beneath, and therefore maintaining the minimum ground cover target is important to prevent the initial and ongoing soil erosion. A combination of the typically light textured soils present through the WSF study area and generally low rainfall environment would indicate the risk of soil erosion due to surface water movement and scouring will be minimal.

Livestock managers will need to continue with the grazing practices, and effectively balance the feed requirements of the livestock, avoid over grazing and prevent the accumulation of excessive pasture.

The risk of soil erosion can be effectively proactively managed by avoid excessive soil disturbance activities during the construction phase, undertaking any required remediation activities, and a continuation of the good grazing management practice.

8.5 Weed infestation.

The Weasel and Weasel Plain properties are relatively weed free.

During WSF construction phase it will be important to establish a high level of biosecurity control ensure all machinery, plant and equipment and vehicles entering the property are cleaned.

During the WSF construction phase some soil disturbance will occur as infrastructure is installed which provides an opportunity for weeds to germinate and potentially infest the land, and therefore the WSF operators will require a weed management program to ensure the properties current weed status is maintained.

8.6 Fire management

The potential accumulation of excessive vegetation under the solar array could result in a possible a bushfire fire risk.

However, the land under the solar array will be grazed by sheep and this will provide effective management and prevent the build up pasture during spring and summer.

The livestock managers on The Weasel and Weasel Plains property are experienced operators and capable of effectively managing pasture covers and balance the feed requirements of the livestock, avoid over grazing and prevent the accumulation of excessive pasture.

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[13] Agfact P2.1.14. (2005) NSW Department of Primary Industries, Tamworth

8.7 Pasture production levels.

The presence of the solar array infrastructure can both positive and negative impacts on pasture production levels. Refer Table 6.

Table 6 Potential impacts of the solar array on pasture production levels.

Negative impacts	Positive impacts
Shadowing of the pasture beneath the panels. - The position of the ground shadow would move through the day and not concentrated permanently on the same spot.	Reduce soil moisture evaporation rates. - Soil moisture would be better retained during the warmer months and therefore more pasture growth would be expected.
Effective rainfall reaching the soil could be slightly reduced due to evaporation off the surface of the solar array panels. - The solar panel tilts during the day and therefore the amount of potential evaporation would be expected to be negligible.	Protection from hot conditions. - During hot weather the presence of the shading offered by the solar array would provide a cooling effect on the pasture and reduce wilting.

The livestock productivity associated with lower lamb and ewe mortality and improve feed efficiency benefits gained by the shelter offered from the solar array infrastructure would be expected to outweigh the reduction in pasture production levels due to the presence of the solar array infrastructure.

8.8 Improved logistics access to the property

Laneway access will be installed as part of the WSF, and this would improve logistics access across the Weasel property.

Currently The Weasel property has no internal formed laneway access network, and there by having improved access would allow for more efficient movement of livestock and machinery.

8.9 Provision of shelter to sheep

The WSF will provide cover for the sheep grazing under the solar array infrastructure, and this will offer livestock productivity outcomes including[14]:

- Improved lamb survival. Lamb survival rates are heavily influenced to the amount of available shelter during lambing, and with the overhead shelter offered by the solar array it is reasonable to expect a positive gain in the reduction of lamb mortality.

[14] https://assets.cleanenergycouncil.org.au/documents/resources/reports/agrisolar-guide/Australian-guide-to-agrisolar-for-large-scale-solar.pdf

- During cooler months would mean a reduction in wind chill exposure which results in a lower dietary maintenance energy requirement for sheep (ewes and lamb) and thereby more efficient livestock productivity outcomes due to increase lamb liveweight gain and ewes maintaining optimal body condition for longer.
- During cooler months would mean a reduction in wind chill exposure which results in a lower dietary maintenance energy requirement for ewes in late pregnancy that leads to a reduction in the incidence and severity of pregnancy toxaemia.

The livestock productivity benefits gained by the shelter offered from the solar array infrastructure would far outweigh the reduction in the carrying capacity lost due to the 8.22 hectares of land used for the WSF BSES and substation infrastructure,

The WSF solar array infrastructure would result on improved lamb survival, reduced ewe mortality and overall improved livestock productivity outcomes on The Weasel and Weasel Plains properties.

8.10 Opportunity for enterprise diversification

The opportunity for agricultural based enterprise diversification on The Weasel and Weasel Plains properties is severely constrained due to factors such the prevailing land capability and climate.

Effectively The Weasel property is limited to dryland grazing, whilst the Weasel Plains property is limited to dryland and irrigated grazing and low frequency cropping with a severely restricted range of crops.

9 Conclusions

1. The Weasel and Weasel Plains properties are currently used for productive agricultural land use activity, that being for a livestock production and low frequency seasonal cropping (Weasel Plain property only), albeit the productivity of these properties is constrained due to the prevailing lower land capability and low rainfall climate.

2. Neither The Weasel or Weasel Plains properties have a level of particular uniqueness and/or inherently high level of productivity to be recognised as having high level of local and regional prominence beyond the recognition that these properties are large land holdings.

3. The WSF is a large-scale solar project covering 435 hectares of land, and includes various infrastructure including solar panels covering, a battery energy storage system and various electricity infrastructure (inverters and an electrical substation).

4. The WSF has been designed and planned to allow for a continuation of the current and future potential agricultural land use activities which can and could be undertaken on the subject properties.

5. The WSF would be located gently sloping topography on The Weasel or Weasel Plains properties.

6. The Weasel property is best considered as a dryland property due the lack of irrigation infrastructure and complete absence of irrigation water the potential to undertake irrigation development is severely constrained and effectively negligible.

7. There is no significant infrastructure present on the Weasel Plains property which is required and/or support agricultural land use activity on adjacent and/or nearby properties, however it should be noted that 5,400 ML irrigation dam is a major water resource although the WSF will have no impact on its refill capacity.

8. The pastureland under the WSF solar array will continue to be grazed by sheep, and therefore on the land subject to the WSF there will be a continuation of the existing agricultural land use activity.

9. The WSF would result in the permanent loss of 8.22 hectares of pastureland however this loss would be outweighed by the significant ongoing operational and management benefits associated with the proposed development including a reduction ewe and lamb mortality and overall improved livestock productivity.

10. The loss of 8.22 hectares of land due to the WSF would cover less than 0.9% of the total area of The Weasel property, and approximately 0.0025% of the total amount of land in the total CHC municipality land capability mapping area, and therefore represents a negligible loss of agricultural land on both a property and regional area.

11. The WSF will have a range of impacts on the subject properties, with the potentially negative impacts effectively managed through a combination of the adoption good construction and operational practices.

12. The proposed development will not constrain, prejudice and/or limit the agricultural land use activities currently undertaken and/or potential future expansion of the activities.

Appendix A

Table 7 Australian Land Use and Management (ALUM) classification Version 8 (October 2016) relevant to the CHC municipality.

2 Production from relatively natural environments	3 Production from dryland agriculture and plantations	4 Production from irrigated agriculture and plantations	5 Intensive uses (agricultural related)
2.1.0 Grazing native vegetation	3.1.0 Plantation forests	4.2.0 Grazing irrigated modified pastures	5.2.0 Intensive animal production
2.2.2 Production native forests	3.2.0 Grazing modified pastures	4.3.0 Irrigated cropping	5.4.0 Residential and farm infrastructure
	3.3.0 Cropping	4.4.0 Irrigated perennial horticulture	
	3.6.0 Land in transition	4.5.0 Irrigated seasonal horticulture	
		4.6.0 Irrigated land in transition	

Appendix B



Figure 1 Adjacent land holdings surrounding The Weasel property.



Figure 2 Land capability map of the WSF study area

Appendix C

Weasel property images



Figure 3 Easterly view over the northern area of The Weasel property.



Figure 4 Southerly view over the gently sloping ground subject to the WSF on the central southern area of The Weasel property.



Figure 5 Southerly view over the optional WSF on the far southern area of The Weasel property.



Figure 6 Northerly view over the far north area of The Weasel property.



Figure 7 Westerly view to the Dungrove property from the central eastern boundary of The Weasel property.



Figure 8 Eastern view across the southern area of the WSF on the central southern area of The Weasel property.



Figure 9 High voltage transmission line and towers which is located along the western side of The Weasel property.



Figure 10 Typical soil profile of the chromosol soil present throughout The Weasel property.



Figure 11 Heavy clay vertosol soil type present on the land adjacent to the Weasel Plains waterway on the northern area of The Weasel property.

Weasel Plains property images



Figure 12 Northerly view over the land subject to the WSF on the Weasel Plains property.



Figure 13 Typical soil profile of the chromosol soil type present on the Weasel Plains property subject to the WSF development.

Appendix D

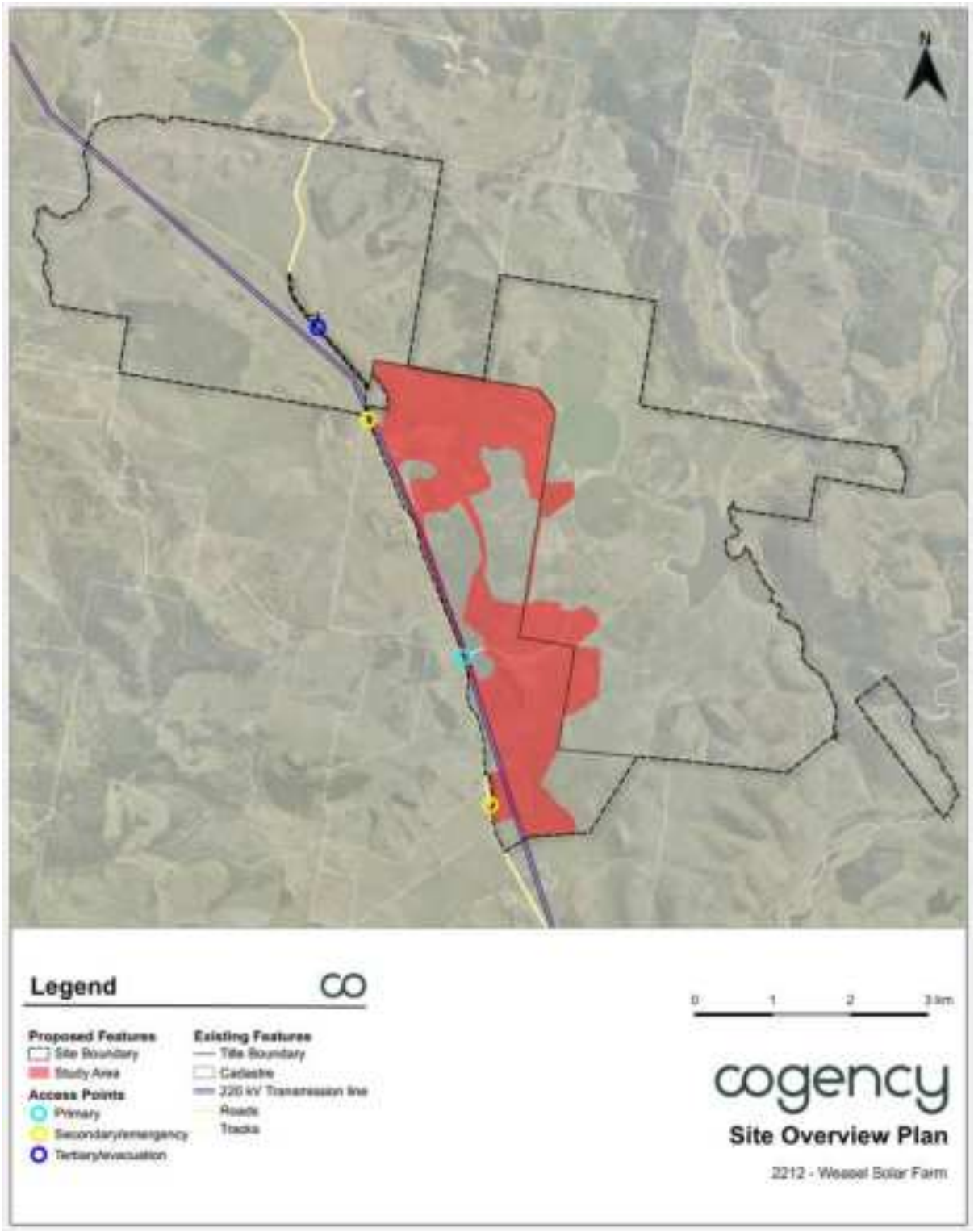


Figure 14 WSF Site Overview Plan (source: Cogency)

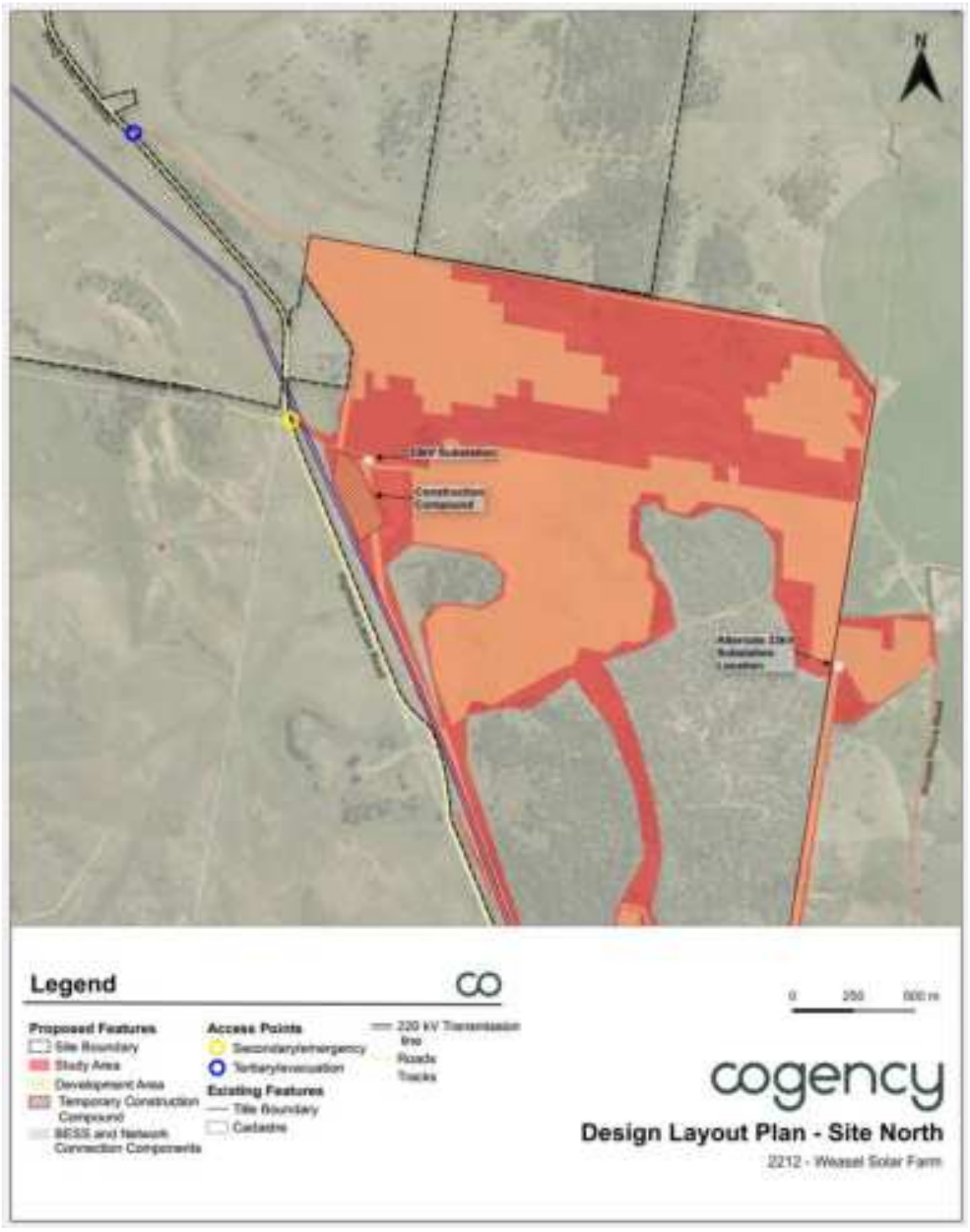


Figure 15 WSF Design Layout Plan - Site North (source: Cogency)

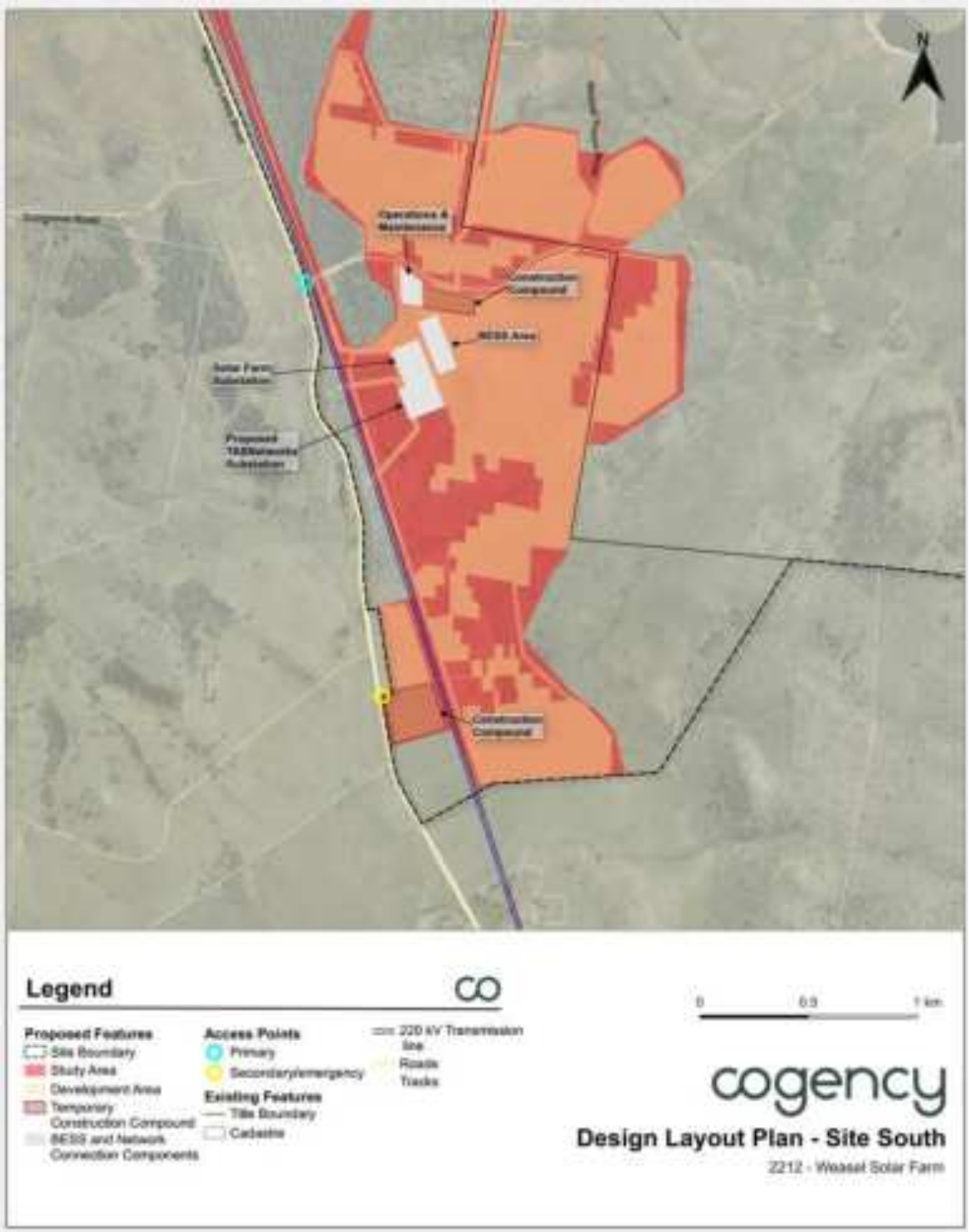


Figure 16 Design Layout Plan - Site South (source: Cogency)

Weasel Solar Farm

Noise Impact Assessment

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16 September 2024

Revision: 1.2

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1.2	16 September 2024	Benjamin French	Arvind Deivasigamani	Arvind Deivasigamani
1.1	27 August 2024	Benjamin French	Arvind Deivasigamani	Arvind Deivasigamani
1.0	19 August 2024	Benjamin French	Arvind Deivasigamani	Arvind Deivasigamani

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Weasel Solar Farm Pty Ltd. c/-Robert Luxmoore Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

Executive Summary

This technical report is an attachment to the Weasel Solar Farm Development Application submission on behalf of Tasflo Pty Ltd.

SLR Consulting Pty Ltd (SLR) has been engaged by Robert Luxmoore on behalf of Weasel Solar Farm Pty Ltd. to conduct a noise assessment for a proposed solar farm (up to 250 MWp capacity) and 144 MW / 576 MWh battery energy storage system (BESS) located at 'The Weasel' – 3415 Highland Lakes Road, 'Weasel Plains' – 3236 Highlands Lakes Road, and 'Rockford' – 3759 Highland Lakes Road, Bothwell, Tasmania.

Evaluation of noise impacts on sensitive receptors has been undertaken in accordance with the *Environmental Management and Pollution Control Act 1994*, *Environmental Management and Pollution Control (Noise) Regulations 2016* and the *Environmental Protection Policy (Noise) 2009.*

The key project impacts in relation to noise is as follows:

- **Noise from construction activities:** All construction works will be completed under a Construction Environmental Management Plan (CEMP). Due to the distance between the proposed site and non-project involved receivers, construction noise impacts are relatively minimal. However, scheduling construction activities in accordance with the Prohibited Hours as defined in the Regulations[1], community engagement and best practice noise management controls: regular maintenance, broadband reversing alarms, etc. will further minimise residual risk of harm to nearby receptors.
- **Noise from operational activities:** The closest non-project involved receiver, R8 is located approximately 100 m from the boundary of the project (approximately 730 m to the BESS area). Compliance for all time periods is achieved at this receiver and all others with all solar farm inverters, BESS and substation operating at 100% capacity with no additional mitigation.

It is recommended to update the noise model during detailed design to ensure compliance is maintained. Confirmation of compliance will be verified by post commissioning noise measurements.

[1] Refer to Item 2 of Schedule 1 in the *Environmental Management and Pollution Control (Noise) Regulations 2016*. Reproduced in **Table 4** in this report.

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1.0 Introduction

Weasel Solar Farm Pty Ltd. is proposing to develop solar farm, with a nameplate capacity of up to 250 MWp. It will be accompanied by a battery energy storage system (BESS) with a capacity of the order of 4h/144 MW / 576 MWh located at 'The Weasel' – 3415 Highland Lakes Road, 'Weasel Plains' – 3236 Highlands Lakes Road, and 'Rockford' – 3759 Highland Lakes Road, Bothwell, Tasmania.

SLR Consulting Pty Ltd (SLR) has been engaged by Robert Luxmoore on behalf of Weasel Solar Farm Pty Ltd. to conduct a noise assessment to support the development application of the proposed Weasel Solar Farm under the *Land Use Planning & Approvals Act 1993.*

2.0 Project Area

The site is predominantly surrounded by large farming properties and some forestry plantations to the west. The site is approximately 9km north of the town centre of Bothwell (499 residents) and 72 km north of Hobart.

There are several rural residential properties within the vicinity of the site, varying in distance to the different solar panel area boundaries. **Table 1** summaries noise sensitive receivers within 2 km of the site boundary, and **Figure 1** shows the locations of the noise sensitive receivers with respect to the site boundary, proposed solar farm arrays, BESS and substation. Micro-siting of the inverters within the solar farm is based on concept designs and subject to change.

The nearest dwelling is located approximately 150m east of the 'North' PV area (R1 in **Table 1**), with another dwelling further east, approximately 260m from the site boundary (R2). These are owned by a stakeholder who is involved in the project. Excluding dwellings located within the properties of involved landowners (Dungrove, Cluny, and Weasel Plains), there are only two dwellings within 2 km of the Development Area that are owned by a non-involved person (R8 and R10 in **Table 1**). To the northwest of the site, there are 9 dwellings within 3.5 to 5km of the site boundary.

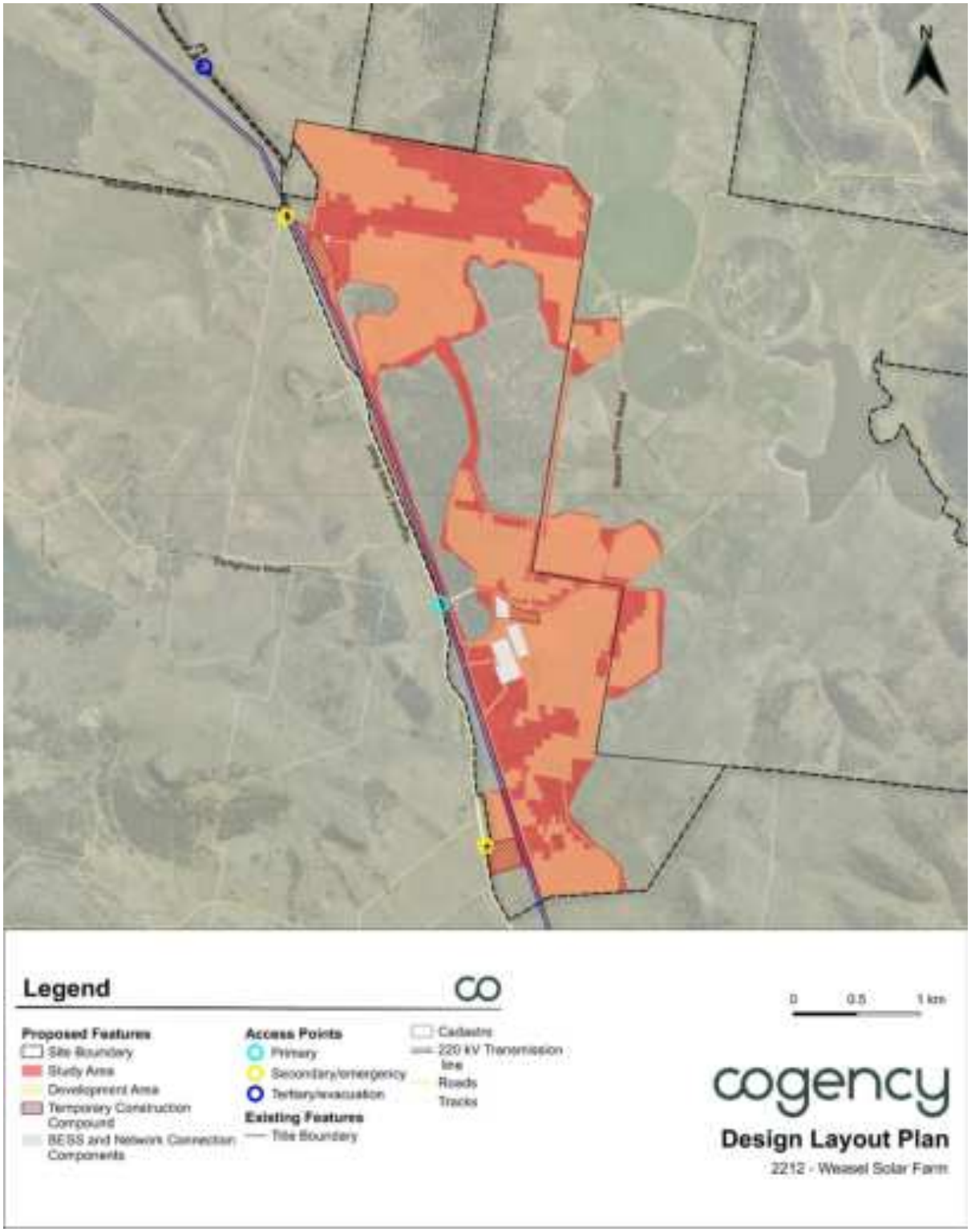
Cattle Hill Wind Farm is approximately 18 kilometres NW of the site. The proposed St Patrick's Plains Wind Farm is approximately 26 kilometres NW of the site.

The existing 220 kV transmission line (*Waddamana to Lindisfarne*) runs within the western boundary of the site, adjacent to Highland Lakes Road. There are no agricultural buildings or other structure of significance within the development investigation areas.

Table 1 Noise Sensitive Receivers

ID	Address	Easting, m	Northing, m	Approx, Distance to Site Boundary
R1*	WEASEL PLAINS' - 3236 Highland Lakes Rd #1	497295	5320402	150 m
R2*	WEASEL PLAINS' - 3236 Highland Lakes Rd #2	497425	5320459	260 m
R3	'CLUNY BLOCK' - 3059 Highland Lakes Rd #1	495188	5319643	320 m
R4	'CLUNY BLOCK' - 3059 Highland Lakes Rd #2	495331	5318296	640 m
R5	'DUNGROVE' - 3287-3289 Highland Lakes Rd #1	493958	5318395	1,850 m
R6	'DUNGROVE' - 3287-3289 Highland Lakes Rd #2	493867	5318468	1,930 m
R7	'DUNGROVE' - 3287-3289 Highland Lakes Rd #3	493727	5318638	1,990 m
R8	'WHITBY' - 3137 Highland Lakes Rd	496249	5317054	100 m
R9	'CLUNY BLOCK' - 3059 Highland Lakes Rd #3	496215	5316179	250 m
R10	2908 Highland Lakes Rd	497193	5315205	560 m
R11	'EAST CLUNY' - 2930 Highland Lakes Rd	497204	5315054	710 m
R12	'CLUNY' - 2925 Highland Lakes Rd #1	496814	5315136	480 m
R13	'CLUNY' - 2925 Highland Lakes Rd #2	496838	5315069	530 m
R14	'CLUNY' - 2925 Highland Lakes Rd #3	496791	5315022	560 m
R15	'CLUNY' - 2925 Highland Lakes Rd #4	496854	5314951	660 m
R16	'CLUNY' - 2925 Highland Lakes Rd #5	496686	5314830	720 m
R17	'CLUNY' - 2925 Highland Lakes Rd #6	496845	5314881	720 m
R18	'CLUNY' - 2925 Highland Lakes Rd #7	496813	5314768	810 m
R19	'CLUNY' - 2925 Highland Lakes Rd #8	496860	5314645	950 m
*: Receivers R1 and R2 are project involved				

Figure 1 Project Area and Noise Sensitive Receivers



3.0 Project Criteria

In Tasmania, the *Environmental Management and Pollution Control Act 1994* (Act), *Environmental Management and Pollution Control (Noise) Regulations 2016* (Regulations) and the *Environment Protection Policy (Noise) 2009* (EPP Noise) regulates noise from industry. The objectives of the EPP Noise are to implement the Act and to protect the acoustic environment that are conductive to:

- The wellbeing of the community including its social and economic amenity, or
- The wellbeing of an individual, including the individual's
    - Health and
    - Opportunity to work and study and to have sleep, relaxation and conversation without unreasonable interference from noise.

The EPP Noise provides acoustic environment indicator levels, adopted from the World Health Organisation publication *Guidelines for Community Noise, 1999*. A selection of project relevant indicator levels is shown in **Table 2**. Note that these environment indicator levels are indicative, and not mandatory noise levels.

Table 2 Acoustic environment indicator levels

Specific Criteria	Critical Health Effect(s)	Leq [dBA]	Time base [hours]	Lmax fast [dBA]
Outdoor Living Area	Serious annoyance, daytime and evening	55	16	-
	Moderate annoyance, daytime and evening	50	16	-
Dwelling, Indoors	Speech intelligibility & moderate annoyance, daytime and evening	35	16	-
Inside bedrooms	Sleep disturbance, night time	30	8	45
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60
Industrial, commercial, shopping and traffic area, indoors and outdoors	Hearing impairment	70	24	110

The Central Highlands Council has published general guidelines on residential noise but does not have specific noise criteria for industry.

Although the acoustic indicator levels in **Table 2** are not mandatory noise limits, they can be used to form a basis for design targets.

It is noted that the background determination methodology in the Tasmanian Environment Division's document *Noise Measurement Procedures Manual* is very similar to the Rating Background Level prescribed in the NSW's *Noise Policy for Industry, 2017 (NPfI)*. It is proposed to adopt the NSW procedure for defining noise targets as it is more conservative than the WHO Acoustic Environment Indicator levels.

According to the NSW NPfI, project noise targets are the minimum of:

- Recommended Amenity Noise Levels:
  - 50/45/40 dBA for day/evening/night respectively, and
- Project Intrusiveness Noise Levels:
  - Which is the maximum of:
    - Rating Background Level + 5 dB, or
    - 40/35/35 dBA for day/evening/night respectively (rural residential settings)

Time of day is defined as:

- Day: the period from 7 am to 6 pm Monday to Saturday or 8 am to 6 pm on Sundays and public holidays
- Evening: the period from 6 pm to 10 pm
- Night: the remaining periods

The Rating Background Level (RBL) is determined by background monitoring. It is defined as the 90th percentile of the L90. In cases where background levels are expected to be low, in rural areas for example, then it is possible to adopt minimum Project Intrusiveness Noise Levels as noise targets.

Therefore for the purposes of this assessment, the minimum Project Intrusiveness Noise Levels are set as Project Noise Targets

Table 3 Project Noise Targets

Time of Day	Project Noise Target, $L_{Aeq,\ 15\ min}$ dBA
Day	40
Evening	35
Night	35

For sleep disturbance assessments, the NSW Noise Policy for Industry recommends noise targets of:

- L_{AFmax} = 52 dBA or
- L_{AFmax} = RBL + 15 dBA, whichever is greater.

3.1 Construction Noise

The aforementioned Act, Regulations and EPP Policy also control construction noise. Part 2, Section 6 of the Regulations specifies:

1) A person must not operate equipment, or a machine specified in Schedule 1 on-

a. Any residential premises; or

b. Any site where construction, or demolition, that is not the construction or demolition of a public street, is taking place –

If the noise emitted by the equipment, or machine, when so operated is, or likely to be, audible in a habitable room in any residential premises, other than the residential premises referred to in paragraph a. whether or not the doors and windows of that habitable room are opened or closed.

Table 4 presents the prohibited hours of use for mobile machinery, forklift trucks and portable equipment, operation of such equipment is prohibited within these periods if it is likely to be audible in a habitable room. Operation of construction equipment outside of the prohibited hours of use is unlimited, provided the EPP Noise is upheld, i.e. best practice environmental management to reduce noise emissions to the greatest extent that is reasonably practical, dominant or intrusive noise characteristics of an activity should be reduced to the greatest extent that is reasonably practical etc.

Table 4 Schedule 1 – Prohibited hours of use: Mobile machinery, forklift truck or portable equipment

Day of Operation	Prohibited hours of use
Monday to Friday	Before 7 am and after 6 pm
Saturday	Before 8 am and after 6 pm
Sunday or public holiday	Before 10 am and after 6 pm

4.0 Acoustic Investigation

This acoustic investigation assesses construction and operational noise impacts to the closest receptors. The following scenarios were modelled:

- Solar Farm construction – construction of the solar arrays
- BESS Earthworks & Hardstand –
- Delivery and installation of the BESS and substation

The solar farm construction scenario involves specialist pile drivers installing the solar farm arrays. The equipment will move around the entire solar array as each row of PV panels are installed.

The other two construction scenarios are concentrated around the BESS and substation area. The BESS earthworks and hardstand scenario involves bulk earthworks and hardstand construction of the BESS and substation. Delivery and installation includes the construction of the BESS and substation infrastructure.

One operational scenario was modelled:

- All noise sources are operating at maximum capacity (i.e. batteries and inverters in the BESS, the inverters distributed around the solar farm and the substation). This represents a typical day time scenario when the BESS is undergoing a charging cycle and the solar arrays are operating. This scenario is also possible during the early morning (6 am to 7am during summer) of the BESS is discharging during the morning peak and the solar arrays are generating have started to operate. Therefore, predicted noise levels at the receivers are assessed against the day and nighttime criteria. This is considered the worst-case day and night noise scenarios.

4.1 Noise Modelling

A 3D noise model was constructed within the modelling software SoundPLAN 8.2 to predict noise levels at the nearby sensitive receivers.

Noise modelling was conducted using the ISO 9613-2 algorithms incorporated in the noise modelling software. The ISO 9613-2 algorithm predicts the A-weighted sound pressure levels under meteorological conditions favourable to propagation from sources of known sound power levels. This enhanced propagation is equivalent to downwind propagation or a moderate ground-based temperature inversion. The model also includes attenuation due to air absorption, ground attenuation and shielding.

4.2 General Modelling Assumptions

The following general assumptions are made based on best-practice modelling method to suit the project:

- The reflection-order of other buildings was set to three (3), indicating that the noise model allowed for three (3) reflections off façades.
- Source heights were set according to the source item.
- Receivers were set 1.5 m above ground level.
- All equipment is assumed to be in operation for the entire assessment period.
- Ground topography within 3 km of the proposed site was sourced from publicly available 1 m elevation data published by the Tasmanian Government.
- Ground absorption is modelled by a single number parameter between 0 (hard – reflective) and 1 (soft – absorptive). The BESS and Substation area was modelled as hard ground, all other ground surfaces were modelled with a ground absorption parameter of 0.6, suitable for rural farmland.

4.3 Sound Power Levels

4.3.1 Construction Noise Assessment

Sound power levels of typical mobile plant and equipment, taken from SLR's noise database of field measurements and BS 5228-1:2009[3] are summarised in **Table 5**. For a worst-case assessment it is assumed that all equipment is operating continuously over the assessment period, due to sequencing of equipment usage that often occurs on site, this is expected to represent a conservative approach.

The most impactful construction activity is anticipated to be the piling of the steel columns that support the solar panel arrays, which is completed by a specialist piece of equipment. These units are typically track mounted and diesel powered with the high-speed piling achieved hydraulically. The full sequence for completing a pile, (which includes: traversing to next pile position, lifting and loading the pile into position, hammering in the pile, releasing the hammered pile), would typically take approximately 2 minutes of which half of that interval includes the hammering phase.

[3] *Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise*

It is anticipated to have six solar farm pile drivers operating with the solar farm area at one time, the Solar Array installation scenario was modelled as an area source with all sound power located at one point. The levels calculated at each receptor with this method represents the worst case exposure to piling noise.

The earthworks + hardstand and infrastructure and delivery and construction scenarios were modelled as area sources covering the BESS and Substation areas. The overall sound power level is distributed over this area.

Table 5 Construction equipment sound power levels

Scenario	Equipment	Quantity	SWL, per item, $L_{Aeq, 15\ min}$	Overall, $L_{Aeq, 15\ min}$
Solar Array Install	Solar Farm Pile Driver	6	112	120
Earthworks + Hardstand	Excavator	2	104	123
	Dozer	1	108	
	Grader	1	104	
	Dump Truck	2	102	
	Vibratory Roller	1	105	
	Concrete Truck	4	104	
	Concrete Pump	4	102	
	Concrete Poker	4	97	
	Rock Breaker	1	121	
	Chain Trencher	1	102	
	Rock Saw	1	113	
	Water Truck	1	111	
	Diesel Generator	4	94	
	Diesel Pump	2	97	
Infrastructure Delivery and Construction	Trucks	2	102	115
	Powered Hand Tools	4	102	
	Forklift or Telehandler	1	102	
	20 t Franna crane	1	98	
	Diesel Generator	4	94	
	Diesel Pumps	2	97	
	Elevated Working Platform (EWP)	3	952	

4.4 Operational Noise Assessment

Sound power levels of noise producing equipment shown in **Table 6**. All sources were modelled as 1/3 octave spectra based on original equipment manufacturer (OEM) data or similar unit. The inverter sound power level is based on a SMA 3.6 kW inverter. Battery module sound power levels are based on Powin Centipede. The original equipment

manufacturer (OEM) has not been finalised and subject to change, however the acoustic performance of these units are indicative of current BESS technology.

The solar farm inverters were modelled as point sources at a height of 2m above the ground. The BESS and substation were modelled as area sources encompassing each area with a sound power level equal to the sum of all equipment within the BESS and substation shown in **Table 6**, i.e. an overall level of 110 dBA.

Table 6 Equipment Sound Power Levels

Item	Qty	Sound Power Level (SWL), per Item, $L_{eq\ 15\ min}$, dBA
Solar Farm	60	93
Inverter		
BESS[1]		
Inverter[2]	56	90
Battery Module	748	77
Medium Voltage Transformer	56	71
Substation[3]		
High Voltage Transformer	1	86
1: The BESS was modelled as a single area source with an overall SWL of 110 dBA		
2: The inverters in the BESS have silencing treatment		
3: The solar farm substation and the adjacent TasNetworks substation are assumed to contain one high voltage transformer each		

5.0 Assessment Results

5.1 Construction Noise Results

Table 7 presents the construction noise results for the assessed scenarios. It is important to note that transient nature of construction noise, particularly over large areas with a moving work front, such as the solar array construction. Receivers with predicted elevated noise levels will be impacted for a relatively short period of time i.e. less than a week, as the work front moves away from the receiver.

Table 7 Construction Noise Results

Scenario	Number of Receptors				
	Less than 40 dBA	41 to 50 dBA	51 to 60 dBA	61 to 70 dBA	Above 70 dBA
Solar Array Install	3	10	4	2	0
Earthworks + Hardstand	16	2	1	0	0
Infrastructure Delivery and Construction	18	1	0	0	0

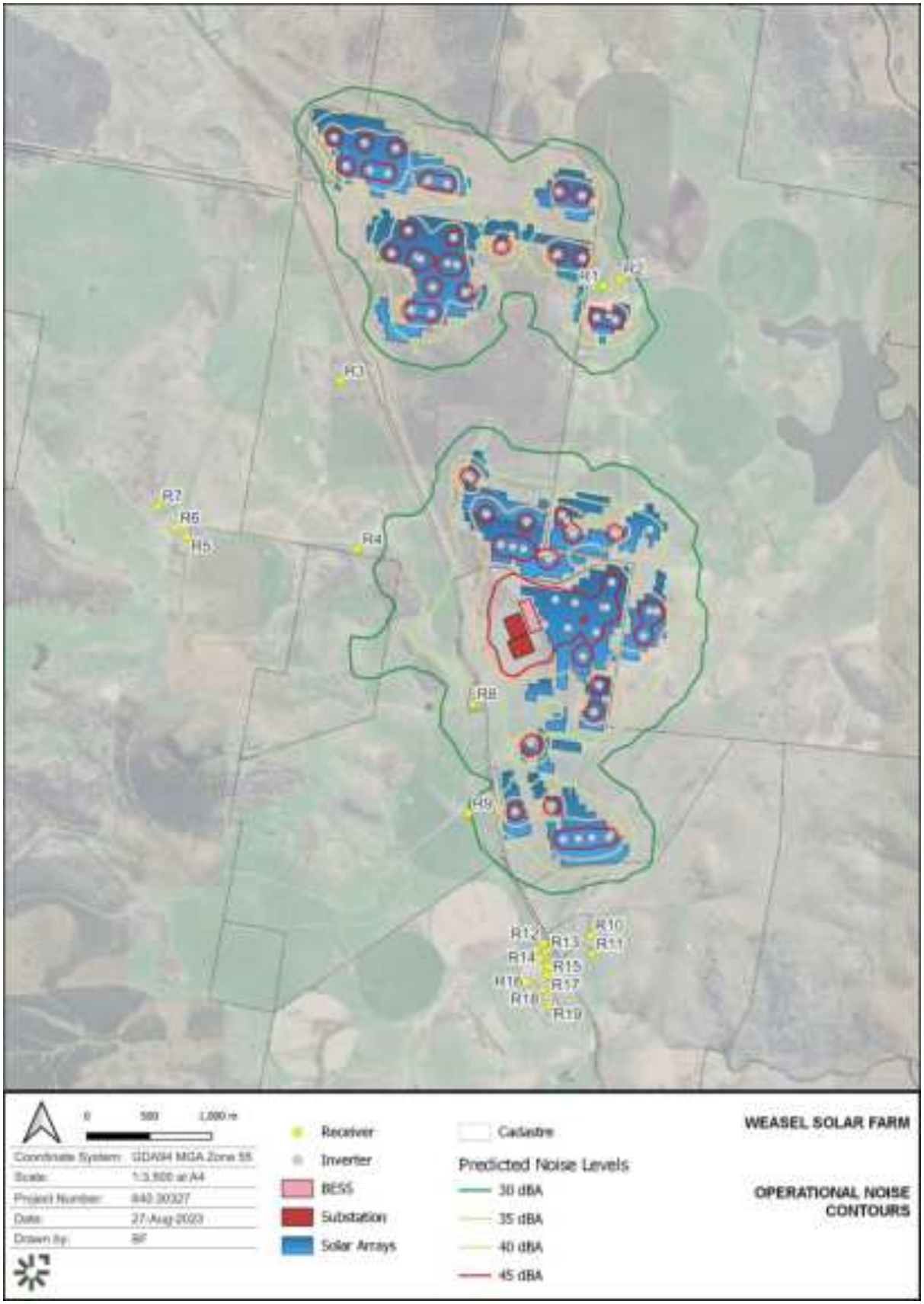
5.2 Operational Noise Results

Table 3 shows the predicted noise levels at the identified receivers, the day and night margin of compliance are also shown. Compliance with the day and night noise limits can be achieved at all receptors with the inverter layout and modelled BESS layout.

Table 8 Operational Noise Results

Receiver	Predicted Noise Level, dBA	Project Noise Limit, dBA		Margin of Compliance, dB	
		Day	Night	Day	Night
R1	35	40	35	5	0
R2	33	40	35	7	2
R3	24	40	35	16	11
R4	27	40	35	13	8
R5	19	40	35	21	16
R6	18	40	35	22	17
R7	18	40	35	22	17
R8	34	40	35	6	1
R9	30	40	35	10	5
R10	24	40	35	16	11
R11	22	40	35	18	13
R12	25	40	35	15	10
R13	24	40	35	16	11
R14	24	40	35	16	11
R15	23	40	35	17	12
R16	23	40	35	17	12
R17	22	40	35	18	13
R18	21	40	35	19	14
R19	20	40	35	20	15

Figure 2 Operational Noise Contours



6.0 Discussion

6.1 Construction Noise

Construction of the solar farm is predicted to not adversely impact amenity of nearby sensitive receptors due to its remoteness. Piling of the solar array steel columns may be audible from the closest receptors for a short period as the closest row of piles are driven.

Some land clearing is required in the solar array areas, however the majority clearing and grading activities will occur around the BESS and substation areas where a hard stand will be installed. R8 is the most impacted receiver during these activities, with predicted noise levels exceeding 50 dBA at times. Since noisy works are limited to day periods these activities be low impact.

The Australian Standard AS2436-2010 *Guide to Noise Control on Construction, Maintenance and Demolition Sites* sets out numerous practical recommendations to assist in taking all reasonable and practicable measures to prevent or minimise noise impacts.

All construction works will be completed under a Construction Environmental Management Plan (CEMP).

Noise control strategies to be considered are listed below:

- Ensure construction works to occur outside of the prohibited hours as defined in the Act (see **Table 4** for a summary of the prohibited hours).
- Notification of receptors of the proposed works schedule and potential noise impacts and relevant contacts for queries or complaints.
- Incorporate clear signage at the site including relevant contact numbers for community enquiries.
- The lowest noise emitting plant and equipment that can economically and efficiently undertake the work should be selected where possible.
- Maintain regular maintenance of equipment to keep it in good working order and operating at the lowest feasible noise level.
- Use less intrusive broadband reversing beepers on mobile plant where possible.
- Equipment operators are to be made aware of noise impacts and techniques to minimise emissions through training/instruction, examples include:
    - Avoid dropping materials from height into bins, trucks and receptacles.
    - Operate mobile plant and power tools in a quiet, efficient manner where possible.
    - Switch plant off when not in use.
- Machines/tools found to produce excessing noise compared with industry best practice should be removed from service until repairs or modification can be made, or the machine/tool is replaced.
- Where possible avoid tonal reversing/movement alarms on machinery and replace with broadband (non-tonal) alarms or ambient noise-sensing alarms.

Use dampened bits on impulsive tools (e.g. ratchet drivers) to avoid ‘ringing’ noise.

6.2 Operational Noise

The predicted operational noise levels at all sensitive receptors are less than the nighttime noise goal of 35 dBA, thus compliance with the *Environment Protection Policy (Noise) 2009* can be achieved.

The operational noise assessment presented in this report is to be considered a conservative approach, i.e., inverters and battery cooling systems and HV transformers operating at 100% capacity all the time combined with atmospheric conditions favourable to noise propagation.

All plant will be reviewed during detailed design to ensure that compliance with the noise goals can be maintained through the selection of equipment and site layout.

7.0 Conclusions

This Noise Impact Assessment was prepared to support a Development Application of the Weasel Solar Farm project at 'The Weasel' – 3415 Highland Lakes Road and 'Weasel Plains' – 3236 Highlands Lakes Road, Bothwell, Tasmania.

Construction noise impacts are considered relatively minor due to distances to sensitive receptors. Impacts are further minimised by scheduling works to day periods and a combination of training/equipment maintenance and community engagement. Noise control strategies given in **Section 6.1** should be implemented in the Construction Environmental Management Plan (CEMP).

Operational noise impacts are also considered relatively minor, with a 5 to 6 dB margin of compliance for day time operations as the most affected receivers (R1 which is project involved, and R8, the closest receiver to the BESS). Night time operation margins are smaller, with a 1 dB compliance margin at R8 and no margin at R1. Night time operations with the all solar farm and BESS equipment operating at maximum are considered unlikely. This may occur when the BESS is charging/discharging overnight or a more likely but still rare event: a 5 am to 7 am discharge.

This assessment shows compliance with the relevant noise legislation is achieved at all sensitive receptors for all time periods with no additional mitigation. All plant will be reviewed during the detailed design stage to ensure that compliance with the noise goals is maintained as the acoustic performance of plant and site layout is refined, followed by post commissioning noise measurements to confirm compliance.





Weasel Solar Farm Project
Central Highlands Region, Tasmania

Historic Heritage Assessment Report
Final Version 1

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15.10.2024

CULTURAL
HERITAGE
MANAGEMENT
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Executive Summary

Project Details

The Weasel Solar Farm is a large-scale solar project. The proposed site for the Weasel Solar Farm is located around 9km north of the town of Bothwell, in the Central Highlands Region of Tasmania and is in the Local Government Area of the Central Highlands Council (see Figure 1). The site is situated on three rural properties:

- 'The Weasel' – 3415 Highland Lakes Road Bothwell TAS 7030 (Title Ref. 140433/1).
- 'Weasel Plains' - 3236 Highlands Lakes Road Bothwell TAS 7030 (Title Ref 140581/1).
- 'Rockford' – 3759 Highland Lakes Road Bothwell TAS 7030 (Title Ref 104298/1).

The potential overall development area for the Weasel Solar Farm encompasses approximately 435ha plus internal transmission corridors (see Figures 2 and 3).

Robert Luxmoore has been engaged by the proponent (TasFlo Pty Ltd) to undertake the design, planning and approvals process for the Weasel Solar Farm project. As part of this process, CHMA Pty Ltd has been engaged to undertake an historic heritage assessment for the Weasel Solar Farm project. This report presents the findings of the assessment.

Results of the Search of the Heritage Registers

A search of the various historic heritage registers (as listed in section 1.3 of this report) shows that there are no heritage listed properties of features that are situated within the boundaries of the Weasel Solar Farm site. The closest heritage listed feature is the Dungrove property which is situated just to the west of the Weasel Solar Farm site, on the west side of Highland Lakes Road. The property is a permanent registration on the Tasmanian Heritage Register (THR ID Number 72). The north-east corner of the registered boundaries of the Dungrove property approaches to within 60m of the Weasel Solar Farm site.

Figure i shows the THR registered boundaries of the Dungrove property in relation to the Weasel Solar Farm site.

Survey Results, Statement of Heritage Impacts and Archaeological Potential

The field survey was undertaken by Stuart Huys and Shay Hannah) (CHMA archaeologists) and Rocky Sainty (Aboriginal Heritage Officer) and was implemented over a period of 5 days (25.4.2024, 26.4.2024, 29.4.2024, 30.4.2024, 1.5.2024). The primary focus of the field survey assessment was the proposed potential overall development area for the Weasel Solar Farm project, which encompasses approximately 435ha. The field team walked a total of 68.45kms of survey transects across this area with the average width of the transects being 10m.

No historic heritage sites or suspected heritage features were identified during the field survey assessment of the Weasel Solar Farm site. As detailed above, a search

of the various historic heritage registers shows that there are no heritage listed properties of features that are situated within the boundaries of the Weasel Solar Farm site. This assessment has therefore confirmed that there are no known historic heritage features that are situated within the potential overall development area for the Weasel Solar Farm project.

There were some constraints in surface visibility experienced across the surveyed areas, with average surface visibility ranging between 30%-40%. Given these constraints, it can't be stated with absolute certainty that there are no undetected historic heritage sites present within the proposed development area for the Weasel Solar Farm project. However, the negative survey results provides a very strong indication that the archaeological potential for heritage features to be present is very low.

It is acknowledged that the survey assessment was predominantly focused on the potential overall development area for the Weasel Solar Farm project, with very few survey transects across the broader site area, where no development is proposed. Therefore, there is the potential that historic heritage sites or features may be present within the broader bounds of the Weasel Solar Farm site. Indeed, this is likely given that the properties where the Weasel Solar Farm site is located were part of early land grants in the district and were settled in the early to mid 1800s. Historic homestead(s), barns and potentially huts for labourers are likely to be present on the property, as well as other features associated with the early pastoral settlement of the Plains (for example heritage plantings around homestead). However, if present, these will be situated outside of potential overall development area for the Weasel Solar Farm project and will not be under any threat of impact.

Heritage Management Plan

The heritage management options and recommendations provided in this report are made on the basis of the following criteria.

- The results of the heritage register searches and field investigation as documented in sections 3 and 5 of the report.
- The legal and procedural requirements as summarised in section 6 of this report, with specific reference to the Work Guidelines for Historic Heritage Places.

Recommendation 1 (Weasel Solar Farm)

No historic heritage sites, features or areas of elevated archaeological potential have been identified within the potential overall development area for the Weasel Solar Farm project and it has been assessed that there is a very low potential for additional undetected historic sites or features to be present. On this basis it is recommended that there are no further historic heritage requirements or constraints that apply to the overall development area for the Weasel Solar Farm project

Recommendation 2 (The Dungrove Property)

The Dungrove property is a permanent registration on the Tasmanian Heritage Register (THR #72). The north-east corner of the registered boundaries of the

Dungrove property approaches to within 60m of the Weasel Solar Farm site. It is recommended that the location of the Dungrove property boundaries is plotted onto the Weasel Soar Farm development masterplan, and it noted that no development activity is to occur within the property boundaries.

If there is the risk of development activity extending to within the boundaries of the Dungrove property, then the proponent will either need to seek a Certificate of Exemption (for works which will have no or negligible impact) or a Discretionary Permit from the Heritage Council.

Recommendation 3 (Changes to the Design)
If the current potential overall development area for the Weasel Solar Farm changes, then additional survey assessments will need to be undertaken for areas not covered by the current assessment.

Recommendations 4 (Unanticipated Discovery Plan)
As per the Practice Note No 2 by the Tasmanian Heritage Council, processes must be followed should any unexpected archaeological features and/or deposits be revealed during proposed construction works. A process for dealing with Unanticipated Discoveries is presented in section 8.

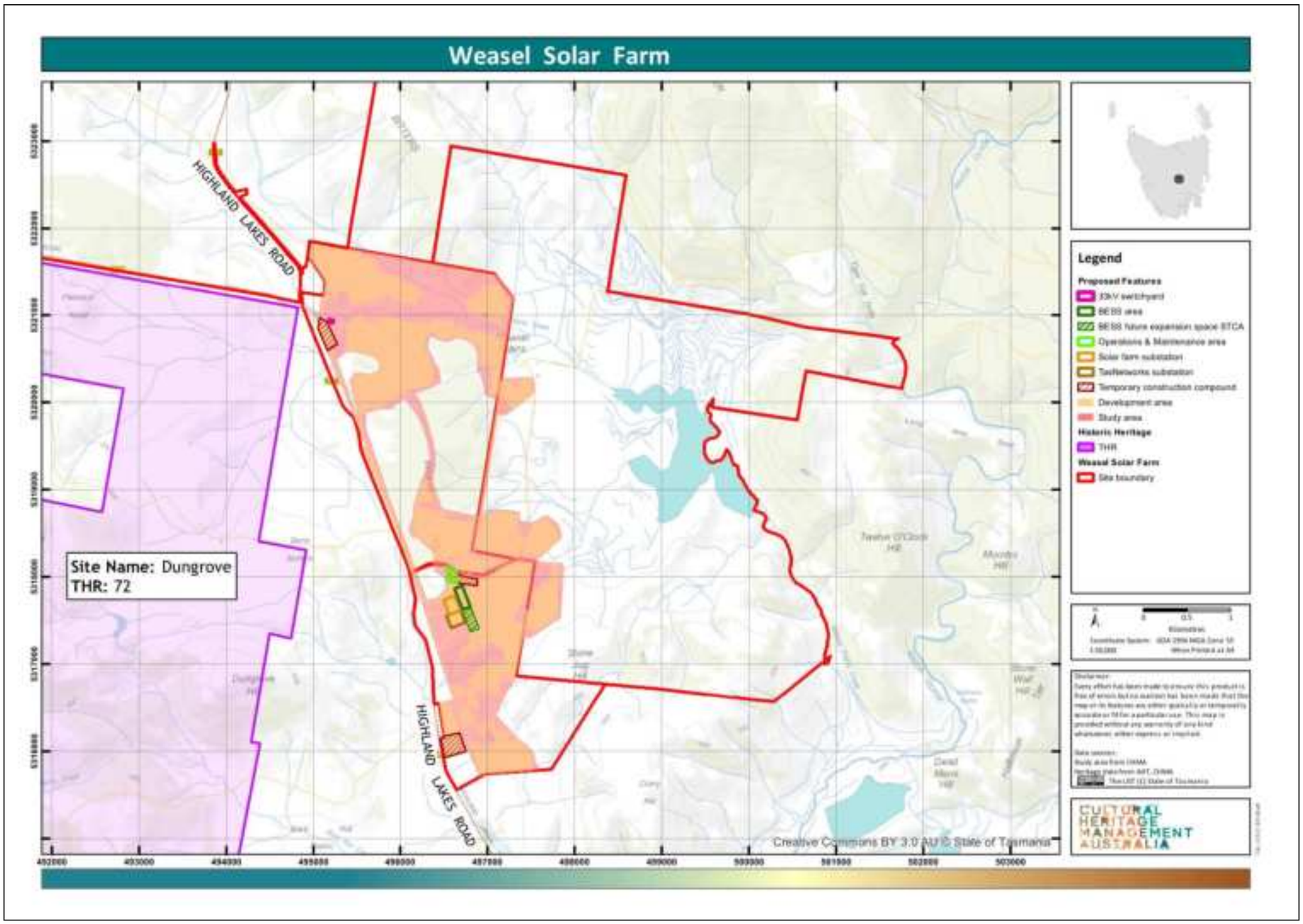


Figure i: topographic map showing the location of the THR listed Dungrove property in relation to the Weasel Solar Farm site

1.0 Project Outline

1.1 Project Details

The Weasel Solar Farm is a large-scale solar project. The proposed site for the Weasel Solar Farm is located around 9km north of the town of Bothwell, in the Central Highlands Region of Tasmania and is in the Local Government Area of the Central Highlands Council (see Figure 1). The site is situated on three rural properties:

- 'The Weasel' – 3415 Highland Lakes Road Bothwell TAS 7030 (Title Ref. 140433/1).
- 'Weasel Plains' - 3236 Highlands Lakes Road Bothwell TAS 7030 (Title Ref 140581/1).
- 'Rockford' – 3759 Highland Lakes Road Bothwell TAS 7030 (Title Ref 104298/1).

The potential overall development area for the Weasel Solar Farm encompasses approximately 435ha, containing approximately 400Ha of solar panels with a nameplate capacity of approximately 200MWp AC. It will be accompanied by a battery energy storage system (BESS) and electricity infrastructure including inverters and a switchyard containing an electrical substation to feed into the existing 220kV transmission line. The proposal includes land for construction, maintenance, and operation, new access tracks and upgrades to existing tracks, laydown areas, security infrastructure, and landscaping. Figures 2 and 3 show the potential overall development area for the Weasel Solar Farm project.

The Weasel Solar Farm is part of a larger 'Highlands Renewable Energy Hub' concept – a multifaceted landowner-led renewable energy concept with the aim to create local jobs and lower electricity costs for Bothwell and the Central Highlands region. The Highlands Renewable Energy Hub comprises this project, along with a potential Wind Farm and Renewable Energy Business Park. The project will be connected to the National Energy Market (NEM) via an interconnection to the existing TasNetworks 220 kV transmission line that lies within the western boundary of the site, parallel to Highland Lakes Road.

Each component of the Highlands Renewable Energy Hub will require separate approval processes. This project is solely focused on the solar and BESS application, including connection to the grid, access roads and associated works (As shown in Figures 2 and 3).

Robert Luxmoore has been engaged by the proponent (TasFlo Pty Ltd) to undertake the design, planning and approvals process for the Weasel Solar Farm project.
As part of this process, CHMA Pty Ltd has been engaged to undertake an historic heritage assessment for the Weasel Solar Farm project. This report presents the findings of the assessment.

1.2 Aims of the Investigation

The principal aims of this assessment are as follows.

- To undertake an historic heritage assessment for the potential overall development area for the Weasel Solar Farm project (the study area as shown in Figures 1-3). The assessment is to be compliant with both State and Commonwealth legislative regimes,
- To determine the extent of registered historic heritage sites within and in the immediate vicinity of the study area.
- To locate and document any historic heritage sites or suspected features that may be present within the identified bounds of the study area.
- To assess the archaeological sensitivity values of the study area.
- To assess the significance values of identified historic heritage sites.
- To develop a set of management recommendations aimed at minimising the impact of the impact of the Weasel Solar Farm Project on any identified historic heritage values.
- Prepare a report which documents the findings of the historic heritage assessment.

1.3 Project Methodology

A three-stage project methodology was implemented for this assessment.

Stage 1 (Pre-Fieldwork Background Work)

Prior to fieldwork being undertaken, the following tasks were completed by CHMA staff.

Heritage Register Searches

A search was carried out of a number of historic registers and databases in order to determine the extent of historic sites and features in the vicinity of the Weasel Solar Farm site. Agency databases searched included:

- Australian National Heritage List (NHL)
- Australian Commonwealth Heritage List (CHL)
- The Australian Heritage Database (AHD)
- Tasmanian Heritage Register (THR)
- The Register of the National Estate (RNE)
- Australian Heritage Places Inventory (AHPI)
- The National Trust (NT)
- The Central Highlands Interim Planning Scheme 2015 (CHIPS).

The collation of relevant documentation for the Project

The following documentation was collated for this project.

- Maps of the study areas;
- References to the land use history of the study area;
- GIS Information relating to landscape units present in the study area;
- Geotechnical information for the study area, including soil and geology data.

Stage 2 (Field Work)

Stage 2 entailed the fieldwork component of the assessment. The field survey was undertaken by Stuart Huys and Shay Hannah) (CHMA archaeologists) and Rocky Sainty (Aboriginal Heritage Officer) and was implemented over a period of 5 days

(25.4.2024, 26.4.2024, 29.4.2024, 30.4.2024, 1.5.2024). The primary focus of the field survey assessment was the proposed potential overall development area for the Weasel Solar Farm project, which encompasses approximately 435ha. The field team walked a total of 68.45kms of survey transects across this area with the average width of the transects being 10m. Section 4 provides further details as to the survey coverage achieved within the study area.

Stage 3 (Report Production)

Stage three of the project involves the production of a Draft and Final Report that includes an analysis of the data obtained from the field survey, an assessment of archaeological sensitivity and management recommendations. The report was prepared by Stuart Huys and Shay Hannah (CHMA).

1.4 Project Limitations

All archaeological investigations are subject to limitations that may affect the reliability of the results. The main constraint to the present investigation was restricted surface visibility due primarily to vegetation cover. Surface visibility across the project footprint was restricted to an estimated average of between 30% and 40%. In the context of Tasmania, this level of average surface visibility is comparatively reasonable. Numerous erosion scalds, graded vehicle tracks and cleared areas were present within the surveyed study area footprint, and these provided locales of improved visibility. The constraints in surface visibility limited the effectiveness of the survey assessment to some degree. The issue of surface visibility is further discussed in Section 4 of this report.

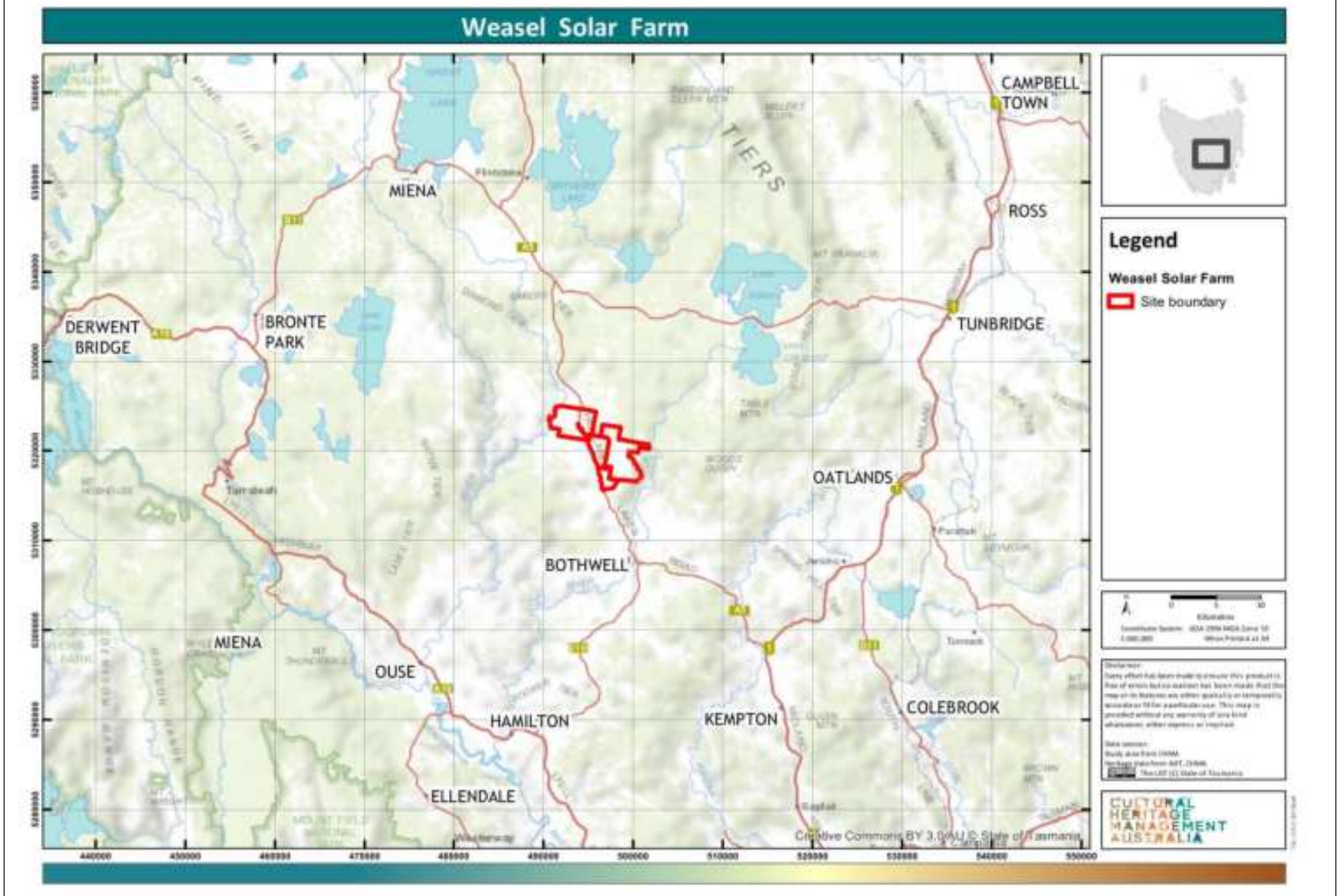


Figure 1: Topographic map showing the general location of the Weasel Solar Farm site in the Central Highlands Region of Tasmania

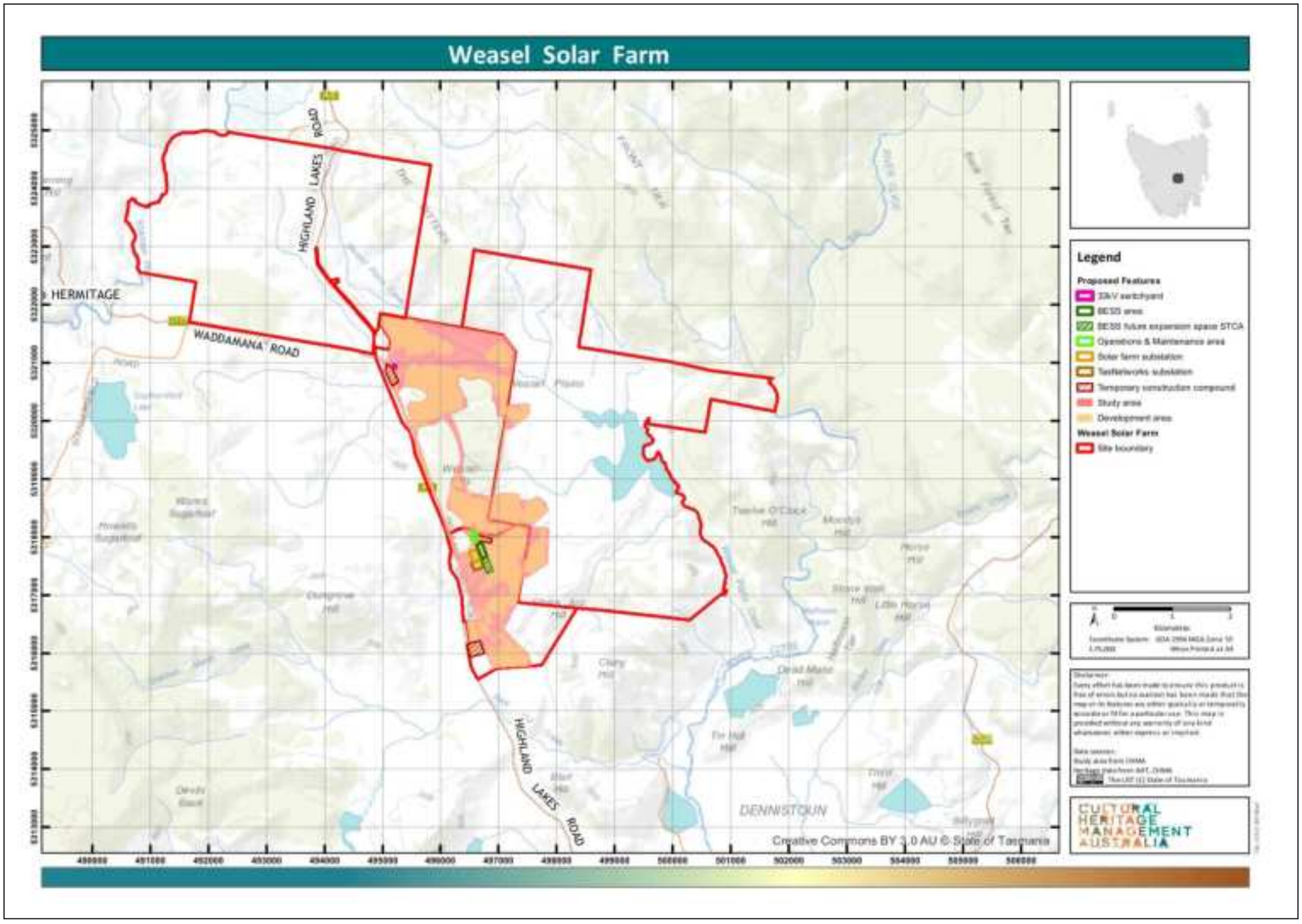


Figure 2: Topographic map showing the landscape setting and potential overall development area for the Weasel Solar Farm project

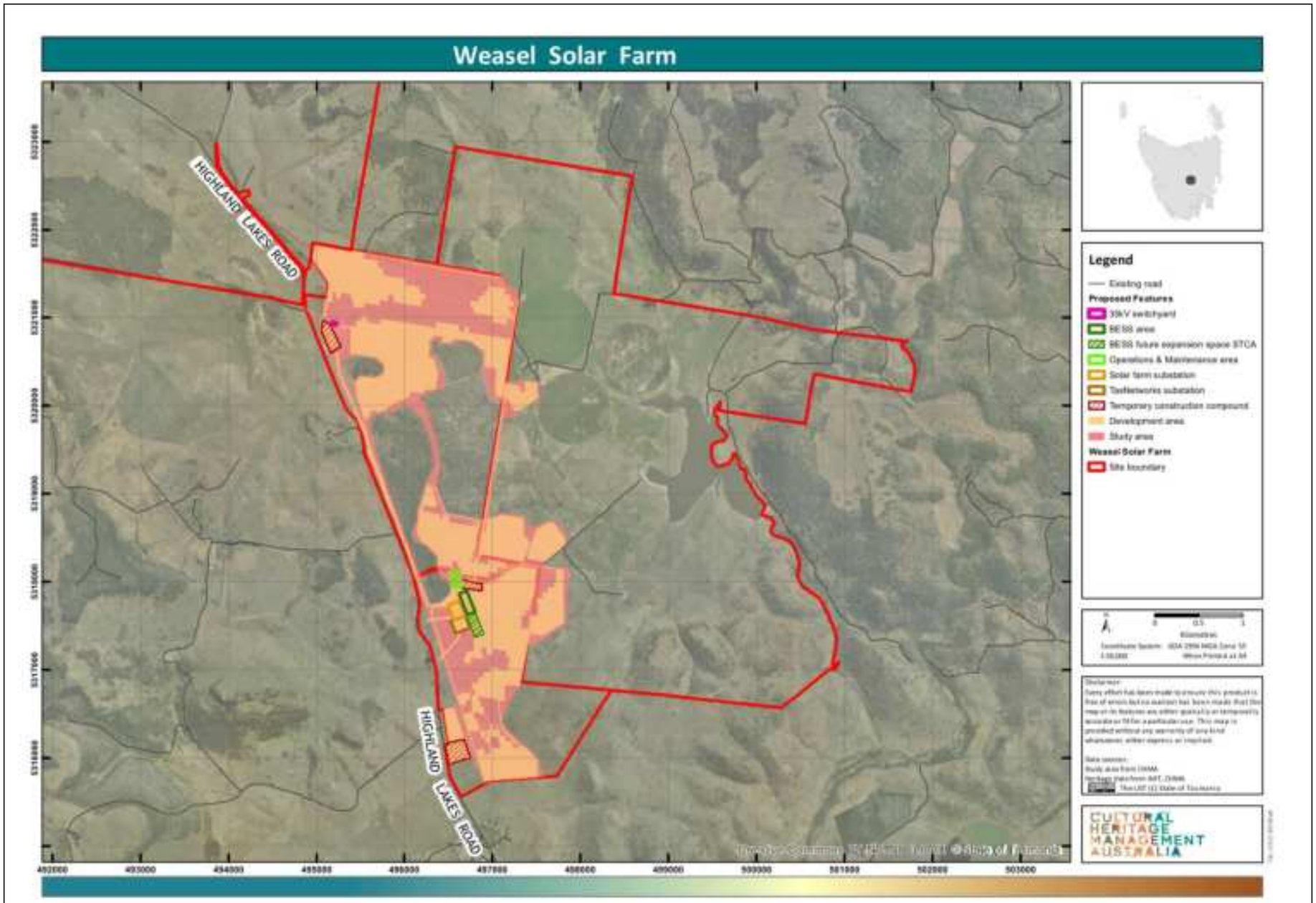


Figure 3: Aerial image showing the potential overall development area for the Weasel Solar Farm project

2.0 The Environmental Setting of the Study Area

The site for the Weasel Solar Farm Project is situated 9km north of the town of Bothwell, in the Central Highlands Region of Tasmania. It is positioned on the east site of Highland Lakes Road and is accessed via Weasel Plains Road.

The site is on the southern edge of the Central Plateau, above the more gently undulating plains to the south east. The southern slopes of the Central Plateau are characterised by elevated basalt and dolerite ridgelines interspersed by open marshy valleys and lagoons. Drainage across the plateau is mainly to the south east, eventually draining into the Derwent River catchment (Jetson 1989:xiii).

The project site is located on the Weasel Plains, with the terrain across the site area being characteristically gently to moderately undulating. Slope gradients are typically in the range of between 2º and 15º, but do increase to over 20º in parts (see Plates 1 and 2). The Weasel Plains are surrounded by a series of more steeply undulating hills, including Weasel Hills to the south-west, Cluny Hill to the south, Twelve O'Clock Hill to the east and the Bitters to the north. The underlying geology across the entire site is dominated by Upper glaciomarine sequences of pebbly mudstone, pebbly sandstone and limestone (see Plate 3) associated with the Lower Parmeener Supergroup (TheList 2024). The Parmeener Supergroup is generally divided into a Lower division which includes all known glaucomarine strata and an Upper division which includes all freshwater strata. The Lower Parmeener group consists of muddy lagoonal and estuarine rocks. The change from rocks of a restricted glaciomarine environment to rocks of a fluviatile environment is relatively abrupt in stratigraphic sections. A eustatic fall in sea level or regional uplift in eastern Australia may have contributed to the abrupt change in the Lower/Upper Parmeener Supergroup boundary.

Soils which have formed on the sedimentary rocks of the Parmeener Supergroup have a tendency to be highly erodible. Grey brown duplex soils have formed on the sandstones and mudstones in the Bothwell area, while thin yellow Tenosols commonly occur on the crests of hills and rocky outcrops in the Hermitage area. Due to the high erodibility of these soil types, buried archaeological material is not predicted to commonly occur.

Weasel Plains Creek is the only named water course in the study area (see Plate 4). The creek flows in a north-west to south-east direction and cuts through the northern portion of the site. This an ephemeral water course, which is a tributary of the Clyde River. It merges with the river around 3km to the south-east. The Clyde River is one of the major water natural water course in this area, and has its headwaters around Lake Crescent. The river flows in a south-west direction out of Lake Crescent and eventually empties into the River Derwent just south of the town of Bothwell. Other minor, unnamed water courses occur across the site area, all of which are tributaries of Weasel Plains Creek.

The proposed potential overall development area for the Weasel Solar Farm project, encompasses approximately 435ha. The native vegetation across this area has predominantly been cleared as part of past farming practices and replanted with grasses. Some areas around Weasel Plains Creek (in the north of the study area) have also been ploughed in the past. Patches of remnant native vegetation occur throughout parts of the site, mainly around the Weasel Hills, *where Eucalyptus pauciflora* forest and woodland is the dominant vegetation structure. Surrounding this woodland are patches of Lowland grassland complex and Lowland grassy sedgeland (see Plates 5 and 6).

From an archaeological perspective, any historic heritage sites that are situated within those parts of the study area that have been cleared as part of past farming practices will have been subject to moderate levels of disturbances. These disturbances are likely to involve soil mixing within the upper 30cm of the soil horizon and some level of spatial disturbance. There are also a series of existing vehicle tracks that extend across many parts of the site area, associated with existing pastoral activities. A major transmission line easement also runs through the site.

Within the lesser disturbed parts of the study area footprint, where the remnant native vegetation is still present, natural processes of deposition, erosion and pedogenisis are the only likely causes of movement of archaeological materials within these areas of lesser disturbances. The potential therefore exists for in situ archaeological deposits to remain in these parts of the site.

The climate of the Central Highlands is cold – temperate. Rainfall is generally consistent throughout the year, although late summer tends to be slightly dryer (BOM 2024). Mean annual rainfall for Bothwell is 529.2mm (BOM 2024). The warmest part of the year is late summer, however mean maximum temperatures are below 23 degrees Celsius. In winter the region frequently has snow with minimum temperatures below freezing.



Plate 1: View north-west across the central part of the site, showing typical gently undulating terrain



Plate 2: View east showing an example of the typical terrain in the northern part of the study area



Plate 3: A pile of rocks in a farm paddock, illustrating the underlying geology of the site



Plate 4: View north-west along Weasel Plains Creek which flows through the north part of the site



Plate 5: View north-east showing cleared farm paddocks



Plate 6: View east at stands of native forest within the central part of the site

3.0 Historic Background for the Study Area

3.1 Early European Settlement of the Central Highlands Region

The exploration of the Central Highlands region of Tasmania occurred early in the settlement phase of the colony, with Robert Brown undertaking a reconnaissance of the Derwent River system in 1803. Brown followed the course of the River some 50 miles upstream, sighting the Clyde and Ouse Rivers in the process. This was followed four years later by an excursion into the Western Tiers and Central Highlands by Laycock and his party in 1807, when he sought an overland route between Port Dalrymple and Hobart in order to obtain supplies. There was a hiatus of almost 10 years until John Beaumont and his exploration party was dispatched to examine the lands towards the Great Lake. The party are reported to have penetrated as far west as the highlands north of Lake St Claire. The 1820s through to the mid 1830s saw an increased number of surveying and exploration parties entering the Central Highlands. These included Scott from 1821-1823, Helder in 1825, Sharland in1832 and Frankland in 1835 (CHMA 2009).

The increasing shortage of food supplies in the colonies led to the dispatch of Kangaroo hunters into the un-settled parts of the colonies. These hunting parties were soon roaming well beyond the borders of the colonised areas. One Kangaroo hunter called Toombs is reported to have advanced as far as the Great Lake by 1815. Other hunting parties subsequently expanded out into the rich hunting grounds around the lakes areas in the Highlands. In 1831, Augustus Robinson, who was looking for the Big River Nation of Aboriginal people reports meeting with one of these hunters/shepherds on a small property at Bashan Plains, in the general vicinity of the study area (Kostoglou 1998).

Pastoralists soon followed behind the hunting parties, with shepherds penetrating into the eastern fringes of the Lakes District by 1818. By the early 1820s larger flocks of sheep are reported to be grazing as far west as the Great Lake. Wild cattle are also reported as grazing these areas in the early 1820s. The grazing of sheep and cattle in the Central Highlands were generally small scale operations run by a single shepherd or small groups of men, with the herds rarely being contained by fences. By the latter part of the 18th Century, many of the small-scale pastoral holdings had been abandoned or bought out by large sheep stations, which had begun to operate in the district (Kostoglou 1998).

Confrontations between these early pastoralists and the local Aboriginal inhabitants (the Big River Nation) quickly escalated, and by the mid 1820s, settlers were engaged in open warfare with the Aboriginals, in competition for land access. This led to a series of military parties being sent into the Central Highlands in attempt to quell the violence.

Bushranging gangs are known to have operated in the Central Highlands area in the 1820s. One of the more prominent of these gangs was the Martin Cash gang, who operated in the vicinity of the study area. Martin Cash and his gang are known to have robbed the occupants of a shepherds hut at Bashan Plains. The gang

subsequently had a number of other more equitable encounters with shepherds in the Lake Echo area, before raiding the property of Captain McKay. Martin Cash's Marsh, which is located 4km east of Lake Echo has been named after this bush ranger (Kostoglou 1998).

Michael Howe, a convict who had absconded, reputed to be the worst of the bushrangers was captured and killed on the banks of the Shannon at Hunterton, a little north of Bothwell, and it's reputed his head was carried back to Hobart Town as proof he had been killed. (http://www.think-tasmania.com/bothwell-history-convicts-bushrangers/, sourced 1/2/2015).

The gradual amalgamation of small holdings into larger estates coincided with the establishment of government funded infrastructure such as roads in the district. Early roads through the district included the Marlborough track (between Hamilton and Marlborough) and the Calder's track (from Marlborough and Lake St. Clair, and subsequently Frenchman's Cap).

The Central Highlands was further opened up to European settlement with the construction of the Great Western Railway between 1890-1912. The convict built railway line, which was largely inspired by James Calder, constituted the major transport artery through the southern Central Highlands until the construction of the Lyell Highway in the late 1920s.

In the early 1900s, hydro electricity development began to occur in the Central Highlands. The hydro electric scheme was initiated in the district in 1911 when the Hydro Electric Power and Metallurgical Company built a small dam at Great Lake with the intention to store water for conveyance to Waddamana where it was planned to construct a power station. The scheme failed to eventuate, and was subsequently taken over by the state government (through the Hydro Electric Department). By 1916, two generators had been installed at Waddamana and power was transmitted to Hobart via a transmission line. A second station at Waddamana was subsequently completed in 1948.

The sporadic and dispersed nature of European occupation in the Central Highlands, and the harshness of the terrain were a discouragement to further advancement of a systematic road network in the district. This changed with advent of logging in the Central Highlands. The initial logging tracks were generally just rudimentary paths cut through the bush by bulldozers. As logging activities increased in scale after the second World War, these tracks became more formalised, providing access for wheeled vehicles. Much of this logging activity was carried out by private operators. However, the roads and associated forests were largely subsequently taken over and managed by the Crown (the Forestry Commission).

3.2 Early Historical Period; Bothwell, Shannon, Ouse and Clyde Rivers

The proposed site for the Weasel Solar farm is situated around 9km north of the historic township of Bothwell. Europeans first came to the Clyde River in the first decade of the 1800s, when Thomas Laycock, a Lieutenant in the N.S.W. corps was

sent by Lieut-Governor P. William Patterson from Launceston to Hobart for food. During his passage, Laycock camped on the banks of the Clyde River, close to where the township of Bothwell sits (on the 18th February 1807). (http://www.think-tasmania.com/bothwell-history-convicts-bushrangers/, sourced 1/2/2015).

The neighbourhood was first surveyed in 1817, and in 1818. The first Europeans to settle in the Bothwell area, began arriving in 1821, and were predominantly wealthy, well connected Scottish, or occasionally Welsh, free settlers. A Welshman, Edward Nicholas, took up a grant of 1800 acres on the Clyde River at this time (then known as Fat Doe River, Big River and now referred to as the Ouse). Today his property, now a distillery, is still known as "Nant". Other early settlers to take up significant landholdings included the Scottish Alexander Reid who, arriving in Hobart Town on 1st March 1822, was shortly thereafter granted land on the Clyde River. The land comprised two sections, including "*1400 acres which he named 'Ratho' after the family property back in his homeland, and 600 acres five miles downstream, which he named Humbie after the town of his birth in Scotland"* (http://www.think-tasmania.com/bothwell-history-convicts-bushrangers/, sourced 1/2/2015). Ratho comprised the earliest golf course in Australia, laid out by the Reid family in the 1830s.

North-west of the study area of is the township of Ebrington. According to Holmes (2014:210-211) the township dates to 1834 when 640 acres of land within the township was offered for sale. It was included in the official Schedule of Townships dated to 1836, however interestingly, *the comment 'not built upon' was included in the Statistics for the County and electoral District of Cumberland in 1857*. In 1902, the correspondence from Secretary of Lands indicated that the township was sold to the 'Meadsfield' Estate, first settled by Edward Nicholas (see ELECTORAL ROLL Legislative Council, DISTRICT OF DERWENT for the year commencing August 1856, http://www.rootsweb.ancestry.com/~austas/Derwent.htm, sourced 1/2/2015). In July 1944, the Bothwell Council suggested that the town reserve should remain because here is a 'church, a school building and a church cemetery".

A review of the Land District Charts shows that the majority of the land encompassed by the Weasel Solar Farm site was within the original land holdings granted to George Cartwright and Joseph Allport. The exception is the north-west portion of the Weasel Solar Farm site which was part of the land holdings of Sinclair Williamson (see Figure 4).

Joseph Allport (1800-1877), solicitor, was the youngest son of William Allport, land surveyor and schoolmaster, of Aldridge, Staffordshire, England, and his wife Hannah, née Curzon. On leaving school he was articled to Sir John Fowler, a solicitor of Burton-on-Trent, and after completing his articles in London was placed on the roll of solicitors. He practised at Wolverhampton, Lichfield and West Bromwich. On 20 December 1826 he married Mary Morton Chapman, whom he had first met as a pupil at the school for young ladies kept by his parents. In 1830 he decided to emigrate to Australia with his wife and young son. They left England in the *Platina* in July 1831, arriving at Hobart Town next December, with two cousins and two friends and,

although the policy of land grants had been discontinued, they obtained a grant at Black Brush about twenty miles (32 km) from Hobart and began farming. In less than a year they realized that their land would not support them all and it was decided that Joseph Allport should withdraw from the partnership and practise law in Hobart.

George Meredith, son of a Birmingham solicitor, negotiated a partnership for him with George Cartwright, the oldest practitioner in Hobart. The business, known as Cartwright & Allport, grew so rapidly that two years later Allport wrote: 'I was not accused of neglecting my business in England but my life was one of positive idleness compared with what it is at present'. In 1835 he was appointed a notary public. In 1841 Cartwright retired from the firm and Joseph Allport took into partnership John Roberts, to whom he had previously given his articles, the firm then becoming Allport & Roberts. Allport's son, Morton, joined the firm in 1855 when it became Allport, Roberts & Allport. In his younger days Joseph Allport practised extensively at the Bar and according to contemporary reports was considered the most successful barrister of his day. Later the growing demands of his extending business forced him to give up all court work and devote himself entirely to the conveyancing and commercial work. He was recognized as an authority on real property law not only in Tasmania but also in England, and was quoted in the *Solicitors' Journal* of December 1861 and January 1862. He was offered, but refused, a judgeship. He did not seek political honours, although he was active in the agitation to have transportation of convicts to Van Diemen's Land abolished.

Outside his business Joseph Allport took a keen interest in many subjects, especially nature study. In 1842 he constructed ponds for rearing imported fish and introduced freshwater perch and tench from England. He was an ardent horticulturist with extensive gardens and orchards; he brought the white and yellow water-lilies to Tasmania and took an active interest in the botanical gardens at Hobart. He was an original member of the Tasmanian Society, the forerunner of the Royal Society of Tasmania, of which he was a fellow to the time of his death; and from its formation was a trustee of the Tasmanian Public Library. He was a member of the Church of England. He died at Hobart on 30 October 1877, survived by his wife and four of their six children. His wife achieved colonial distinction for her miniatures, lithographs and studies of Tasmanian flowers, shown in Hobart exhibitions between 1845 and 1863.

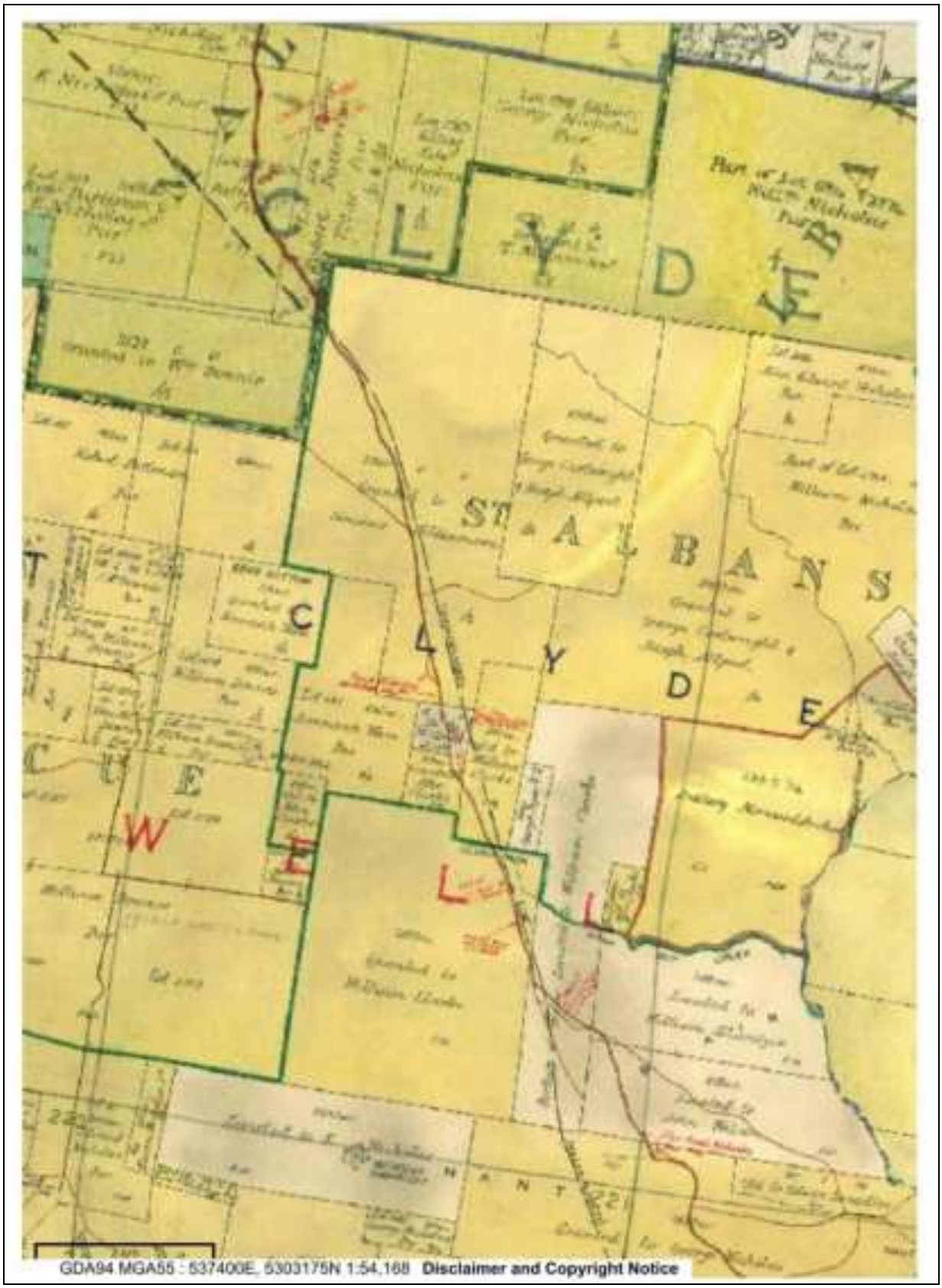


Figure 4: Land District Charts shows that the original land holdings grants within and in the surrounds of the Weasel Solar Farm site (Source TheList 2024)

3.3 Results of the Heritage Registers Search

A search of the various historic heritage registers (as listed in section 1.3 of this report) shows that there are no heritage listed properties of features that are situated within the boundaries of the Weasel Solar Farm site. The closest heritage listed feature is the Dungrove property which is situated just to the west of the Weasel Solar Farm site, on the west side of Highland Lakes Road. The property is a permanent registration on the Tasmanian Heritage Register (THR ID Number 72). The north-east corner of the registered boundaries of the Dungrove property approaches to within 60m of the Weasel Solar Farm site.

Figure 5 shows the THR registered boundaries of the Dungrove property in relation to the Weasel Solar Farm site. Table 1 provides the summary listing details for the Dungrove property.

Table 1: Summary details for the THR listed Dungrove Property

Feature	
Tasmanian Heritage Register - Unique ID Number	72
Tasmanian Heritage Register - Site Name	Dungrove
Title Reference	140434/1
Registration Status	Permanently Registered
Boundary Reference	Interim Boundary
Boundary Confidence	Unconfirmed (Interim Boundary)
Address	3287-3289 HIGHLAND LAKES RD, BOTHWELL, 7030
Municipality	Central Highlands Council

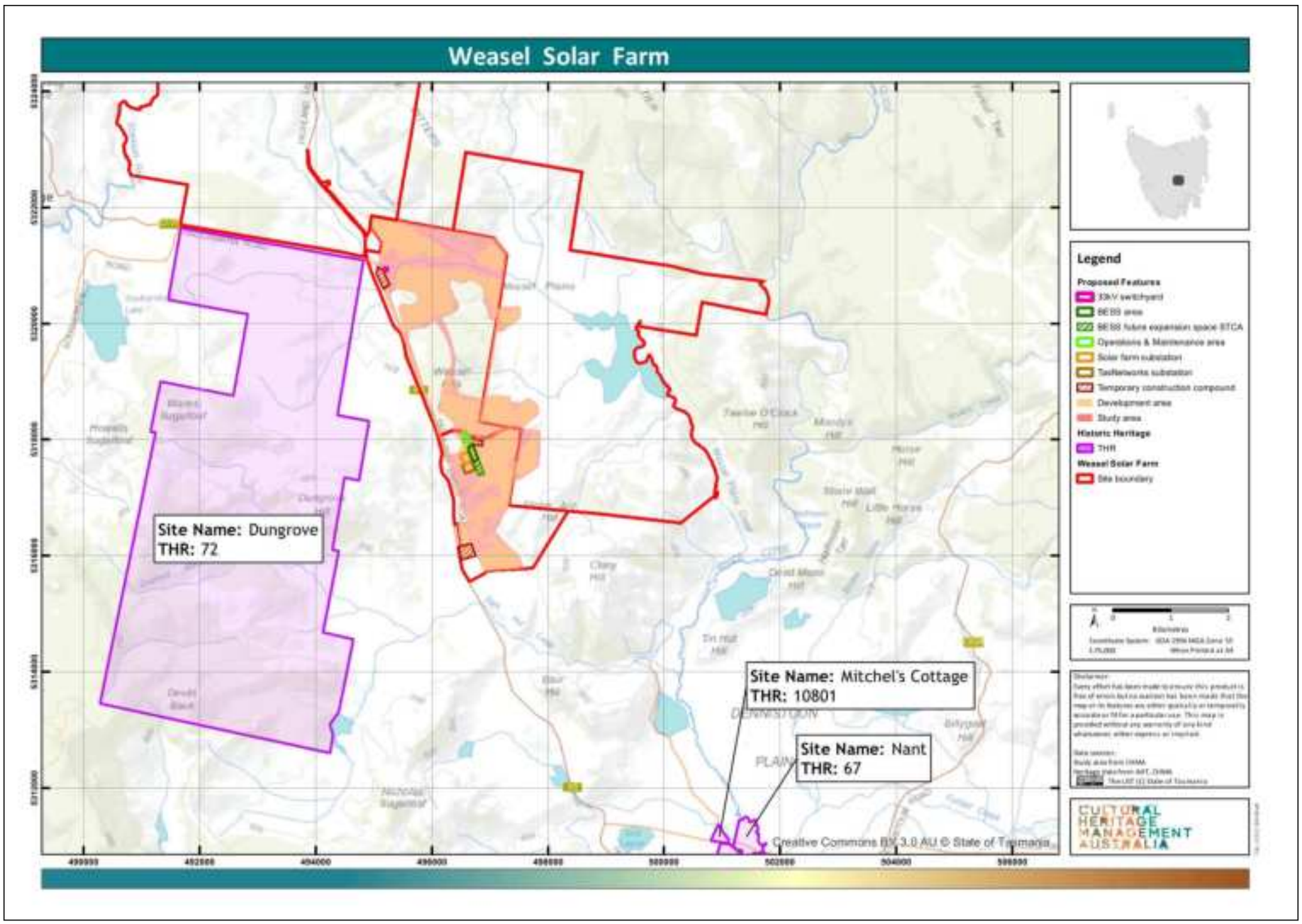


Figure 5: Registered and recorded historic sites and features that are located in the general surrounds of the Weasel Solar Farm site

4.0 Survey Coverage of the Study Area

Survey Coverage and Surface Visibility
Survey coverage refers to the estimated portion of a study area that has actually been visually inspected during a field survey. Surface Visibility refers to the extent to which the actual soils of the ground surface are available for inspection. There are a number of factors that can affect surface visibility, including vegetation cover, surface water and the presence introduced gravels or materials. Figure 6 presents a chart which is used as a general guideline for estimating surface visibility.

The field survey was undertaken by Stuart Huys and Shay Hannah) (CHMA archaeologists) and Rocky Sainty (Aboriginal Heritage Officer) and was implemented over a period of 5 days (25.4.2024, 26.4.2024, 29.4.2024, 30.4.2024, 1.5.2024). The field team walked a total of 68.45kms of survey transects across the Weasel Solar Farm site, with the average width of the transects being 10m. This equates to a total survey coverage of 684 500m². The primary focus of the field survey assessment was the proposed potential overall development area for the Weasel Solar Farm project, which encompasses approximately 435ha. Figure 7 shows the alignment of these transects.

Surface visibility was reasonably consistent across the surveyed areas, ranging between an estimated average of between 30% and 40%, which is in the low-medium range (see Figure 6). Vegetation cover was the main impediment to surface visibility. As a general rule, surface visibility was slightly better (averaging around 40%) on the hill slopes and crests (see Plates 7 and 8), compared to the lower lying valley floors, where visibility averaged 30% (see Plates 9 and 10). In the context of Tasmania, this level of average surface visibility is reasonable. Numerous erosion scalds, graded vehicle tracks and cleared areas were present within the surveyed areas, and these provided locales of improved visibility (see Plate 11). In an effort to increase effective coverage, these areas were targeted by the field team.

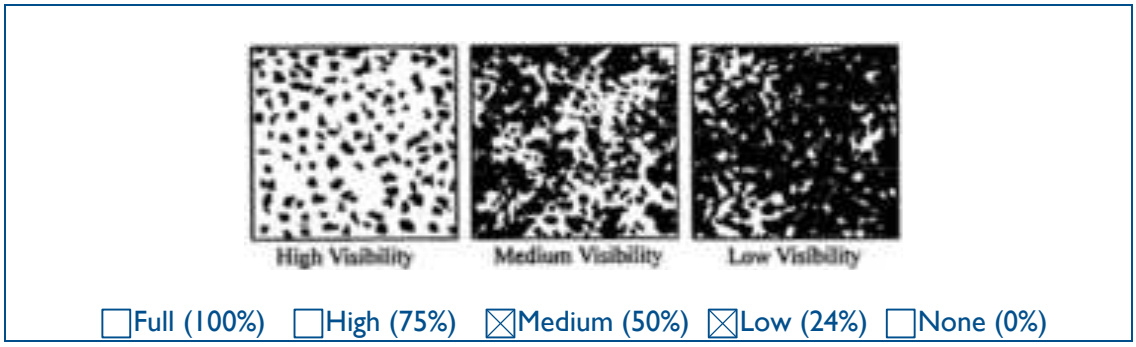


Figure 6: Guidelines for the estimation of surface visibility

Effective coverage
Variations in both survey coverage and surface visibility have a direct bearing on the ability of a field team to detect historic heritage sites. The combination of survey coverage and surface visibility is referred to as effective survey coverage. Table 2 presents the estimated effective survey coverage achieved by the field team. The

overall effective coverage is estimated to be 251 500m². Generally, the level of effective coverage is assessed as being adequate for the purposes of determining the likely presence, nature and extent of historic heritage sites that may be present within the potential overall development area for the Weasel Solar Farm project.

Table 2: Effective Survey Coverage achieved for the Weasel Solar Farm survey Assessment

Locations surveyed	Total Area Surveyed	Estimated Average Surface Visibility	Effective Survey Coverage
Grassed Agricultural Areas on Plains	22 300m x 10m = 223 000m²	30%	66 900m²
Hills and ridges fringing plains	46 150m x 10m = 461 500m²	40%	184 600m²
Total	68 450m x 10m = 684 500m²		251 500m²



Plate 7: View east showing typical levels of surface visibility (40%) in the hills areas



Plate 8: View north-west showing average visibility of 40% in the hill areas



Plate 9: View north-west across the valley floor plains with surface visibility at around 40%



Plate 10: View west across the plains area with visibility averaging 30%



Plate 11: View east at a large erosion scald within the hills providing a locale of improved visibility

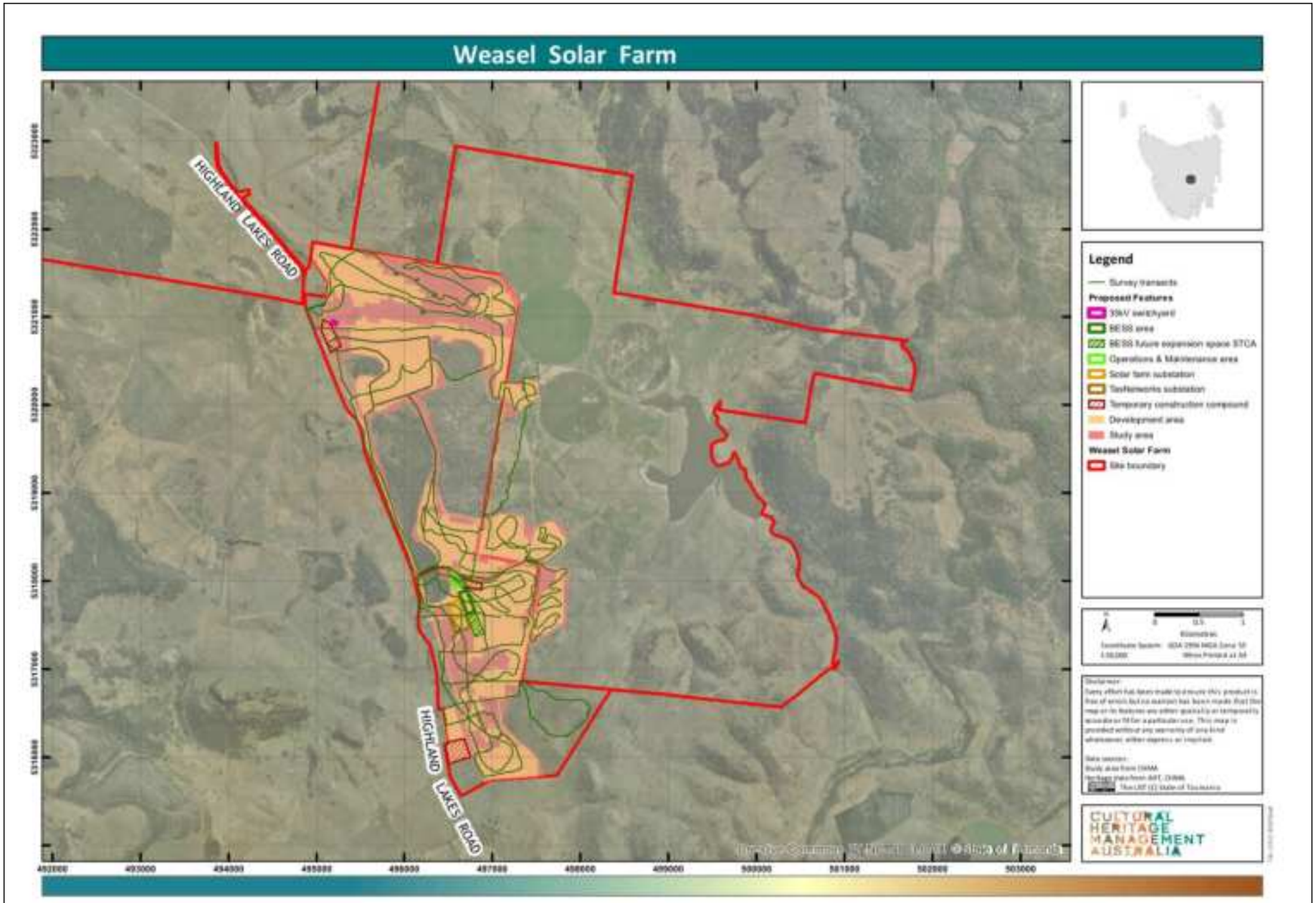


Figure 7: Aerial map showing survey transects walked across the Weasel Solar Farm site, with transects focused on the proposed potential overall development area

5.0 Survey Results, Statement of Heritage Impacts and Archaeological Potential

No historic heritage sites or suspected heritage features were identified during the field survey assessment of the Weasel Solar Farm site. As detailed in section 3.3 of this report, a search of the various historic heritage registers shows that there are no heritage listed properties of features that are situated within the boundaries of the Weasel Solar Farm site. The closest heritage listed feature is the Dungrove property which is situated just to the west of the Weasel Solar Farm site, on the west side of Highland Lakes Road. The property is a permanent registration on the Tasmanian Heritage Register (THR ID Number 72). The north-east corner of the registered boundaries of the Dungrove property approaches to within 60m of the Weasel Solar Farm site. This assessment has therefore confirmed that there are no known historic heritage features that are situated within the potential overall development area for the Weasel Solar Farm project.

As noted in section 4 of this report, there were some constraints in surface visibility experienced across the surveyed areas, with average surface visibility ranging between 30%-40%. Given these constraints, it can't be stated with absolute certainty that there are no undetected historic heritage sites present within the proposed development area for the Weasel Solar Farm project. However, the negative survey results provides a very strong indication that the archaeological potential for heritage features to be present is very low.

It is acknowledged that the survey assessment was predominantly focused on the potential overall development area for the Weasel Solar Farm project, with very few survey transects across the broader site area, where no development is proposed. Therefore, there is the potential that historic heritage sites or features may be present within the broader bounds of the Weasel Solar Farm site. Indeed, this is likely given that the properties where the Weasel Solar Farm site is located were part of early land grants in the district and were settled in the early to mid 1800s. Historic homestead(s), barns and potentially huts for labourers are likely to be present on the property, as well as other features associated with the early pastoral settlement of the Plains (for example heritage plantings around homestead). However, if present, these will be situated outside of potential overall development area for the Weasel Solar Farm project and will not be under any threat of impact.

6.0 Statutory Controls and Legislative Requirements

The following provides a summary overview of the various legislative instruments and statutory requirements relating to historic heritage in Tasmania. The review is presented in order to provide the proponent with a basic understanding of the statutory frameworks and procedures relating to heritage in Tasmania.

6.1 National Conventions

Council of Australian Governments Agreement 1997

In 1997, COAG reached an agreement on Commonwealth, State and local government roles and responsibilities for heritage management. Local government, through the Australian Local Government Association, and the Tasmanian Government were both signatories to this Agreement. The Agreement resulted in the following outcomes:

- Acceptance of a tiered model of heritage management, with the definition of places as being of either, world, national, state or of local heritage significance;
- Nominations of Australian places for the World Heritage List and management of Australia's obligations under the World Heritage Convention would be carried out by the Commonwealth Government;
- A new National Heritage System was created in January 2004, comprising the Australian Heritage Council (AHC), National Heritage List (NHL) and Commonwealth Heritage List (CHL);
- The Commonwealth Government, through the Australian Heritage Council would be responsible for listing, protecting and managing heritage places of national significance;
- State and Territory Governments would be responsible for listing, protecting and managing heritage places of state significance; and
- Local government would be responsible for listing, protecting and managing heritage places of local significance.

Environment Protection and Heritage Council of the Australian and State/Territory Governments 1998

In 1998, the National Heritage Convention proposed a set of common criteria to be used in order to better assess, understand and manage the heritage values of places.

The Environment Protection and Heritage Council of the Australian and State/Territory Governments adopted this as a national set of desirable common criteria (known as the HERCON criteria). The adoption of these criteria by Heritage Tasmania has not yet been formalised. These criteria are also based upon the Burra Charter values. The Common Criteria (HERCON Criteria) adopted in April 2008 are summarised below:

a) *Importance to the course or pattern of our cultural or natural history.*
b) *Possession of uncommon, rare or endangered aspects of our cultural or natural history.*

c) *Potential to yield information that will contribute to an understanding of our cultural or natural history.*
d) *Importance in demonstrating the principal characteristics of a class of cultural or natural places or environments.*
e) *Importance in exhibiting particular aesthetic characteristics*
f) *Importance in demonstrating a high degree of creative or technical achievement at a particular period.*
g) *Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. This includes the significance of a place to Indigenous peoples as part of their continuing and developing cultural traditions.*
h) *Special association with the life or works of a person, or group of persons, of importance in our history.*

These criteria have been endorsed by the Heritage Chairs and Officials of Australia and New Zealand (HCOANZ) in the Supporting Local Government Project document, "Protecting Local Heritage Places: A National Guide for Local Government and Communities" (March 2009).

Burra Charter 2013

Australia ICOMOS (International Council on Monuments and Sites) is the peak body of professionals working in heritage conservation in Australia. The Burra Charter was adopted by Australia ICOMOS in 1979 in Burra, South Australia based on other international conventions. Further revisions were adopted in 1981, 1988, 1999 and 2013 to ensure the Charter continues to reflect best practice in heritage and conservation management. The current version of the Australia ICOMOS Burra Charter 2013 is the only version that should be used.

The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places), and is based on the knowledge and experience of Australian ICOMOS members. The Charter sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians.

The Charter recognises the need to involve people in the decision-making process, particularly those that have strong associations with a place. It also advocates a cautious approach to changing heritage places: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.

6.2 Commonwealth Legislation

Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides for the listing of natural, historic or indigenous places that are of outstanding national heritage value to the Australian nation as well as heritage places on Commonwealth lands and waters under Australian Government control.

Once a heritage place is listed under the EPBC Act, special requirements come into force to ensure that the values of the place will be protected and conserved for future generations. The following heritage lists are established through the EPBC Act:

- *National Heritage List* - a list of places of natural, historic and indigenous places that are of outstanding national heritage value to the Australian nation
- *Commonwealth Heritage List* - a list of natural, historic and indigenous places of significance owned or controlled by the Australian Government.
- *List of Overseas Places of Historic Significance to Australia* – this list recognises symbolically sites of outstanding historic significance to Australia but not under Australian jurisdiction.

This assessment has confirmed that there are no listed or identified heritage features that occur within the boundaries of the Weasel Solar Farm site. On this basis, it is advised that there are no heritage listing requirements that apply for this project.

Australian Heritage Council Act 2003

The Australian Heritage Council is a body of heritage experts that has replaced the Australian Heritage Commission as the Australian Government's independent expert advisory body on heritage matters when the new Commonwealth Heritage System was introduced in 2004 under amendments to the Environment Protection and Biodiversity and Conservation Act 1999.

The Council plays a key role in assessment, advice and policy formulation and support of major heritage programs. Its main responsibilities are to assess and nominate places for the National Heritage List and the Commonwealth Heritage List, promote the identification, assessment, conservation and monitoring of heritage; and advise the Minister on various heritage matters.

Protection of Movable Cultural Heritage Act 1986

The PMCH Act regulates the export of cultural heritage objects from Australia. The purpose of the Act is to protect, for the benefit of the nation, objects which if exported would significantly diminish Australia's cultural heritage. Some Australian protected objects of Aboriginal, military heritage and historical significance cannot be granted a permit for export. Other Australian protected objects may be exported provided a permit or certificate has been obtained.

6.3 State Legislation

Land Use Planning and Approvals Act 1993

This Act (LUPAA) is the cornerstone of the State Resource Management and Planning System (RMPS). It establishes the legitimacy of local planning schemes

and regulates land use planning and development across Tasmania. With regard to historic heritage, LUPAA requires that planning authorities will work to conserve those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value" [Schedule 1 Part 2(g)].

Resource Planning and Development Commission Act 1997

The Resource Planning and Development Commission (now referred to as the Tasmanian Planning Commission) is responsible for overseeing Tasmania's planning system, approving planning schemes and amendments to schemes and assessing Projects of State Significance. In terms of heritage management, the TPC will consider the establishment of heritage overlays, precincts or areas as part of the creation of planning schemes.

Resource Management and Planning Appeal Tribunal Act 1993

The Resource Management and Planning Appeal Tribunal determine planning appeals and enforce the Acts within the RMPS. The Tribunal plays an important role in the management of heritage places through its determinations on proposed development on, or near to, places of heritage significance.

Historic Cultural Heritage Act 1995

The *Historic Cultural Heritage Act 1995* (HCH Act) is the key piece of Tasmanian legislation for the identification, assessment and management of historic cultural heritage places. The stated purpose of the HCH Act is to promote the identification, assessment, protection and conservation of places having historic cultural heritage significance and to establish the Tasmanian Heritage Council". The HCH Act also includes the requirements to:

- establish and maintain the Tasmanian Heritage Register (THR);
- provide for a system for a system of approvals for work on places on the Register;
- provide for Heritage Agreements and assistance to property owners;
- provide for protection of shipwrecks;
- provide for control mechanisms and penalties for breaches of the Act.

Under the HCH Act, "conservation" in relation to a place is defined as:

- the retention of the historic cultural heritage significance of the place; and
- any maintenance, preservation, restoration, reconstruction and adaption of the place.

The definition of "place" under the HCH Act includes:

- a site, precinct or parcel of land;
- any building or part of a building;
- any shipwreck;
- any item in or on, or historically or physically associated or connected with, a site precinct or parcel of land where the primary importance of the item derives in part from its association with that site, precinct or parcel of land; and

- any equipment, furniture, fittings, and articles in or on, or historically or physically associated or connected with any building or item.

The Act created the Tasmanian Heritage Council (THC), which came into existence in 1997 and operates within the State RMPS. The THC is a statutory body, separate from government, which is responsible for the administration of the HCH Act and the establishment of the Tasmanian Heritage Register (THR), which lists all places assessed as having heritage values of state significance. The THC also assesses works that may affect the heritage significance of places and provides advice to state and local government on heritage matters. The primary task of the THC is as a resource management and planning body, which is focused on heritage conservation issues. Any development on heritage-listed places requires the approval of the THC before works can commence.

Heritage Tasmania (HT) also plays a key role in fulfilling statutory responsibilities under the HCH Act. HT has three core roles:

- co-ordinating historic heritage strategy and activity for the State Government;
- supporting the Tasmanian Heritage Council to implement the HCH Act; and
- facilitating the development of the historic heritage register.

Works to places included in the THR require approval, either through a Certificate of Exemption for works which will have no or negligible impact, or through a discretionary permit for those works which may impact on the significance of the place.

Discretionary permit applications are lodged with the relevant local planning authority. On receipt, the application is sent to the Heritage Council, which will firstly decide whether they have an interest in determining the application. If the Heritage Council has no interest in the matter, the local planning authority will determine the application.

If the Heritage Council has an interest in determining the application, a number of matters may be relevant to its decision. This includes the likely impact of the works on the significance of the place; any representations; and any regulations and works guidelines issued under the HCH Act. The Heritage Council may also consult with the planning authority when making a decision.

In making a decision, the Heritage Council will exercise one of three options: consent to the discretionary permit being granted; consent to the discretionary permit being granted subject to certain conditions; or advise the planning authority that the discretionary permit should be refused. The Heritage Council's decision is then forwarded to the planning authority, which will incorporate the decision into any planning permit

Works Guidelines for Historic Heritage Places 2015

The Tasmanian Heritage Council and Heritage Tasmania have issued Works Guidelines for Historic Heritage Places. The guidelines provide a general reference

for the types of works which may be exempt, or those where a permit will be required. They also define appropriate outcomes for a range of different works and development scenarios. Although specifically designed for places included in the THR, the guidelines provide useful advice for the management of heritage places generally.

This assessment has confirmed that there are no heritage features listed on the Tasmanian Heritage Register that occur within the boundaries of the Weasel Solar Farm site. On this basis, it is advised that there are no Certificate of Exemption or Discretionary Permits that apply for this project.

6.4 Local Planning Schemes (The Tasmanian Planning Scheme – Central Highlands)

The Weasel Solar Farm site falls within the local government area of the Central Highlands Council, which includes the towns of Bothwell, Bronte Park, Derwent Bridge, Hamilton, Liawenee, Miena, Ouse and Tarraleah.

The *Tasmanian Planning Scheme – Central Highlands* formally came into effect for the Central Highlands Local Government on 8 February 2023, and replaces the former *Central Highlands Interim Planning Scheme 2015*. The *Tasmanian Planning Scheme* provides a single planning scheme and a consistent set of rules and requirements in relation to the manner in which all land in Tasmania may be used, developed, protected and conserved. It consists of two parts:

1. **State Planning Provisions** contain the mandatory common rules that are to apply in all municipal areas. For consistency in permit and compliance requirements that must be met by a proposed use or development.
2. **Local Provision Schedule** for each municipal area setting out how the State Planning Provisions are to apply. The Clarence Local Provision Schedule (LPS) contains all of the Clarence specific local controls including the Zone and Code Maps, Code lists , Specific Area Plans (mapping & controls) and Site Specific Qualifications.

The planning scheme supports strategic land use planning for residential, business, agriculture, utilities, environmental and recreational zones. The scheme includes considerations such as natural hazards, local heritage values, natural assets, parking requirements and the protection of road, railway and electricity infrastructure.\

Section C6 of the *Tasmanian Planning Scheme* deals specifically with the Local Heritage Code. The stated purpose of the code is to recognise and protect the local historic heritage significance of local places, precincts, landscapes and areas of archaeological potential and significant trees by regulating development that may impact on their values, features and characteristics.

This code applies to:
(a) development on land within any of the following, as defined in this code:
(i) a local heritage place;
(ii) a local heritage precinct;
(iii)a local historic landscape precinct; and

(iv) for excavation only, a place or precinct of archaeological potential; and

(b) the lopping, pruning, removal or destruction of a significant tree as defined in this code.

If a site is listed as a local heritage place and also within a local heritage precinct or local historic landscape precinct, it is only necessary to demonstrate compliance with the standards for the local heritage place unless demolition, buildings and works are proposed for an area of the site outside the identified specific extent of the local heritage place.

This code does not apply to a registered place entered on the Tasmanian Heritage Register.

This assessment has confirmed that there are no heritage features listed under the *Central Highlands Interim Planning Scheme 2015* (CHIPS) that occur within the boundaries of the Weasel Solar Farm site. On this basis, there are no heritage code requirements under The *Tasmanian Planning Scheme – Central Highlands* that are applicable.

7.0 Heritage Management Plan

The heritage management options and recommendations provided in this report are made on the basis of the following criteria.

- The results of the heritage register searches and field investigation as documented in sections 3 and 5 of the report.
- The legal and procedural requirements as summarised in section 6 of this report, with specific reference to the Work Guidelines for Historic Heritage Places.

Recommendation 1 (Weasel Solar Farm)

No historic heritage sites, features or areas of elevated archaeological potential have been identified within the potential overall development area for the Weasel Solar Farm project and it has been assessed that there is a very low potential for additional undetected historic sites or features to be present. On this basis it is recommended that there are no further historic heritage requirements or constraints that apply to the overall development area for the Weasel Solar Farm project

Recommendation 2 (The Dungrove Property)

The Dungrove property is a permanent registration on the Tasmanian Heritage Register (THR #72). The north-east corner of the registered boundaries of the Dungrove property approaches to within 60m of the Weasel Solar Farm site. It is recommended that the location of the Dungrove property boundaries is plotted onto the Weasel Soar Farm development masterplan, and it noted that no development activity is to occur within the property boundaries.

If there is the risk of development activity extending to within the boundaries of the Dungrove property, then the proponent will either need to seek a Certificate of Exemption (for works which will have no or negligible impact) or a Discretionary Permit from the Heritage Council.

Recommendation 3 (Changes to the Design)

If the current potential overall development area for the Weasel Solar Farm changes, then additional survey assessments will need to be undertaken for areas not covered by the current assessment.

Recommendations 4 (Unanticipated Discovery Plan)

As per the Practice Note No 2 by the Tasmanian Heritage Council, processes must be followed should any unexpected archaeological features and/or deposits be revealed during proposed construction works. A process for dealing with Unanticipated Discoveries is presented in section 8.

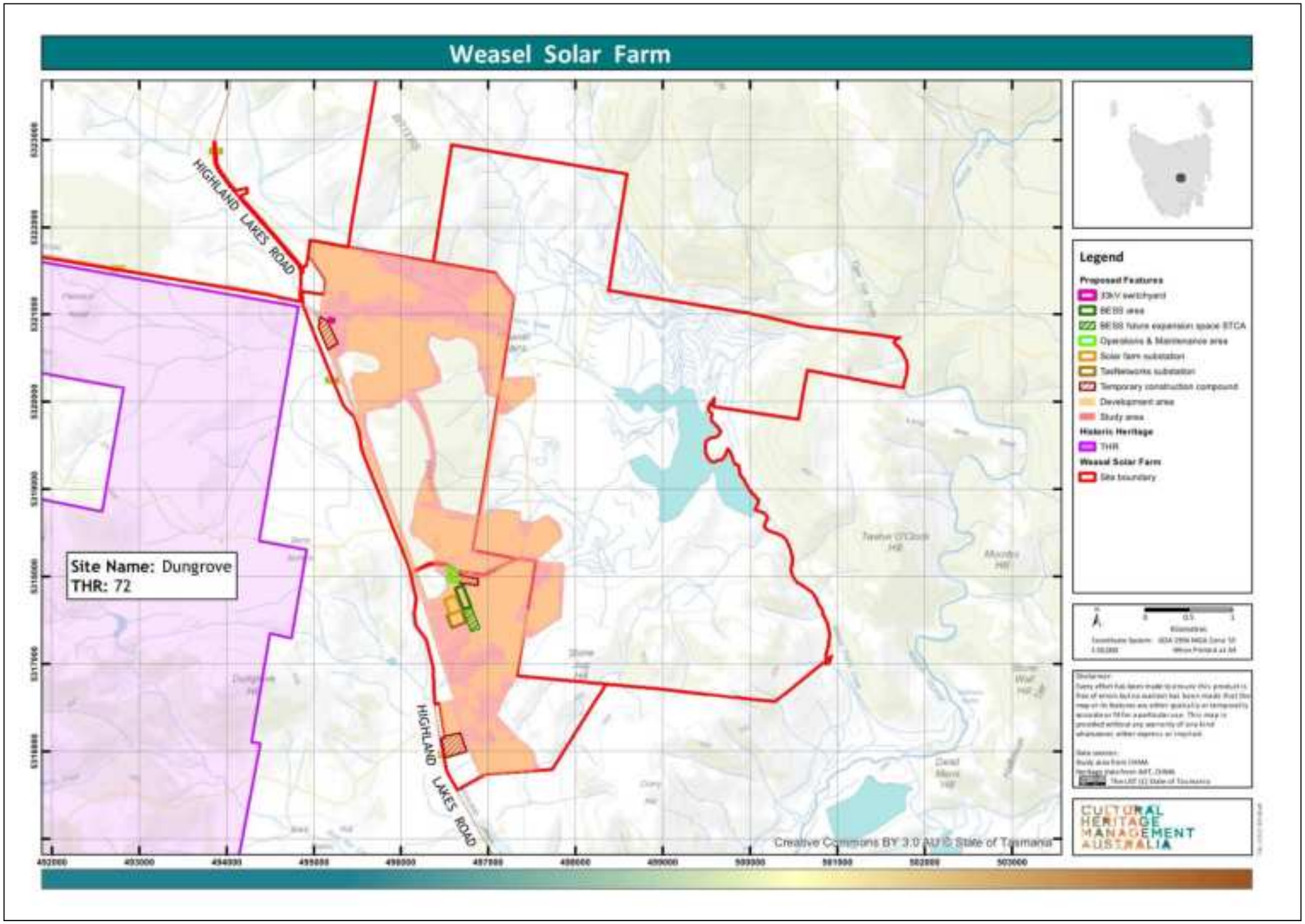


Figure 8: Topographic map showing the location of the THR listed Dungrove property in relation to the Weasel Solar Farm site

8.0 Unanticipated Discovery Plan

The following text describes the proposed method for dealing with unanticipated discoveries of heritage features or objects during the proposed Weasel Solar Farm development works. The plan provides guidance to project personnel so that they may meet their obligations with respect to heritage legislation. Please Note: There are two different processes presented for the mitigation of these unanticipated discoveries. The first process applies for the discovery of all cultural heritage objects or features, with the exception of skeletal remains (burials). The second process applies exclusively to the discovery of skeletal remains (burials).

Discovery of Heritage Objects or Features

Step 1

If any person believes that they have discovered or uncovered a heritage object or feature, the individual should notify any machinery operators that are working in the general vicinity of the area that earth disturbance works should stop immediately.

Step 2

A buffer protection zone of 5m x 5m should be established around the suspected heritage find. No unauthorised entry or earth disturbance will be allowed within this 'archaeological zone' until such time as the suspected heritage find has been assessed, and appropriate mitigation measures have been carried out.

Step 3

A qualified heritage consultant should be engaged to assess the suspected heritage find. As a first step in the process, the heritage consultant should contact Heritage Tasmania, the Heritage Council and the Local Council and notify them of the find. The heritage consultant will ensure that Heritage Tasmania, the Heritage Council and the Local Council are consulted throughout the assessment process.

Step 4

If the heritage find is a movable object, then the find should be recorded, photographed and a decision should be made as to whether the object should be re-located to a designated Keeping Place. If the find is an unmovable heritage object or feature, then the find should be recorded and photographed and a HIA and HMP developed for the feature. This should be then submitted to Heritage Tasmania, the Heritage Council and the Local Council for review and advice.

Possible outcomes may necessitate:

a. An amendment to the design of the development
b. Carrying out of archaeological excavations prior to the re-commencement of works
c. Archaeological monitoring and recording during works
d. Preparation (and implementation) of a strategy to ensure communication of the new information to the community.
e. A combination of the above.

Discovery of Skeletal Material

Step 1:
Call the Police immediately. Under no circumstances should the suspected skeletal material be touched or disturbed. The area should be managed as a crime scene. It is a criminal offence to interfere with a crime scene.

Step 2:
Any person who believes they have uncovered skeletal material should notify all employees or contractors working in the immediate area that all earth disturbance works cease immediately.

Step 3:
A temporary 'no-go' or buffer zone of at least 50m x 50m should be implemented to protect the suspected skeletal material, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected skeletal remains have been assessed by the Police and/or Coroner.

Step 4:
If it is suspected that the skeletal material is Aboriginal, Aboriginal Heritage Tasmania should be notified.

Step 5:
Should the skeletal material be determined to be Aboriginal, the Coroner will contact the Aboriginal organisation approved by the Attorney-General, as per the *Coroners Act 1995*.

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Legislation

The *Tasmanian Planning Scheme – Central Highlands*
Historic Cultural Heritage Act 1995
Council of Australian Governments Agreement 1997
Environment Protection and Heritage Council of the Australian and State/Territory Governments 1998
Land Use Planning and Approvals Act 1993
Resource Planning and Development Commission Act 1997
Resource Management and Planning Appeal Tribunal Act 1993
Environment Protection and Biodiversity Conservation Act 1999
Australian Heritage Council Act 2003
Protection of Movable Cultural Heritage Act 1986
Aboriginal Heritage Act 1975
Coroners Act 1995



Consultation Summary Report

Weasel Solar Farm

Central Highlands, TAS

For Weasel Solar Farm Pty Ltd c/o Robert Luxmoore Pty Ltd

23 September 2024

cogency

Planning | Engagement | Strategy

Document Details

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We celebrate the physical and spiritual connections between Indigenous people and place expressed through the Birrarung Wilam (Common Ground) art Project on the banks of Melbourne's Yarra River.

Acknowledgement of Country

Cogency acknowledges the Traditional Owners and Custodians of the land on which we meet, work and write, the Wurundjeri Woi-wurrung peoples of the Kulin nation, and their connections to land, sea, and community. We pay our respect to their Elders past and present and emerging.

Cogency also extends that respect and acknowledges the Traditional Custodians of Bothwell, the Big River Tribe, or Teen Toomie Mennenyer people. We recognise and respect their cultural heritage, beliefs and continuing connection with the land and waterways. We also recognise the resilience, strength, and pride of the Big River Tribe and First Nations communities and acknowledge that Sovereignty was never ceded.

Executive Summary

Weasel Solar Farm Pty Ltd c/o Robert Luxmoore Pty Ltd (the Proponent) appointed Cogency Australia (Cogency) to prepare a Community & Stakeholder Engagement Strategy and lead the engagement activities for the proposed development of the Weasel Solar Farm – a large-scale solar farm in Bothwell, located in the Central Highlands region of Tasmania referred to as the 'Project.'

The Proponent is committed to ensuring the community and stakeholders are proactively and meaningfully informed, consulted and involved in the planning and development of the Project, and that the benefits are genuinely felt by local people and businesses.

This Consultation Summary Report (Report) provides details of the engagement undertaken for the Weasel Solar Farm, from 2023 to 2024.

The three main phases of engagement throughout the lifecycle of the Project include:

- **Phase 1:** Early Feasibility and Design (Completed)
- **Phase 2**: Pre-Lodgement (Completed)
- **Phase 3:** Post-Lodgement & Advertisement (To start).

During all phases of the Project, the appropriate stakeholders have and will be effectively informed, consulted, and involved in the process based on the objectives, principles, best practices, and guidelines for community engagement outlined in the Project's Community and Stakeholder Engagement Strategy.

By actively listening to stakeholders and addressing their concerns, the Proponent has aimed to enhance the benefits derived from the Weasel Solar Farm and minimise the impacts on neighbours, the community, and the local environment.

Consultation with stakeholders and the Bothwell community has enabled the project team to adjust various elements of the Project's design and conduct additional technical studies to identify and resolve any issues raised.

The Engagement Action Plan continues to be periodically updated to reflect the progress of the Project, incorporate community input, and address any emerging needs and issues.

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Glossary

Abbreviation	Meaning
ABS	Australian Bureau of Statistics
AEMO	Australian Energy Market Operator
BESS	Battery Energy Storage System
CEC	Clean Energy Council
EPA	Environmental Protection Authority
EPBC	Environment Protection and Biodiversity Conservation
IAP2	International Association for Public Participation
LGA	Local Government Area
kV	Kilovolt
MER	Monitoring, Evaluation and Reporting
MW	Megawatt
NEM	National Energy Market (NEM)
O&M	Operations and Management
ReCFIT	Renewables, Climate and Future Industries Tasmania
REZ	Renewable Energy Zone
Strategy	Community and Stakeholder Engagement Strategy

1. Project Overview

1.1 Introduction

Cogency Australia Pty Ltd (Cogency), on behalf of Weasel Solar Farm Pty Ltd c/o Robert Luxmoore Pty Ltd (the Proponent), has prepared this Consultation Summary Report in relation to the proposed development of the Weasel Solar Farm – a large-scale solar farm north of Bothwell, located in the Central Highlands region of Tasmania, hereby referred to as the 'Project'.

Community and stakeholder engagement is fundamental to delivering positive and effective outcomes for both renewable energy projects and the local community. Evidence from across Australia and internationally has shown that effective engagement increases the likelihood of establishing and maintaining renewable energy facilities that bring the most mutual benefit to all stakeholders. Proactive, meaningful, inclusive, and robust engagement practices can therefore be seen as an investment in two outcomes: the future success of the renewable energy industry and strong communities.

This Report aims to provide an overview of the stakeholder and community consultation that has occurred and will continue to occur in the planning and development of the Project. To date, the Proponent with the support of Cogency has sought to ensure that the community and stakeholders are **proactively and meaningfully informed, consulted and involved** throughout the Project's lifecycle.

1.2 The Project

The Weasel Solar Farm is a significant new solar farm Project to be developed north of Bothwell, in the Central Highlands region of Tasmania. The Weasel Solar Farm is one component of the Proponent's broader 'Highlands Renewable Energy Hub' that is seeking to generate and use renewable energy alongside agricultural and forestry processing to generate significant social and economic benefits for the local community and the state of Tasmania.

The Highlands Renewable Energy Hub seeks to deliver three distinct yet interconnected components - a solar farm, a wind farm, and a renewable energy business park (battery and industry), all of which have different development approval pathways. The focus of this Summary is the solar farm component.

The Project comprises of a solar farm with a capacity of up to 250MW and a battery energy storage system (BESS). The Project area covers approximately 435 ha for the solar panels and includes a two-hectare development area for the BESS, electricity switchyard infrastructure, transmission line connection into the existing 220kV transmission line, and associated infrastructure and works such as access tracks, benching, drainage and landscaping.

Once operational, the Weasel Solar Farm will provide critical energy generation for the National Electricity Market (NEM) grid. By generating energy from renewable energy sources, the proposed Project will contribute to existing and proposed renewable energy projects within Tasmania's Central Highlands Renewable Energy Zone (T3-REZ), while helping to strengthen energy supply and price stability for households across Tasmania and support Tasmania's energy transition.

1.3 Site and Context

The site is located within the south-east of the Central Highlands Local Government Area (LGA) of Tasmania. The solar farm development area is located within the Weasel Plains, south-east of many of the great lakes that give the Central Highlands its unique natural character. Early design concepts show the solar farm development areas will be located approximately 5 km to the east of the rural locality of Hermitage, approximately 9 km to the north of Bothwell, and a 72 km north of Hobart.

While the surrounding area is quite undulating, the areas selected for the solar farm development are relatively flat. The development areas for the solar farm are generally cleared of vegetation due to historical agricultural use, with large patches of vegetation within the wider property being avoided.

Highland Lakes Road (State Route A5) runs adjacent to the western extent of the site, with sightlines largely protected by existing vegetation and topography (a ridge runs parallel between the road and the solar development areas). The A5 connects from the A1 (National Highway 1, Tasmania's most important road connection - Hobart to Launceston) approximately 25 km south at Melton Mowbray and broadly runs north/north-west to Deloraine through the Central Highlands region (including via Bothwell and Miena). It connects to at Melton Mowbray, providing connections to Hobart.

The site sits within one of the three Tasmanian Renewable Energy Zones (REZ) as identified by the Australian Energy Market Operator (AEMO), the T3 – Central highlands REZ (T3-REZ). REZ's are areas with high-quality renewable energy resources where clusters of large-scale renewable projects can be developed. The Central Highlands region holds immense potential for the development of a variety of renewable energy projects and there are several renewable energy projects that are currently under development or in operation, including the operational Cattle Hill Wind Farm.



Figure 1 – Regional Context Map

2. Community Snapshot

2.1 Traditional Owners

Prior to European Settlement, the Central Highlands region was stewarded by the Big River Tribe, or Teen Toomie Mennenyer people. The Tasmanian Aboriginal Centre and the Aboriginal Land Council of Tasmania (ALCT) are the key stakeholders representing traditional owners in the region.

Within the Central Highlands Local Government Area, there are 154 people who identify as Aboriginal and/or Torres Strait Islander, representing approximately 6.1% of the population (ABS, 2021).

Teen Toomie Mennenyer people have cared for and protected this land since the dreaming. Their connections to the land, animals, seas, and waterways were and continue to be a part of their being.

2.2 Regional Context

The Proposal is located within the Central Highlands Council area. The LGA covers more than 8,000 square kilometres and makes a significant and increasing contribution to the economic wealth of Tasmania.

Known for its great lakes and scenic mountainous areas, the region is popular for tourism and recreation. The region boasts multiple thriving industries including agriculture (diverse crop and livestock production), horticulture, forestry, power generation and trout fishing. The key communities in the region of the Weasel Solar Farm are Bothwell, Osterley, Victoria Valley and Ouse. These towns and villages are relatively small and distinct rural communities. Central Highlands' major transport services are the Midland Highway and Highland Lakes Road.

2.3 Community Overview

The community with the closest relationship to the development of the Weasel Solar Farm is Bothwell. Other communities of Osterley, Victoria Valley and Ouse are further and less connected. Based on the site's geography, engagement will be tailored to the primary service town of Bothwell.

Bothwell has a population of approximately 499 residents (ABS, 2021). Bothwell sits on the river Clyde and is surrounded by rich rural land, primarily used for agriculture and is known as the southern gateway to the central highlands of Tasmania, and the gateway to some of the best trout fishing in Australia near Arthurs Lake and the Great Lake. First established by settlers of Scottish descent in 1824, the Scottish influence can still be seen in Bothwell today. Bothwell received its name from Governor George Arthur after the town in Scotland similarly located on the River Clyde. It is one of the most historically significant towns in Tasmania, with a total of 60 buildings and locations of historic interest.

The median age of Bothwell is higher than the national average and there is a higher percentage of couples without children which is indicative of an aging population. The top industries of employment are sheep / sheep-beef cattle farming and local government administration.

2.4 Stakeholder Identification

To engage appropriately and effectively with the local community and stakeholders, an important first step was to identify the full list of community and stakeholder groups who may be affected by and/or have an interest in the Project, as outlined in **Table 1**.

Table 1 – Stakeholder identification analysis for Weasel Solar Farm

Group	Sub-section	Description
Near Neighbours	Nearest (<2km)	Excluding the dwellings located within the involved Dungrove and Cluny properties, there are two non-involved dwellings located approximately 600m-1km to the southwest of the Development Area.
	Near (<5km)	10 more non-involved dwellings have been identified up to 5 kilometres north-west from the boundary of the Development Area for the solar farm.
Bothwell Community		Township of Bothwell is 9km south of the Development Area with approximately 500 residents.
Local Businesses	Near (<5km)	Businesses up to 5 kilometres from the site boundary.
	Far (>5km)	Businesses greater than 5 kilometres from the site boundary, within the local area.
Traditional Owners		Tasmanian Aboriginal Centre Aboriginal Land Council Tasmania Heritage Council – Tasmanian Heritage Register
Central Highland community		Communities beyond the immediate area, within the wider Central Highlands regional area
Print Media	Local	Local publications such as the Derwent Valley Gazette and The Highland Digest.
	State	Tasmanian publications such as The Advocate, The Examiner, The Mercury, and Tasmanian Country.
	National	National publications such as the Australian Financial Review, and The Australian.
Other Media	Local	Local TV and Radio, including 7LTN Tasman Community FM
	State	State TV and Radio, including ABC Hobart, 7News Tasmania, 9News Tasmania, Triple M Hobart, Print Radio Tasmania.
	National	National TV and Radio, including ABC National, 7News, 9News, Sky News, SBS.
Social media	Local	Local community Facebook groups i.e. Bothwell Community Forum
Federal Government	Relevant Ministers	Minister for Climate Change and Energy, Hon Chris Bowen MP. Minster for Environment and Water, Hon Tanya Plibersek MP. Minister for Infrastructure, Transport, Regional Development and Local Government, The Hon. Catherine King MP Minister for Industry and Science, Mr. Ed Husic MP Minister for Agriculture, Fisheries and Forestry Senator the Hon. Murray Watt
	Federal member for Lyons	Brian Mitchell (Labor) Senators: Liberal - Wendy Askew, Claire Chandler, Richard Colbeck, Jonathon Duniam Jacqui Lambie Network - Jacqui Lambie, Tammy Tyrell ALP - Catryna Bilyk, Anne Urquhart, Carol Brown, Helen Polley Greens - Peter Whish - Wilson
	Dept Officers	Staff in government agencies such as ReCFIT
	Federal Agencies	Department of Climate Change, Energy, Water and the Environment (DCCEEW) Australian Renewable Energy Agency (ARENA)
State Government	Relevant Ministers	Minister for Planning, Minister for Skills and Training, Felix Ellis Minister for Parks and Environment, Minister for Energy and Renewables, Nick Duigan
	Local members	Legislative Council – Craig Farrell, Member for Derwent (Labor) House of Assembly:

		Guy Barnett (Liberal) Jen Butler (Labor) John Tucker (Liberal) Mark Shelton (Liberal) Rebecca White (Labor)
	State Agencies	Renewables, Climate and Future Industries Tasmania (RECFIT) Skills Tasmania (Energising Tasmania) Advisory Board on Skills Tasmania Parks and Wildlife Service Tasmanian Planning Commission
Local Government	Relevant Councillors	Mayor - Loueen Triffitt Deputy Mayor - Jim Allwright Councillors - Tony Bailey, Robert Cassidy, Anthony Archer, John Hall, Julie Honner, Yvonne Miller and David Meacheam
	Relevant Authorities	Central Highlands Council General Manager - Stephen Mackey
Emergency Services		SES and Tasmania Fire services Bothwell Fire station (Volunteer), Bothwell – West Bothwell Fire Station
Water Authority		Tas Water
NGOs / Not for Profits		Farmers for Climate Action *E.g. Landcare, skills training organisations*
Transport Agencies		Tasmanian Department of State Growth – Transport Tasmania
Utilities / Grid Providers		TasNetworks - Tasmania's main grid operator and transmission line developer

3. Community and Stakeholder Engagement Plan

3.1 Engagement Objectives

The Proponent acknowledges that active and early engagement with the community and other relevant stakeholders is crucial to the planning process. The exchange of knowledge and information helps foster a greater understanding of and support for the Project and further helps improve the design and development outcomes.

The Proponent is committed to delivering best practice engagement, with the overarching objective of ensuring that the identified community and stakeholder groups are proactively and meaningfully informed, consulted and involved and that the benefits of the Project are genuinely felt by the local community.

The communication and stakeholder engagement objectives are:

- Deliver an inclusive and robust engagement process that informs, consults, or involves stakeholders (as appropriate) throughout the Project's lifecycle.
- Engage early and proactively during the preliminary planning and pre-application phases to improve the Project.
- Develop relationships with targeted stakeholders by raising early awareness and actively engaging with these groups.
- Develop a thorough understanding of the local aspirations and concerns which relate to the Project and work with them to achieve mutually beneficial outcomes.
- Ensure stakeholders understand how to access information about the Project, provide feedback, stay informed and lodge complaints.
- Promote the Project's benefits by establishing clear and consistent messaging to manage misinformation.
- Encourage stakeholder and community input into the key aspects of the Project and the community benefit-sharing initiatives.
- Increase support for the Project from the local community and other key stakeholders.
- Establish a comprehensive database of stakeholders for the life of the Project and an up-to-date record providing evidence of all engagement activities undertaken throughout the process.
- To meet government planning expectations.

The objectives above are being met through the implementation of the Weasel Solar Farm Engagement Strategy and Engagement Action Plan, defined by the Project's engagement principles.

3.2 Engagement Principles



Mutual Benefit and Respect

Deliver shared outcomes of mutual benefit in an equitable way for the local host community, landowners, and developer. Provide a space for genuine dialogue for respectful discussions that identify mutually agreeable solutions.



Authenticity

Have a strong, authentic, and local presence in the community by providing dedicated staff who are reliably and readily available as the community's trusted 'translator' of technical knowledge, to explain information to the community and stakeholders in a simple yet effective way to address



Transparency, Trust, and Accountability

Provide diverse and ongoing opportunities for engagement throughout the Project's lifecycle. Monitor and evaluate the community engagement, benefit sharing and social impact management programs to identify areas for improvement and/or modification.



Fairness

Ensure that consultation is two-way and that opportunities exist for local community members and other stakeholders to participate, with access to balanced information, and having their ideas justly considered, responded to, and incorporated where possible.



Ongoing Engagement

Listen and respond to community needs and concerns in a comprehensive and timely manner. Maintain a record of the key issues raised and/or complaints received to date and how they were resolved.



Responsiveness

Listen and respond to community needs and concerns in a comprehensive and timely manner. Maintain a record of the key issues raised and/or complaints received to date and how they were resolved.



Social Feasibility

Understand, minimise, and offset the risk of negative social impacts across the Project's lifecycle by taking into consideration the many social factors through the use of appropriate social analysis tools and integrating them, alongside the technical and economic factors, into the Project.



Inclusiveness

Identify a wide range of different stakeholders across the local and regional communities and ensure that the channels and methods of engagement are tailored to the needs of each stakeholder group so that they are engaged with appropriately and effectively.



Relationship Building

Build genuine local relationships, networks and links to key local leaders or organisations. Allow key stakeholders to become advocates and create feedback loops. Help the local community to identify positively with the Project and integrate it into their sense of community and place.

3.3 Community Benefit Sharing

As a landowner and active member of the local community, the Proponent has engaged in early consultations with fellow community members to explore opportunities for a potential community investment program. The Proponent is committed to ensuring that the Project's success directly contributes to the long-term prosperity and well-being of the local community.

For each project within the Energy Hub, the proponent is considering different options. For the Weasel Solar Farm, the project team is currently investigating the potential of providing funding to the local Tasmania Fire Service (TFS). The Weasel Solar Farm Project will support the local fire brigade by allocating a portion of its revenue to fund essential equipment, training, and facilities. This community benefits sharing initiative ensures enhanced emergency response capabilities, promoting safety and resilience within the local community.

3.3.1 Local Employment Benefits

The Proponent is committed to sustainably contributing to local employment and training while ensuring high labour standards. During the construction of the Weasel Solar Farm, employment opportunities naturally peak at these times, and the approach is to maximise local direct employment and training opportunities.

The Proponent will seek to prioritise hiring from within the local community to support regional economic development and growth. In addition, once approved, the Proponent will implement a local procurement business register, to engage and support local and regional businesses to source materials for the Project locally.

4. Consultation Phases

An Engagement Action Plan for the Project was developed to encompass engagement activities for the entire Project lifecycle. The Plan was specifically tailored to the local and regional context of Bothwell, and its surrounds, to ensure the approach was relevant and effective. Each engagement stage was designed to facilitate information sharing and provide opportunities for diverse stakeholder participation to influence the design of the concept plan.

Three engagement stages were identified, with the primary objective being **to ensure early, proactive, and meaningful engagement** with key stakeholders and the local community.

The Engagement Action Plan was structured to give ample time for interested parties to be informed and involved before the Development Application (DA) is lodged, and with additional opportunities during the DA assessment.

4.1 Feasibility and Early Engagement

This phase comprised engaging with authorities to help with preliminary investigations and to garner support for and input to the Project at local, regional, and state levels.

A Community & Stakeholder Engagement Strategy was developed at this stage to help establish key engagement and approval objectives for the initial stages of the Project. Within this document, the Engagement Action Plan was established, outlining the key phases and activities for the Project.

This phase also comprised engagement with adjacent landholders and nearby neighbours. Despite the limited number of dwellings within 5km of the Site, near-neighbour engagement has been a critical component of the Project to help increase understanding of the proposal and utilise their local knowledge to inform the design of the Project.

4.2 Pre-Lodgement Engagement

This phase focused on ensuring that all stakeholders remained well-informed about the progress of the Project. Periodic updates were provided to key stakeholders, including nearby neighbours and landholders, as well as stakeholders at the local and State Government level to maintain transparency and encourage ongoing engagement. These updates covered critical milestones, project developments, and any changes that may affect the community.

During this phase, specialist consultants were engaged to conduct comprehensive technical assessments, addressing environmental, social, and logistical considerations of the Proposal. These assessments inform and support the DA.

4.3 Post-Lodgement & Advertisement Engagement

This phase will aim to introduce the Project to the broader local community, assist them in understanding the issues, listen to their concerns and address those through final design iterations.

This phase aims to keep all stakeholders informed of the Project after the DA is lodged with the Council for assessment.

The project team will continue to involve the community and stakeholders in the planning and decision-making process, and further consultation will be conducted to ensure the Project is widely understood by the community and stakeholders.

Feedback on the Development Application will be sought via:

- Verbally at the first community drop-in session (to be held in October), meeting or telephone
- Written feedback via email, letter or formal submission
- Project update newsletter
- Feedback forms (hard copies received at the community sessions or e-forms online).

5. Consultation Activities

An Engagement Action Plan was developed to cover the entire Project lifecycle. The implementation of the Engagement Action Plan has provided channels of information sharing and opportunities for a wide range of stakeholders to influence the development of the concept plan.

The three main phases of engagement throughout the lifecycle of the Project include:

- **Phase 1:** Feasibility and Early Engagement (completed)
- **Phase 2**: Pre-lodgement Engagement (completed)
- **Phase 3:** Post-lodgement & Advertisement (to start).

During all phases of the Project, the Proponent is committed to informing, consulting, and involving the appropriate stakeholders through an effective engagement process based on the objectives and principles of community engagement best practices and guidelines.

Throughout all stages to date, the Proponent and project team have ensured that clear information was communicated regarding the Project, its potential impacts, and the mitigation measures proposed to manage them. By actively listening to stakeholders and addressing their concerns, the proponent has aimed to enhance the benefits and minimise the impacts on neighbours, the community, and the local environment. This has involved making design changes to various elements of the Project and conducting additional technical studies to identify and resolve any issues raised. The Engagement Action Plan continues to be periodically updated to reflect the progress of the Project, incorporate community input, and address any emerging engagement needs and issues.

5.1 Feasibility and Early Engagement

Engagement for the feasibility stage was undertaken from the end of 2023 and the beginning of 2024. This phase of engagement was critical to garnering support in the early stages of the Project, identifying potential opportunities and constraints and receiving initial feedback.

The key objectives of this phase were to engage with local and State authorities to seek initial feedback and garner support during the Project's early stages. During this phase, Cogency prepared a Community Engagement and Stakeholder Strategy tailored to Bothwell's local and regional context. The local stakeholders and community groups were identified, along with the appropriate engagement activities to be undertaken as part of the Engagement Action Plan.

Given the limited number of sensitive receptors within 5km of the Project, adjacent nearby landholders and neighbours are crucial to the success of Weasel Solar Farm. Community engagement has initially been targeted towards near-neighbour engagement to help increase understanding of the proposal and utilise their local knowledge to inform the design of the Project.

Table 2 – Early Feasibility Engagement Overview

Stakeholders Engaged	Communication and consultation undertaken
▪ State Government – Energy Minister ▪ Central Highlands Council ▪ ReCFIT ▪ Adjacent neighbours	▪ Face-to-face meetings ▪ Online meetings ▪ Formal briefings/presentations

Initial Stakeholder Briefings

The initial briefings with key state and local stakeholders sought to provide an overview of the Project and discuss potential opportunities and constraints at a high level. The meetings provided insights into the current state of the renewable energy transition in Tasmania, along with the requirements and approval process of an application for a large-scale solar farm. Stakeholders were generally supportive of the Project.

Near Neighbours

Within 5 km of the proposed development area, there are a limited number of non-involved dwellings (i.e., dwellings not owned by landowners of the Weasel Solar Farm). Early engagement efforts were prioritised with immediate neighbours to ensure clear communication and transparency from the outset. These discussions primarily focused on providing an overview of the Project, including key components such as the location of solar panels, the BESS and the general layout of the site. Neighbours were also informed about the anticipated Project timeline and the various stages of the planning approvals process.

In addition to outlining the technical aspects of the solar farm, the conversations addressed the broader benefits the Project will bring to the local community, such as contributions to renewable energy goals, potential job creation during construction, and long-term economic opportunities. Any potential amenity impacts, such as visual changes, noise during construction, and traffic management, were also discussed to ensure neighbours had a full understanding of how the Project might affect their surroundings.

To maintain open lines of communication and build positive relationships, the project team will continue to provide regular updates to nearby residents throughout the life of the Project. This will include sharing key milestones, upcoming construction activities, and any changes in the Project's design or timeline. Neighbour feedback will remain an important part of this engagement process, allowing concerns to be addressed promptly and ensuring that community perspectives are considered as the Project progresses.

5.2 Pre-lodgement Engagement

The pre-application engagement commenced in Early to Mid-2024. This phase aimed at reintroducing the Project with more technical information, providing periodic updates to the key process stakeholders previously engaged and continuing discussions with neighbouring properties.

Where needed, the Project was introduced to new stakeholders and any other interested parties. This stage was designed to ensure that any questions or concerns regarding the refined design of the Project could be considered with ample time before the lodgement of the Development Application.

Table 3 – Pre-lodgement Engagement Overview

Stakeholders engaged	Activities undertaken
▪ EPA	▪ Face-to-face meetings
▪ Central Highlands Council	▪ Online meetings
▪ State Government – State Premier and Energy Minister	▪ Formal briefings/presentations
▪ Traditional owners	▪ Letter of introduction
▪ Federal members for Lyons - Senator Askew	▪ Phone calls

Summary of Design Engagement Activities			
Date	**Stakeholder**	**Activity**	**Consultation notes**
April 2024	**EPA**	Online Briefing	▪ Introduced project, providing an overview of the proposal, construction impacts etc. ▪ Determine appropriate approval pathways – preparation of proposal will be based on NOI guidelines
May 2024	**Central Highlands Council**	Face-to-face meeting	▪ Held at Council office in Bothwell ▪ Overall positive and supportive reaction to project and broader Highlands Renewable Energy Hub ▪ Discussed boundary misalignment of Weasel Plains and determined steps to investigate further ▪ General questions regarding environmental, hydrology, and fire risks and potential impacts ▪ Discussed jobs and economic benefits to Bothwell and the broader community ▪ Discussed opportunities to add value to the local economy

			▪ Mixed views on how solar would be received by the community, but noted that the site is appropriate for the distance and lack of visibility
May 2024	**State Government**	Face-to-face meeting	▪ Meeting with the Premier and newly appointed Energy Minister ▪ Briefing to discuss updates to Highlands Renewable Energy Hub and introduce concept to new energy Minister
July 2024	**Central Highlands Councillor briefing**	Face-to-face meeting	▪ Briefing presentation introducing the project and seeking feedback ▪ Appreciative of community focus so far ▪ Discussed the current condition of Highland Lakes Road and the need for upgrades ▪ Potential for a benefit-sharing option for CFA ▪ Concerns about previous RE projects were discussed
July 2024	**Near neighbour meeting**	Face-to-face meeting	▪ Present plans and introduce projects, seek feedback. ▪ Discussed distance from solar arrays ▪ Not concerned about the concept of the project and generally supportive of renewables in general
September 2024	**Federal Member for Lyons**	Online meeting	▪ Briefing to discuss the Highlands Renewable Energy Hub and introduce concept of Weasel Solar Farm.

Stakeholder Briefings

Pre-lodgement briefings consisted of face-to-face and online meetings with key process stakeholders including the EPA, Central Highlands Council and Councillors, and key State Government bodies. These Project briefings sought to introduce the Project and the Proponent to new stakeholders to provide opportunities for initial feedback and input. Timely Project updates were also provided to stakeholders already familiar with the Project, whereby project designs and community benefit-sharing opportunities and initiatives were discussed.

These discussions found stakeholders to be supportive of the Project and they generously provided insights from past energy Projects in the Central Highlands region. These meetings provided further insights that helped to understand the key opportunities and issues that could arise for the Project and how to manage these considerately. Important feedback was also provided on how best to support the community through a Community Benefit Fund.

Discussions with EPA

The online briefing with the EPA marked the initial stage in determining that the Weasel Solar Farm proposal would not require referral to the EPA Board for assessment under Section 24(1) of the *Environmental Management and Pollution Control Act 1994* (EMPC Act). The briefing introduced the Project and provided an initial overview of potential environmental and social impacts.

Following the meeting, the EPA requested additional information to help determine the appropriate approval pathways. In response, a proposal letter was submitted, including a Project summary and key supporting documentation, such as the Ecological Assessment for the Weasel Solar Farm.

Subsequently, the EPA acknowledged via formal correspondence that the proposal is unlikely to result in significant environmental or social impacts, and therefore would not require referral to the EPA Board.

Traditional Owners

An introductory email was sent by Aboriginal Heritage Consultancy Services on 7 July 2024 introducing the Project and asking for comments on the findings of the field study to the following organisations:

- Tasmanian Aboriginal Centre (TAC)
- Parrdarrama Pungenna Aboriginal Corporation
- Southeast Tasmanian Aboriginal Corporation (SETAC)
- Weetapoona
- Karadi Aboriginal Corporation

No responses were received as of 2 August 2024.

5.3 Post-lodgement & Advertising

This phase of engagement will commence in late 2024 following the lodgement of the DA. While the Project is undergoing assessment for statutory approval, the Proponent and the project team will continue to engage the local community, neighbouring residents and other key stakeholders. The Proponent, with the support of Cogency, **remains committed to proactive, and meaningful engagement** with the local community and stakeholders, which has started from the preliminary concept design phase.

Table 4 – Post Lodgement Engagement Overview

Stakeholders to engage	Activities to undertake
▪ Bothwell community ▪ Central Highlands Council ▪ Premier of Tasmania ▪ TasNetworks ▪ Neighbouring property owners ▪ ReCFIT ▪ Skills Tasmania ▪ EPA ▪ Aboriginal community groups	▪ Community Drop-in session ▪ Publish Project Website ▪ Meetings as requested from the interested or concerned local community and stakeholder groups

Community Drop-In Session

As part of the post-lodgement engagement, the Proponent will host a Community Drop-in Session for the Weasel Solar Farm project to engage with local Bothwell residents, landholders, and other community members. The session will provide an informal and open setting where attendees can drop by at their convenience to learn more about the Project, ask questions, and share their thoughts. The primary aim of the drop-in session will be to ensure that the community feel informed and involved in the planning and development of the solar farm. Before the session, the Project website will be published to make information about the Project publicly available

Visual displays and take-home materials, including maps, diagrams, and project timelines, will be used to help attendees better understand the scale and scope of the Project. Project team members will be there to explain the technical aspects and answer any questions. Throughout the session, attendees will be encouraged to leave feedback and share any concerns they might have. This feedback will be used to inform future project planning and community engagement efforts. The project team plans to host additional drop-in sessions and community engagement activities as the project progresses, ensuring that the community remains informed and involved every step of the way.

Stakeholder briefings

The project team is committed to maintaining ongoing communication with key stakeholders throughout the post-lodgement period of the Weasel Solar Farm. During this time, the team will re-engage with key stakeholders, including state government, regulatory agencies, and community representatives, offering

dedicated meetings to provide detailed project updates. These meetings will cover any changes to the Project's design, the status of planning approvals, and upcoming construction timelines, ensuring that stakeholders remain well-informed and involved in the Project's progression. These briefings will also be a good opportunity to personally welcome neighbours to the community drop-in session.

Neighbours

The project team will re-engage with each neighbour throughout the post-lodgement period to offer meetings to discuss project updates and mitigate any concerns regarding the Project. These meetings will serve as an opportunity to offer clarity on any changes in the project's timeline, layout, or construction schedule, ensuring that neighbours are fully informed about the next steps. The project team will aim to address any potential concerns related to amenity impacts, such as construction noise, increased traffic, or visual changes to the landscape.

6. Conclusion and Next Steps

The Weasel Solar Farm presents an opportunity to increase renewable energy generation in Tasmania, thereby strengthening energy and price stability for Tasmanian households and supporting the state's net-zero transition.

From the outset of planning and development, the Proponent, Weasel Solar Farm Pty Ltd c/o Robert Luxmoore Pty Ltd, has been dedicated to fostering and sustaining respectful relationships with the local community, businesses, all levels of government, Traditional Owners of the land, and other stakeholders. This has been made evident through the proponent's commitment to preliminary and ongoing engagement with key stakeholders (such as nearby neighbours, Central Highlands Council and Tasmanian Aboriginal Centre).

As demonstrated within this report, the Proponent has remained committed to proactive and meaningful engagement at every critical stage of the Project. This approach has helped facilitate open and honest dialogue with key stakeholders and the broader community.

While aiming to minimise the potential impacts of the Project, the Proponent has also strived to maximise the benefits for the local community. Through the comprehensive engagement process, the Proponent has developed a deep understanding of the key opportunities and challenges associated with the Project, and how to manage these thoughtfully. These insights have also helped to identify initiatives related to the creation of a Community Benefit Fund which will continue to evolve as the Project progresses through its approval stages.

Looking ahead, the Proponent, with the support of Cogency, remains committed to fostering strong relationships with key stakeholders and the local Bothwell community. The Proponent plans to maintain open lines of communication by actively engaging with local community members through a Community Drop-In Session and establishing the local Community Benefit Fund.

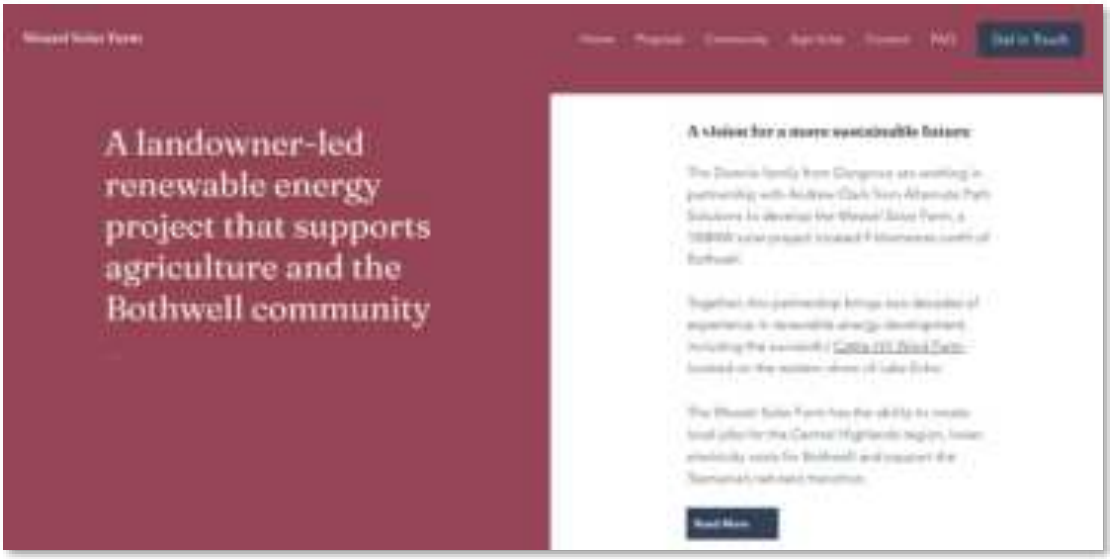
This continued engagement highlights the Proponent's dedication to maintaining respectful relationships, ensuring that the community's voices are heard, and their needs are addressed throughout the Project's lifecycle.

Appendices

Appendix A	**Weasel Solar Farm website**
Appendix B	**Community drop-in session advertisement**

Appendix A Weasel Solar Farm website







Appendix B Community drop-in session advertisement



YOU'RE INVITED

COMMUNITY DROP-IN INFORMATION SESSION

WEASEL SOLAR FARM PROPOSAL

The Weasel Solar Farm is a landowner-led renewable energy project with the ability to create local jobs for the Central Highlands region and support Tasmania's net-zero transition. The electricity generated will be used to produce green fuel, fertiliser and building materials for local use.

Come along to talk to the team and learn more about the project.

Date: Thursday 31 October
Time: 4:00pm-7:00pm
Venue: Bothwell Town Hall

CONTACT US

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cogency

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Planning | Engagement | Strategy

Cogency provides planning, environmental assessment and stakeholder engagement services for the renewable energy, property, clean tech, and circular economy sectors.

Our collaborative teams bring a uniquely nuanced understanding of planning processes and the technical aspects of renewable energy property, infrastructure, and circular economy projects, which helps to build a strong rapport and trust with local community members and stakeholders.

Unlike many in-house engagement and planning teams that are managed separately, our planners work in collaboration with our engagement practitioners to ensure that stakeholder and community consultation is at the heart of the planning process and a critical tool for delivering positive outcomes for our clients.

www.cogencyaustralia.com.au

Weasel Solar Farm

Socioeconomic Impact Assessment

September 2024

Prepared by Urban Enterprise for TasFlo Pty Ltd

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Version:

Final Report: Version 1

Urban Enterprise is located on Wurundjeri Woi-Wurrung Country. We pay our respects to elders past, present and emerging and also acknowledge all Traditional Owners of Country on which we work.

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1.
Executive Summary

Executive Summary

TasFlo Pty Ltd engaged Urban Enterprise to prepare a Socioeconomic Impact Assessment (SEIA) for the Weasel Solar Farm (WSF); a proposed large-scale agrisolar farm situated near Bothwell, in Central Highlands municipality in Tasmania.

The purpose of the SEIA is to identify and assess the suite of socioeconomic impacts that could be generated by the project.

Project Overview

The proposed agrisolar facility includes the following key components:

- 250MW of electricity generation;
- 144MW battery energy storage system (BESS); and
- Livestock grazing can continue alongside the solar farm (i.e. agrisolar).

The project is proposed to be constructed within a 3,840 ha site.

Policy Context

- The project aligns and satisfies key environmental, economic and social objectives at a local, regional, state and federal level.
- Federal and state policy is accelerating the need to transition to renewables, including more ambitious targets for renewable energy generation and reduction in greenhouse emissions.
- Renewable energy targets, incentives and investments underpin new ways that energy is produced, stored and transported throughout Tasmania. Solar power is considered a critical part of the energy transition and is recognised as a key growth area to support future energy needs.
- Local policy encourages investment and economic development in the municipality, particularly in industries that serve to diversify the local economy and facilitate population growth.

Economic Context

- The project will draw on direct and indirect supply chains during the planning/design, construction and operation phases.
- Activities associated with the planning and design phase is likely to occur in Tasmania and mainland Australia.
- The project will primarily draw on a regional and state catchment to support construction and operational activities.
- The project is also expected to draw from a national and international catchment for specialised design and manufacturing activities.
- There will be indirect economic opportunities for population service industries such as accommodation, retail and hospitality on the back of these goods and services.

Socioeconomic Profile

- Higher socioeconomic disadvantage, low population base and below average participation rates in the primary catchment suggests that the project may have challenges in sourcing workers from the local area during the construction phase.
- The economy in the primary catchment is likely to benefit from demand generated by the transient workforce during the planning/design and construction phases, particularly across retail, hospitality and accommodation.
- The primary and secondary catchment unemployment rates are higher compared with Australia, indicating that the economy has some capacity within the labour market.
- The regional catchment has relevant employment specialisations in electricity, gas, water and waste services and manufacturing, presenting opportunities for the regional catchment to participate in projects needs during the construction and ongoing phases of the project.
- Accommodation and food services also presents as a potential secondary industry to benefit during the construction phase for Tasmania.
- The primary and secondary catchment occupation profiles generally align with some supply chain needs of the project , particularly during the construction phase. Examples include a higher proportion of labourers, machinery operator and technicians and trades workers.

Executive Summary

Socioeconomic Impact Summary

Impact	Impact	Key stakeholders
Short Term		
Economic stimulus: construction phase	The estimated construction investment of $188 million in Tasmania is estimated to generate $428 million in total economic output and support 926 (FTE) jobs during the construction phase, including 348 direct jobs.	Regional, state and national construction industry: civil trades, labourers, machinery operators, technicians.
Amenity disruptions from construction activities	Amenity impacts such as noise and traffic may arise from associated construction activities. However, relevant technical studies conclude that impacts will be minimal, and will be appropriately managed through construction and environmental management plans	Local residents (proximate), passing travellers.
Community attitudes	Development of the project may lead to community concerns around property rights and potential impacts to the natural environment and agricultural land. Conversely, the project could galvanise the local community through the provision of positive economic development outcomes.	Local community
Competition for labour force	There are a small number of renewable energy projects planned in proximity to the development area, and a diverse range of other renewable energy projects across the State. Some of the jobs and skills required to deliver these projects, and anticipated timing of construction may overlap with WSF. The overlap has the potential to increase competition for local labour, and may lead to tensions and delays across projects.	Local and regional labour force, major projects.
Cumulative demand for housing, accommodation and services	Some of the construction workers required to service the project will be sourced from outside of Centra Highlands, and will require a mix of rental housing and commercial accommodation. Central Highlands also some capacity within its commercial accommodation sector to support the project. However, servicing the cumulative housing needs of other projects concurrent to the local rental market and tourism sector could place temporary upward pressure on rents and commercial room rates. Hobart has moderate capacity to meet overflow accommodation demand generated by workers.	Local businesses and local residents (housing only)
Long Term		
Economic stimulus: Operational phase	The ongoing operation of the solar farm is estimated to generate $12 million in total economic output and support 14 (FTE) jobs per annum, which includes 6 direct jobs (FTE).	Local and regional economy
Agricultural value of grazing	Overall the proposal will not constrain, prejudice or limit the agricultural land use activities currently undertaken or potential future expansion of the activities.	Local and regional agriculture industry
Amenity impacts	Once built and operational, the physical infrastructure of the solar farm could create long term amenity impacts such as visual, noise and traffic. Relevant technical studies conclude that there are unlikely to be any substantial amenity impacts during the operational phase of the project.	Local residents (proximate), passing travellers.
Grid reliability & energy access	The project will enhance the reliability of the local energy grid, reducing the frequency and duration of power outages. This will benefit the local community by mitigating disruptions of power outages to residents, businesses, healthcare facilities, and the broader community.	Local residents and businesses
Government revenue	Council will receive an uplift in revenue in the form of rate revenue due to a change in land use on site. The estimated revenue uplift delivered to Council is in the order of $25k per annum.	Central Highlands Council, local economy and community.
Community fund	The proponent proposes to establish a community fund associated with the operational phase of the facility. This will take the form of an annual payment that can be used to support local projects and programs that deliver positive community outcomes.	Local community

Executive Summary

Impact Evaluation

Construction Phase

Impact	Magnitude	Likelihood	Management measures	Recommendations
Economic stimulus: construction phase	Moderate	Likely	None identified	Advocate for use of local suppliers (where possible).
Amenity disruptions from construction activities	Low	Unlikely	Installation of advisory signage, minor road repairs and the provision of sufficient parking for staff and delivery vehicles. Scheduling construction activities in accordance with relevant regulations, regular maintenance and broadband reversing alarms	Construction and environmental management plans will be prepared as part of a condition on the planning permit.
Community attitudes	Low	Possible	Public community consultation sessions held in region	Ensure community are regularly engaged, and project updates are communicated as they arise.
Competition for labour force	Moderate	Possible	None identified	Liaise with other renewable energy project proponents to discuss synergies with jobs and skills and potential for resource sharing.
Cumulative demand for housing, accommodation and services	Moderate	Possible	None identified	Engage with Central Highlands Council, Greater Hobart Councils and relevant Chamber of Commerce/Business Associations to notify of accommodation requirements and impending periods of high demand during the construction period.

Operational Phase

Impact	Magnitude	Likelihood	Management measures	Recommendations
Economic stimulus: Operational phase	Low	Highly unlikely	None identified	Advocate for the use of local suppliers (where possible).
Agricultural value of grazing	Low	Highly likely	None identified	None
Amenity impacts	Low	Unlikely	Technical studies prepared to assess potential amenity impacts and recommend management measures	Refer to other technical studies for planned and recommended management measures relating to ongoing amenity impacts.
Grid reliability & energy access	Low	Highly likely	None identified	None
Government revenue	Low	Highly likely	None identified	None
Community fund	Low	Likely	The proponent proposes to establish a community fund to support local projects and programs that deliver community benefits.	Seek to contribute funds towards community projects, initiatives and programs that improve liveability and socioeconomic outcomes for the community.

2. Background

Background

Introduction

The Weasel Solar Farm (WSF) project is a proposed 435 hectare agrisolar farm, situated near Bothwell, in Central Highlands municipality in central Tasmania. The project is estimated to generate 250MW of electricity and will also include a 144MW BESS. The project will also allow large areas of agricultural uses on the site to continue.

Engagement

TasFlo Pty Ltd engaged Urban Enterprise to prepare a socioeconomic impact assessment (SEIA) for the proposed WSF. The purpose of the SEIA is to identify and assess the suite of socioeconomic impacts that could be generated by the project.

Economic impacts primarily relate to the direct and indirect economic activities that are generated through the construction and operational phase of the project.

Social impacts primarily relate to changes (both positive and negative) that may occur to the way people live and the environment during the project's lifecycle.

Information Sources

The following sources of information have been used to inform this project:

- Census of Population & Housing and Place of Work, Australian Bureau of Statistics, 2011-2021;
- Census of Employment, ABS, 2011-2021;
- Unemployment rate, National Skills Commission, 2024;
- Renewable Power Generation Costs in 2022, International Renewable Energy Agency, 2023;
- General project information, TasFlo / Robert Luxmoore, 2024;
- Agricultural Assessment, Pinion Advisory, September 2024;
- Ecological Assessment, Van Diemen Consulting, September 2024;
- Landscape and Visual Assessment, Human Habitats, September 2024;
- Traffic Impact Assessment, pitt & sherry, September 2024;
- Glint and Glare Assessment, SLR Consulting, September 2024;
- Noise Impact Assessment, SLR Consulting, September 2024; and
- Historic Heritage Assessment, Cultural Heritage Management Australia, September 2024.

Scope

The scope of this report includes the following:

1. Project Context - Provide an overview of the proposal, including location, description of key project phases, construction investment, development timeline and supply-chain needs.
2. Strategic and Policy Drivers - Assess the strategic rationale and policy drivers that underpin the need for the project.
3. Impact Area – Define a primary and secondary impact area to understand the socioeconomic capability and capacity, and also establish catchments in which impacts associated with the project are likely to flow and accrue.
4. Baseline Socioeconomic Conditions – profile the socioeconomic characteristics and employment capabilities in the impact areas to understand the potential for local supply-chain integration and assess the extent to which the economy and community within the impact areas could be affected.
5. Literature Review - Complete a literature review, case study analysis and review other relevant technical studies to identify potential socioeconomic impacts generated by solar and other renewable energy projects.
6. Socioeconomic Impact Framework - Prepare an impact framework that identifies and describes the expected socioeconomic impacts that may arise during the construction and operational phase of the project.
7. Economic Impact Assessment - Estimate the economic impact of the project during the short term construction phase and ongoing operational phase using the Input-Output (I-O) method of analysis.
8. Management Measures - Assess the magnitude and likelihood of impacts, and recommend management measures (where relevant) to optimise benefits and minimise negative impacts.

3.
Project Context

Proposed Project

Proposal

The proposed Solar Farm project includes the following key features:

- Energy generation capacity of 250MW;
- Battery storage facility (144MW) and ancillary infrastructure including inverters and electrical substation; and
- Livestock grazing can continue alongside the proposed solar farm (i.e. agrisolar).

The 435 ha project area is proposed to be constructed within a broader 3,840 ha site (across two land parcels) on Highland Lakes Road in Bothwell.

The site is approximately 1.25 hours' drive from Hobart, 1.5 hours' drive to Launceston and 2.25 hours to Devonport.

Launceston Airport is a key gateway to Tasmania from mainland Australia while the Port of Bell Bay facilitates a large share of Tasmania's domestic and international sea freight.

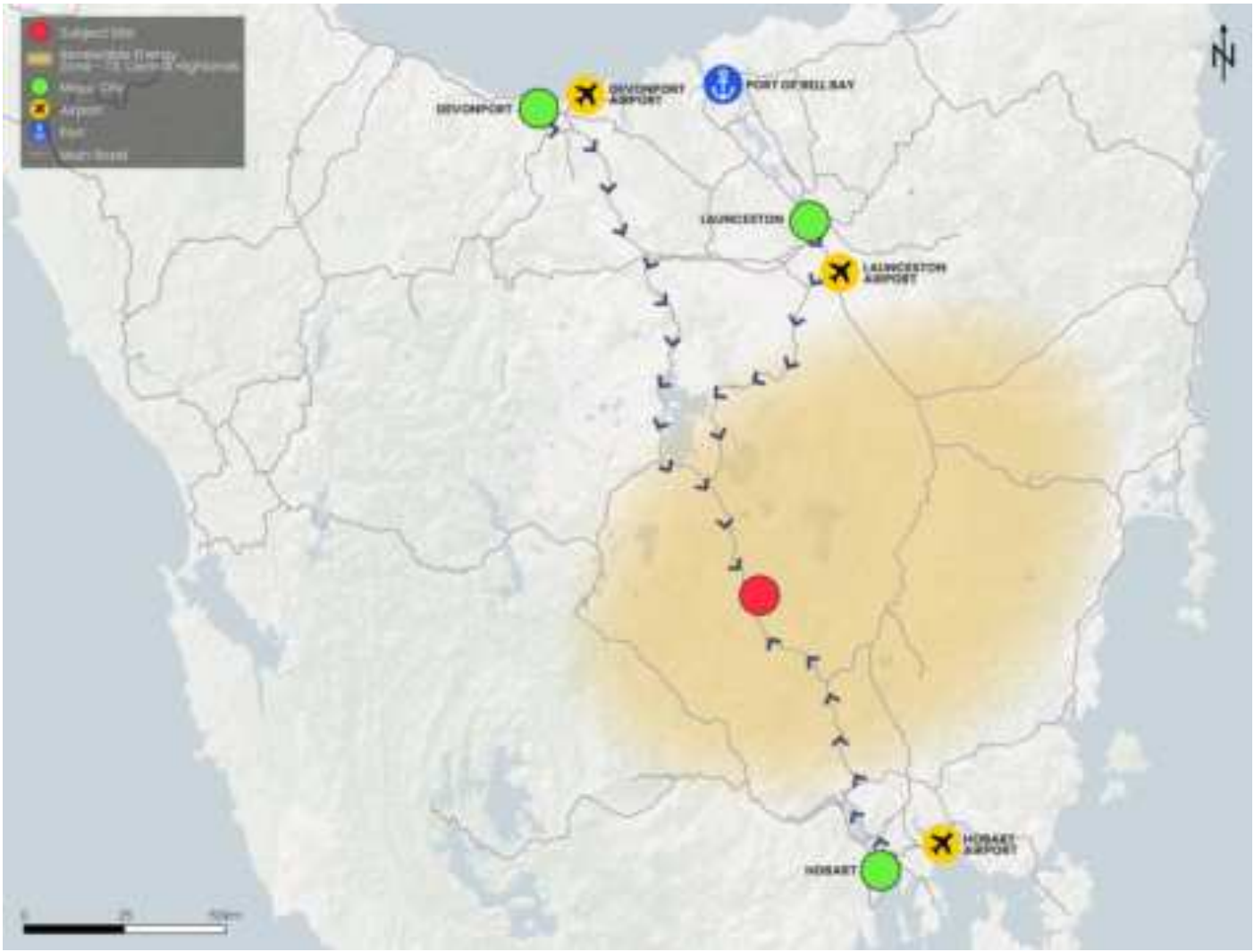
The proposal is also situated within the Central Highlands Renewable Energy Zone (REZ).

Figure 1. Subject Site



Source: Urban Enterprise, 2024

Figure 2. Regional Context



Source: Urban Enterprise, 2024

Strategic & Policy Context

Overview

This section summarises the federal, state and regional policy that is relevant to the proposal, the current state of play for the solar industry, and the strategic rationale for Weasel Solar Farm.

Strategic Alignment

Government policy is accelerating the transition to renewables, including more ambitious targets for renewable energy generation and greenhouse gas emissions reduction.

Having achieved 100 per cent renewable energy generation in 2020, Tasmania is now aiming to achieve a target of 200 per cent renewable energy by 2040, as well as net zero greenhouse gas emissions by 2030. The Tasmanian Government has identified renewable energy investment as a key economic driver for the future, and supports an increase in renewable energy generation, with a vision to becoming a renewable energy powerhouse.

Renewable Energy Zones (REZs) were introduced by the Australian Energy Market Operator (AEMO) to help identify regions that are highly suited to renewable energy development. The development of REZs seek to maximise benefits from existing energy resources and established grid infrastructure to unlock new energy at lower cost. Weasel Solar Farm is situated within Tasmania's Central Highlands candidate REZ (see Figure 3)

Table 1 (overleaf) outlines the federal, state, regional and local policies and strategies that support the proposal, including alignment with environmental, economic, social and community objectives. In summary:

- The project aligns and satisfies key environmental, economic and social objectives at a local, regional, state and federal level.
- Federal and state policy supports the transition to renewables, including more ambitious targets for renewable energy generation and reduction in greenhouse emissions.
- Renewable energy targets, incentives and investments are driving major shifts in the way energy is produced, stored and transported throughout Tasmania. New sources of energy and forms of production are complementing and replacing traditional equivalents. Solar energy, while not a current strength in Tasmania, is considered a critical part of the energy transition and is recognised as a key growth area to support future energy needs.
- The project will support further growth in Tasmania's renewable energy industry, and diversify the state's new energy mix, which is primarily wind and hydro power.
- Local policy identifies a desire to encourage investment and economic development in the municipality, particularly in industries that serve to diversify the local economy and facilitate population growth.

Figure 3. Tasmanian Renewable Energy Zones



Source: Draft Integrated System Plan for the National Electricity Market, AEMO, 2024

Strategic & Policy Context

Table 1. Strategic & Policy Summary

	Relevant objectives and actions	Project alignment
Federal		
Climate Change Act (2022)	• Reducing Australia's net greenhouse gas emissions by 43% on 2005 levels by 2030 • Reducing Australia's net greenhouse gas emissions to zero by 2050	The project will support the uptake of new renewable energy capacity to assist in achieving the federal government's renewable energy and emissions reductions targets.
State		
Tasmania's Climate Change Act (2008)*	• Aim to achieve net zero greenhouse gas emissions by 2030 and support measures to help Tasmania adapt to climate change .	The project will assist the state in achieving its emissions target through the generation and storage of additional renewable energy.
Tasmanian Renewable Energy Action Plan (2020)	• Transforming Tasmania into a global renewable energy powerhouse • Growing the economy and providing jobs	The project will assist in further developing the state's renewable industry project mix. The project will also provide substantial economic benefits to the state during the construction and ongoing phases.
Renewable Energy Coordination Framework (2022)	• Stimulate job creation and business growth through renewable energy investment to build a skilled workforce. • Engage communities to ensure benefits are tangible and valued and make positive contributions to shaping their future	The project will generate substantial direct and indirect economic benefits for the Tasmanian economy. The project will also involve meaningful community engagement.
Tasmanian Trade Strategy 2019-2025	• Build trade in key sectors, including renewable energy	The project will provide additional renewable energy capacity in Tasmania that has the potential to be exported.
Strategic Regional Plan for Tasmania (2023)	• Delivering renewable energy projects and leveraging the benefits for Tasmania's industries, community and people • Diversifying off-island opportunities in new sectors, with a focus on the new economy	The project will deliver a new renewable energy project in Tasmania and support industry diversification.
Regional		
Southern Tasmania Regional Land Use Strategy (2020)	• Manage and protect the value of non-significant agricultural land in a manner that recognises sub-regional diversity in land and production characteristics.	The project will allow for grazing to continue in the project area, which will minimise the loss of agricultural production.
Local		
Central Highlands Strategic Plan 2015-2024	• Encourage expansion in the business sector and opening of new market opportunities • Encourage the establishment of alternative industries to support job creation and increase permanent residents	The project is expected to create opportunities for local business involvement during the construction phase and will encourage development of new industries to support local economic development.

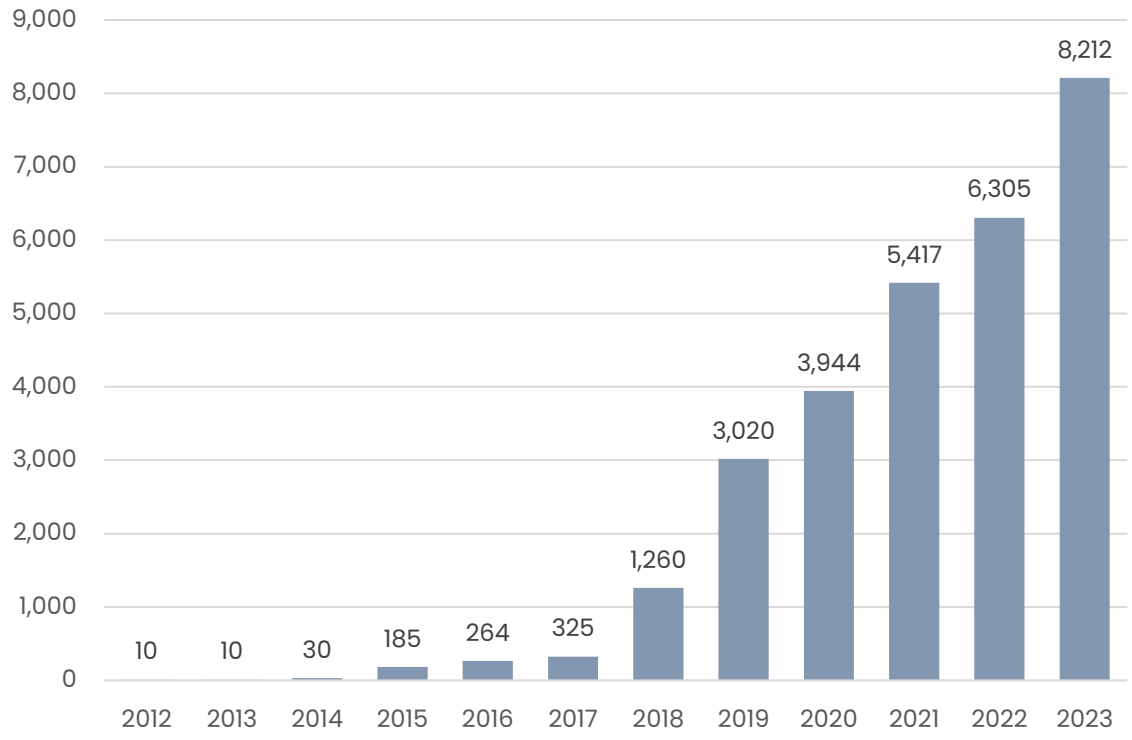
Australian Large-Scale Solar

State of the Industry: large-scale solar

A summary of the key trends in the large-scale solar industry in Australia and internationally are provided below:

- Fourteen large-scale solar projects were commissioned in 2023, amounting to 1.9 GW of new capacity. Those figures are both up from 2022 (when 12 large-scale projects added 841 MW to the power system) and arrest the three-year trend of large-scale solar projects falling in number and total capacity.
- 38 of the 56 renewable energy projects under construction in Australia in 2023 were large scale solar projects, down from 48 at the same stage in 2022.
- To date there have been no large-scale solar projects developed in Tasmania, however a 288MW agrisolar project has recently been approved for development in Northern Midlands municipality.
- The federal government recently announced the establishment of the Solar Sunshot program to grow solar PV manufacturing in Australia. The $1 billion funding program is intended to provide support across the solar PV supply chain, including the scaling up of module manufacturing capabilities and exploration of other areas of the supply chain where grant funding can help catalyse the industry.
- In 2023 the International Energy Agency lowered its forecast growth for renewable energy in Australia due to policy uncertainty "following early achievement of its Large-Scale Renewable Energy Target".
- New policies and proposed reforms will continue to play a part in shaping the trajectory of the local solar industry in the market, including the Australian government's Capacity Investment Scheme and proposed transmission access reforms.

Figure 4. Cumulative installed large-scale solar capacity, Australia (MW)



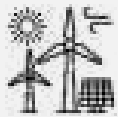
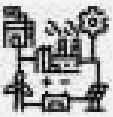
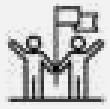
Source: Clean Energy Council, 2024

Strategic Rationale

Strategic rationale

Table 2 provides a summary of the strategic rationale for the project.

Table 2. Strategic Rationale

		Rationale
	**Renewable energy generation**	Tasmania is considered a renewable energy powerhouse in Australia due to its specialisations in hydro and wind energy. This project will provide additional renewable energy generation capacity within the State and will also serve to diversify the clean energy mix.
	**Local benefits**	The Central Highlands region is a small economy that is primarily driven by agriculture and tourism. This project has the potential to provide an uplift in localised economic activity and investment for the region whilst also diversifying the industry base and encouraging local economic resilience.
	**Grid stability & reliability**	A solar project that includes a BESS in the Central Highlands region has the potential to provide grid stability by addressing fluctuations in energy supply. Tasmania's existing renewable energy mix is primarily comprised of wind and hydro power, thus new solar energy projects have the potential to deliver energy supply to the grid at different times (i.e. when there is no wind blowing) and store that energy as required, thus improving stability and reliability of the network.
	**Market signal**	With the exception of the Northern Midlands Solar Farm in Cressy (approved), there has been no large-scale solar projects developed in Tasmania. The successful development of the proposal can demonstrate the market potential of solar energy in the region (and Tasmania) and has the potential to catalyse further solar energy investment in the region.
	**Policy support**	The project has strong policy support across all levels of government. The proposal will make an important contribution to achieving the state government's renewable energy targets and will encourage industry diversification in line with local economic development policy objectives.

Supply-Chain Needs

Large-scale solar: supply-chain needs

In order to assess the anticipated location and timing of supply-chain needs, an overview of the key phases of the project's lifecycle is required to establish baseline economic activities, skills and services that will be drawn on.

The key phases of a large-scale solar farm project is summarised in Table 3, and includes the indicative supply chain needs, timing and anticipated supplier/source locations.

This has been informed by the following:

- Identify and profile of existing industrial precincts that could service the project in Tasmania based on supply chain alignment (see following page);
- Analyse the completed Cattle Hill Wind Farm located in Central Highlands;
- Review other renewable energy project proposals in Tasmania and mainland Australia;
- Discussions with the proponent regarding the potential utilisation of local and regional suppliers.

The following observations and implications are noted:

- The project will draw on direct and indirect supply chains during the planning/design, construction and operation phases.
- Planning and design is likely to occur in Tasmania and mainland Australia.
- The project will primarily draw on a regional and state catchment to support construction and operational activities.
- Given the specialised nature of particular activities associated with large-scale solar projects, the project is expected to draw from a national and international catchment for key design and manufacturing activities.
- There will be indirect economic opportunities for population service industries such as accommodation, retail and hospitality on the back of these goods and services.

Table 3. Large-scale solar supply chain needs

Phase	Overview	Supply-chain needs	Indicative time frame	Anticipated location
Planning/ Design	Feasibility analysis, site investigations and concept design: • Due diligence. • Route to market analysis. • Concept designs and technical studies. • Planning approvals.	Professional and technical services: ▪ Engineering and surveying ▪ Planning, legal and financial services ▪ Environmental services ▪ Project management and administration	2-3 years	Tasmania/ Mainland Australia
Construction	Engineering, procurement, construction and installation: • Modules & inverter manufacturing • Grid connection • Mechanical & electrical installation • BESS • Sub-stations	Specialised manufacturing, installation services, general construction, trade and labourers, transport and logistics: ▪ Solar panel manufacturing ▪ Steel manufacturers ▪ Electricians and technicians ▪ Engineering (electrical, civil, structural) ▪ Site preparatory and civil construction ▪ Labourers ▪ Machinery operators ▪ Truck drivers ▪ Machine and equipment servicing and hire	18 months	Tasmania/ Mainland Australia/ International
Operation	Operation, maintenance and servicing: • Modules & inverters • Sub-stations • Plant & equipment • Site	Construction and trades ▪ Landscaping and maintenance ▪ Operators ▪ Technicians ▪ Facilities management	25-30 years	Tasmania

Source: Urban Enterprise, 2024

Key Precincts

This section provides a profile of existing industrial precincts that could support the proposal's supply-chain needs. Key criteria for the selection of these precincts include:

- Located within a 2.5-hour (drive) catchment;
- Located on key transport routes; and
- Supply chain alignment to WSF project needs.

Information has been collected via research into major industrial precincts across Tasmania, as well as existing and planned renewable energy projects in the region.

There are no industrial precincts in Central Highlands, however, there are several precincts clustered in the north and south of the State that have the potential to service WSF, including Bridgewater and Derwent Park in the south, and Western Junction and Bell Bay in northern Tasmania.

Table 4. Key Precincts

	Bridgewater	Derwent Park	Western Junction	Bell Bay
Distance to subject site	50 mins	1 hour	1 hour 30 mins	2 hours 15 mins
Business/ employment mix	• Logistics • Building materials • Equipment supplier • Earthmoving • Concrete • Construction	• Concrete • Logistics • Steel distributer • Construction	• Logistics • Concrete • Steel fabricator • Manufacturing • Construction	• Logistics • Construction • Concrete • Engineering • Manufacturing
Examples of businesses	• Onetrak (construction) • CJD Equipment (construction equipment)	• Hazell Bros (construction)* • Statewide Cranes	• Haywards (manufacturing)* • McElligotts (construction)	• Librety Steel Group* • Monson Logistics
Economic role & project alignment	The closest major industrial precinct to the subject site which comprises several relevant businesses that could service the proposal.	Central Hobart industrial precinct that played a role in servicing the Cattle Hill wind farm project in Central Highlands.	Industrial precinct south of Launceston that supported the development of the Cattle Hill wind farm project in Central Highlands.	Major port that is likely to support the project supply chain due to its role as a key transport route to the mainland.

* Businesses that serviced the Cattle Hill Wind Farm project

Figure 5. Key Precincts



Source: Urban Enterprise, 2024

Impact Areas

Research and analysis presented in this report suggests that WSF is likely to generate economic activity throughout Tasmania, with no one region/area (outside Central Highlands) expected to be the primary beneficiary.

Northern Tasmania is expected to play an important role in the project given it is the primary port gateway into the state from mainland Australia. Key precincts in southern Tasmania such as Bridgewater and Derwent Park accommodate key contractors that could support discrete project needs.

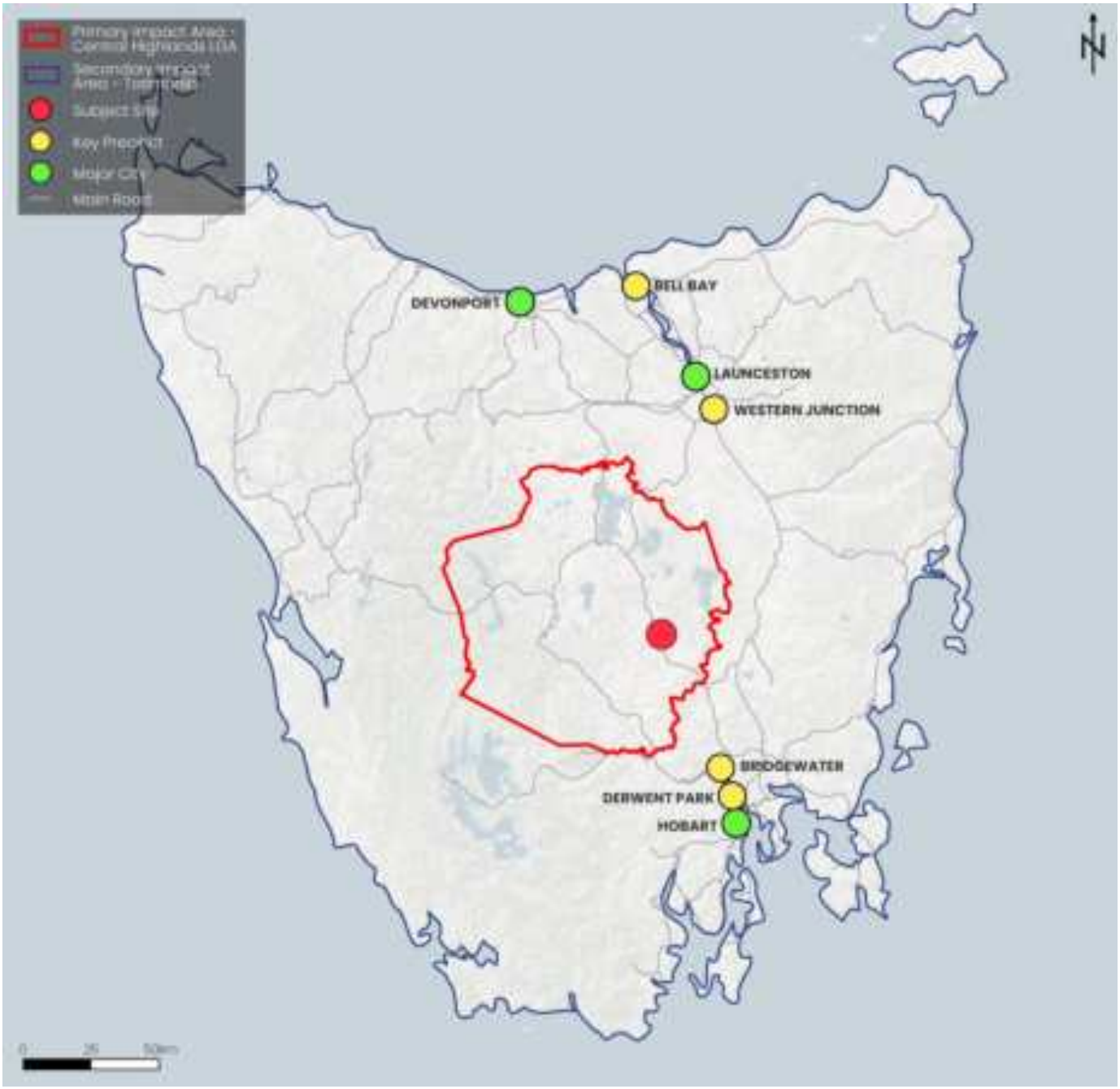
Having regard to the above, two catchment areas have been established to guide the SEIA for WSF.

A primary and secondary impact area has been established to understand the socioeconomic capability and capacity within the region, and the extent to which supply-chain participation and integration is possible. The impact areas also provides defined catchments in which socioeconomic impacts from the project are likely to flow.

The primary impact area includes the Central Highlands municipal area. The secondary impact area is the state of Tasmania.

The impact areas have regard to the proximity to the project, location attributes, the population and employment base, and economic capabilities.

Figure 6. Impact Areas



Source: Urban Enterprise, 2024

4.
Socioeconomic Profile

Socioeconomic Profile

Socioeconomic Snapshot

This section summarises the socioeconomic profile and employment capability in the primary and secondary catchments to identify gaps and opportunities to serve different stages of the project supply-chain across its lifecycle.

The following observations are relevant:

- The regional catchment is home to approximately 573,000 residents and 281,000 jobs.
- The primary catchment has an estimated resident population of 2,500 (2023) and 830 jobs.
- The secondary catchment unemployment rate (4.2%) is higher compared with Australia (3.6%).
- The primary and secondary catchments have a higher level of socioeconomic disadvantage when compared to the national average.
- The primary catchment has a higher proportion of older cohorts, with a higher median age (50 years) compared with Tasmania (42 years) and Australia (38 years).
- The primary catchment has a relatively low employment participation rate, which reflects the older age profile.
- The Central Highlands economy has a high share of employment in indirect/flow-on industries of accommodation and food and retail trade.

A low population base and below average employment participation rate in the primary catchment suggests that the project may have challenges in sourcing workers from the local area. The project is likely to draw from the state workforce to support planning/design and construction.

The Central Highlands economy can benefit in other ways, particularly through demand generated by the transient workforce during the planning/design and construction phases for goods and services such as retail, hospitality and accommodation.

Table 5. Central Highlands & Tasmania at a glance

Central Highlands	**Output** $236.9 million	**Jobs** 829 **(10-year AAGR)** +1%	**Top industry sectors of employment** (2021): • Agriculture (45%) • Accommodation & Food Services (14%) • Retail Trade (7%)
	Businesses 280	**Participation Rate** 55% (South East SA4)	**Unemployment** (Sep 2023) 4.1%
	Population (ERP 2023): 2,595 **(10-year AAGR)** 1.1%	**Median age** 50	**SEIFA** 911
Tasmania	**Output** $60.29 Billion	**Jobs** 281,000 **(10-year AAGR)** +2%	**Top industry sectors of employment** (2021): • Healthcare (16%) • Education & Training (10%) • Retail Trade (10%)
	Businesses 42,000	**Participation Rate** 61.6%	**Unemployment** (Sep 2023) 4.2%
	Population (ERP 2023): 573,000 **(10-year AAGR)** 1.2%	**Median age** 42	**SEIFA** 966

Source/s: State Growth Tasmania, Community Profile & economic profile, Profile Id; Skills and Jobs Atlas, Jobs & Skills Australia.

Socioeconomic Profile

Employment & Business Mix

The regional catchment employment mix is relatively well-matched to some of the general construction, manufacturing and transport activities required to deliver and maintain solar projects.

There are approximately 23,600 construction jobs and 20,500 manufacturing jobs within the regional catchment. This includes a small number of manufacturing and construction jobs in the primary catchment. A proportion of these jobs with transferable skills present opportunities to service the construction phase of Weasel Solar Farm.

From a transport and logistics perspective, the regional catchment includes more than 12,200 transport, postal and warehousing jobs, suggesting there may be scope for local employment opportunities in this sector during the construction phase of the project.

Currently, solar manufacturing capabilities do not exist in the region and will likely have to be sourced from overseas. However, employment in the electricity, gas, water and waste services industry is prominent within Tasmania (5,200) and may provide employment opportunities during construction and ongoing phases of the project.

The primary catchment has employment in key indirect industries (e.g. retail, accommodation) suggesting benefits could flow through these sectors locally during the construction phase.

There are more than 42,000 businesses operating in the region, of which around 17,000 are operating in industries aligned to renewable energy supply chains.

There are potential advantages in the construction, transport, postal and warehousing manufacturing, and professional services sectors, accounting for 40% of the region's business base.

Table 6. Employment & Business Mix, 2021

Industry	Employment		Businesses	
	Central Highlands	Tasmania	Central Highlands	Tasmania
Agriculture, Forestry and Fishing	373 (45%)	15,436 (5%)	123 (44%)	5,441 (13%)
Accommodation and Food Services	119 (14%)	21,023 (7%)	18 (6%)	2,316 (6%)
Retail Trade	55 (7%)	27,104 (10%)	14 (5%)	2,602 (6%)
Public Administration and Safety	38 (5%)	20,278 (7%)	0 (0%)	101 (0%)
Arts and Recreation Services	31 (4%)	5,594 (2%)	3 (1%)	590 (1%)
Electricity, Gas, Water and Waste Services	**30 (4%)**	**5,220 (2%)**	**3 (1%)**	**127 (0%)**
Manufacturing	**25 (3%)**	**20,676 (7%)**	**12 (4%)**	**1,720 (4%)**
Education and Training	23 (3%)	27,161 (10%)	0 (0%)	518 (1%)
Construction	**22 (3%)**	**23,612 (8%)**	**18 (6%)**	**7,485 (18%)**
Health Care and Social Assistance	22 (3%)	45,886 (16%)	4 (1%)	3,030 (7%)
Transport, Postal and Warehousing	**22 (3%)**	**12,205 (4%)**	**13 (5%)**	**3,289 (8%)**
Other Services	18 (2%)	10,848 (4%)	6 (2%)	2,191 (5%)
Mining	14 (2%)	3,604 (1%)	0 (0%)	110 (0%)
Administrative and Support Services	11 (1%)	7,632 (3%)	3 (1%)	1,657 (4%)
Wholesale Trade	11 (1%)	6,762 (2%)	5 (2%)	947 (2%)
Professional, Scientific and Technical Services	**8 (1%)**	**16,034 (6%)**	**19 (7%)**	**4,241 (10%)**
Rental, Hiring and Real Estate Services	4 (0%)	3,295 (1%)	34 (12%)	4,214 (10%)
Information Media and Telecommunications	3 (0%)	3,602 (1%)	0 (0%)	298 (1%)
Financial and Insurance Services	0 (0%)	5,790 (2%)	5 (2%)	1,187 (3%)
Total	**829**	**281,762**	**280**	**42,064**

Source: ABS Census of Population & Housing, Place of Employment, 2021

Socioeconomic Profile

Employment Specialisations

Employment specialisations in the region are evident through the Location Quotient (LQ) technique, which measures the proportion of employment in Central Highlands compared with Tasmania and Australia.

An industry value of less than 1 indicates a low proportion of employment within that industry compared with benchmarked areas. A value greater than 1 represents a higher proportion of employment and indicates a competitive advantage in that industry sector compared with benchmarked regions.

The LQ analysis for Central Highlands shows that agriculture is a highly specialised industry sector and is critical to the productivity of the regional economy.

Other industry sectors of relevance include electricity, gas and waste services, and accommodation and food services. Electricity and gas services aligns to the ongoing operational needs of the project; however, this represents only a very small number of jobs in Central Highlands.

Specialisation in accommodation and food services provides alignment to indirect or secondary industries associated with the construction phase due to the influx of construction workers and the demand for accommodation and hospitality.

The regional catchment has relevant employment specialisations in electricity, gas, water and waste services and manufacturing, presenting opportunities for the regional catchment to participate in projects needs during the construction and ongoing phases of the project.

Figure 7. Employment specialisations (LQ>1), Central Highlands, 2021

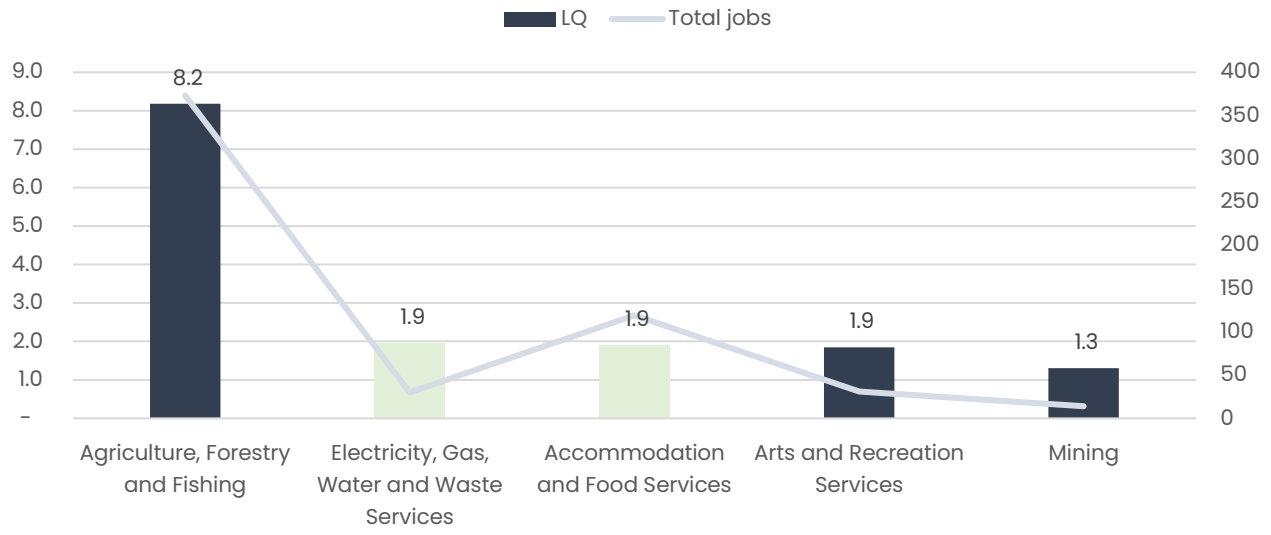
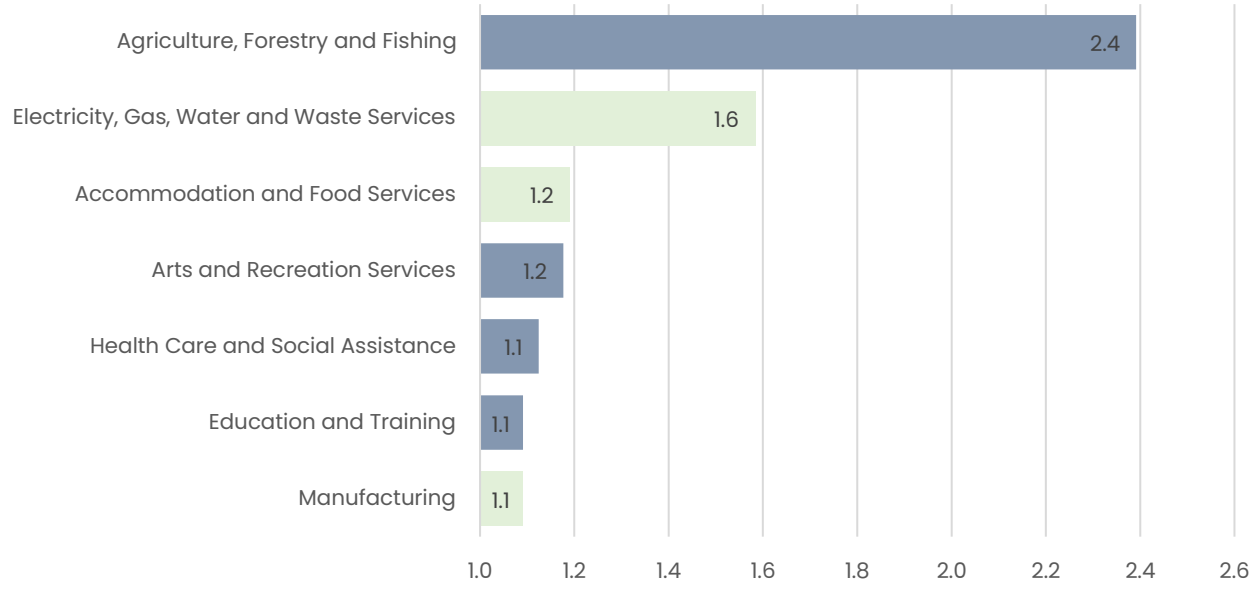


Figure 8. Employment specialisations (LQ>1), Tasmania, 2021



Source: ABS Census of Population & Housing, Place of Employment, 2021

Socioeconomic Profile

Employment Specialisations

Sub-sector LQ analysis of Tasmania's relevant economic specialisations has been undertaken to understand the potential alignment and benefit opportunities for the regional economy at a more granular level.

The LQ analysis of sub-sectors indicates that:

- Electricity generation and distribution are specialised sectors in Tasmania, with existing and potentially transferable economic capabilities and labour force.
- Primary metal and metal product manufacturing presents opportunities for the supply of discrete project components.
- Accommodation and hospitality can serve demand from transient and seasonal construction phase workers.

Table 7. Employment specialisations (LQ>1), Tasmania, 2021

Industry	LQ
Electricity, Gas, Water and Waste Services	
Electricity Generation	2.3
Electricity Distribution	1.6
Waste Treatment, Disposal and Remediation Services	1.1
Manufacturing	
Wood Product Manufacturing	1.7
Beverage and Tobacco Product Manufacturing	1.6
Primary Metal and Metal Product Manufacturing	1.5
Food Product Manufacturing	1.4
Pulp, Paper and Converted Paper Product Manufacturing	1.2
Accommodation and Food Services	
Accommodation	1.6
Pubs, Taverns and Bars	1.2

Source: ABS Census of Population & Housing, Place of Employment, 2021

Socioeconomic Profile

Occupations

Analysis of occupations held by employed residents in the primary and secondary catchments indicates an alignment of jobs and skills with some supply chain needs of the project , particularly during the construction phase.

Examples include a higher proportion of Labourers, machinery operator and technicians and trades workers in the primary and secondary catchments than Australia.

White collar occupations (administrative and professional workers) are underrepresented when compared with Australia, indicating that these roles are more likely to be sourced from outside of the catchments.

Figure 9. Occupations, Central Highlands, Tasmania, Australia, 2021



Source: ABS Census of Population & Housing, Place of Usual Residence, 2021

Unemployment & Participation

Unemployment in Central Highlands is moderate (4.1%) and has remained below 5% since the end of 2021.

The rate of unemployment in Tasmania is slightly higher at 4.2% and has trended down across the past three years; indicating a tightening of the labour market.

Importantly, the labour force participation rate in Central Highlands (56%) sits well below Tasmania (62%) and is markedly lower than Australia (66.5%).

Low unemployment and participation rates are likely to present challenges in the recruitment and retention of labour to support renewable energy projects concurrent to existing business demand.

Figure 10. Unemployment rate, Central Highlands & Tasmania, 2019-2023

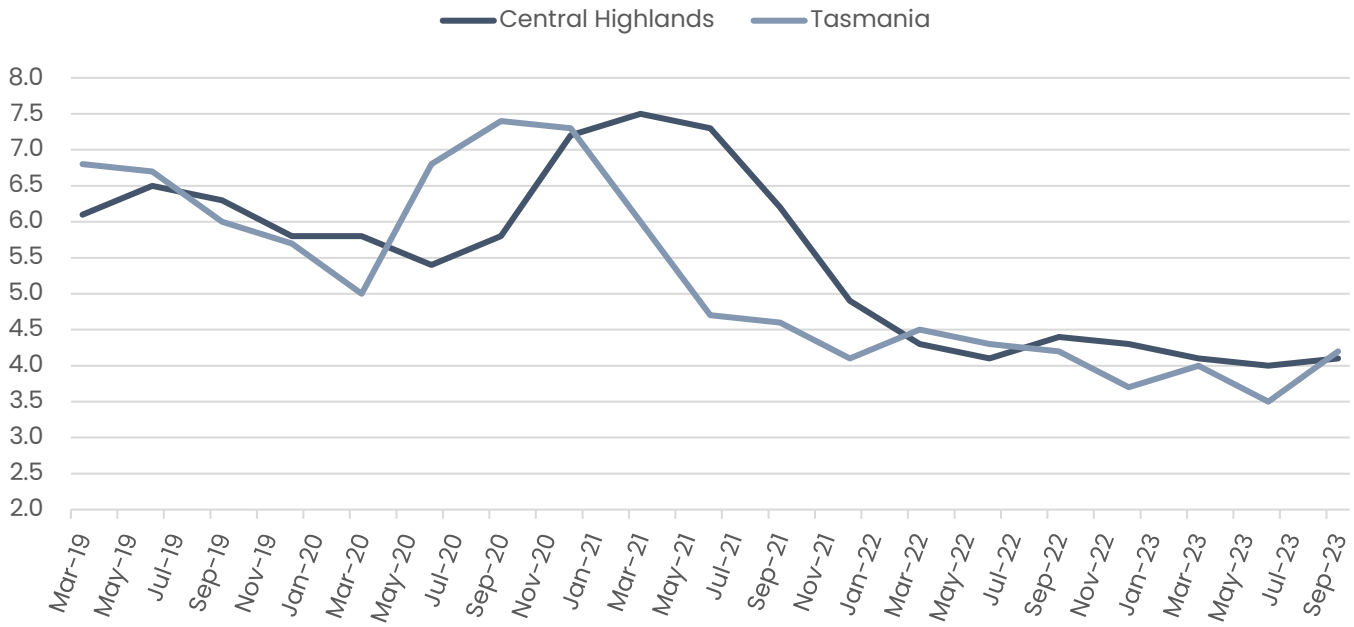
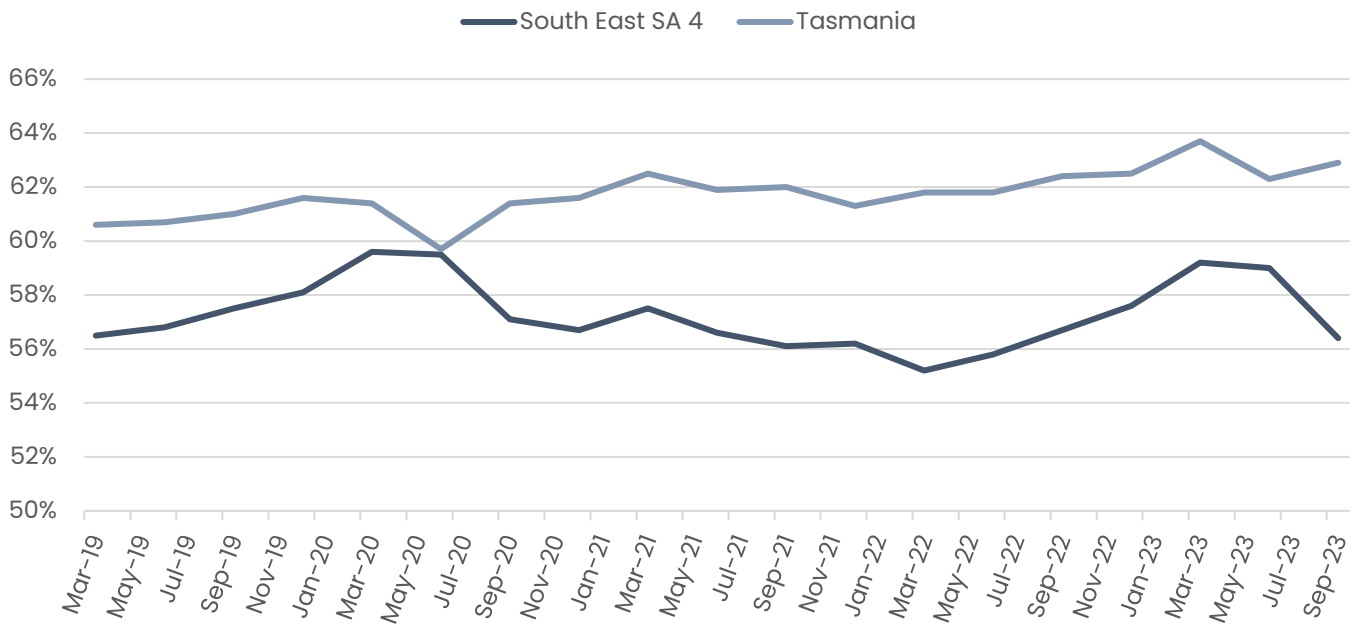


Figure 11. Participation Rate, South East SA4 & Tasmania, 2019-2023



Source: Skills and Jobs Atlas, Jobs & Skills Australia, 2024

Socioeconomic Profile

Key Findings

- The project will draw on a primary regional catchment (Central Highlands), as state secondary catchment (Tasmania), as well as a national catchment during the development, construction and operation phases of the project.
    - Solar panel manufacturing and specialised technician (design, engineering) capabilities are likely to be imported from outside of Tasmania.
    - Primary and secondary catchment opportunities will present for regional businesses in general construction and civil works, electrical and engineering, parts manufacturing, transport, machinery operating and servicing.
- A low population base and below average employment participation rate in the primary catchment suggests that the project may have challenges in sourcing workers from the local area during the construction phase.
- The primary catchment economy can benefit in other ways, particularly through demand generated by the transient workforce during the planning/design and construction phases for goods and services such as retail, hospitality and accommodation given existing specialisations.
- The Central Highlands economy also specialises in the electricity sector which could present opportunities during the operational phase of the project.
- The primary and secondary catchment unemployment rates are higher compared with Australia, indicating that the economy has some capacity within the labour market.
- The regional catchment has relevant employment specialisations in electricity, gas, water and waste services and manufacturing, presenting opportunities for the regional catchment to participate in projects needs during the construction and ongoing phases of the project.
- Accommodation and food services also presents as a potential secondary industry to benefit during the construction phase for Tasmania.
- The primary and secondary catchment occupation profiles have alignment with some supply chain needs of the project , particularly during the construction phase. Examples include a higher proportion of labourers, machinery operator and technicians and trades workers.

5.
Socioeconomic Impact Assessment

Socioeconomic Impact Assessment

Overview

This section identifies and assesses the potential socioeconomic impacts that could arise during the construction and operational phase of the WSF project.

Potential socioeconomic impacts of solar farms

To assist with identifying potential impacts, the following approach has been adopted:

- Review existing literature and case study examples of comparable solar farm projects across Australia; and
- Review relevant technical studies prepared for the WSF to identify potential social impacts.

Literature review & case study analysis

The following renewable energy literature and research has been reviewed and referenced as part of the analysis:

- Agrivoltaics provide mutual benefits across the food energy water nexus in drylands. Nature Sustainability, Barron-Gafford et al, Vol 2, Sep 2019, 851.
- Host Landowner Negotiations, Australian Energy Infrastructure Commission, 2020
- Review of the Impact of Wind Farms on Property Prices, Urbis, 2016 for the NSW Government
- Exploring community acceptance of rural wind farms in Australia: a snapshot, CSIRO, 2012

See Appendix A for a summary of the case study analysis. The findings from the literature review and case study analysis are as follows (and summarised in Appendix B):

- Social impacts typically relate to:
    - Amenity impacts such as noise, visual and traffic during construction;
    - Community concerns around property rights and potential impacts to the natural environment, agricultural land , visual amenity and perceived health and wellbeing impacts.
    - Increased pressure on local infrastructure and services due to cumulative demand from seasonal labour and major projects undertaken concurrently.
- The most substantial economic impacts such as direct and indirect job creation and business supply-chain generally occur during the short-term construction phase.
- Economic impacts during the operational phase are modest due to lesser demand for on-site employment to service and maintain the infrastructure.
- The state-wide benefits primarily relate to long term cost savings associated with renewable energy sources of generation and environmental benefits of renewable energy production.
- Energy storage projects typically create substantial benefits for local residents and businesses due to improvements to the reliability of the energy grid.
- Isolated local and private beneficiaries include landowners who provide the right to use their land, and an increase in municipal rate revenue collected by Council, which is ultimately re-directed for community benefit.

Review of technical studies

Several technical studies have been prepared for the Weasel Solar Farm that are relevant to the SEIA. Appendix D provides a summary of relevant findings relating to impacts during the project's lifecycle.

Key findings include:

- The proposal will not constrain, prejudice and/or limit the agricultural land use activities currently undertaken and/or potential future expansion of the activities.
- The ecological assessment found a very small number of threatened flora and fauna. Some declared weeds were identified, and areas covered by the waterway and coastal protection overlay consist mostly of agricultural land, which can be avoided with careful planning.
- The project will have a limited, localised impact on the landscape while visual impacts are expected to range from negligible to moderate.
- Mitigation methods to address the minor traffic issues include the installation of advisory signage, minor road repairs and the provision of sufficient parking for staff and delivery vehicles.
- Limited noise impacts during both construction and operation of the project were identified.
- There are no heritage listed properties of features or suspected heritage features at the subject site.
- There are no potential glare conditions for the project and limited night time illumination glare.

Impact Framework

A socioeconomic impact framework has been prepared to outline and justify the suite of expected impacts that could arise from the project. For each impact, the main stakeholder groups and industries affected are identified.

For short term impacts, the economic impacts are expected over a finite period, and will not endure beyond the 18-month construction phase of the project.

For ongoing impacts, the economic impacts are expected to be delivered once the proposal is delivered and operational and will occur either on an ongoing basis or over a long-term horizon.

Table 8. Impact framework

Impact	Rationale	Key stakeholders
Short Term		
Economic stimulus: construction phase	The direct investment to construct the solar farm and associated infrastructure will stimulate the construction industry through additional output and jobs created during the construction phase.	Regional, state and national construction industry: civil trades, labourers, machinery operators, technicians.
Amenity disruptions from construction activities	Amenity impacts such as noise and traffic may arise from associated construction activities.	Local residents (proximate), passing travellers.
Community attitudes	Development of the project may lead to community concerns around property rights and potential impacts to the natural environment and agricultural land. Conversely, the project could generate civic pride in the local community through the provision of positive economic development outcomes.	Local community
Competition for labour force	If other major projects with high construction phase employment needs are delivered concurrent with the proposal, competition for labour force may increase and create tensions between major projects. Conversely, if there is adequate capacity, the local labour force will benefit from an increase in participation.	Local and regional labour force, major projects.
Cumulative demand for housing, accommodation and services	The attraction of workers during the construction phase will create additional demand for local infrastructure and services such as commercial accommodation, rental housing, retail and hospitality.	Local businesses and local residents (housing only)
Long Term		
Economic stimulus: Operational phase	The operation and maintenance of the project will require direct expenditure and jobs, which will create direct and flow-on indirect benefits to the economy	Local and regional economy
Agricultural value of grazing	Currently, the development area is primarily used for sheep grazing. Under the agrisolar proposal, sheep grazing will continue but the land will experience a reduction in productivity to accommodate the change in land use.	Local and regional agriculture industry
Amenity impacts	Once built and operational, the physical infrastructure of the solar farm may create long term amenity impacts such as visual and noise. The scale of the impact typically depends on the significance of the environment affected, the potential to enact permanent change, and the extent of stakeholder groups that are impacted.	Local residents (proximate), passing travellers.
Grid reliability & energy access	The project will enhance the reliability of the local energy grid, reducing the frequency and duration of power outages. This will have significant socioeconomic benefits by preventing disruptions to residents, businesses, healthcare facilities, and the broader community.	Local residents and businesses
Government revenue	The change in land use at the development area will alter the rates liability for the landowner. There is expected to be an uplift in Council revenue in the form of higher rates and charges.	Central Highlands Council, local economy and community.
Community fund	The proponent will establish a community fund associated the operational phase of the facility. This will take the form of an annual payment that can be used to support local projects and programs that achieve positive community outcomes.	Local community

Socioeconomic impacts

This section assesses and quantifies (where possible) economic impacts expected to be created by the Weasel Solar Farm. Impacts are assessed for the short-term construction phase, and the ongoing phase (i.e. once the project is complete and operational).

This assessment adopts the input-output method of analysis (I-O). The I-O method is based on the interdependencies and relationship between industry sectors and is widely used across the public and private sector to estimate the direct and flow on economic impacts of a project or activity to an economy.

The Productivity Commission of Australia states that "input-output tables can be used to compute output, employment and income multipliers. These multipliers take account of one form of interdependence between industries — that relating to the supply and use of products. The numbers add up the direct and indirect impacts of a change in final output of a designated industry on economic activity and employment across all industries in an economy."

Definitions of economic terms can be found in the glossary of terms.

The impact area for quantitative impacts is the regional impact area defined in Section 2 (Tasmania), with additional analysis provided for local impacts (i.e. Central Highlands LGA) where appropriate.

Construction phase (short term)

During the construction phase, the following socioeconomic impacts are expected:

1. Economic stimulus generated from construction investment;
2. Amenity disruptions from construction activities;
3. Community attitudes;
4. Competition for labour force; and
5. Cumulative demand for housing and accommodation.

Economic stimulus generated from construction investment

To derive the scale and location of economic impacts (jobs and investment) during the construction phase of the project the following sources of information have been referenced:

- Analysis of the International Renewable Energy Agency's Renewable Power Generation Costs in 2022 report (See Appendix E);
- Findings from case study analysis of large-scale renewable energy projects across Australia, including Tasmania (Appendix A). In total, 14 solar farm projects and one wind farm project were reviewed. The case study analysis included one solar farm project in Victoria that undertook a retrospective assessment of impacts; and
- Discussions with the client regarding construction activities.

The total project cost is estimated to be in the order of $543 million[1]. Further analysis on the location of this investment is provided in Table 9, with approximately $188 million of the project cost expected to be spent in Tasmania.

A summary of key assumptions used to derive the economic impacts are summarised in Appendix C.

Table 9. Construction investment breakdown

	Value
Tasmania	$188.2M
Mainland Australia	$75.2M
International	$279.3M
Total	$542.7M

Source: Urban Enterprise, 2024

Inputting the Tasmanian construction investment estimate into the Input-Output model yields the following impact results:

- $428 million in total economic output, including:
  - $188 million direct output; and
  - $240 million indirect output
- 927 jobs, including
  - 348 direct jobs; and
  - 579 indirect jobs

Table 10. Construction economic impacts, Tasmania

	Direct	Indirect	Total
Output	$188.2M	$239.7M	$428.0M
Employment	348	579	927

Source: Urban Enterprise, 2024

1. Project cost is a preliminary estimate only and is subject to finalisation through detailed design and scoping. This cost estimates aggregates the solar and BESS facility.

Local economic impacts from construction investment

The economic impacts outlined in the previous section are estimated to endure over the 18-month construction period. Indirect impacts also account for flow-on expenditure from wage stimulus associated with labour, particularly jobs sourced from outside of the primary catchment.

It is important to note that not all of the direct jobs generated by the project will flow to the primary impact area (i.e. Central Highlands). A substantial proportion of jobs will be required to be imported from outside of the local area, given the requirement for specialised jobs and skills (e.g. solar technicians). Central Highlands has a small employment and population base to draw on for a major renewable energy project. The local economy is also small and lacks diversity, making it difficult for the project to create substantial economic activity during construction.

The greatest opportunity for local businesses and workers to support the construction phase is through more general construction activities such as civil construction and site works, trade workers and labourers, machinery operators, transport and logistics. Given the local specialisation in accommodation and food services there are also opportunities for Central Highlands' accommodation and hospitality industries to benefit during this phase of the project.

Based on the above information as well as Urban Enterprise's experience with other renewable energy projects, it is estimated that between 2-5% of the economic impacts could accrue in the primary impact area. This analysis has regard to the scale and profile of the Central Highlands economy and its ability to support WSF.

WSF is estimated to generate economic output in **the order of $6-$16 million during the construction phase, and support between 14-34 direct jobs (FTE)**.

Amenity disruptions from construction activities

Amenity impacts such as noise and traffic may arise from associated construction activities. The findings from the technical studies indicate the following:

- There were only minor traffic issues identified as part of the construction phase in the traffic assessment. Mitigation methods to address these issues include the installation of advisory signage, minor road repairs and the provision of sufficient parking for staff and delivery vehicles.
- Due to the distance between the proposed site and non-project involved receivers, construction noise impacts are expected to be relatively minimal. However, scheduling construction activities in accordance with relevant regulations, regular maintenance and broadband reversing alarms will further minimise residual risk of harm to nearby receptors

Community attitudes

Development of major renewable energy projects can create community concerns around property rights and potential impacts to the natural environment, agricultural land, perceived health and wellbeing and visual amenity. This has the potential to disrupt social cohesion within a local community and create ongoing tension between residents and project proponents.

At this stage it is difficult to determine whether there will be community concerns with the project given the preliminary nature of the proposal. Meaningful community consultation is considered critical to minimising the potential for this to become a negative impact in the future. Ensuring that the local community understands the potential benefits will also be important to gain social license for the project.

Competition for labour force

There are several renewable energy projects planned in proximity to the development area and within the broader region. Examples of nearby projects that may overlap with the construction phase of Weasel Solar Farm include:

- **St Patricks Plains Wind Farm** (300 MW) – situated in the Central Highlands LGA 26km north-west of the subject site. Designs completed, seeking approvals.
- **Northern Midlands Solar Farm** (288 MW) – located in the Northern Midlands LGA. Approved, construction expected to commence in 2025.
- **Palmerston BESS** (100MW) – located adjacent to the Palmerston substation in the Northern Midlands LGA. Approved, construction expected to commence in 2025.

In addition, there are several other renewable energy projects proposed across Tasmania, including onshore wind, battery storage and hydrogen, as well as the planned installation of new transmission infrastructure.

Other key projects in Tasmania are summarised below:

- **Marinus Link** is a proposed 1,500MW capacity undersea electricity connection to link Tasmania and Victoria. It is a two-staged project, with construction expected to commence in late 2025 and run for 4-7 years
- **Battery of the Nation** is a project that seeks to expand renewable energy storage and generation in Tasmania and is considered complementary to Marinus Link. Construction is expected to last for approximately six years with a workforce of 300 workers. This includes the $123 million Tarraleah reinvestment project that is located within Central Highlands.
- **Robbins Island** is a wind project comprises that up to 1,000MW output with a total of $1.2 billion investment, plus transmission lines. Total peak employment is expected to be around 700 FTE at stage 1 construction.
- **Jim's Plains** is a wind and solar project comprising 200MW of wind and 40MW solar which is forecast to have a peak employment of 518 FTE jobs during the construction phase.

If all of these renewable energy projects were to be delivered as planned and overlap with the construction phase of WSF, the cumulative job impacts would be notable. Any potential overlap could increase competition for local labour, and might lead to conflicts and delays across projects.

Cumulative demand for housing and accommodation

The project is estimated to require 186 direct jobs during the construction phase. Not all of these workers will originate from the impact area. Given the specialised nature of certain jobs and skill requirements (e.g. solar technicians), a proportion of jobs are anticipated to be imported from other parts of Tasmania and Australia.

For imported labour, an uplift in demand for local infrastructure and services can be expected during the construction phase such as rental housing, commercial accommodation, retail and hospitality.

At this stage it is too difficult to determine the distribution of local, regional and imported labour. However, temporary workers will likely use a mix of commercial accommodation and rental housing when staying in-region.

Commercial Accommodation

To determine whether there is adequate commercial accommodation room capacity to serve worker demand, an assessment of room supply relative to average room demand has been undertaken for Central Highlands and surrounds.

Analysis shows that the current occupancy rate for commercial accommodation in Central Highlands is estimated at 51%[2], indicating there is capacity to support additional overnight visitation.

The level of regional, state and national employment needs is uncertain at this stage. Three scenarios for the proportion of imported labour during the construction phase of the project have been assessed to understand the impact on accommodation demand (see Table 12). The results show that the project will generate demand for between 11-22% of the catchment's accommodation room supply.

This is a significant share of room capacity, however, given Central Highlands' relatively low occupancy rate, the accommodation demand generated by the project is considered an economic benefit. This is particularly the case given that workers will generate weekday demand, which is typically an off-peak period.

Table 11. Existing commercial accommodation supply & demand

	Description	2023
Total room demand	Total commercial accommodation room nights required to accommodate existing visitors	89,080
Total room supply	Total commercial accommodation room nights available.	173,740
Occupancy rate	Existing commercial accommodation occupancy rate.	51%
Vacancy rate	Existing commercial accommodation vacancy rate.	49%
Current available capacity	Additional commercial accommodation room nights available	84,660

Source: Urban Enterprise, 2024

Table 12. Accommodation impact, imported labour scenarios

	Low	Base	High
Total construction workers (peak demand)		186	
Proportion of workforce requiring commercial accommodation	20%	30%	40%
No. of workers requiring commercial accommodation	37	56	74
Working days in the year		260	
Worker commercial accommodation demand (i.e. room nights)	9,664	14,495	19,327
Worker demand (room capacity)	11%	17%	22%

Source: Urban Enterprise, 2024

2. Note this estimate aligns to AirDNA occupancy data for Central Highlands (53%)

Rental Market

The project's development area is approximately 1.25 hours (drive) from Greater Hobart. The proponent anticipates that a notable share of construction phase workers will be house and accommodated in northwest Hobart.

Preliminary discussions also suggest the northern areas of Greater Hobart such as Brighton, Pontville and Bridgewater would be considered desirable due to the reduced travel time to the subject site.

The rental market in Hobart is experiencing declining capacity, with fewer rental properties available alongside increasing rents.

Current active listings show moderate availability of rental properties compared to recent trends; indicating some capacity to absorb rental demand. As of April 2024, there were approximately 600 available rentals in the Hobart region. Over the past four years, median rents have increased from $422 per week in 2020 to $505 in 2024.

As previously mentioned, there are a diverse range of renewable energy projects proposed across Tasmania. If all projects were to be delivered as planned, the cumulative demand for housing and accommodation could present potential challenges for the region to service demand for rental housing and accommodation.

Figure 12. Hobart rental listings, 2011-2024

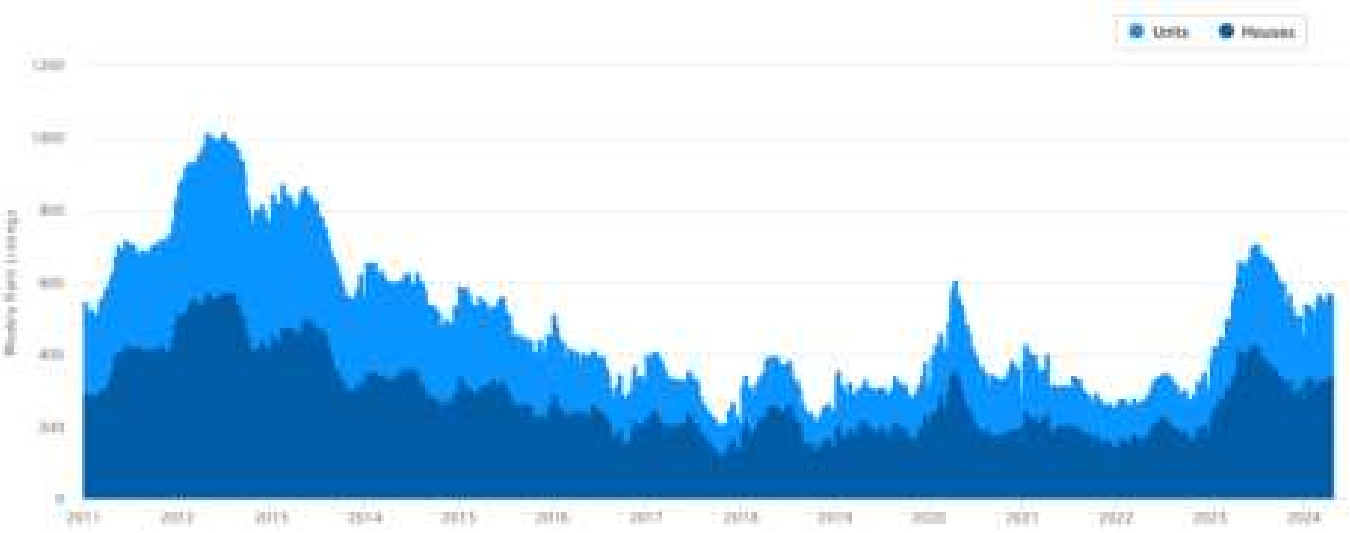


Figure 13. Hobart rental prices, 2010-2024



Source: SQM rental listing & prices data, 2024

Long term (ongoing)

Once the project is complete and operational, the project could result in the following socioeconomic impacts:

1. Economic impacts generated during the operational phase.
2. Agricultural value of grazing
3. Amenity impacts
4. Grid reliability & energy access
5. Municipal revenue from land use changes.
6. Community funds

Economic impacts

To estimate the economic impacts during the operational phase of the project the following sources of information have been referenced:

- Analysis of the International Renewable Energy Agency's Renewable Power Generation Costs in 2022 report (See Appendix E);
- Findings from case study analysis of large-scale renewable energy projects across Australia, including Tasmania (Appendix A); and
- Discussions with the client regarding operational activities.

The estimated economic impacts during the operational phase of the project include:

- $11 million in total economic output, including:
    - $4.7 million direct output; and
    - $6.3 million indirect output
- 20 jobs, including
    - 8 direct jobs; and
    - 12 indirect jobs

It should be noted that most of these benefits are expected to accrue within the local economy due to the requirement for these jobs to be undertaken on-site.

Table 13. Operational economic impacts, Tasmania

	Direct	Indirect	Total
Output	$4.7M	$6.6M	$11.3M
Employment	8	12	20

Source: Urban Enterprise, 2024

Grid reliability & energy access

The project will enhance the reliability of the local energy grid and the broader network through peak demand management and frequency regulation due to the BESS component of the development.

BESS projects can store excess electricity during periods of low demand and discharge it during peak demand periods. This helps to stabilise the grid by reducing strain during high-demand periods, preventing blackouts, and reducing the need for costly peaker plants. BESS projects can also respond rapidly to disturbances, helping to stabilise the grid after events like sudden load changes, equipment failures, or even natural disasters.

Grid frequency needs to be maintained within a narrow range for the system to operate reliably. BESS projects can respond quickly to frequency fluctuations, injecting or absorbing power to help keep the frequency stable. This ultimately reduces the frequency and duration of power outages.

This will have a significant socioeconomic impact for the local economy and community by reducing energy disruptions to residents, businesses, healthcare facilities, and the broader community.

Municipal funds from land use changes

The landowner of the subject site currently pays annual rates and charges associated with agricultural activities. Council charges rates based on a property's Assessed Annual Value (AAV), which is a rental value determined by the Valuer General and applied to the designated land use.

The project will deliver an uplift in Council revenue as a result of the change in land use at the development area; renewable energy generation activities will generate a higher rating liability. At this stage the extent of the uplift is unclear, however, examples in neighbouring municipalities suggest it could be in the order of $25,000 per annum.

Community funds

The proponent proposes to establish a community fund to support local projects and programs that deliver community benefits. Typically, the amount paid to a community fund is based on the project's size (i.e. MW capacity) and the community's needs.

The Clean Energy Council suggests that for large-scale solar projects, the community contribution range in the order of $130-$800 per MW per year over 10 to 25 years. Based on this range, it is expected that the community fund will receive between $26k to $160k per annum over the life of the project. The proponent will engage with community stakeholders in the future to determine the scale of the fund.

Agricultural value of grazing

The 435-hectare development area is currently used to graze sheep, cattle and periodic seasonal broadacre cropping. The Agricultural Assessment[3] noted that the productivity of this land is constrained due to the prevailing lower land capability and low rainfall climate.

The assessment stated that the subject site is not considered to possess a high level of local or regional agricultural prominence beyond the recognition that the two properties are large land holdings.

The pastureland under the project's solar array will continue to be grazed by sheep, and therefore on the land subject to the WSF there will be a continuation of the existing agricultural land use activity.

The WSF would result in the permanent loss of 8.22 hectares of pastureland, which is considered negligible for both the property and the region.

The assessment concluded that the proposal will not constrain, prejudice or limit the agricultural land use activities currently undertaken or potential future expansion of the activities.

Amenity impacts

Once built and operational, the physical infrastructure of the solar farm may create long term amenity impacts such as visual, ecology and traffic. The key findings from the technical studies are summarised below. Please refer to technical studies for detailed analysis and findings:

- The only potential issues identified from the glint and glare assessment related to night time illumination glare associated with the substations and BESS components of the project. Management measures to mitigate this include directing light downwards as much as possible, use of luminaries designed minimise light spill, minimise over-lighting and use asymmetric beams
- No traffic issues were identified for the operational phase of the project
- Overall the Project will result in a 'Low to Moderate' modification to the existing visual landscape character. With the implementation of the recommended mitigation measures, the proposed development could be undertaken whilst maintaining the core landscape character of the area, and have a minimal visual impact on the surrounding visual landscape
- During the operational phase there are no material noise impacts that require management measures

3. Weasel Solar Farm Agricultural Assessment, Pinion Advisory, September 2024

Summary of socioeconomic impacts

The socioeconomic impacts of the proposal during the construction and operational phase are summarised in Table 14.

Table 14. Summary of impacts

Impact	Impact	Key stakeholders
Short Term		
Economic stimulus: construction phase	The estimated construction investment of $188 million in Tasmania is estimated to generate $428 million in total economic output and support 926 (FTE) jobs during the construction phase, including 348 direct jobs.	Regional, state and national construction industry: civil trades, labourers, machinery operators, technicians.
Amenity disruptions from construction activities	Amenity impacts such as noise and traffic may arise from associated construction activities. However, technical studies prepared as part of the development application suggest these impacts will be minimal, and will be appropriately managed through construction and environmental management plans	Local residents (proximate), passing travellers.
Community attitudes	Development of the project could create community concerns around property rights and potential impacts to the natural environment and agricultural land. Conversely, the project could galvanise the local community through the provision of positive economic development outcomes.	Local community
Competition for labour force	There are a small number of renewable energy projects planned in proximity to the development area, and a diverse range of other renewable energy projects across the State. Some of the jobs and skills required to deliver these projects, and anticipated timing of construction may overlap with WSF. The overlap has the potential to increase competition for local labour, and could lead to tensions and delays across projects.	Local and regional labour force, major projects.
Cumulative demand for housing, accommodation and services	Some of the 186 construction workers will be imported from outside of the region, and will require a mix of rental housing and commercial accommodation. Hobart has moderate rental property capacity to meet some accommodation demand generated by the project's construction phase. Central Highlands also some capacity within its commercial accommodation sector to support the project given its relatively low occupancy rate. However, if all renewable projects are delivered across Tasmania (as planned), servicing the cumulative housing needs could place temporary upward pressure on rents and commercial room rates.	Local businesses and local residents (housing only)
Long Term		
Economic stimulus: Operational phase	The ongoing operation of the solar farm is estimated to generate $12 million in total economic output and support 14 (FTE) jobs per annum, which includes 6 direct jobs (FTE).	Local and regional economy
Agricultural value of grazing	Overall the proposal will not constrain, prejudice or limit the agricultural land use activities currently undertaken or potential future expansion of the activities.	Local and regional agriculture industry
Amenity impacts	Once built and operational, the physical infrastructure of the solar farm could create long term amenity impacts such as visual, noise and traffic. Technical studies prepared as part of the development application indicate that there are unlikely to be any substantial amenity impacts during the operational phase of the project.	Local residents (proximate), passing travellers.
Grid reliability & energy access	The project will enhance the reliability of the local energy grid, reducing the frequency and duration of power outages. This will have significant socioeconomic benefits by preventing disruptions to residents, businesses, healthcare facilities, and the broader community.	Local residents and businesses
Government revenue	Council will receive an uplift in revenue in the form of additional rates and charges due to a change in land use on-site. The estimated revenue uplift delivered to Council is in the order of $25k per annum.	Central Highlands Council, local economy and community.
Community fund	The proponent proposes to establish a community fund associated with the operational phase of the facility. This will take the form of an annual payment that can be used to support local projects and programs that deliver positive community outcomes.	Local community

Impact Evaluation

The significance of impacts are evaluated by considering the expected magnitude (low, moderate and high) and the likelihood of the impact occurring during the lifecycle of the project.

The following criteria has been used to assess the magnitude of impacts:

- Duration – The timeframe over which the impact occurs or the frequency of potential impacts.
- Extent – The geographical area or the range and number of stakeholders affected.
- Magnitude – Scale or degree of change from the existing condition as a result of the impact.
- Sensitivity – The extent to which people or an environment can adapt to or mitigate the impact.

The following categories have been used to assess the likelihood of impacts taking place:

- Highly Unlikely – High improbability that the impact will occur.
- Unlikely – An improbability that the impact will occur.
- Possible – moderate probability that the impact will occur.
- Likely – A good probability that the impact will occur.
- Highly Likely – A very high probability that the impact will occur.

Planned and recommended management measures have been included (where relevant) to optimise benefits and minimise negative impacts.

Table 15. Impact evaluation – construction phase

Impact	Magnitude	Likelihood	Management measures	Recommendations
Economic stimulus: construction phase	Moderate	Likely	None identified	Advocate for use of local suppliers (where possible).
Amenity disruptions from construction activities	Low	Unlikely	Installation of advisory signage, minor road repairs and the provision of sufficient parking for staff and delivery vehicles. Scheduling construction activities in accordance with relevant regulations, regular maintenance and broadband reversing alarms	Construction and environmental management plans will be prepared as part of a condition on the planning permit.
Community attitudes	Low	Possible	Public community consultation sessions held in region	Ensure community are regularly engaged, and project updates are communicated as they arise.
Competition for labour force	Moderate	Possible	None identified	Liaise with other renewable energy project proponents to discuss synergies with jobs and skills and potential for resource sharing.
Cumulative demand for housing, accommodation and services	Moderate	Possible	None identified	Engage with Central Highlands Council, Greater Hobart Councils and relevant Chamber of Commerce/Business Associations to notify of accommodation requirements and impending periods of high demand during the construction period.

Table 16. Impact evaluation – operational phase

Impact	Magnitude	Likelihood	Management measures	Recommendations
Economic stimulus: Operational phase	Low	Highly unlikely	None identified	Advocate for the use of local suppliers (where possible).
Agricultural value of grazing	Low	Highly likely	None identified	None
Amenity impacts	Low	Unlikely	Technical studies prepared to assess potential amenity impacts and recommend management measures	Refer to other technical studies for planned and recommended management measures relating to ongoing amenity impacts.
Grid reliability & energy access	Low	Highly likely	None identified	None
Government revenue	Low	Highly likely	None identified	None
Community fund	Low	Likely	The proponent proposes to establish a community fund to support local projects and programs that deliver community benefits.	Contribute funds towards community projects, initiatives and programs that improve liveability and socioeconomic outcomes for the community.

6. Appendices

Appendix A: Case Study Analysis
Appendix B: Literature Review Findings
Appendix C: Economic Impact Assessment Assumptions
Appendix D: Technical Studies Summary
Appendix E: IRENA Solar Costs

Appendix A – Case Study Analysis

Table 17. Case study analysis

Project	Location	Energy Capacity	Status	Construction impacts	Ongoing impacts
Robbins Island Renewable Energy Park	North-west Tasmania	900MW	Planning Approval 2020	2,766 jobs, including 1,038 direct jobs. Gross value-added of $384m, including direct GVA of $153m	101 direct ongoing FTE jobs, including 40 direct jobs
Numurkah Solar Farm	Numurkah - 200km north of Melbourne	128MW	Operational (retrospective)	203 direct jobs in Hume region 87 in rest of Victoria = 290 direct jobs $122.4m expenditure in Victoria Economic activity of $317.4m in Hume region	6 direct jobs in Hume region $4.2m expenditure in Victoria Economic activity of $12.5m in Hume region
Culcairn Solar Farm	Culcairn - 45km north of Albury	350MW	Planning Approval 2021	350 direct jobs in NSW $177m direct expenditure 60% spent in Riverina Murray region	6 direct jobs $15.1m direct expenditure 90% spent in Riverina Murray region
Bookaar Solar Farm	Bookaar - 8km north west of Camperdown	200MW	Planning Approval 2022	150 direct jobs, 105 locally $280m capital investment - $28m spent locally	8-12 ongoing jobs nationally, 6 locally Economic stimulus to the Study Area of $29.5 million over 30 years
Frasers Solar Farm	Toongabbie - 180km east of Melbourne	75MW	Planning Approval, 2020	250 jobs (direct & indirect) $110m investment	4 direct ongoing jobs
Fulham Solar Farm	Fulham - 220km east of Melbourne	80MW	Planning Approval, 2022	90 direct jobs	10 direct jobs
Maffra Solar Farm	Maffra - 230km east of Melbourne	30MW	Planning Approval, 2018	100 jobs (assuming direct and indirect) $50m investment	*
Perry Bridge Solar Farm	Perry Bridge - 250km east of Melbourne	44MW	Planning Approval, 2021	88 direct jobs	2-3 direct jobs
Tragowel Solar Farm	Tragowel - 270km north of Melbourne	510MW	Planning Approval, 2019	$500m investment	*
New England Solar Farm	Uralla, NSW	720MW (includes 400 MWh battery storage facility)	Under construction	700 direct jobs	15 direct jobs
Western Downs Green Power Hub	Chinchilla, QLD	460MW (includes 150 MWh battery storage facility)	Under construction	400 direct jobs	10 direct jobs
Cultana Solar Farm	Whyalla, SA	280MW	Under construction	700 direct jobs	10 direct jobs
Limondale Solar Farm	Balranald, NSW	249MW	Operational	300-400 direct jobs	7 direct jobs
Darlington Point Solar Farm	Darlington Point, NSW	330MW	Operational	500 direct jobs (25% locals) $450m investment	*

Source: Various sources online
*Information not available

Appendix B – Literature Review Findings

Table 18. Literature review summary

Impact	Description
Social	
Amenity	Construction activities, including heavy machinery and transportation of materials, will result in amenity impacts for the local community such as noise and traffic. Large solar arrays can alter the visual landscape, especially in rural or natural areas, which may be considered unsightly by some residents. This visual impact can vary depending on the design and location of the solar farm.
Community attitudes	Development of major renewable energy projects can create community concerns around property rights and potential impacts to the natural environment, agricultural land and visual amenity. This has the potential to disrupt social cohesion within a local community and create ongoing tension between residents and project proponents. Meaningful community consultation is considered critical to addressing this impact.
Local infrastructure & services	The construction and operation of large-scale renewable energy projects has the potential to increase pressure on local infrastructure and services due to the cumulative demand from seasonal labour and major projects undertaken concurrently. This can create poor social outcomes for local residents through the provision of housing, utilities and community services.
Economic	
Construction	Economic output and employment (FTE jobs) associated with the construction phase of a project. These are typically substantial and there is scope for local benefits if there is alignment with the local business and employment profile. Other economic impacts associated with the construction phase include: • Cumulative uplift in demand for worker housing, accommodation, retail and services; and • Competition for skills and labour between other major projects.
Operation	Economic output and employment (FTE jobs) during the life of the project. These are often substantially lower than the construction phase impacts, albeit over a much longer period. Agrisolar projects also include special solar panels that allow for existing agricultural grazing to continue on-site.
Remuneration for landowners	Landowners are typically remunerated for the right to use their land for the construction and operation of a renewable energy project, in-turn delivering financial benefits to the private landowner(s)
Property values*	To date, there have been minimal domestic studies measuring the impact that proximity to solar farms has on surrounding property values. This includes the effect that visual amenity impacts caused by solar farm development has on surrounding residential property prices
Energy consumption	The capacity to generate renewable energy for state and national consumers. The power that is generated from renewable energy projects typically gets exported into the national energy market, and therefore benefits all consumers of electricity.
Community fund	Some examples of renewable energy projects seek to contribute funds towards local communities in which the project is located or proximate to. This typically takes the form of an annual payment that can be used to support local projects and programs.
Government revenue	Local government receives annual payments from renewable energy generators under state government legislation. The payment combines a fixed charge with a variable charge based on a power station's capacity
Grid reliability & energy	BESS projects can enhance the reliability of the local energy grid, reducing the frequency and duration of power outages. This can have significant socioeconomic benefits by preventing disruptions to businesses, healthcare facilities, and the broader community. In regions with unreliable or limited energy access, BESS projects can help ensure a more consistent power supply, benefiting households, schools, healthcare facilities, and local businesses.

Source: Refer to reference list in text and Appendix A

*Given the lack of research that is available, an assessment of this impact has been excluded.

Appendix C – Economic Impact Assessment Assumptions

Table 19. Economic Impact Assessment Assumptions

Phase	Assumption	Source
Construction	Capex: $542 million	Urban Enterprise/IRENA
	Capex location breakdown: Tasmania = 35% Mainland Australia = 13% International = 52%	Urban Enterprise
	Multipliers derived from case study analysis	Urban Enterprise
Operational	Opex: $4.7 million p.a.	Urban Enterprise/IRENA
	Multipliers derived from case study analysis	Urban Enterprise

Appendix D – Technical Studies Summary

Table 20. Technical Studies Summary

Technical Study	Purpose	Findings
Agricultural Assessment, Pinion Advisory, September 2024	Assess the potential impacts on existing agricultural land use	• Currently the subject site is used to graze sheep, cattle and periodic seasonal broadacre cropping • The subject site is not considered to possess a high level of local or regional agricultural prominence beyond the recognition that the two properties are large land holdings • The pastureland under the project's solar array will continue to be grazed by sheep, and therefore on the land subject to the WSF there will be a continuation of the existing agricultural land use activity • The WSF would result in the permanent loss of 8.22 hectares of pastureland, which is considered negligible for both the property and the region • The proposal will not constrain, prejudice and/or limit the agricultural land use activities currently undertaken and/or potential future expansion of the activities
Ecological Assessment, Van Diemen Consulting, September 2024	Provide preliminary information on the extent and quality of native vegetation and fauna habitat within the study area	• There are no threatened ecological communities present in the study area • There is one small area with the threatened native vegetation of Eucalyptus tenuiramis which should be avoided • Three species listed on the Threatened Species Protection Act 1995 were observed in or adjacent to the Study Area. None of these proposed to be taken or distributed by the development • No fauna species listed on the Threatened Species Protection Act 1995 or Environment Protection and Biodiversity Conservation Act 1999 were observed in the Study Area during the surveys • Declared Weed species listed on the Biosecurity Act 2019 were observed in the Study Area • The study area intersects the waterway and coastal protection area overlay. On balance, the areas intersected by the Overlay are primarily agricultural land or areas where there has been the regeneration of some native species such as rushes, grasses and sedges. These areas can be avoided through careful planning and design
Landscape and Visual Assessment (DRAFT), Human Habitats, September 2024	Assess the potential landscape and visual amenity impact of the proposed solar farm.	• The project will have a limited, localised impact on the landscape character of the broader landscape setting. The landscape impacts are projected to be low to negligible in nature • The visual impacts in terms of magnitude are expected to range from negligible to moderate, the initial impacts are estimated as low to moderate while the residual impacts are expected to be low • Minor, localised impacts with regard to lighting can be expected. These will be restricted to areas with intensive infrastructure such BESS, switchyard and substation. • Landscape plantings to perimeter in specific locations are recommended as the key management measure
Traffic Impact Assessment, pitt & sherry, September 2024	Assess the potential traffic impacts of the construction and operational phase of the development	• The crash history for Highland Lakes Road in the vicinity of the site did not identify any safety issues at the proposed site access points • The sight distances at the proposed site accesses meet the Austroads guidelines for safe intersection sight distances • The proposed transport route is expected to have sufficient capacity to accommodate the additional traffic generated during construction of the proposed development; and • Operations traffic volumes of the proposal are estimated to be minimal and are not expected to have any noticeable impact on the safety and function of the surrounding road network after construction • Mitigation methods to address the traffic issues are outlined in detail in the assessment and include the installation of advisory signage, minor road repairs and the provision of sufficient parking for staff and delivery vehicles.

Table 20. Technical Studies Summary (continued)

Technical Study	Purpose	Findings
Noise Impact Assessment, SLR Consulting, September 2024	Assess the noise impacts associated with the development	• Due to the distance between the proposed site and non-project involved receivers, construction noise impacts are relatively minimal. However, scheduling construction activities in accordance with relevant regulations, regular maintenance and broadband reversing alarms will further minimise residual risk of harm to nearby receptors. • During the operational phase there are no material noise impacts that require management measures
Historic Heritage Assessment, Cultural Heritage Management Australia, September 2024	To undertake an historic heritage assessment for the proposal	• There are no heritage listed properties of features that are situated within the boundaries of the subject site • No historic heritage sites or suspected heritage features were identified during the field survey assessment • There were no substantial management measures recommended for the subject site. • An adjacent property is registered on the Tasmanian Heritage Register and it is recommended that this property is plotted onto the development masterplan and note that no development activity is to occur within the property boundaries
Glint and Glare Assessment, SLR Consulting, September 2024	Undertake a reflective glare assessment of the proposal	• There are no potential glare conditions for the project • An examination of the topography and existing vegetation shows that the shielding would be enhanced by the large areas of natural bushland between the project arrays and many of the surrounding roads and residential dwellings • The only potential for night time illumination glare would be associated with the substations and BESS components of the project. Management measures to mitigate this include directing light downwards as much as possible, use of luminaries designed minimise light spill, minimise over-lighting and use asymmetric beams

Source: Refer to reference list in text and Appendix A

*Given the lack of research that is available, an assessment of this impact has been excluded.

Appendix E – IRENA solar costs

Table 21. Solar project costs per KW in Australia, 2022

Project	Location	Australia (USD)
Hardware	Modules	339.2
	Inverters	38
	Racking and mounting	89.3
	Grid connection	44
	Cabling/ wiring	42.1
	Safety and security	11.5
	Monitoring and control	5.1
Installation	Mechanical installation	87.4
	Electrical installation	78.3
	Inspection	29.6
Soft costs	Margin	55.1
	Financing costs	29.4
	System design	10.7
	Permitting	37.5
	Incentive application	11.6
	Customer acquisition	13.7
	Total	922.5

Source: Renewable Power Generation Costs in 2022, IRENA 2023

Table 22. Solar operational & maintenance costs per KW OECD, 2022

	Oceania (USD)
All-in O&M costs for utility-scale solar PV	7.5

Source: Renewable Power Generation Costs in 2022, IRENA 2023

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4 June 2025

Graham Rogers & Trent Henderson
Central Highlands Council

By email: development@centralhighlands.tas.gov.au

Our Project Ref: 2212

RE: Response to request for Further Information, Weasel Solar Farm DA 2024/55

Dear Graham and Trent,

Thank you for your Request for Further Information (RFI) dated 14 April 2025. Please find below our response to each of the requests in Table 1.

We trust the information provided in this response is sufficient to consider the application ready for assessment. If Council considers that this response has not answered all of Council's requests, please advise accordingly as soon as possible.

Table 1 — RFI Responses

Request		Response
1.	Plans need to be consistent with cl. 6.1.3 of the Tasmanian Planning Scheme – Central Highlands. Site Analysis & Site Plan need to show the current landscape and clearly indicate all works and development associated with the proposed project. This includes, but is not limited to, the following: a) Setback distances of all structures and works, b) Location of topographical features c) Any recommendations or requirements within the specialist reports need to be shown.	The Site Analysis, Site Plan, and Master Plan have been revised to comprehensively illustrate all proposed works and development associated with the Weasel Solar Farm. Updates include the addition of key topographical features and the inclusion of minimum setback distances to the perimeter of the development. Furthermore, the plans now incorporate annotations reflecting recommendations from specialist reports, particularly in relation to stormwater runoff management and the design of internal road intersections with existing waterways. A contents page to the design pack provides a summary of plans within Appendix B as well as directs readers to plans contained within other technical documents.
2.	Discretionary uses in the Agriculture Zone Having regard to the purpose of the zone (cl. 21.1) and the objective of cl. 21.3.1 of the Scheme, further clarity is required on how the project minimises the conversion of agricultural land to a non-agricultural use.	The Agricultural Report submitted with the application confirms that the Development Area comprises marginal agricultural land with limited suitability for high-value production, consistent with the RFI's own assessment. Importantly, the report demonstrates that the proposed development can support continued agricultural use through the co-location of sheep grazing within the solar farm footprint. The proposed co-location of the solar panels with sheep grazing ensures that agricultural activity continues on the land, thereby minimising the extent of conversion to a non-agricultural use in line with the intent of the Scheme. As concluded within the Agricultural Report: The Weasel Solar Farm would result in the permanent loss of 8.22 hectares of pastureland however this loss would be outweighed by the significant ongoing operational and management benefits associated with the proposed development including a likely reduction ewe and lamb mortality and overall improved livestock productivity.
2 a)	Please provide confirmation that the layout and arrangement are sufficiently spaced to facilitate and promote pasture growth underneath to accommodate livestock grazing.	The solar farm layout provides spacing between rows of at least 10m and a minimum height clearance that ensures suitability for sheep grazing (and management). The design plans have been updated with annotations to note the spacing. Only a marginal amount of land will be taken from agricultural production (for the BESS and infrastructure hardstand), with the Agricultural Report noting this is not a significant loss. Additionally, the Agricultural Report concludes there are agricultural output

		benefits to 'agrisolar', with likely improved sheep wool production and conditions for lambing due to solar panel partial shading. While there are no Australian-based guidelines on solar design to support sheep grazing yet, there is growing proof of the co-location benefits. The design relies upon current best practice and professional knowledge – gained from other existing projects and research sources. A minimum spacing of 10m is sufficient to allow vehicle movement, sunlight penetration and support grass growth.
2 b)	Please clarify the intended management plans for the construction compound shown on the Master Plan. Specifically, what is the timespan for its use and what rehabilitation plan is to occur on the site of this area to grazing pasture is proposed.	There are three construction compound areas that are intended to facilitate the construction works e.g. delivery area for materials, temporary worker facilities, parking, hardstand, etc. The northernmost (A) is outside of the proposed PV area, thus is surplus to requirements post-construction. It will be removed upon completion of works. The central (B) and southernmost (C) are intended to form part of the PV area footprint. Their temporary status will be superseded once construction approaches completion to enable the PV array to be built. The exact management and rehabilitation can be required as a condition of permit, via the Construction Management Plan.
2 c)	In regard cl. 21.3.1 P2 of the Scheme, please provide clarification on the livestock grazing management of the site. Does the design and layout of the panels restrict the grazing option to sheep only, or can cattle graze through the site?	While cattle grazing is not currently suited to large-scale solar farms (due to risk of damage by cows), the Proponent has prepared a letter (attached) outlining that the area proposed for development is not suitable for cattle grazing and has no intention of cattle grazing that area. Sheep grazing remains a compatible and practical use beneath and between the solar arrays.
3.	**Building Heights in the Agriculture Zone** The development application indicates that the project will have a maximum building height of 18.5m for the "Vertical Post Structures", or power poles. At 18.5m the height relies on the Performance Criteria cl. 21.4.1 P1 of the Scheme. Please demonstrate that the height is "necessary for the operation" of the project, for example, why cannot the power be fed underground	The use of overhead lines for internal transmission is necessary for the operation of the Project. The collection of power from solar arrays is then conveyed via 33kV transmission to the on-site substation and step-up to the high-voltage connection. The potential alternative of underground internal transmission is not feasible or desirable, as compared to overhead: ▪ There is greater ground disturbance associated with trenching, as well as inability to 'oversail' existing vegetation. The internal transmission routes intersect multiple waterways, with the overhead option able to avoid disturbance within those Natural Asset Code areas. ▪ Underground transmission typically requires broader easement clearance. ▪ Underground transmission is significantly more expensive. Furthermore, the existing high-voltage transmission line is overhead and significantly taller and more dominant visually than the proposed overhead 33kV transmission. A dedicated internal transmission plan has been added to the design pack, noting the likely location of poles along both options of internal transmission (only one route will be utilised, but is subject to detailed design and electrical modelling). This plan shows the separation from non-involved dwellings. As a further consideration for overhead transmission; taller poles means longer spans (and wider easements), requiring an engineering balancing act to be calculated through detailed design. Ground clearance requirements and cable swing calculations will need to be determined during detailed design, and must align with Australian Standards for electrical conductors.
3 a)	Additionally, it must be demonstrated that no unreasonable impact will be caused on adjoining properties, including the Highland Lakes Road, having regard to: a) the proposed height of the building; b) the topography of the site; c) the bulk and form of the building; d) separation from existing use on adjoining properties; e) the nature of the existing uses on adjoining properties; and	The plan pack has been updated to include additional setback annotations from the development, including distance to Highland Lakes Road. Photomontages included in the LVIA include the 33kV overhead transmission (particularly Viewpoint 2, from Highland Lakes Road). The report assesses potential visual impacts and concludes that there is low impact. Notably, the topography of the Site, existing vegetation, and significant distances to non-involved dwellings means the visual impact of the proposal is low. Additionally, landscape screening is proposed to further ameliorate views. The existing context also needs to be considered, with high-voltage overhead transmission lines in the direct foreground/line-of-sight between Highland Lakes Road and the Development Area. The majority of the solar farm is hidden by topography and existing vegetation. Option 1 for internal transmission runs adjacent to the existing high-voltage transmission line easement, on the far side as viewed from Highland Lakes Road, to benefit from existing infrastructure and avoid creating a distinctly separate and 'new' line of transmission distant and distinct to existing.

	f) any buffers created by natural or other features.	
3 b)	The "Vertical Post Structures", or power poles, along with all proposed structures must be shown on a set of plans that map out setbacks and routes in relation to title boundaries, other powerlines and separation from all dwellings.	New plan created focusing on layout of internal transmission. Plans modified with additional dimensions and setbacks.
4.	**Building Setbacks in Building Heights in the Agriculture Zone** To demonstrate the siting of buildings minimises potential conflict with use on adjoining properties, pursuant to cl. 21.4.2 of the Scheme, documentation must be provided that indicates the setback of all works and development as defined by the Land Use Planning & Approvals Act 1993, to the Lot boundaries associated with the site.	Plans have been updated and illustrate the setbacks to property boundaries and non-involved dwellings. The dimensioning particularly focuses on 'distance to perimeter security fence', as that is the outermost physical development.
5.	Parking & Sustainable Transport Code In accordance with the applicable standards listed under cl. C2.6 – Development Standards for Buildings & Works, plans must be provided that demonstrate the project is compliant with: a) Construction of parking areas - cl. C2.6.1, b) Design & Layout of parking areas – cl. C2.6.2, c) Number of accesses for vehicles – cl. C6.2.3,	Plans (by Pitt&Sherry) have been updated and illustrate the concept parking layouts and construction of parking areas. Access points have previously been identified in the TIA and its plans. Additional plan updates (Appendix B) have included notes that: ▪ All internal track waterway crossings will be designed with appropriate culverts, and construction techniques/sediment control will be in place to manage stormwater and runoff appropriately. ▪ Existing overland flow paths will be maintained. ▪ Any large, impermeable surfaces will have drainage management for any runoff concentration, particularly if natural drainage is towards waterways. ▪ Detailed design plans will be prepared (as a condition of permit) for all waterway crossings and hardstand areas , along with the Construction Management Plan (and/or Environment Management Plan) that addresses soil and water management and erosion risk. Both the TIA, Ecological & Natural Assets Code Assessment and Hydrology reports address at a high-level, the interaction of culverts and waterways.
6.	Road & Railway Assets Code Consistent with the requirements of the Road & Rail Assets Code C3.0 of the Scheme, please provide plans of all associated work for the access to the site of any public road. Documentation need to demonstrate that the access design and location is suitable for the vehicles using the site during construction and the ongoing life of the project.	The TIA includes an assessment of the proposed access points (primary, secondary and tertiary/emergency), including safe sight distances, swept path analysis and indicative design plans. The preparation of the TIA was informed by discussions with DoSG, including their Crown landowner consent to lodge the application. The TIA included a number of recommendations that could be incorporated post-approval as detailed design. These recommendations have been reiterated by DoSG in their referral response (provided to the project team on 01/05/25). The proposed access points have been designed to ensure compliance with the Road & Rail Assets Code C3.0 of the Scheme. Documentation, including the Traffic Impact Assessment and the Swept path analysis (Appendix C,) Traffic Impact Assessment demonstrate the suitability of the access locations for both construction and long-term operational phases. Key measures include: - Swept paths from public roads are shown in Appendix C, demonstrating access suitability for B-doubles and semi-trailers. Each access point will be widened by 30 metres and existing culverts will be extended to accommodate turning movements. - To maintain sight lines, existing signs at the Highland Lakes Road/Waddamana Road intersection will be repositioned, ensuring safe vehicle exit from Access A. - Entrances to Weasel Plains Road and Access A, B, and C will be upgraded to rural sealed standard and sealed back 30 metres from the highway, reducing mud and gravel transfer to Highland Lakes Road. Pitt&Sherry have updated their design pack within the TIA.

Additional request via email 01/05/25: 1. **Overland Flow Maintenance:** plans need to show that all overland flow is to be maintained. However, if affected, please demonstrate how this will be managed in concept. 2. **Natural Waterway Crossings:** These crossings are to be designed to accommodate a 1-in-100 RTA storm event, applicable to the needs of the location. 3. **Driveway Layout:** Provide a conceptual plan for the driveway layout with enough detail to address its construction and drainage. This does not need to be an engineering-designed plan but should be clear and sufficiently detailed to indicate the route and topography. 4. **Access Location and Vegetation Removal:** Include the access location and details regarding any vegetation that may need to be removed for the driveway layout or sightlines to the road. 5. **Reference to Standards:** Please refer to Tasmanian Standard Drawings as a reference for driveway and access construction.	Additional notations on plans note that all overland flow paths will be maintained. While internal access tracks do cross some waterways (and associated Natural Assets Code), the hydrology report demonstrates that these typically avoid H2 and above flooding (specifically avoided as informed by hydrology modelling). Additionally, Section D4 of the Ecological & Natural Assets Code Assessment addresses code Performance Criteria and mitigations. The development will ensure that stormwater discharge into waterways is managed appropriately. Furthermore, notations have been added (Design Plans, Appendix B) that culvert design, detailed design, stormwater management and construction sediment control will be completed as part of detailed design and an Environment / Construction Management Plan post-approval. That said, the principle commitments include ensuring that there will be: ▪ Existing overland flow paths will be maintained (in a 1-in-100 RTA event). Exact crossing and culvert design will be completed post-approval, however, informed by hydrology/flood modelling. ▪ All internal track waterway crossings will be designed with appropriate culverts, and construction techniques/sediment control will be in place to manage stormwater and runoff appropriately. Table 7 of the Ecological & Natural Assets Code Assessment presents recommended management measures to address, including: – Minimise soil disturbance and sediment release. – Control erosion and sedimentation risk. – Avoid contaminant spills. – Stabilise and rehabilitate banks. ▪ Any large, impermeable surfaces will have drainage management for any runoff concentration, and will not allow direct, unfiltered discharge directly into waterways. ▪ Design and works will reference the Derwent Estuary Program's "Erosion and sediment control" (2023) for additional measures. ▪ Detailed design plans will be prepared (as a condition of permit) for all waterway crossings and hardstand areas , along with the Construction Management Plan (and/or Environment Management Plan) that addresses soil and water management and erosion risk. The design plans within the Appendix of the TIA contain indicative engineering designs for public road access points and demonstrate the capacity for upgrading to accommodate construction traffic as necessary. Internal access tracks are indicative only and subject to detailed design. Their exact layout cannot be finalised at this point in time. The principles committed to above and noted on design plans is sufficient for planning assessment. The design plans (and existing conditions photographs) within the TIA demonstrate that the existing crossover points to be augmented for project access do not require removal of vegetation. The masterplan documents within the Appendix B Design Plans do not contain detailed access or construction drawings, as these details are contained in indicative design plans (to relevant standards) within the TIA. The DoSG request for conditions on permit stem from the TIA recommendations. The Proponent is satisfied with the conditions as suggested for the planning permit.

Should you have any questions on the above, please do not hesitate to contact me on 0422 424 144 or at billy@cogencyaustralia.com.au.

Yours Sincerely,



Billy Greenham
Associate Director
Cogency Australia

CC: Kathy Bradburn, Senior Administration Officer
Louisa Brown, Senior Planner

RED SEAL
Urban & Regional Planning

8243

PLANNING ASSESSMENT

Development Application pursuant to Section 57

***Land Use Planning and Approvals Act 1993* for a**

***Agrisolar* (Solar Farm) at Weasel Plains, Bothwell**

(PID: 2538314, 2538322, 5014022)

Council Ref: DA-2024-55



For: Central Highlands Council

TRENT J. HENDERSON
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This Planning Report has been prepared by:

Trent Henderson, a Registered Planner of the Planning Institute of Australia (RPIA) and an Associate Member of Australian ICOMOS. Mr Henderson holds a Bachelor of Arts (Honours) (University of Tasmania), Graduate Certificate of Urban Design (Deakin University), Master of Environmental Planning (University of Tasmania), and Master of Cultural Heritage & Museum Studies (Deakin University) and has nearly twenty years' experience working within the Tasmanian Planning System in community, local government, and private sector roles particularly within rural communities. Mr Henderson also holds qualification and experience in Business Sustainability Management (Institute for Sustainable Leadership, University of Cambridge), On-site implementation of conservation earthworks (Cert L2 QLD TAFE), Risk-based Land Use Planning (Emergency Management Australia), & Rural Operations.

Paul Verne has a Diploma in Civil Engineering & Advanced Diploma in Project Management, plus over 25 years' experience in the construction industry, with 20 years assessing the traffic implications of developments, including residential dwellings, multiple units & lot subdivisions, and commercial projects. As Development Engineer, or Roads & Transport Officer, Paul's roles within local government were to assess engineering plans; provide technical advice; inspect and conduct safety audits on all new and existing council assets and proposed developments.

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SUMMARY

Council Ref:	DA-2024-55
Report Purpose:	Review Development Application DA-2024-55 pursuant to Section 57 of *Land Use Planning & Approvals Act 1993*
Planning Authority:	Central Highlands Council
Applicant:	*Weasel Solar Farm Pty Ltd*
Property Owner[s]:	Dungrove Land Company Pty LTD, Cluny Pty Ltd, Scott Reardon
Sec.52 LUPAA:	Crown Land Services
Project:	Weasel Solar Farm
Location:	"*The Weasel*" 3415 Highland Lakes Road, Bothwell, "*Weasel Plains"* 3236 Highlands Lakes Road, Bothwell, and "*Rockford"* 3759 Highlands Lakes Road, Bothwell.
Property ID:	2538314, 2538322, 5014022
Certificate of Title:	Volume 140433 Folio 1, Volume 140581 Folio 1, Volume. 104298 Folio. 1
THR ID No.	NA - Dungrove THR #72 is an adjoining property
Planning Scheme:	Tasman Planning Scheme – Central Highlands
Zone:	Agriculture
Overlay Code:	Electricity Transmission infrastructure protection 4, Natural Assets Code 7, waterway and coastal protection area Bushfire-Prone Areas Code 13, Landslip Hazard Code 15
Development Code:	Parking & Sustainability Code, Road and Railway Assets
Local Provisions:	Central Highlands Local Provisions Schedule
Specific Area Plan:	Not Applicable
Use Class:	Utilities
Proposed Works:	Use and development of land for Utilities (large-scale solar farm & associated infrastructure, including BESS and transmission connection).
Purpose:	Solar farm for power generation.
Issue:	The proposal relies on the Performance Criteria of - Clause 21.3.1 Discretionary Use Class (Agriculture Zone), - Clause cl. 21.4.1 Building Height and also requires the assessment of the Performance Criteria within: - Clause C2.0 Parking and sustainable transport, - Clause C4.0 Electricity transmission infrastructure protection, - Clause 7.0 Natural Assets (Waterway & Coastal Protection Area), - Clause C13.0 Bushfire-prone areas,
Synopsis:	The location has been selected based on technical requirements, and whilst it will be seen from public spaces, the project is consistent with the applicable standards of the Tasmanian Planning Scheme – Central Highland, subject to conditions. It is recommended that DA-2024-55 be approved.

INTRODUCTION

Red Seal Urban & Regional Planning has been engaged by Central Highlands Council to assess the Development Application DA-2023-34 against the provisions of the Tasmanian Planning Scheme – Central Highlands, pursuant to the Land Use Planning and Approvals Act 1993.

1. PROJECT OVERVIEW

1.1 The Proposal

The project seeks approval from Central Highlands Council in its capacity as the Planning Authority to establish a solar energy farm (Agrisolar[1]) located across three parcels of private freehold land. The three parcels of land involve the following:

- "The Weasel" 3415 Highland Lakes Road, Bothwell (PID: 2538314, CT: 140433/1)
- "Weasel Plains" 3236 Highlands Lakes Road, Bothwell (PID: 2538322, CT: 140581/1)
- "Rockford" 3759 Highlands Lakes Road, Bothwell (PID: 5014022, CT: 104298/1)

The combination of these three parcels results in a total site area of 3841 hectares; however, according to the submitted documentation, the area allocated to agrisolar is approximately 430 hectares within the site.

The site is already used for agricultural activities minimising the need for clearance of native vegetation, resulting in minimal impact on environmental values. The topography avoids unnecessary earthworks that would otherwise disturb regrowth and promote weed spread with a greater impact downstream from sedimentation and erosion.

The location of the site adjacent to existing transmission infrastructure and access via Highland Lakes Road minimises costs and disruptions to surrounding landowners.

The site is currently used for livestock grazing, specifically sheep. The proposal intends to continue livestock grazing alongside the solar farm.

1.2 Development

The solar farm includes approximately 270 ha of solar arrays, a BESS[2], plus associated infrastructure:

- internal 33 kV transmission line,
- inverters & transformers (approximately 60 dimensioned as 6m long 2m width and 2.8m in height[3]),

and ancillary infrastructure:

- access tracks,
- fencing,

[1] **Agrisolar** involves integrating solar photovoltaic (PV) systems with agricultural activities, allowing for both energy generation and food or resource production on the same land. (Clean Energy Council, 2021, "Australian Guide to Agrisolar for Large-scale Solar: for proponents & farmers". Sourced https://assets.cleanenergycouncil.org.au/documents/resources/reports/agrisolar-guide/Australian-guide-to-agrisolar-for-large-scale-solar.pdf

[2] *Battery Energy Storage System: a system that stores the excess energy generated by solar panels for later use, rather than immediately sending it to the grid.*

[3] Plans & Elevation, Drawing: 10500480 ME-0001-01

- landscaping,
- transmission connection, and
- substation into the existing 220 kV transmission line that crosses the site.

Primarily access to the development area will be from Weasel Plains Road, although Highland Lakes Road will provide secondary/emergency access points.

The proposal also includes works upgrading the vehicle crossovers from the Highlands Lakes Road to provide access during construction of the project and during ongoing use of the land.

The maximum height of the solar panel trackers is 4.4m at the sharpest tilt, whilst being just over 1.8m when parallel to the ground[4]. Typically, solar modules are aluminium framed with glass face, and generally 240cm x 110cm x 3cm; although, subject to final selection in detailed design depending on the specific location and needs on the site.

An internal 33 kV transmission line is to be installed within the western extent of the site, connecting the northern solar area to the southern area (to the substation). The line length along the western boundary adjacent to Highland Lakes Road will be approximately 3km, running overhead. Minimal clearing will be required to accommodate the overhead transmission lines, typically a height of 18m.[5]

An operations and maintenance building will have a maximum height of 9.15m at the roof peak, a width of 20m and length of 40m.

1.3 Legislative Requirements

The application is not classified as a Level 2 Activity under the *Environmental Management and Pollution Control Act 1994* (EMPCA). The Proponent provided correspondence that EPA approval was not required for this project (dated 6 September 2024).

Unless specifically exempt, all works, development and use on land within Tasmania is subject to the *Land Use Planning and Approvals Act 1993* (the LUPAA). Administration of the Act for this site is the Tasmanian Planning Scheme – Central Highlands, which sets out several provisions through the category of use, zoning, codes, and specific area plans with standards that exempt, set automatic compliance under acceptable solution, or discretionary compliance subject to being consistent with an applicable performance criteria.

Pursuant to cl. 5.6.2 a provision is regarded as an applicable standard if:

(a) the proposed use or development will be on a site within:
i. a zone;
ii. an area to which a specific area plan relates; or
iii. an area to which a site-specific qualification applies; or
(b) the proposed use or development is a use or development to which a relevant code applies; and
(c) the standard deals with a matter that could affect, or could be affected by, the proposed use or development.

[4] Plans & Elevation, Drawing: 10500480 ME-0001-02
[5] 33kV DBL CCT Terminal Structure - Elevation, Drawing: 10500480 ME-0002-01, 10500480 ME-0002-02, & 10500480 ME-0002-03

Under the provisions of the Tasmanian Planning Scheme – Central Highlands the applicable zones are:

- Agriculture,
- Utilities.

Matters that are applicable to either a particular type of use or development that may apply to land in one or more zones or alternatively affect land that is not appropriately described by zone boundaries are addressed by Codes within the Scheme. The following codes are applicable to the assessment of this development application:

- Parking and Sustainable Transport Code C2.0,
- Road and Railway Assets Code C3.0,
- Electricity Transmission Infrastructure Protection Code C4.0,
- Natural Assets Code C7.0 (waterway & coastal protection area),
- Bushfire-Prone Areas Code C13.0.

However, the extent to which these codes are applicable varies due to the specific standards within each code that will be examined in detail within this report.

Pursuant to cl. 5.5.3 of the Scheme, where there is an inconsistency between a provision in a code and a provision in a zone, the code provision prevails. Additionally, in accordance with cl. 5.5.4 of the Scheme:

> "*an inconsistency between a provision of a code and a provision of a zone does not exist if a code requires compliance with standards additional to those that apply within a zone*".

1.4 State & Local Government Policy

There are currently three state policies in place governing Tasmania's strategic policy direction, being:

- *State Policy on the Protection of Agricultural Land 2009,*
- *State Policy on Water Quality Management 1997, and*
- *State Coastal Policy 1996.*

In addition, the National Environmental Protection Measures (NEPMs) are developed under the *National Environment Protection Council (Tasmania) Act 1995* and outline objectives and protections for aspects of the environment. Section 12A of the *State Policies and Projects Act 1993* provides NEPMs with the status of a State Policy.

There is no Tasmanian Planning Policy (TPP) currently in effect.

The development proposal is within land covered by the *Southern Tasmania Regional Land Use Strategy 2010-2035* (STRLUS). The STRLUS guides land use, development, and infrastructure decisions, by setting out the strategy and policy basis to facilitate and manage change, growth, and development.

The local government strategic plan prepared under Section 66 of the *Local Government Act 1993*, applicable to this municipality, is the Central Highlands Strategic Plan 2015 – 2024, available from Council's website.

Pursuant to Section 34 of the *Land Use Planning and Approvals Act 1993* regard for the strategies within these policy documents was undertaken for the preparation of the Planning Scheme. Therefore, implementation of these policies is subsequently achieved

through the Scheme and the application Local Provisions Schedule (LPS) and the State Planning Provisions (SPP).

Whilst they may be referenced to provide context and interpretation of policy, these policy documents are not standalone enforcement or compliance documents.

1.5 Documentation Submitted for Assessment

The following documents form the basis of this assessment:

- Cover Letter Weasel Solar Farm Development Application dated 30 September 2024
- Weasel Solar Farm - Development Application Planning Report, Cogency Australia dated 30 September 2024
- Signed Board "Assessment Not Required" Letter, EPA Tasmania dated 6 September 2024
- Weasel Solar Farm – Council Consent to Lodge dated 24 September 2024
- Weasel Solar Farm – Signed Proponent Application Form dated 19 September 2024
- Appendix A – Weasel Solar Farm Certificate of Titles, including:
  - Certificate of Title Volume.140433 Folio 1, search date 22 August 2023.
  - Certificate of Title Volume 140583 Folio 1, search date 27 February 2024,
  - Certificate of Title Volume 104298 Folio 1, search date 16 September 2024.
- Appendix B – Design Plans, DNV & Cogency, includes:
  - Site Overview Plan, Study Area Plan, Design Layout Plan, Master Plan, Solar Farm Site General Arrangement: BESS Layout - Scale 1:1000 (A1),
  - Medium Voltage Power Station: Plan & Elevations - Scale as shown (A1),
  - Typical Elevations: Plans & Elevations – Scale as shown (A1),
  - 220kV Switchyard: Plan & Front Elevation – Scale as shown (A1),
  - AC-Coupled BESS Elevations: Front & Side Elevations – Scale as shown (A1),
  - BESS Security Fencing Elevations: Typical Detail – Scale as shown (A1),
  - Switch Room & Control Room: Plan View – Scale as shown (A1),
  - Operations & Maintenance Building: Elevations – Scale as shown (A1),
  - 33kV DBL CCT Terminal Structure: Elevations – NTS (A1),
  - 33kV DBL CCT Strain Structure: Elevations – NTS (A1),
  - 33kV DBL CCT Vert. Post Structure: Elevations – NTS (A1),
- Appendix C - Landscape and Visual Impact Assessment – Human Habitats dated 26 September 2024.
- Appendix C – Weasel Solar Farm, Bothwell – Photosimulations – Human Habitats dated October 2024
- Appendix D- Ecological and Natural Assets Code Assessment, Van Diemen Consulting, dated 19 September 2024
- Appendix E – Flood Impact Assessment, Pitt&Sherry, dated 25 September 2024
- Appendix F – Aboriginal Heritage Assessment Report, Cultural Heritage Management Australia, dated 26 August 2024
- Appendix G – Bushfire Impact Statement, Ground Proof Mapping Pty LTD dated 26 September 2024
- Appendix H – Traffic Impact Assessment, Pitt&Sherry dated 16 September 2024
- Appendix I – Agricultural Assessment, Pinion Advisory dated 19 September 2024
- Appendix J – Noise Impact Assessment, SLR Consulting Australia, dated 16 September 2024

- Appendix K – Glint and Glare Assessment, SLR Consulting, dated 19 September 2024
- Appendix L – Historic Heritage Assessment Report, Cultural Heritage Management Australia dated 15 October 2024
- Appendix M – Consultation Summary Report, cogency dated 23 September 2024
- Appendix N – Socioeconomic Impact Assessment, Urban Enterprise dated September 2024

A request for clarification was made by Council in accordance with Section 54 of the Land Use Planning & Approvals Act 1993, as such the following documents were submitted on the 4 June 2025:

- Response Letter by *Cogency*,
- Traffic Impact Assessment by *Pitt&Sherry,*
- Greater Detailed Master Plans and Site Analysis by *Cogency*,
- Internal Access Track Plans & Waterway Flood Plans by *Cogency*.

1.6 Certificate of Title involving works

Works associated with this project are contained by Certificate of Title:

- Volume: 140433 Folio: 1,
- Volume: 140581 Folio: 1, &
- Volume: 104298 Folio: 1.

There are no restrictive covenants on the Schedule of Easements associated with the Sealed Plan that restrict this proposal; however, it is noted that a Burdening Electrical Easement traverses the titles.

Pursuant to Section 52 of LUPA, the owners have been notified of the lodgement of the Application to the Planning Authority.

2. WEASEL PLAINS SOLAR FARM SITE ANALYSIS

2.1. The Site

The land is located approximately 9km north of Bothwell with very few non-involved residential dwellings within 5km of the Development Area. The site has direct access to Highland Lakes Road (State Route A5) adjacent to the western extent of the development. Additionally, the site is centrally located not only within Tasmania but also in driving distance from Hobart and Launceston and situated within the Central Highlands Renewable Energy Zone (REZ).

The Proponent's Planning Report notes that "while the Weasel Solar Farm project will be the most southern solar farm in Australia, summer daylight hours extend longer than in northern parts of the state and during peak usage hours nationally"[6].

The Development Areas are largely free of vegetation, with minimal presence of significant flora and fauna species. Large patches of vegetation within the wider site have been excluded from the Development Areas, ensuring that the Proposal will integrate with minimal impact into the existing environment.

The terrain is described as gently to moderately undulating. Higher elevations of the southern end of the site at Stone Jug Hill or Black Hill are at the 600m contour level, with Weasel Plains Creek around the 480m contour and falling to the east,

The topography is well-suited to support the Proposal, avoiding the need for major earthworks and being well screened from public view. The development site however has slope gradients typically in the range of between 2º and 15º, but increasing to over 20º in parts, predominately with a northerly aspect.

2.2. Cultural Heritage

2.2.1. Aboriginal Heritage

An Aboriginal Heritage Assessment Report was prepared by Stuart Huys & Rocky Sainty dated 26 August 2024.

As noted on Page 8 of the Report the site's field survey was:

> implemented over a period of 5 days (25.4.2024, 26.4.2024, 29.4.2024, 30.4.2024, 1.5.2024). The primary focus of the field survey assessment was the proposed potential overall development area for the Weasel Solar Farm project, which encompasses approximately 435ha. The field team walked a total of 68.45kms of survey transects across this area with the average width of the transects being 10m.

The study area was most likely situated within the territory of the *Pangerninghe* people (Big River Nation)[7].

No Aboriginal heritage sites or suspected Aboriginal heritage features were identified

[6] CO, Planning Report, page 38.

[7] Aboriginal Heritage Assessment Report, pages 19 to 25.

during the field survey assessment of the Weasel Solar Farm site[8]. However, based on the surrounding landscape, there is potential for campsites along Weasel Plains Creek to have been utilised on occasions "as such there is the potential for artefact deposits to be present"[9].

Feedback from Aboriginal Heritage Tasmania is outlined in figure 2.2a below.

AHT acknowledge the findings and recommendations of the assessment. For the purposes of the Aboriginal Heritage Act 1975, the report conforms to the assessment standards outlined in the Aboriginal Heritage Standards and Procedures.

All works should proceed in accordance with the recommendations made within the report.

It is noted that the consultants have recommended that the proposed development footprint should be amended to avoid two areas of potential archaeological sensitivity and if this is not feasible, that archaeological sub-surface testing should occur.

If sub-surface assessment does occur, it should comply with AHT's Aboriginal Heritage Standards and Procedures. All works should be carried out by a suitably qualified consulting archaeologist and Aboriginal Heritage Officer, in consultation with AHT. Any proposed sub-surface testing methodology should be reviewed by AHT prior to commencement.

Figure 2.2a - Aboriginal Heritage Tasmania's comments relating to the project.

2.2.2. Cultural Landscape Analysis

The site itself is not recognised within the Tasmanian Planning Scheme – Central Highlands LPS or within the *Historic Cultural Heritage Act 1995* for any specific heritage values associated with the site. The closest heritage site is the property "Dungrove" located to the west of the Weasel Solar Farm site, on the west side of Highland Lakes Road. The property is a permanent registration on the Tasmanian Heritage Register (THR ID Number 72) with the Statement of Significance as follows:

d) **The place is important in demonstrating the principal characteristics of a class of place in Tasmania's history.**

Dungrove is of historic heritage significance because of its ability to demonstrate the principal characteristics of a sandstone Federation Queen Anne domestic building. The early cottage has the ability to demonstrate the principal characteristics of an early sandstone house and the Shearing shed is able to demonstrate the growth and development of a nineteenth century rural building.

The works associated with the solar farm are nearly 2km from the Dungrove farmhouse.

A Historic Heritage Assessment Report was undertaken by Stuart Huys dated 15 October 2024. No cultural heritage features were discovered within the area of the site.

[8] *Ibid*, p.43.
[9] Ibid, p.44.

2.3. Natural Values

The dominate vegetation type mapped by TasVege on the State LIST Mapping indicates the land is covered in *Agricultural Land (FAG),* with the LIST identifying the area the area as ranging from imperfect to poor drainage.

The native vegetation communities that do occur through the site are identified by TasVege as:

- *Eucalyptus pauciflora* forest and woodland not on dolerite (DPO),
- Lowland grassland complex (GLC),
- *Bursaria - Acacia* woodland (NBA).

Other vegetation communities may be present but not within the footprint of the development site. It is also observed that the extent these areas are considered an intact vegetation community at this location is not indicated by the LIST. Regardless, these vegetation communities are not listed under Schedule 3 of the *Nature Conservation Act 2002*.

An Ecological & Natural Assets Code Assessment by Van Diemen Consulting, dated 19 September 2024, has been undertaken for the project. The Assessment details the quality of the vegetation communities[10]. It also identifies and assesses vegetation communities outside the development area but within the site.

Van Diemen Consulting cite[11] the vegetation communities observed and mapped in the Study Area are:

- *Eucalyptus tenuiramis* forest and woodland not on dolerite (TASVEG Code – DTO) - This vegetation community is listed on Schedule 3A of the *Nature Conservation Act 2002* as *Eucalyptus tenuiramis* forest and woodland on sediments;
- Eucalyptus pauciflora forest and woodland not on dolerite (TASVEG Code – DPO); and
- Lowland grassy sedgeland (TASVEG Code – GSL).

The Assessment notes that:

> "*Eucalyptus tenuiramis* forest and woodland not on dolerite is limited in the Study Area to a narrow north- south oriented corridor in the central region of the proposed Development. Other than for small-scale temporary surface disturbances such as cable trenching which can be rehabilitated, it is recommended that this vegetation community be avoided by the works".

As the land is zoned Agriculture, the Priority Vegetation overlay within the Natural Assets Code does not apply to this land; however, the Waterway & Coastal Protection Area Overlay does apply to the watercourses that traverse the site.

[10] Van Diemen Consulting, Ecological & Natural Assets Code Assessment, Page 24-36.
[11] Van Diemen Consulting, Ecological & Natural Assets Code Assessment, Page 83.

2.4. Agricultural Values

The design of the solar arrays will allow for the continued use of the land for grazing sheep underneath the panels, a practice known as 'agrisolar'. The agrisolar approach underscores the site's suitability by maintaining agricultural productivity alongside renewable energy generation.

The majority of the site is classified as having a Land Capability of Class 5, "being land that is unsuited to cropping and with slight to moderate limitations to pastoral use"[12]. This supports the dominate agricultural use of the site having been sheep grazing.

An agricultural assessment of the land has been undertaken by *Pinion Advisory*, which observed:

> The Weasel Plains property is and will continue to be used for grazing livestock, and based on the area of available land, if all irrigated land is available for grazing, type of vegetation present (dryland pasture or native grasslands), rainfall and land capability the current total annual carrying capacity of the property is approximately 15,475 DSE.
>
> Assuming a total Weasel Plains property carrying capacity of 15,475 DSE, this would allow for running approximately 5,525 ewe lamb breeding units (as per a 70 kg liveweight crossbred ewe with a 130% lambing rated at 2.8 DSE/unit).
>
> The actual number and class of livestock which could be run on The Weasel and Weasel Plain properties will vary depending on seasonal conditions, age, livestock performance expectations, market conditions and overall enterprise requirements.[13]

Due to the land capabilities and climatic conditions *Pinion Advisory* notes that site "is suitable for perennial horticulture including cherries, hazelnuts, grapes (sparkling or table wine) and olives"[14].

The Agricultural Assessment notes that "220 hectares of centre pivot irrigated land is available on the Weasel Plains property"; however, it also notes that this is for a severely restricted range of crops and more for additional fodder for livestock grazing. The centre pivot irrigated land is not located where the solar panels are proposed.

Confirmation was obtained from current farm management that only sheep are grazed on the site and from experience cattle are not appropriate for the location.

[12] *Land Capability Handbook, Guidelines for Classification of Agricultural Land in Tasmania*, 2nd edition, 1999.
[13] Pinion Advisory, Agricultural Assessment, page 19.
[14] *Ibid*.

3. PUBLIC CONSULTATION

3.1. Public Consultation Overview

In accordance with Section 57 of the Land Use Planning and Approvals Act 1993 the application was advertised from 11 June 2025 to 25 June 2025. A total of seven representations were received during the public notice period, one in support, and six from referral agencies providing recommendations or commentary on the project.

No representation was received in opposition to the proposal.

3.2. Referral Agencies

As the Development Application had potential interest with several organisations associated with the site or adjacent to the site, the following were notified as part of the public consultation period:

- Aboriginal Heritage Tasmania,
- Heritage Tasmania,
- Tasnetworks,
- Hydro Tasmania,
- Inland Fisheries Service,
- NRE Tasmania – Water Management Branch,
- NRE Tasmania (Property Services),
- Dept. State Growth,
- Sustainable Timber Tasmania,
- Tasmanian Irrigation,
- Conservation Assessments (CAS) team: Department of Natural Resources & Environment.

3.3. Representation in Support

The representation in support states:

I write to make a brief representation in support of DA 2025/14 for the Weasel Plains Solar Farm.

> "I believe this is a positive initiative on a suitable site, and will catalyse a positive renewables-led future for the Central Highlands and Tasmania more broadly. I think the use is consistent with the agricultural zone, particularly its agrisolar element which is highly compatible with and indeed complementary to sheep grazing on low-grade land, noting research demonstrating solar panels with ground clearance similar to that proposed can increase the productivity of grazing land and improve animal welfare. The proponent is to be commended for the sensitive design of the site avoiding areas of natural and landscape value and Aboriginal cultural heritage, and achieving a reasonable degree of screening and visual impact mitigation from Highland Lakes Road and residences.
>
> I am supportive of the proposed public benefits and the broader vision of industrial uses, including data centres and manufacturing, on the site. Behind-the-meter renewable industry is an exciting vision for Tasmania.
>
> Tasmania's opportunity for large scale solar has been under-appreciated and is now being realised, as is the value of battery storage. It is highly likely that Tasmania will need all the proposed solar, wind, and storage projects proposed to date, and more, to fully decarbonise our transport sector and retain and grow heavy industry in the state, while realising the potential of new frontiers. Grid-scale solar projects are especially valuable

at this juncture as they can be realised much faster than wind projects and pumped hydro, and this project benefits as well from access to existing and adequate transmission."

3.4. Representation in Opposition

No submissions were received in opposition to the development application.

3.5. Assessment of Representations

The submissions in their entirety are made available to the Planning Authority for review; however, the matters raised by the referral agencies are summarised as follows:

***Aboriginal Heritage*:**

Aboriginal Heritage Tasmania have provided the following comments:

- Aboriginal heritage assessment has been undertaken in accordance with AHT's Standards and Procedures,
- No heritage was identified, however, there were two areas of sensitivity mapped, and specific recommendations made for managing these areas. The Cogency report indicates that these management recommendations have been implemented (i.e. the areas avoided).
- the Aboriginal heritage assessment only covered the areas of land where proposed infrastructure was being sited (as at April/May 2024) – see map below. The bulk of "Weasel Plains" 3236 Highlands Lakes Road Bothwell (CT 140581/1) was not surveyed, and no part of "Rockford" 3759 Highlands Lakes Road Bothwell (CT 104298/1) was surveyed.
- There are three registered sites located within the "Rockford" property; however, they do appear to be outside the footprint for the proposed access road.
- In its current form, the Weasel Plains project does not require a permit under the Aboriginal Heritage Act 1975. But should there be any major changes to the development footprint outside the areas covered by the 2024 Aboriginal heritage assessment, then AHT would suggest that further investigation may be required to determine if there are any additional requirements.

Heritage Tasmania

Heritage Tasmania note that:

"Works are occurring outside the THR areas. We have no interest in this application".

Inland Fisheries Service (IFS)

The proposal presents no issues from IFS; however, there may be potential presence of golden galaxias, a threatened fish, which should be considered during the construction phase.

Tasmanian Irrigation

Tasmanian Irrigation provided the following comments:

> Please be advised that the following restrictions and exclusions apply to TI's main irrigation supply pipeline, which traverses the applicant's properties:
>
> 1. Prohibition of Permanent Structures: No permanent structures are to be constructed over the TI pipeline.

2. Pipeline Cover and Vehicle Loading: The TI pipeline must maintain a minimum cover of 700 mm. Any additional vehicle loading designed to traverse the pipeline must be reviewed and approved by TI. Road crossings will need to be re-engineered, if necessary, to ensure the pipeline can safely bear the proposed vehicle loads.
3. No additional excess fill to be placed over the TI pipeline without direct approvals from TI.
4. Pipeline Exposure: Any exposure of the TI pipeline must be conducted under the supervision of a TI representative.
5. Relocation or Redesign: Above-ground air valves associated with the TI pipeline must be confirmed onsite as part of the final design. Any relocation or redesign of these valves will be at the developer's expense.
6. Easement and Legislative Protection: TI assets are installed under the provisions of the Irrigation Clauses Act and may not always be covered by a registered easement

Department of State Growth

DSG have requested the following conditions be included in any permit (if issued):

1. The proposed access points Weasel Plains Road – Primary Access, Construction and Emergency Access A, Construction and Emergency Access B and Tertiary and Emergency Access C are to be widened to suit the swept path of the largest vehicle expected to access the site (indicated as 19.0m semi-trailer and B-double trucks) and in accordance with TSD-R05-v3 (truck access to rural properties 'type A'). At Weasel Plains Road – Primary Access, extend the existing longitudinal culvert to suit widening.
2. The proposed access points Weasel Plains Road – Primary Access, Construction and Emergency Access A, Construction and Emergency Access B, and Tertiary and Emergency Access C are to be upgraded and sealed from the edge of the State Road for a minimum of 30m.
3. The existing transverse culvert opposite Weasel Plains Road – Primary Access is to be lengthened by 2 metres and backfilled to resolve narrowing of the unsealed shoulder at the junction.
4. Install W5-22 Trucks entering or crossing sign with W8-17-1 NEXT 6km on Highland Lakes Road, 150 metres south of Access B, facing northbound traffic for the duration of the construction period.
5. Install W5-22 Trucks entering or crossing sign with W8-17-1 NEXT 6km on Highland Lakes Road, 150 metres north of Access A, facing southbound traffic for the duration of the construction period.
6. Reposition existing 'fingerboard' signage at Highland Lakes Road / Waddamana Road intersection. Signs to be relocated closer to fence line to prevent obstructing sight lines of vehicles exiting proposed Construction and Emergency Access A. Signs are to be erected at the same height as the existing signs and on the same number of posts (50mm NB posts with minimum footings of 450 x 650mm). New posts may be required as the existing posts are likely set directly into concrete footings and will need to be cut off at ground level and as such, will be too short to be reused.

Conservation Assessments (CAS) (NRE)

CAS has provided the following review on the natural values of the site:

Threatened Flora

The Ecological and Natural Assets Code Assessment for the proposal observed three species listed as threatened under the *Threatened Species Protection Act 1995* (TSPA) within the solar farm survey area. These include

- *Ranunculus pumilio var. pumilio* (ferny buttercup),
- *Acacia siculiformis* (dagger wattle) and
- *Scleranthus fasciculatus* (spreading knawel).

The information provided indicates that the proposal is not expected to have any impact on these three threatened flora species. CAS supports the avoidance of all locations inhabited by these species during construction and operation of the proposed solar farm.

Threatened Fauna

Masked Owl (*Tyto novaehollandiae subsp. castanops*) The Ecological and Natural Assets Code Assessment for the proposal confirmed that the proposal is located within the core habitat range for the Tasmanian masked owl, which is listed as endangered under the TSPA and vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA).

It is recommended that impacts to the five trees are avoided and that a 150 m buffer is established around each tree. Alternatively, if impacts to any of the trees cannot be avoided, further investigations should be undertaken prior to the final design phase of the project to determine whether any masked owl nests are present. If any tree is confirmed to contain a masked owl nest and is likely to be impacted by the development, CAS should be contacted for further advice. Where possible this should occur prior to final approval of the development.

Tasmanian devil (*Sarcophilus harrisii*) and Spotted-tailed Quoll (*Dasyurus maculatus*)

The solar farm site is within the habitat range for the Tasmanian devil and spotted-tailed quoll (both listed under the TSPA and the EPBCA). CAS supports the management recommendations in the report for devils and quolls, including pre-clearance surveys for dens prior to commencement of construction works, a 50 m buffer around confirmed and potential denning sites, and a 20 km/hr speed limit for all internal roads during night-time hours (one hour before sunset to one hour after sunrise).

Roadkill

Weasel Plains Road is proposed to be the primary access road for construction traffic to the Weasel Solar Farm site. Site hours are proposed to start at 6.00 am and finish at 6.00 pm. Weasel Plains Road is unsealed with a speed limit of 80 km/hr. According to the Traffic Impact Assessment, during construction of the solar farm vehicle movements are expected to peak between 6:00 am-7:00 am (entering site) and 6.00 pm-7.00 pm (exiting site) in line with the construction site hours. During these peak times there is the potential for up to approximately 50 vehicle movements to and from the solar farm site.

During the winter months the peak traffic hours for construction traffic on Weasel Plains Road will overlap with night-time hours. An increase of night-time traffic of more than 10% is considered significant regarding likely impacts on the Tasmanian devil (Sarcophilus harrisii). Given the low numbers of vehicle movements to and from the site currently (one or two per day on average), the predicted increase in night-time traffic on Weasel Plains Road may result in a significant increase in the risk of wildlife collisions with vehicles along this road, including for Tasmanian devils and spotted-tailed quolls. It is recommended that roadkill mitigation measures are implemented in accordance with the Tasmanian Devil Survey Guidelines and Management Advice for Development Proposals (The Devil Guidelines).

Threatened Native Vegetation Communities

The Ecological and Natural Assets Code Assessment for the proposal recorded one threatened native vegetation community within the survey area, being Eucalyptus tenuiramis forest and woodland not on dolerite (DTO) (classified in TASVEG 4 as Eucalyptus tenuiramis forest and woodland on sediments, but with the same meaning).

CAS supports the recommendation in the report to avoid impacts to the *Eucalyptus tenuiramis* forest and woodland not on dolerite threatened native vegetation community, as far as practicable.

Weeds and Diseases

Several plant species that are declared pests under the *Biosecurity Regulations 2022* have been recorded within the solar farm site, including blackberry (*Rubus anglocandicans),* Californian thistle *(Cirsium arvense),* Gorse *(Ulex europaeus*), and Californian thistle (*Cirsium arvense*).

Movements of vehicles, machinery and materials such as soil, sand and gravel increase the risk of spreading weeds or diseases on to and from the proposal site. Good hygiene practices should be put in place to minimise the risk of weeds and/or diseases being introduced to the development site.

These matters raised within the submissions will be addressed within the following report where applicable to the Tasmanian Planning Scheme – Central Highlands.

4. TASMANIAN PLANNING SCHEME – CENTRAL HIGHLANDS

Unless specifically exempt, all works, development and use on land within Tasmania is subject to the *Land Use Planning and Approvals Act 1993* (LUPAA). At the time of lodgement of this development application, administration of the Act for this site is the Tasmanian Planning Scheme – Central Highlands (the Scheme).

Pursuant to Part 5 – Operation of the Scheme, provisions within the Scheme set out applicable standards for use and development of a site through the category of use, zoning, codes, and specific area plans with standards that exempt, or set automatic compliance under the acceptable solution, or discretionary compliance subject to being consistent with the relevant performance criteria.

3.1 Exemptions or No Permit Required of the Scheme

3.1.1 Exempt

This application does not seek any exemptions under Part 4 – Exemptions of the Scheme.

3.1.2 No Permit Required

In accordance with the standards listed under Clause 6.6.1(a) a use may not require a permit to commence. However, pursuant to cl. 6.6.1 (b) the development relies on performance criteria, and therefore, is to be assessed in accordance with the requirements of cl. 6.8.1 of the Scheme.

3.2 Use Class Category – cl. 6.2

It is observed that the Scheme delineates between the terms “Use Class” and “Use”. The term “use” is defined in cl. 3.1 of the Scheme as “*in relation to land, includes the manner of utilising land but does not include the undertaking of development*”. That is the term use is more akin to the term ‘activity’.

Pursuant to cl. 6.2 the Scheme categorises use and development in to “Use Class”; therefore, a Use Class may have several different uses or activities that are categorised as a particular Use Class.

The current use of the site is livestock grazing, specifically sheep, therefore, the land is considered agricultural land, pursuant to Table 3.1 Planning Terms and Definitions of the Scheme. Livestock grazing is an agricultural use and listed under Table 6.2 Use Class as being classified Resource Development by the Scheme.

The Scheme does not specifically cite “Solar Farms” as a use or Use Class; however, pursuant to cl. 6.2.3, the Use Class of Utilities includes electricity generation.

Pursuant to cl. 6.2.5, the Utilities Use Class is not subservient to the Resource Development Use, and both are to occur on site.

3.3 General Provisions

The land associated with Highland Lakes Road is zoned Utilities, pursuant to cl 7.6.1 the "planning authority may at its discretion approve an application for access" having regard to the listed matters under (a), (b), and (c). Whilst the adjoining land is zoned Agriculture and different to Utilities, the solar farm is a Permitted Use Class under Use Table 26.2 of the Utilities Zone. As such, there is no necessity for the access to be assessed under the same zone provisions as the adjoining land, which is Agriculture.

3.4 Agricultural Zone – Part 21

The site is zoned Agriculture and therefore subject to the applicable standards listed under Part 21 of the Tasmanian Planning Scheme – Central Highlands, as follows:

3.4.1 Purpose of the Agricultural Zone – cl. 21.1

Pursuant to cl. 21.1 of the scheme purpose of the Agriculture Zone is:

21.1.1 - To provide for the use or development of land for agricultural use.
21.1.2 - To protect land for the use or development of agricultural use by minimising:
- *(a) conflict with or interference from non-agricultural uses;*
- *(b) non-agricultural use or development that precludes the return of the land to agricultural use; and*
- *(c) use of land for non-agricultural use in irrigation districts.*

21.1.3 - To provide for use or development that supports the use of the land for agricultural use.

Whilst a solar farm is classified as a Utilities Use Class by the Scheme, the project has been designed with consideration of agrisolar principles which seek to compliment the agricultural values of the land. This is to be achieved so that grazing can still occur between solar panels, providing shelter for sheep. However, the project "will involve the permanent loss of 8.22 hectares of class 5 land which is currently used for grazing purposes on The Weasel property", which equates to an "annual loss in carrying capacity of approximately 80 DSE.[15] As noted within the Agricultural Report;

> *A loss of 80 DSE equates to a reduction of 1.37% compared the current overall carrying of the Weasel property, which is a negligible reduction relative to the livestock productivity gains associated with the shelter provided by the solar array infrastructure and certainly offset by the diversified income stream generated by the WSF.[16]*

Therefore, the project diversifies the use of the land whilst maintaining the agricultural values of the site, which is consistent with the intent of the purpose statements of the agricultural zone.

3.5 Agriculture Zone Use Standard – cl. 21.3

Pursuant to the Agriculture Zone Use Table 21.2, Utilities is classified as a discretionary use; therefore, the application is subject Section 57 of LUPAA and must address the applicable standards listed under cl. 21.3.1 Discretionary Use of the Scheme.

[15] Pinion Advisory, page 24.
[16] *Ibid*.

3.5.1 Discretionary Use

The objective of cl. 21.3.1 is that uses listed as Discretionary:

(a) support agricultural use; and
(b) protect land for agricultural use by minimising the conversion of land to non-agricultural use.

The objective does not state that there is to be no conversion of agricultural land, simply that the extent of conversion is minimalised. Documentation submitted has indicated that the layout of the solar farm will facilitate the ability for sheep to graze under the solar panels, thereby presenting the case that the land converted to non-agricultural use is minimal.

3.5.2 Required Location for Operation – cl. 21.3.1

As the use class Utilities is discretionary the proposal relies on the Performance Criteria of cl. 21.3.1 P1 of the Scheme that states:

P1 - *A use listed as Discretionary, excluding Residential or Resource Development, must be required to locate on the site, for operational or security reasons or the need to contain or minimise impacts arising from the operation such as noise, dust, hours of operation or traffic movements, having regard to:*

(a) access to a specific naturally occurring resource on the site or on land in the vicinity of the site;
(b) access to infrastructure only available on the site or on land in the vicinity of the site;
(c) access to a product or material related to an agricultural use;
(d) service or support for an agricultural use on the site or on land in the vicinity of the site;
(e) the diversification or value adding of an agricultural use on the site or in the vicinity of the site; and
(f) provision of essential Emergency Services or Utilities.

The test of this standard is that the proposal must be located on the site for operational or security reasons. As indicated within the Socioeconomic Impact Assessment submitted, the site has been selected for the topographical benefits providing a northerly orientation located adjacent to both a major road and established infrastructure.

Whilst solar access is potentially available at any location, maximising the agrisolar potential consideration on the aspect of the site's topography, environmental values and current land use has occurred. As a result, minimum earthworks and vegetation clearance is required and the current agricultural use can occur whilst the solar farm has the ability to connect to the power grid and road infrastructure to service the site. Therefore, the proposal has had regard to the intent of the matters listed under sub-clause (a), (b), & (c) of the Standard.

The layout facilitates sheep grazing between the solar array layout with the potential for providing shelter[17]; therefore, not contradicting sub-clause (d).

The project maintains the current agricultural use whilst diversification or value adding to the land; therefore, consistent with sub-clause (e).

The proposal is for the provision of a utility consistent with sub-clause (f).

[17] CO, Planning Report, page 37.

Although the proposal is discretionary the development of a solar farm consistent with the principles of agrisolar is consistent with the intent of cl. 21.3.1 P1 of the Scheme.

3.5.3 Conversion of Agricultural Land – cl. 21.3.1 P2

The Scheme seeks to advance the objectives of the *State Policy on the Protection of Agricultural Land 2009* and avoid the loss of agricultural land to non-agricultural use, through cl. 21.3.1 P2 that states:

P2 - A use listed as Discretionary, excluding Residential, must minimise the conversion of agricultural land to non-agricultural use, having regard to:

- *(a) the area of land being converted to non-agricultural use;*
- *(b) whether the use precludes the land from being returned to an agricultural use;*
- *(c) whether the use confines or restrains existing or potential agricultural use on the site or adjoining sites.*

It is reiterated that the current agricultural use of the site for livestock grazing, specifically sheep, is to remain with the installation of the solar farm. As previously cited, the project reduces the non-agricultural use of the site by 1.37% compared with the current overall carrying of the Weasel property. Therefore, the proposal has minimal conversion of agricultural land to a non-agricultural use.

Having regard to the three listed matters of the standard, the proposal is has had regard to the sub-clause (a) and still facilitates the pasture growth through the site. The terrain requires minimal disturbance by excavation, as such does not preclude the land from being returned to a sole agricultural use at a later time, pursuant to sub-clause (b).

There is no suggestion that the use of the site for agrisolar would confine or restrain the surrounding land from agricultural use; therefore, consistent with sub-clause (c) of the Scheme.

3.5.4 Prime Agricultural Land – cl. 21.3.1 P3

The site does not involve any Prime Agricultural Land as defined by the Scheme; therefore, this standard is not applicable to the assessment of this proposal.

3.5.5 Residential Uses – cl. 21.3.2 P4

No new residential use is proposed by this Development Application; therefore, this standard is not applicable to the assessment of this proposal.

3.6 Agricultural Zone Development & Work Standards – cl. 21.4

3.6.1 Building Height – cl. 21.4.1

The internal transmission lines proposed parallel to the Highland Lake Road are supported by 'poles' with a maximum height of 18.5m (Figure 3.6a), which exceeds the 12m building height requirement of the Acceptable Solution cl. 21.4.1 A1 of the Scheme. All other structures are under the Acceptable Solution building height requirement.

Therefore, the project relies on the provisions within the Performance Criteria cl. 21.4.1 P1 of the Scheme, that states:

P1 *- Building height must be necessary for the operation of the use and not cause an unreasonable impact on adjoining properties, having regard to:*

(a) the proposed height of the building;
(b) the topography of the site;
(c) the bulk and form of the building;
(d) separation from existing use on adjoining properties;
(e) the nature of the existing uses on adjoining properties; and
(f) any buffers created by natural or other features.

Confirmation that the internal powerlines are needed to cross the site overhead has been provided after a Section 54 *Land Use Planning & Approvals Act 1993* request. Justification for the height is that the earthworks required to put all internal transmission lines underground are not feasible for the terrain, not only financially but also because of the environmental impact that would result from the extensive trenching. This would potentially have greater sedimentation impact on waterways and on fauna burrows within the area, plus on any cultural heritage. The height of the transmission lines is therefore necessary based on the agricultural, environmental and cultural values that are potentially attributed to the site, having regard to the listed matters appropriate for the location and the project.



Figure 3.6a – Photomontage showing the transmission poles traversing the site and the solar panels in the background. It is observed that from Highland Lakes Road, along this frontage high voltage transmission lines cross the frontage of the site which can be faintly seen within the skyline of the image. (Source: Photosimulations – Human Habitats, Page 11).

It is observed that this provision does not govern or prohibit visual impacts, but that the structures will not cause unreasonable impact on the adjoining properties. Given that the structures are necessary for the operation and are within the vicinity – although outside the easements – of the existing high power transmission situated within the Central Highlands Renewable Energy Zone, the proposal has had regard to the matters listed under Performance Criteria cl. 21.4.1 P1 and complies with the Scheme.

3.6.2 Setbacks – cl. 21.4.2

The acceptable solution of cl. 21.4.2 A1 requires 5m setback.

No buildings, structures or solar panels are located within 5m of the boundary, which has been confirmed within greater detailed Master Plans submitted on the 4 June 2025 by the applicant.

The proposal complies with acceptable solution of cl. 21.4.2 A1 of the Scheme.

As the proposal is not for a sensitive use the distances within acceptable solution of cl. 21.4.2 A2 are not relevant for this assessment.

3.7 Agricultural Zone Subdivision Standards – cl. 21.5

The scope of this Development Application does not involve subdivision; therefore, this standard is not applicable to the assessment of this proposal.

5. TASMANIAN PLANNING SCHEME: CODE REQUIREMENTS

For matters that transcend specific zones the Planning Scheme addresses these via a Code, either in the form of a development code such as car parking or a mapped overlay for significant native vegetation. Whilst there may be several codes that apply to the property, the extent to which they apply to a specific development application will vary according to the final design and the intensity or type of use.

4.1 Signs Code - C1.0

No signs have been proposed within the documentation submitted for this application; therefore, pursuant to cl. C1.2 of the Scheme, this Code is not applicable to the assessment of this application.

4.2 Parking & Sustainable Transport Code - C2.0

A Traffic Impact Assessment has been conducted by Pitt&Sherry, dated 16 September 2024, which was updated on the 21 May 2025 after a Sec.54 request under LUPAA.

4.2.1 Application of Parking & Sustainable Code – cl. C2.2

Unless stated otherwise in a particular purpose zone, or sub-clause C2.2.2, C2.2.3 or C2.2.4, this code applies to all use and development. In accordance with sub-clause C2.2.2, C2.2.3 the following clauses do not apply to the assessment of this project: cl. C2.5.3 and cl. C2.5.4 of the Scheme.

4.2.2 Exempt Parking & Sustainable Standards – cl. C2.4

There are no exemptions to this code; however, it is observed that on a practical level some of the matters raised within the standards of this Code do not apply to every project or site.

4.2.3 Parking & Sustainable Use Standards – cl. C2.5

4.2.3.1 Car parking numbers – cl. C2.5.1

The Acceptable Solution of cl. C2.5.1 A1 requires the number of on-site car parking spaces must be no less than the number specified in Table C2.1, which states that there is no specified parking number required for Utilities Use Class.

4.2.3.2 Car Parking Numbers in Residential Zone - cl. C2.5.5

There is no residential zone in the area; therefore, this standard is not applicable to the determination of this proposal.

4.2.4 Development Standards for Parking – cl. C2.6

Documentation provided to Council on the 4 June 2025, being Design Plans by Cogency, and a Traffic Impact Assessment by Pitt&Sherry, demonstrate that the internal vehicle layout and access can be achieved that facilitates the manoeuvring needs of vehicles during construction and ongoing maintenance of the site whilst minimising and managing stormwater runoff appropriately.

As cited within the respondent submissions during the public notice period, and within the Agricultural Assessment, the Ecological and Natural Assets Code Assessment, and the Flood Impact Assessment, there is a risk of runoff from the site. It is therefore recommended that a condition of any Planning Permit include the requirement of a final surveyed internal road layout with the inclusion of erosion, and stormwater volume and quality controls to manage all stormwater runoff from the internal access roads along with any other impervious surfaces.

4.3 Road & Railway Assets Code - C3.0

The principal access to the site is from Weasel Plains Road, with vehicle crossovers off Highland Lakes Road to be upgraded and used for secondary purposes.

A Traffic Impact Assessment detailing the conceptual designs for each access has been provided by Pitt&Sherry on the 4 June 2025.

The Department of State Growth as the road authority has provided feedback that was detailed earlier within this Report under Public Consultation. It is recommended that this feedback forms the base of a condition of any Planning Permit.

4.4 Electricity Transmission Infrastructure Protection Code - C4.0

Pursuant to Clause C4.2 this Clause is not applicable to this Application. Although an electricity transmission corridor crosses the frontage of the site, the mapping of this corridor is outdated with the removal of one of the lines at this point. As noted within the Planning Report Submitted:

> *"No solar array or associated infrastructure (security fencing) is proposed within the easement of the 220kV transmission line (equating to the Inner zone). The Proposal does have a length of internal 33kV transmission adjacent to the Inner zone, with its own easement sharing the Inner zone."*

Additionally,

> *the Proposal does not include any major development within the overlay that could create conflict with the existing transmission infrastructure and therefore is appropriate. The Weasel Solar Farm requires TasNetworks approval through their connection enquiry approval process, and this DA will be referred to TasNetworks for comment. The project team have consulted with TasNetworks closely over the past year.*

Pursuant to cl. C4.6.1 A1 no works or development is to occur within the (a) inner protection area or (b) registered electricity easement; therefore, the proposal complies with the applicable standards of the Electricity Transmission Infrastructure Protection Code.

4.5 Telecommunications Code - C5.0

Pursuant to Clause C5.2 this Clause is not applicable to this Application.

4.6 Local Historic Heritage Code - C6.0

Pursuant to Clause C6.2 this Code does not apply to this site. Although this code is not applicable a Tasmanian Heritage registered site *Dungrove* THR NO. 72 is located on an adjoining property to Weasel Solar Farm. A Historic Heritage Report (Appendix L) has been undertaken to assess any risk to local heritage.

Heritage Tasmania should be referred to during the Public Notice Period of the Application as an organisation that may have an interest

4.7 Natural Assets Code - C7.0

The code has been addressed through Appendix E – Flood Impact Assessment conducted by Pitt&Sherry. Additionally, An Ecological and Natural Assets Code Assessment (Appendix D) has been conducted by Van Diemen Consulting addressing this code.

As detailed within the submissions received during the public consultations, there is significant environmental values associated with the site and its surrounds.

4.7.1 Application of Natural Assets Code – cl. C7.2

Pursuant to cl. 7.2.1(a), this code is applicable to this proposal as the property has land that is mapped Waterway & Coastal Protection Area within the development site.

Pursuant to cl. C7.2.1(c), the priority vegetation area does not apply to land zoned Agriculture. As a result, matters relating to vegetation removal are not governed by this Code unless the vegetation is within the buffer zone of the Waterway & Coastal Protection Area.

A request for clarification under Section 54 of the *Land Use Planning & Approvals Act 1993*, has confirmed that solar panels and associated infrastructure works including access roads will be kept out of the Waterway & Coastal Protection Area. Some works will occur where the access route crosses a waterway.

The fact that the priority vegetation area does not apply to the site does not mean that the works are exempt from any approvals. As highlighted by the submission from *Conservation Assessments (CAS) team: Department of Natural Resources & Environment*, there is vegetation and potential habitat for significant fauna within the broader site. These are not governed by the provisions of the Planning Scheme; however, it is recommended that an advisory clause is included on any Planning Permit highlighting any obligations the property owner and developer may have under other legislation, such as the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA), or the State *Threatened Species Protection Act 1995*.

It is reiterated that a condition on minimising or preventing sedimentation of waterways is recommended to show an appropriate erosion and stormwater control plan for the

site with appropriate programs in place to maintain current if not reduced sediment runoff from the site.

Additionally, it is advised that weed hygiene measures be undertaken for vehicles entering and leaving the site. A condition is to be included that requires plans to be submitted to Council prior to any works occurring on site.

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4.8 Scenic Protection Code - C8.0

Pursuant to Clause C8.2 this Code is not applicable to this Application.

4.9 Attenuation Code - C9.0

Pursuant to the matters listed under Clause C9.2, this Code is not considered to be applicable to this proposal. A Noise Impact Assessment (Appendix J) has been conducted by *SLR Consulting Australia* addressing any concerns regarding noise attenuation impact.

4.10 Coastal Erosion Hazard Code - C10.0

Pursuant to Clause C10.2 this Code is not applicable to this Application.

4.11 Coastal Inundation Hazard Code - C11.0

Pursuant to Clause C11.2 this Code is not applicable to this Application.

4.12 Flood-Prone Areas Hazard Code - C12.0

Pursuant to Clause C12.2, this Code is not applicable to this proposal. The code has been addressed through Appendix E – Flood Impact Assessment conducted by Pitt&Sherry.

4.13 Bushfire-Prone Areas Code - C13.0

Pursuant to Clause C13.2, this Code is applicable to this proposal. The use can be considered to be hazardous use due to the battery storage on the site.

A Bushfire Impact Statement (Appendix G) has been conducted by Ground Proof Mapping P/L. As part of this a Bushfire Emergency Management Strategy and Bushfire Mitigation plan have been developed to address this code and mitigate the risk of bushfire.

4.14 Potentially Contaminated Land Code - C14.0

Pursuant to Clause C14.2 this Code is not applicable to this application as it does not propose any disturbance to the soil.

4.15 Landslide Hazard Code - C15.0

Pursuant to Clause C15.2, this Code is applicable as there are patches of low landslip hazard risk areas within the development area.

There is no applicable report addressing this code. The argument made by the proponent is that no significant works are to occur within the low landslip hazard risk areas with only solar arrays and security fencing. As this is considered minor works this code would not be applicable to assessment.

4.16 Safeguarding of Airports Code - C16.0

Pursuant to Clause C15.2 this Code is not applicable to this development

5 CONCLUSION

The proposed involves three parcels of land as follows:

- “The Weasel” 3415 Highland Lakes Road, Bothwell (PID: 2538314, CT: 140433/1)
- “Weasel Plains” 3236 Highlands Lakes Road, Bothwell (PID: 2538322, CT: 140581/1)
- “Rockford” 3759 Highlands Lakes Road, Bothwell (PID: 5014022, CT: 104298/1)

The establishment of a solar farm based on agrisolar principles offers a diversification of land use whilst facilitating the current agricultural use of the site.

The location has been selected based on technical requirements, and whilst it will be seen from public spaces, the project is consistent with the applicable standards of the Tasmanian Planning Scheme – Central Highland, subject to conditions.

It is recommended that DA-2024-55 be approved.

CENTRAL HIGHLANDS COUNCIL COMMUNTY GRANTS PROGRAM APPLICATION FORM

Please ensure you have read and understand the Program Guidelines prior to completing this form. Please enclose your group/club's current financial statement.

1. APPLICATION & ORGANISATION DETAILS

Name of Project: Miena Seisiún 2026

Amount of Grant Requested: $2000

Estimated Total Project Cost:$10000

Applicant Organisation: Miena Seisiún – a sub group of Folk Federation of Tasmania Inc.

Contact Person's Name: Dr Rod Griffin

Contact Details Address: [redacted]

Phone: (Business hours)

Mobile [redacted]

Email:rodgriffin@iinet.net.au

Signature

Name

Dr. Anthony Roderick Griffin

Position in Organisation President

Date 3-7-25

What is the overall aim/purpose of the applying organisation?

Our aims are two-fold: to provide an opportunity for players of traditional Celtic music from across Tasmania to meet and play together, and to provide an enjoyable concert and dance experience for the regional community.

Miena Seisiun was formed in 2023 with the sole aim of conducting this annual event. For 2023/24 this was sponsored by J.Johns of the Great Lake Hotel and formed part of the Tasmanian Highlands Gathering program. . For 2025 Mr Johns decided to move the wider Scottish components of THG to a winter time-slot but, after wide consultation with our musical participants, we decided to stay with February and to expand our offering to the Tasmanian dance community via membership of the Folk Federation of Tasmania. Our participants play regularly with their own local session groups but State-wide opportunities such as this are rare.

What is the membership of the organisation?

Organisation of the event is managed by a Committee of 4 people – President R Griffin, VP J Hickey, Treasurer K MacLeod, Communications C Greer.

2. ELIGIBILITY *(see Community Grant Program Guidelines)*

Is the organisation:
X Representative of the interests of the Central Highlands Community
X Incorporated
X Not for Profit
□ Unincorporated
□ A Hall Committee

OR
□ An individual community member

Have you previously received funding from the Central Highlands Council? *(Please attached additional pages if required) YES*

If yes;
Name of Project:

Miena Seisiun 25

Date Grant received:

10/01/25

Amount of

Grant:$1500

3. PROJECT DETAILS

Project Start Date: Feb 27th 2026

Project Completion Date Mar 1st 2026

: Project Objectives:

a) To provide an opportunity for musicians across the State to play together and attend instrument workshops
b) To present a concert of traditional Irish music and a bush dance for the enjoyment of the local and regional community
c) To increase awareness of the history and beauty of the Central Highlands

4. COMMUNITY SUPPORT

What level of community support is there for this project?
See attached letters of support from the GLCC Committee; Session Players Tasmania (a group based in Deloraine with membership from throughout the State); and from the local Fire Service Brigade Chief who kindly permits us to use part of their premises for our workshop program. Although we no longer receive financial support from the Great Lakes Hotel they are happy to provide the space for our session on Feb 28th.

About half of the attendees at the previous concert and bush dance were local and regional people.

Does the project involve the community in the delivery of the project?
The Committee of the Great Lake Community Centre and their volunteers provide essential support for the event through hire of the physical facilities and catering services. PA support is provided by a local resident; two of the 4 Committee members live locally and one of the key musicians comes from Ouse.

How will the project benefit the community or provide a community resource?
Local businesses will benefit from expenditure by our participants and the regional community will have the opportunity to enjoy the public concert and bush dance. We are always keen to encourage younger people to enjoy our music and are happy to provide free tickets to the concert to any students from the Bothwell school who wish to attend.
An application to Cattle Hill Community Fund will include $ for new spotlights for the stage at the GLCC. These will improve delivery of the concert and bush dance and will subsequently be donated to their Committee as a permanent improvement to the facility.

5. COUNCIL SUPPORT

Are you requesting other Council support? E.g. parks, halls, telephones, fax, photocopying, computers, office accommodation, cleaning facilities, street closure.
If yes, please give details.

None required

Are you requesting participation by Councillors or Council Staff?
If yes, please give details.

We are not requesting participation but we would be delighted if any Councillors or staff are interested in attending. An invitation will be sent to the Mayor's office nearer the time.

If your application is successful, how do you plan to acknowledge Council's contribution?
As last year, we are more than happy to acknowledge the contribution by mentioning in publicity e.g. Highland Digest article. If we are provided with the Council logo we will display as appropriate. The MC of our concert will give a verbal acknowledgement.

6. FUTURE APPLICATIONS AND THE SUCCESS THIS PROJECT

Do you anticipate the organisation will apply for funding in future years?

Miena was chosen as a suitably central location for players from across Tasmania and is reliant on the drive of Committee members who live locally and is therefore a year-to-year proposition. There are no plans for MS to move elsewhere as long as total grant money + sales are sufficient to break even. . Options for expansion (and therefore increased ticketing income) are limited and we are very unlikely to generate enough of a $ surplus to exist without ongoing grant support. So, it is very likely that we would again seek Council funding.

Please note that a key benefit of your program is that you are very flexible with timing of submissions within the financial year….other sources of funding have limited windows of opportunity, with decisions sometimes too late for us to secure performers whom we have provisionally invited. So, although we will not need $ immediately, knowledge that the Council is supportive gives strength to other applications and hopefully makes it more likely that we are successful.

How will you monitor/evaluate the success of this project?
The event will be deemed a financial success if we break even via a combination of grant income and ticket sales. Year-on-year increase in participant numbers will be a good index of sustained interest. After the event we will seek feedback from workshop tutors and a sample of participants to identify improvements which might be implemented in future.

7. PROJECT BUDGET (see separate file)
Note: Amount from Council must not exceed half the project cost

Budget by Components comparing actuals for 2025 and estimate for 2026			
		Actual	Proposed
		MS 25	MS 26
GLCC venue logistics			
	Advertising	230	200
	Box office	150	300
	Photography	150	200
	sound tech	150	300
	Guided bird walk	0	200
	Admin expenses/insurance	0	300
Sub-total		680	**1500**
Performers			
	Concert performers	1400	1400
	Workshop tutors	1400	2000
	Dance band	500	300
	Airfare/transfers	0	500
Sub-total		3300	**4200**
Community Enhancement			
	Stage Lights GLCC	0	1000
	Lights installation	0	250
	3 extra mics/stands GLCC	0	250
	GLCC hire	389	500
Sub-total		389	**2000**
Total		4369	7700
Unsponsored(Met by FFT Miena subgroup through ticket sales)			
Portion of Performer expenses		0	1200
Contingences		0	500
Performer accommodation		0	600
Sub-total		0	**2300**
All items		**4369**	**10000**
SUMMARY			
TICKET SALES		2721.85	3000
TOTAL GRANTS SOUGHT		2000	7000

Letter of support for the Miena Seisiún program 2026

I am the Brigade chief of great lake fire brigade located at miena in Tasmania having completed 51 years of volunteer work achieving the highest honour of the Australian Fire service medal. I support the application of a grant for the music group managed by Rod Griffin. The group is community minded and not only supports the local fire brigade but also to the local community centre as a location for performance items.

Rod's group provides monetary support to the local community centre. We are a group of mature aged community people relying on any support possible from outside organisations.

The local great lake brigade is pleased to support Rod's application.

Regards Colin Triffitt AFSM

Brigade Chief

Great Lake Brigade.

7/06/25

0497 933 484
ABN: 37 211 497 276

GREAT LAKE COMMUNITY CENTRE INC
Makers' Shed all community members welcome
Home to Tasmania's largest Community Geothermal Greenhouse
greatlakecommcentreinc@gmail.com 55-57 Cider Gum Road, MIENA TAS 7030

To Whom It May Concern

We, the Committee Members of the Great Lake Community Centre, fully support the Miena Seisiún, in seeking funding for Cultural Activities within the Central Highlands. Having these events, encourages both locals and visitors to visit our beautiful region of Tasmania, and indeed Australia.

Our committee would welcome any groups that provide public concerts and various workshops for the community in, and around, our Community Centre, as in previous years.

We wish them good fortune in their continuing endeavour, and in gaining funding for this project.

Kind regards

John Cox

President, Great Lake Community Centre

Lilea Sward

Secretary, Great Lake Community Centre

Session Players Tasmania Inc.

Business Address: 91 Stirling Street,
Acton 7320, TAS
Email: contact@tassessions.com
Facebook: Session Players Tasmania
Web: www.tassessions.com
ABN: 94148084279
ComBank Account: 10605082
BSB: 067400

16 July 2025

Letter of Support from Session Players Tasmania (SPT)

Tasmania has many first, second and third-generation Irish and Scottish families and, as a result, we have a thriving community of musicians who regularly meet around the state to play traditional Celtic music together. A core aim of SPT is to inspire and nurture the next generation to ensure Celtic music continues to be played and enjoyed in Tasmania for years to come.

Now in its fourth year, The Miena Seisiun (formerly the Tasmanian Highlands Gathering) is becoming a popular and much-anticipated event for local residents and traditional musicians from all corners of Tasmania. The Miena Seisiun weekend includes instrument tutorials, interactive workshops, a concert, ceili dance, and many opportunities for musicians of all ages and abilities to connect and play together in friendly sessions.

This vibrant weekend of music and community aligns perfectly with the SPT mission. To support the organising committee, we regularly give advice and guidance, and we are always proud to see the enthusiasm and joy that this event brings to both musicians and audiences alike.

For the 2026 Miena Seisiun, SPT will host an event at The Great Lake Hotel, providing experienced musicians to lead and anchor the Saturday evening session, ensuring a high-quality, inclusive musical experience for everyone involved.

The Miena Seisiun has grown from its humble beginnings into a highly valued cultural weekend that showcases Tasmania's living Celtic heritage. Session Players Tasmania strongly encourages positive consideration for the Miena Seisiun's grant funding application, so this annual event can continue to flourish, inspire, and bring people together for many years to come.

Yours sincerely

Heath Richardson

President of Session Players Tasmania

Reptile Rescue incorporated

0499 116 690

June 2025

Dear General Managers, Mayor & Councillor's,

Reptile Rescue Inc, a Tasmanian charity established in 1999, provides statewide snake removal services through a network of trained, independent rangers.

To maintain this vital service, we rely on financial support from Tasmanian councils.

As a non-profit organisation, we face significant costs, including phone services, liability insurance and rangers' expenses.

Our voluntary phone services operate 24/7.

We're seeking donations to cover our running costs. Notably, our eighty volunteer rangers provide service at their own expense, with client payments going directly to them for fuel costs.

We're hoping that your council will consider supporting our statewide initiative.

For any enquires call 0447645953.

Warmest regards

J Jones

Jodie Jones
Public Officer
Reptile Rescue Inc

Bank Details: Reptile Rescue Inc. My State BSB: 807-009 ACC: 60041811

Email Remittance to jpj7468@bigpond.com

The Derwent Catchment Project

Catchment Repair Report



2024-2025

The Derwent Catchment Project



Tyenna River

The Derwent Catchment Project

Our Mission

- To empower and inspire the community to be involved in active land management across the catchment
- To facilitate community and industry innovation and investment in best-practice natural resource management

Vision

A thriving community and economy supported by a healthy natural environment

2024-2025 restoration programs

The Derwent Catchment Project delivers a range of restoration projects aimed at improving the health and resilience of the landscape. These include weed eradication and containment, riverbank and waterway restoration to reduce erosion and flood risk, and increasing community education and awareness.

The involvement of stakeholders is crucial to achieving a landscape-wide approach, ensuring coordination, support, and long-term impact across the catchment. By combining on-ground action, community involvement, and strong partnerships, the programs are helping to deliver lasting environmental outcomes.

Stakeholder involvement

The Derwent Catchment Project has strong relationships with stakeholders across the catchment, including:
the Department of State Growth, Central Highlands Council, Derwent Valley Council, Brighton Council, Hydro Tasmania, Sustainable Timber Tasmania, Private forestry, Parks and Wildlife Service, Entura, TasRail, local farmers and producers and the community.

These critical partners at differing levels allow the Derwent Catchment Project to facilitate conversations and work plans across tenures and deliver holistic solutions to large and complex land management issues.

The Derwent Catchment Project

derwentcatchment.org



Treated Gorse at Dee Lagoon

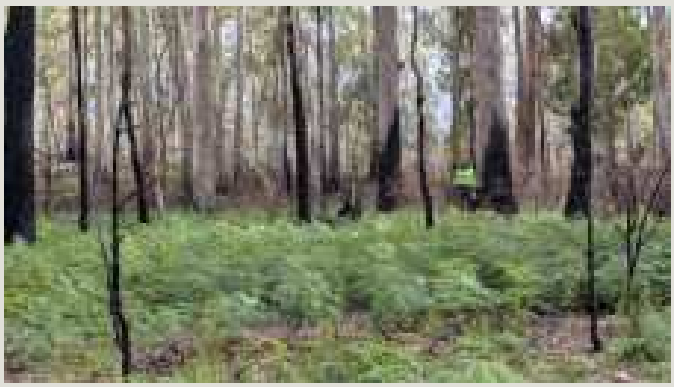
Strategic Weed Management

Effective weed control relies on a strategic, landscape-scale approach to maximise impact and resource efficiency. The Derwent Catchment Project coordinates regional weed management by aligning efforts across landholders, councils, community groups, and state agencies. This collaboration avoids duplication and ensures priority areas are targeted. Activities are guided by the Derwent Valley, Central Highlands, and Brighton Weed Management Plans, which align with key eradication zones across these municipalities.

Dee Lagoon weed management-

Supported by TasNetworks, Hydro, Sustainable Timbers Tasmania, and Central Highlands Council

As part of our ongoing maintenance efforts, the initial weed control sites were revisited and resprayed to ensure long-term suppression and to prevent regrowth from establishing. The team also assessed the recently burnt areas, identifying sections where weeds had begun to emerge and applying treatment where required. The other focus was on the continued removal of large invasive holly and broom plants, which were found interspersed within dense patches of native vegetation. Using a cut-and-paste method, they treated the stumps with herbicide to avoid off-target damage and ensure effective control, supporting the native vegetation.



Surveying fire scar at Dee Lagoon



Ragwort at Poatina

Poatina Ragwort

Supported by TasNetworks, and alignment with Hydro programs

The Derwent Catchment Project completed targeted ragwort control at Poatina in February, treating and monitoring all identified infestations across the site. In addition to this control work, a separate strategic survey was conducted to map ragwort distribution and refine our monitoring methodology.
During these activities, field teams also observed other contractors working in adjacent areas. The insights gained from both the control operations and the strategic survey will guide our ragwort management approach in future seasons

Karamu

Supported by Derwent Estuary Program, Department of State Growth, Property Services, Derwent Valley Council, Parks and Wildlife Services

In the 2024–2025 season, the Derwent Catchment Project undertook a comprehensive re-survey of the Derwent River corridor for monitoring and evaluation under the Karamu Weed Management Plan. This effort revealed new Karamu plants likely exposed when vegetation was stripped away during the late-2024 weather event prompting treatment across all management zones even though glyphosate applications failed to deliver the expected control. Meanwhile, riparian landowners have stepped in with complementary weed-management activities, improving access to infested areas and paving the way for more effective future treatments. Notably, a previously unrecorded population of Karamu was also discovered in Sorell Creek, offering valuable insights to refine our adaptive management strategy.



Karamu discovered after the flooding on the Derwent River

Brighton Weed Management Plan

Supported by Brighton Council

The Derwent Catchment Project has launched a targeted trial to control African boxthorn along the Brighton foreshore, carefully balancing cultural sensitivity with operational efficiency.
In areas of high Indigenous heritage value, all work is guided by Traditional heritage protocols: DCP staff conduct pre-treatment site walks, limit ground disturbance, and employ spot-herbicide and hand-removal only to ensure site preservation. Conversely, the project has deployed large-scale mechanical removal at non-Indigenous sites where cultural constraints do not apply—using excavators and mulchers to clear dense thickets rapidly and prepare the ground for follow-up treatments. This dual approach ensures that culturally significant areas are protected while allowing for efficient, landscape-scale weed management elsewhere, with early results informing a catchment-wide control protocol



African boxthorn treatment on Boyer Road

Boyer Road

Brighton Weed Management Plan – supported by Dept. State Growth, TasNetworks, TasRail, Brighton Council

In the 2024–2025 season, the Derwent Catchment Project undertook a comprehensive resurvey of the Derwent River corridor for monitoring and evaluation under the Karamu Weed Management Plan. This effort revealed new Karamu plants likely exposed when vegetation was stripped away during the late-2024 weather event prompting treatment across all management zones even though glyphosate applications failed to deliver the expected control. Meanwhile, riparian landowners have stepped in with complementary weed-management activities, improving access to infested areas and paving the way for more effective future treatments. Notably, a previously unrecorded population of Karamu was also discovered in Sorell Creek, offering valuable insights to refine our adaptive management strategy.



African boxthorn control at Old Beach



Lyell Hwy treatment

Lyell Highway - Entrance to the Valley

Derwent Valley Weed Management Plan
supported by State Growth, Private landholders, Derwent Valley Council

Woody weed control has been conducted north of Ouse township along the Lyell Highway to support neighbouring landholders. Infestations of fennel, broom and blackberry between Ouse and Gretna have been systematically treated, with blackberry eradication extended across all management zones to align with the Derwent Valley Biosecurity Plan's objective of removing alternative fruit-fly hosts. Significant plants near Granton were removed manually to mitigate spray-drift impacts on local wineries, and targeted spot-spraying between Granton and New Norfolk addressed smaller outbreaks, ensuring comprehensive coverage along the entire corridor.

Tarraleah broom

Central Highlands Weed Management Plan
Supported by Parks and Wildlife Services, TasNetworks, Hydro, Sustainable Timbers, Central Highlands Council

A review of the previous treatment identified a need to retreat only 10% of the plants, indicating a high level of success. Large plants above the oval had further cut-and-paste treatment to help reduce and remove the biological burden. Broom seedlings were treated around the site to mitigate any new infestations



Treatment of English broom at Tarraleah



English broom treatment at Miena



Treatment at Dee Lagoon

Invasive grasses

Brighton and Derwent Valley Weed Management Plans

Supported by State Growth and WAF, TasNetworks, State Government, Private landholders, Brighton and Derwent Valley Councils

The assessment of the Espartillo treatment program has indicated encouraging outcomes, with the primary infestation site now significantly more manageable following the successful control and removal of extensive African boxthorn growth that had previously hindered access and effective management. Weed Management Plans for Serrated tussock and Chilean Needle Grass at key locations in the Brighton region have been developed DCP.
At Granton, serrated tussock control has now reached its final treatment stage, with responsibility for ongoing management formally transitioned to the respective landholders. In support of broader landscape-scale outcomes, DCP has pledge support for the applications to the Weed Action Fund's Invasive Grasses program, targeting coordinated control initiatives across both northern and southern regions of Tasmania.



African feathergrass and Pampass grass at Boyer

Weed Management Plan: Boyer Mill

Derwent Valley Weed Management Plan

supported by TasNetworks and Boyer Paper Mill LTD

A targeted weed management plan has been developed following a comprehensive review of a significant African feathergrass and Pampas grass infestation at the Boyer Mill. Initial treatments conducted jointly by the landholder and the Derwent Catchment Project team focused on controlling plants beneath the transmission lines. The plan involves the creation of dedicated access tracks to enhance treatment efficiency and the evaluation of drone-based herbicide application. This site will be formally integrated into the broader African feathergrass Weed Management Plan for the Derwent Valley, ensuring coordinated control efforts across the catchment



Merriworth Field Serrated Tussock field day



Treated African Feather grass at Boyer



Treated Spanish heath on the non-operating line

TWWHA Buffer Zone - Rail Corridor

Derwent Valley Weed Management Plans
Supported by TasRail, Sustainable Timbers Tas, SFM/New Forests, Derwent Valley Councils and alignment with Dept. State Growth

Treatment was carried out on plants along the Maydena section, focusing on controlling foxglove and Spanish heath. These efforts align with the Derwent Valley Council's roadside management plan and the Sustainable Timbers Tasmania/Lenah Valley – New Forest (SFM) strategic weed plan, ensuring a coordinated approach to weed management in the area.

TWWHA Buffer Zone - Forestry service roads

derwent Valley Weed Management Plan
Supported by Sustainable Timbers Tas., SFM/New Forests, TasRail, Derwent Valley and alignment with Dept. State Growth

Treatment was carried out along Plenty Road, Styx Road, Florentine, and associated roads, focusing on controlling foxglove and Spanish heath. A January follow-up treatment for Californian thistle is scheduled to ensure continued management of this invasive species. To continue on with the treatment program the DCP ground went back along key sections early in the new year to treat Californian thistle



Treating Foxglove in the Florentine



Orange hawkweed at the Shannon

Mel Kelly and Fonz



Mel Kelly and her beloved sniffer dog Fonz were a remarkable team, known for their dedication, skill, and quiet determination in every task they took on together. Their bond was clear to all who met them, and their contributions left a lasting impact. It is with deep sadness that we acknowledge the loss of Mel and Fonz. They will be remembered with great respect and affection — a duo whose legacy will continue to inspire.

Orange Hawkweed

Central Highlands Weed Management Plans

Supported by TasNetworks, Sustatinable Timbers Tas. Hydro, Central Highlands Council, and alignment with Dept. State Growth and Hobart City Council.

A comprehensive survey was undertaken across several sites, including Miena, Poatina, Bronte Village, and The Shannon. For half of the known sites at Miena and the Shannon, there has been a large decrease in plant populations; however, the remaining half had only minor success with treatment. A detailed survey was carried out at Butlers Gorge, highlighting the success of treatment in the NW corner of the old village. New non-surveyed sites were found in the eastern section of the village, which is being overgrown with natural vegetation, making surveying and treatment difficult. The new infestation at Bronte Park Village had recent earthworks within, and investigations are ongoing to ensure hygiene risks have been mitigated. To enhance effectiveness, all plants will now be treated using a new $1m^2$ method, enabling better targeting of non-visible leaves; this approach aligns with NSW and Victoria management techniques.



Old Beach community planting day- Brighton Council

Community engagement

Community engagement is a core focus of the Derwent Catchment Project, recognising that sustainable environmental outcomes rely on informed and active local participation. Through stalls at community events, river and educational workshops, and hands-on planting days, the community outreach program builds awareness, shares practical skills, and fosters a strong sense of stewardship. These activities not only connect people to their local environment but also empower them to take part in its care and restoration.

Adopt-A-Shore - education program

Supported by TasNetworks and Hydro

The Derwent Catchment Project's Adopt-A-Shore program is a hands-on community engagement initiative that empowers local volunteers to care for their local environment. Through this program, participants learn practical skills in weed identification and management, native plant recognition, and effective planting techniques. By building local knowledge and fostering stewardship, Adopt-A-Shore helps strengthen community involvement in catchment restoration and supports long-term environmental outcomes.



Willow control on the lachlan River

River Restoration

The Derwent Catchment Project is implementing a range of river restoration initiatives designed to enhance the resilience and health of priority waterways throughout the region. With support from Federal Grant funding through the Preparing Australian Communities and Disaster Ready Funding programs, DCP is leading projects including the Lachlan River Recovery, Sorell Creek and Glen Dhu Rivulet Recovery, Clyde River Recovery, and Tyenna River Recovery. The Tyenna project has a strong community involvement, particularly through the efforts of the Volunteer Willow Warriors. Recent flood events have highlighted the value of this work, with rivers undergoing restoration showing improved performance and less damage compared to untreated systems.



September 2024 flooding Tyenna River

Sorell Creek and Glen Dhu Rivulet Recovery

Disaster Ready Funding- Australian Federal Government

Supported by Derwent Valley Council
TasNetworks,

Work has continued along the Glen Dhu Rivulet with the final stages of willow control being carried out in the lower reaches. We have been working with Derwent Valley Council to come up with an engineering solution for sections of the Glen Dhu Road that often become flooded. Modelling has shown that this will continue to increase hence, an adaptive approach is being taken to use the road as a mechanism to channel water back into the Rivulet whilst protecting infrastructure to ensure community members are only blocked off for the high water period and not for the time it takes to repair the road.
The team have been busy engaging with landholders along the Sorell Creek to explain the program and how they can be involved. The crew have also been busy starting willow treatment working their way down from Molesworth Primary School. The work in the lower sections will be challenging due to poor access in some areas and steep cliffs however, there access points which will allow the crew to navigate their way in. Over 90% of landholders have been spoken to with 75% signed agreements.







Willow treatment on the Sorell Creek and Glen Dhu Rivulet







Restoration works on the Lachlan River

Lachlan River Recovery

Central Highlands Weed Management Plans

Supported by Derwent Valley Council

A comprehensive survey was undertaken across several sites, including Miena, Poatina, Bronte Village, and The Shannon. For half of the known sites at Miena and the Shannon, there has been a large decrease in plant populations; however, the remaining half had only minor success with treatment. A detailed survey was carried out at Butlers Gorge, highlighting the success of treatment in the NW corner of the old village. New non-surveyed sites were found in the eastern section of the village, which is being overgrown with natural vegetation, making surveying and treatment difficult. The new infestation at Bronte Park Village had recent earthworks within, and investigations are ongoing to ensure hygiene risks have been mitigated. To enhance effectiveness, all plants will now be treated using a new 1m² method, enabling better targeting of non-visible leaves; this approach aligns with NSW and Victoria management techniques.



Willow Warriors on the Tyenna River

Tyenna River Recovery and the Willow Warriors

Supported by Inland Fisheries, TasNetworks, SFM/New Forests, private landholders and aligned with TasRail infrastructure management

Multiple Willow Warrior working bees with a dedicated volunteer group focused on difficult willows. Follow-up servicing by our lead volunteer, Vicky, in the upper reaches has ensured that all willows have been mapped and work requirements created. Other working bees focused on helping landholders who adopted a no-herbicide approach to willow management, which requires significantly more physical effort. Discussions have been held with Westerway residents regarding the removal of the large willows upstream of the school, which have blown down during recent weather events.

Maydena Angler Access - Tyenna River

Supported by Inland Fisheries and SFM/New Forests,

Conversations are continuing with SFM/Lenah Estates and Inland Fisheries Service about the angler access route and rehabilitation along the Tyenna at Maydena. To date over 1500 plants have been planted along the riparian zone with further plantings being put on hold until favorable rains have come. Future work at this site by the Willow Warriors includes treating and removing pine samplings up to the new 40 meter buffer. DCP ground crew will also continue to treat Californian thistle and foxglove in the area next year

Log Jam removal - Tyenna River

Supported by TasRail

TasRail funded the removal of a large log jam on the Tyenna near Mt Field National Park. Having the support of TasRail to remove this log jam not only reduces the likelihood of willow being caught up and growing in the centre of the river, but it also helps reduce localised flooding in the area. This work has engaged the interest of other landholders downstream who have similar issues with other infrastructure, highlighting the importance of taking the willow biomass out of the system.







Seed collecting; community events; and expansion of the nursery at Hamilton

Nursery expansion

Supported by Brighton, Derwent Valley, and Central Highlands Council

The Derwent Catchment Project is expanding its nursery at Hamilton, with support from Brighton, Derwent Valley, and Central Highlands Councils. This will help increase the supply of locally grown native plants for restoration and community projects.

The DCP crew has been out with Karen learning how to identify good seed sources and collecting seed for the nursery. Locally collected seed ensures that the plants grown are well adapted to local conditions and have a higher survival level.

Karen and the team have been attending a wide range of community events. These events provide an opportunity to sell plants and engage with the community about natural resource management activities happening the catchment.

Strategic surveying and site-specific mapping

Supported by TasNetworks, Sustainable Timbers tas.Hydro

To ensure TasNetworks had a detailed understanding of where weeds were present and where they were not, the DCP carried out remote survey work along easements. These surveys enabled the DCP to assess the weed burden and report back on any other concerns that were noted. The data collected from these surveys, along with other sources, allowed the DCP to create detailed maps for sites with high-priority weeds. These maps served as quick reference guides for TasNetworks staff and contractors, helping to ensure higher levels of hygiene and care were implemented.

Strategic Surveying - Poatina Ragwort

Supported by TasNetworks alignment with Hydro

Extended field surveys for ragwort were carried out at Poatina, building on the success of previous treatment programs in the area. These surveys were informed by new site reports from vegetation management teams and expanded to ensure alignment with Hydro Tasmania's broader ragwort control efforts. The coordinated approach has strengthened regional weed management and improved the ability to respond effectively to emerging infestations.



Ragwort survey and treatment

Strategic Surveying - Gordan region Spanish heath

Supported by TasNetworks

Across four days in May 2025 DCP conducted a resurvey of the TasNetworks transmission line infrastructure accessed via Gordan River Road, Mueller Road, Styx Road, and Jaques Road. The primary aim was to identify and record the presence of Spanish Heath (Erica lusitanica) while noting other declared weeds when observed. The survey began at Tower 1 and concluded at Tower 163. Towers 164 – 169 were unable to be accessed due to topographic barriers and a lack of road connectivity from the east

Strategic Surveying - Butlers Gorge Orange hawkweed

Supported by TasNetworks, Sustainable Timbers Tas, Hydro

The Orange hawkweed survey was extended further east along the power line easement to support and align with work already being done by Sustainable Timbers Tasmania and Hydro Tasmania. During this extended survey, new sites were found and will now be included in future weed control plans for the area. This helps make sure efforts across the region are better coordinated and more effective.



Foxglove treatment Florentine Valley

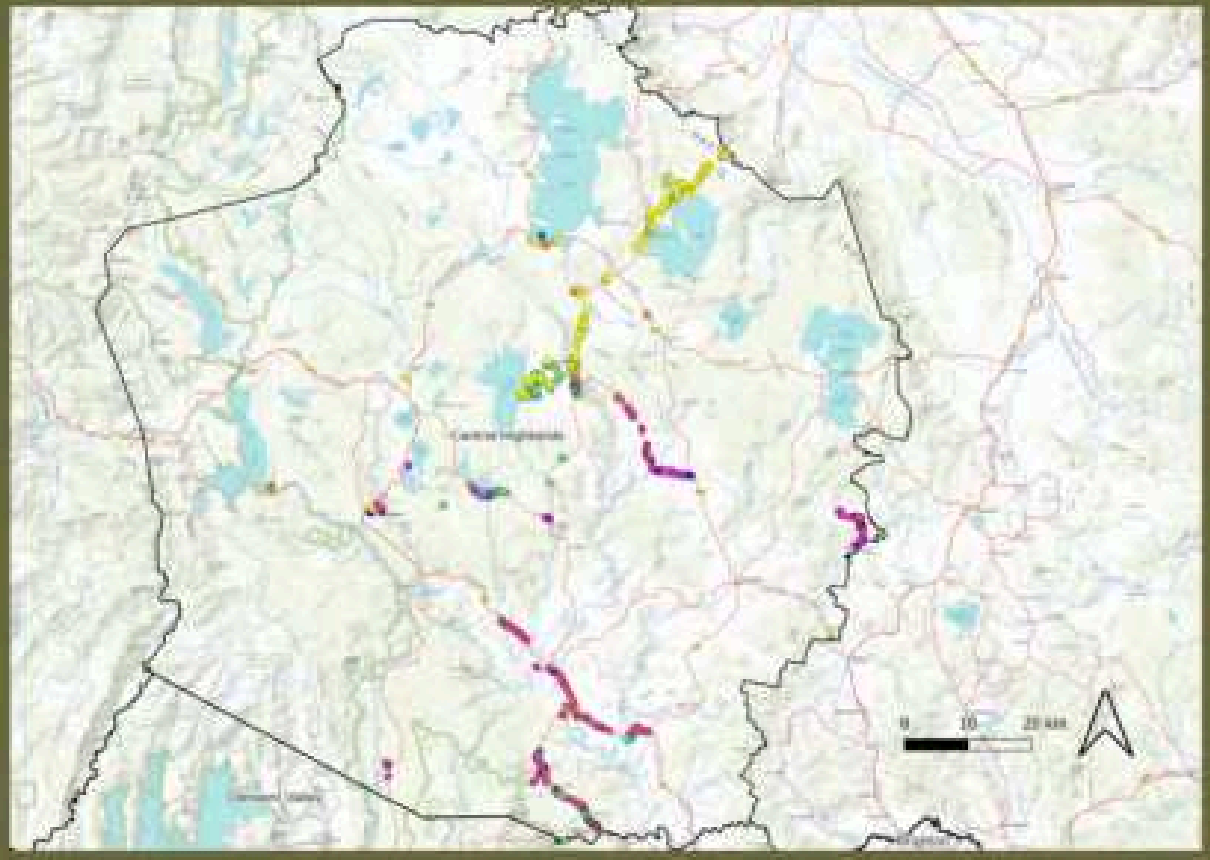
2025-2026 season

Catchment meeting

Stakeholder meeting in August to discuss the new season

WAFs

The Derwent Catchment Project, with support from industry stakeholders, has provided assistance to the lead applicant, Enviro-Dynamics, in the preparation and submission of applications for Projects 4, 5, and 6.



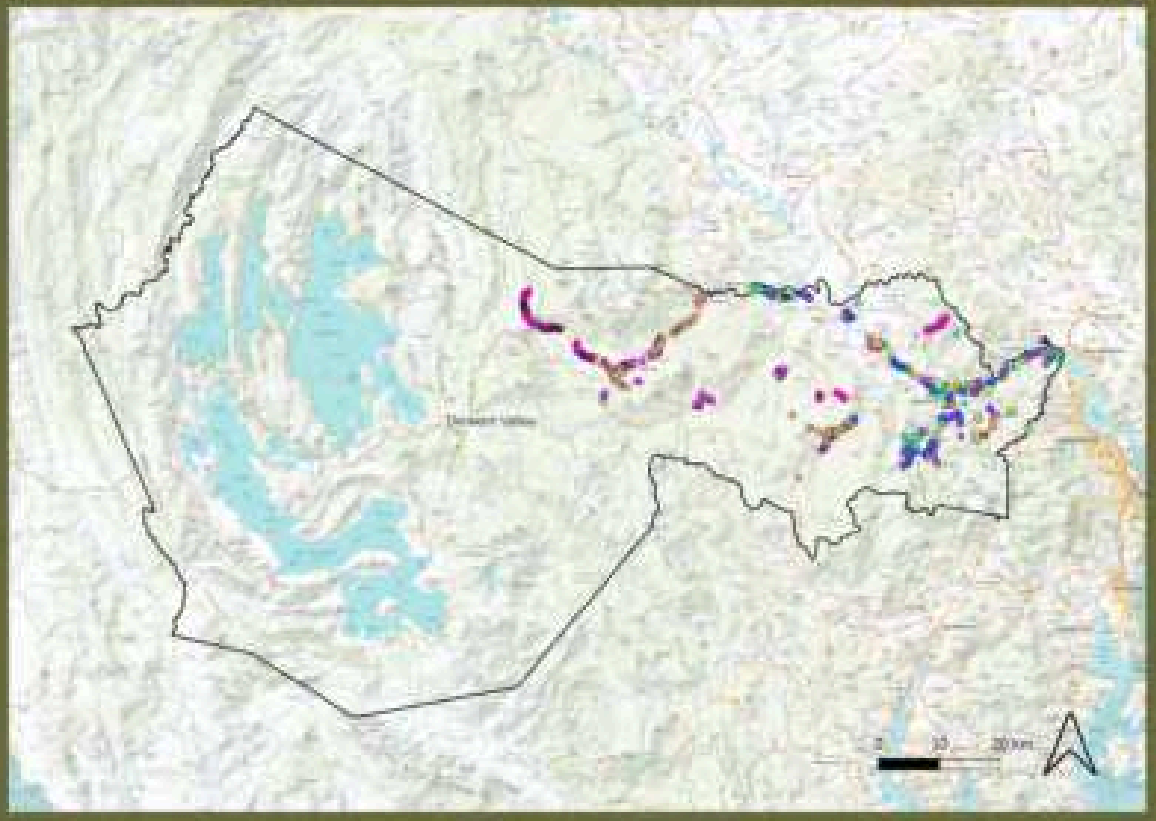
Central Highlands weeds treated 2024-2025

Treated weeds
- African Boxthorn
- Amsinckia
- Asparagus Fern
- Blackberry
- Californian Blink Weed
- Californian Thistle
- Canary Broom
- Cotoneaster
- English Broom
- Hawkweed
- Foxglove
- Gorse
- Holly
- Horehound
- Ragwort
- Radnor
- Orange hawkweed
- Ox-eye daisy
- Paterson's curse
- Poppy
- Purple Sallofly
- Ragwort
- Scotch Thistle
- Spanish Heath
- Sweet Briar Rose
- Tree Ivy
- Tree Lupin
- Vanished Thistle
- Whitewood

municipality Central Highlands

Australia - Tasmania LIST Topographic

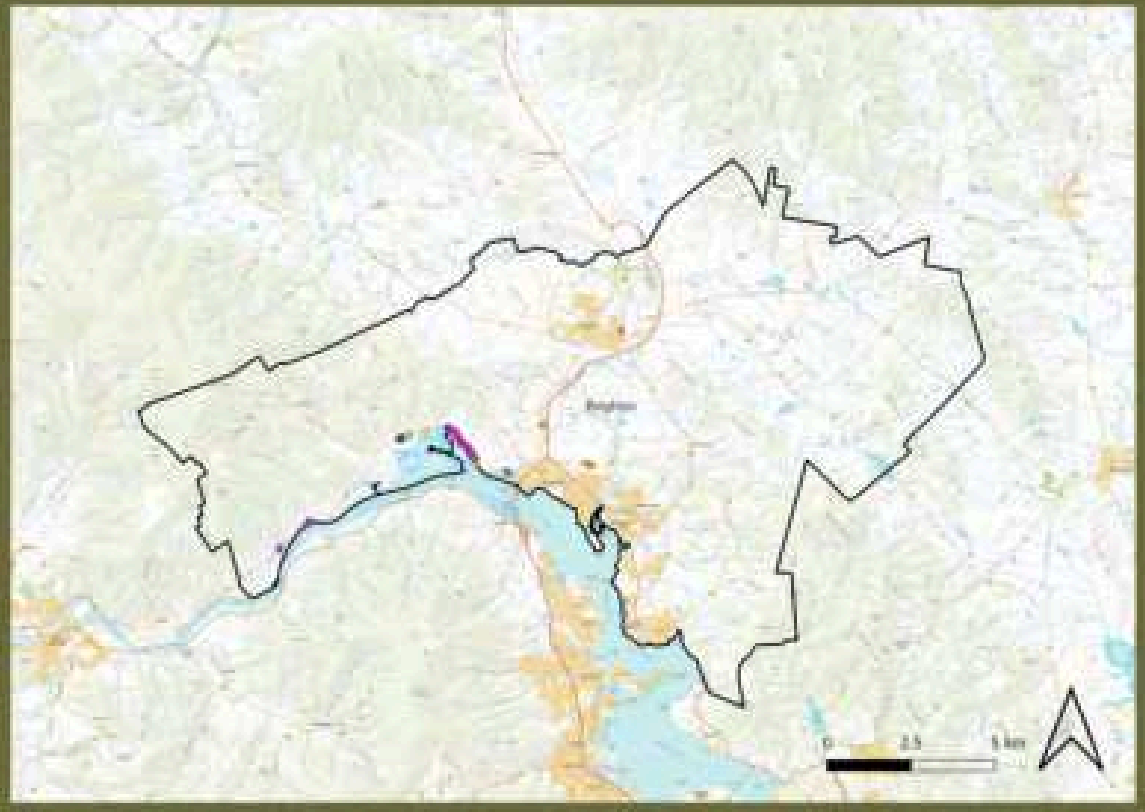
The Derwent Catchment Project



Derwent Valley weeds treated 2024-2025

The Derwent Catchment Project

1000



Brighton weeds treated 2024-2025

Treated weeds
- African Boxthorn
- Blackberry
- Fennel
- Paterson's curse
- Purple Salsify
- Sweet Briar Rose
- Whitewood

municipality Brighton

Australia - Tasmania LIST Topographic

The Derwent Catchment Project

Thank you to our stakeholders
and supporters



CENTRAL HIGHLANDS

BOTHWELL TOWNSHIP STRUCTURE PLAN



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Central Highlands Council acknowledges and pays respect to the Tasmanian Aboriginal Community as the traditional and original owners and continuing custodians of this land and acknowledge and pay respect to Elders, past, present and emerging.

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Document Issue and Status Record

Document Issue Number	Issue & Report Status	Prepared By	Checked By	Date Approved
A	DRAFT Report for Council review	AL	NS	04/10/2024
B	DRAFT Report for Community Consultation	AL	NS	31/10/2024
C	FINAL REPORT	AL	DM / NS	05/06/2025

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INTRODUCTION – CENTRAL HIGHLANDS

Central Highlands Council, located in central Tasmania between the State's two major cities of Hobart and Launceston, has begun to experience significant change with growing employment, an ageing population and an increasing demand for housing. The area offers competitive employment and economic advantages in agriculture, tourism, hydro-electricity supply and emerging renewable energy opportunities. This unique economic environment is underpinned by the local environment, natural assets and resources. These forces are generating new imperatives to critically reflect on how best to ensure the resilience and liveability of each of the regional townships within the municipality.

Geographically, Central Highlands is one of the largest municipalities in Tasmania, covering around 12% of the state's land area (8,010 square kilometres). Conversely, Central Highlands is the least densely populated local government area in Tasmania, with around 2,520 residents (ABS Census, 2021).

Central Highlands Council recognised the need for holistic strategic planning to guide future preferred development for three key towns within the municipality of Bothwell, Hamilton and Ouse. These towns play vital roles in providing essential services, accommodation options, and acting as gateways for visitors who wish to explore the natural beauty and heritage of the Central Highlands region of Tasmania.

Recent public notification of the Central Highlands Draft Local Provisions Schedule resulted in substantial feedback and representations from the community. Whilst some representations highlighted potential rezoning issues in the townships, feedback has particularly emphasized the need for strategic land use planning exercises in these townships.



GROWTH & EVOLUTION OF OUR REGION

In addition to the adoption of a new Local Provisions Schedule at a municipal level, in 2024, a state government planning review of the Southern Tasmania region was initiated in the form of the Southern Tasmania Regional Land Use Strategy (STRLUS). The updated strategy is intended to provide a long-term plan for managing growth and change in Southern Tasmania over the next 25 years, whilst protecting our natural environment.

The intention is that detailed structure planning exercises undertaken within each of the municipalities, such as Central Highlands, will feed into the STRLUS review and guide the ongoing evolution of townships such as Bothwell.

Accordingly, the specific strategic direction for each township, outlining a vision, existing assets, challenges, and a future plan for service and infrastructure delivery needs to be reviewed and updated. Strategic thinking is necessary to determine how to best balance investment across those towns with projected growth, while ensuring communities have fair access to the facilities and services necessary for liveability.

To do this, it is important to understand how each community uses the facilities in their town, what they need and value, and how/where they access services not available locally. This approach will ensure the individual towns are as self-contained as possible while also supporting the towns to function in a broader network supporting the provision of housing, education, employment, tourism opportunities and key community infrastructure to ensure the wellbeing of residents for years to come.

As such, the Bothwell Township Structure Plan will provide key guidance to both the State Government and Council enabling Central Highlands to advocate, facilitate and/or implement recommendations around funding, community infrastructure, tourism and housing investment.



PLANNING FOR GROWTH - BOTHWELL

As one of the largest established towns within the Central Highlands, Bothwell primarily caters to the needs of the local population, providing services and facilities to established residents, accommodating visitors to the region and a transient workforce employed primarily in forestry and the renewable energy industry.

Bothwell is a historic town situated approximately 63km northwest of Hobart, supporting a total of 379 residents. Bothwell is known for its scenic beauty, rich history and rural charm. The first golf course in Australia, and longest continuously open golf course in Australasia, is located on the property of Ratho and is still in use today. Established in 1822 by primarily Scottish settlers, Bothwell maintains strong links with its Scottish heritage.

Initial considerations for the Bothwell study area included:

- Heritage-related tourism opportunities, including provision of short-stay accommodation, attractors and improvements to the movement network.
- Potential for increase in residential land supply and servicing capacity.
- Flooding from the River Clyde
- Capacity of the town's water and sewer services.
- Increasing town capacity through potential rezoning of existing serviced Low Density Residential land to Village, Rural Living land to Low Density Residential and nearby Rural land to Rural Living.
- Potential to provide a new rural living area on poor quality land west of the township.
- Potential to revitalise the town's historic centre.
- Strengthening visitor potential as the gateway to the Highlands Lakes' fishing, bushwalking and hunting areas, and the birthplace of golf in Australia.
- Leverage on tourism opportunities presented by the Highlands Power Trail.
- Improving pedestrian/cycle linkages within the town between the town's facilities, attractions and open space areas.
- Improving linkages to key adjacent visitor attractions such as Ratho and Nant.
- Improving safety at the main junction in the town (Highlands Lakes Road / William Street, Market Place / Queen Street).
- Potential to increase visitor accommodation, including tourist, farm workers and windfarm construction workers.
- Telecommunications and television black spots.
- The landscape setting of the town.


BOTHWELL CARAVAN PARK

The Bothwell Structure Plan has been developed by Niche Studio for Central Highlands Council (CHC) with the assistance of Urban Enterprise, Entura, relevant government agencies, service authorities, major stakeholders and, critically, the local community.

The report has been prepared in accordance with the current *Tasmanian Planning Scheme – Central Highlands Local Provisions Schedule (2023).*

The Structure Plan sets out the overarching themes to guide future development and growth within the township of Bothwell. Objectives and strategies designed to enhance economic development opportunities, plan for aspirational growth rates and protect and enhance the historic character of Bothwell are outlined as logical conclusions to the detailed opportunity and constraint analysis conducted.

To guide the Central Highlands municipality in setting an aspirational economic vision for the future, Council commissioned an independent socio-economic analysis. This report supports the directions outlined by Urban Enterprise and proposes targeted future actions to facilitate the aspirational growth needed to ensure Central Highlands becomes a revitalised, sustainable community into the future. The report, *Socio-Economic Futures: A strategic, dynamic analysis & directions*, has been appended.

BOTHWELL

PLAN 001B - Study Area

N

HIGHLAND LAKES ROAD

DENNISTOUN ROAD

SCHAW STREET

PATRICK ST

HIGHLAND LAKES ROAD

HIGH STREET

FRANKLIN STREET

MEADSFIELD ROAD

HOLLOW TREE ROAD

NICHE STUDIO

THE WORK WE ARE BUILDING ON

In developing a Structure Plan for Bothwell, Niche completed a range of background investigations across the project to ensure that a thorough investigation into the opportunities and constraints of the town was made.

Phase 1 included an analysis of the physical opportunities and constraints of the study area.

A background review of relevant policy and strategy documents was also conducted, serving to ground the Structure Plan in a current regional context. The background report is attached as Appendix 1.

Initial targeted community consultation with selected community organisations and key stakeholders was also undertaken in Phase 1. These conversations were designed to highlight current issues facing the region and draw out themes and opportunities as seen by local community members. Input from key government agencies was also invited, as servicing and infrastructure provision plays an important role in growth and development.

Phase 2 focused on engaging the community and building a collaborative vision for the future of Bothwell. Niche developed a comprehensive understanding for the region and the elements of the built and natural environment valued by the community. The community workshopped potential improvements for Bothwell across six main themes, as detailed further in this Structure Plan.

Four key types of community consultation were undertaken to inform the preparation the Structure Plan, in the form of online surveys and communication, intercept surveys, visioning workshop, and targeted one-on-one discussions. A detailed discussion of the consultation undertaken, together with the findings that arose, can be found in the Community Consultation Summary Report, appended to this report.

Phase 3 required Niche to collate and investigate the themes arising from background analysis and community consultation, in conjunction with priorities and aspirations as set by Council and considering State-level guidelines as set out by the Southern Tasmanian Regional Land Use Strategy (STRLUS).

This has culminated in the Structure Plan as stepped through in the following report.

RESEARCH

Conduct work internally and with expert consultants to research the local place, including the planning context, with the goal of understanding the environment which we are looking to contribute to.

LISTEN & LEARN

Conduct authentic community and stakeholder engagement, listening to feedback and ideas with the goal of learning about what matters to locals.

DESIGN EXCELLENCE

Through a robust analysis process, understand and achieve ‘design excellence’ for urban planning and design with the goal of raising the bar for placemaking in the area.

THE TOWNSHIP OF BOTHWELL

A detailed analysis of existing constraints and potential opportunities was conducted as part of Phase 1 of the Structure Plan project, including review of current planning-related reporting, documentation and policy applicable to the Central Highlands municipality.

Mapping existing constraints, including current zoning, hazards, environmental considerations and servicing within the study area has been used to inform development of the Bothwell Structure Plan, and these are described in detail in the following sections.

Building on the mapped constraints, an in-depth investigation of economic drivers, demographics and housing was conducted by Urban Enterprise. The major findings from the economic analysis centred around the aging population of the municipality as compared to the population of greater Tasmania. This then has flow-on effects to the local economy, community infrastructure needs and housing requirements. Accentuating the unique needs of the municipality is the pressure that a large number of holiday homes and shacks, and a largely transient workforce employed in the renewable energy sector place on the municipality – requiring services that cannot be supported by the year-round resident population of Central Highlands.

If required services and facilities are absent from an area, it can be difficult to attract new residents. Conversely, if population growth remains low, it is difficult to attract the required development that would support population growth. However, the lifestyle and affordability advantages in the region, coupled with the commuting distance to greater Hobart, represent opportunities that could be capitalised on to build resident population of Bothwell.

The needs and expectations of an aging population for a liveable, inviting place are different to those of young families or working age residents, and this in turn presents opportunities and challenges for Bothwell and the municipality at large.

LAND USE

The town of Bothwell comprises a central core of land zoned Village, extending from a central point at the intersection of Highland Lakes Road and William Street/Market Place for approximately two blocks in all cardinal directions.

The Bothwell Recreation Ground on Hollow Tree Road is zoned Recreation, and Mount Adelaide to the west of the town centre is zoned Open Space.

A section of ten blocks in the southeast of the study area, bounded by Mary Street to the west, Highland Lakes Road and then High Street to the north, is zoned as Rural Living. Specific lots to the west of the town, fronting Schaw Street and Wentworth Street, on the western side of the River Clyde are zoned Low Density Residential.

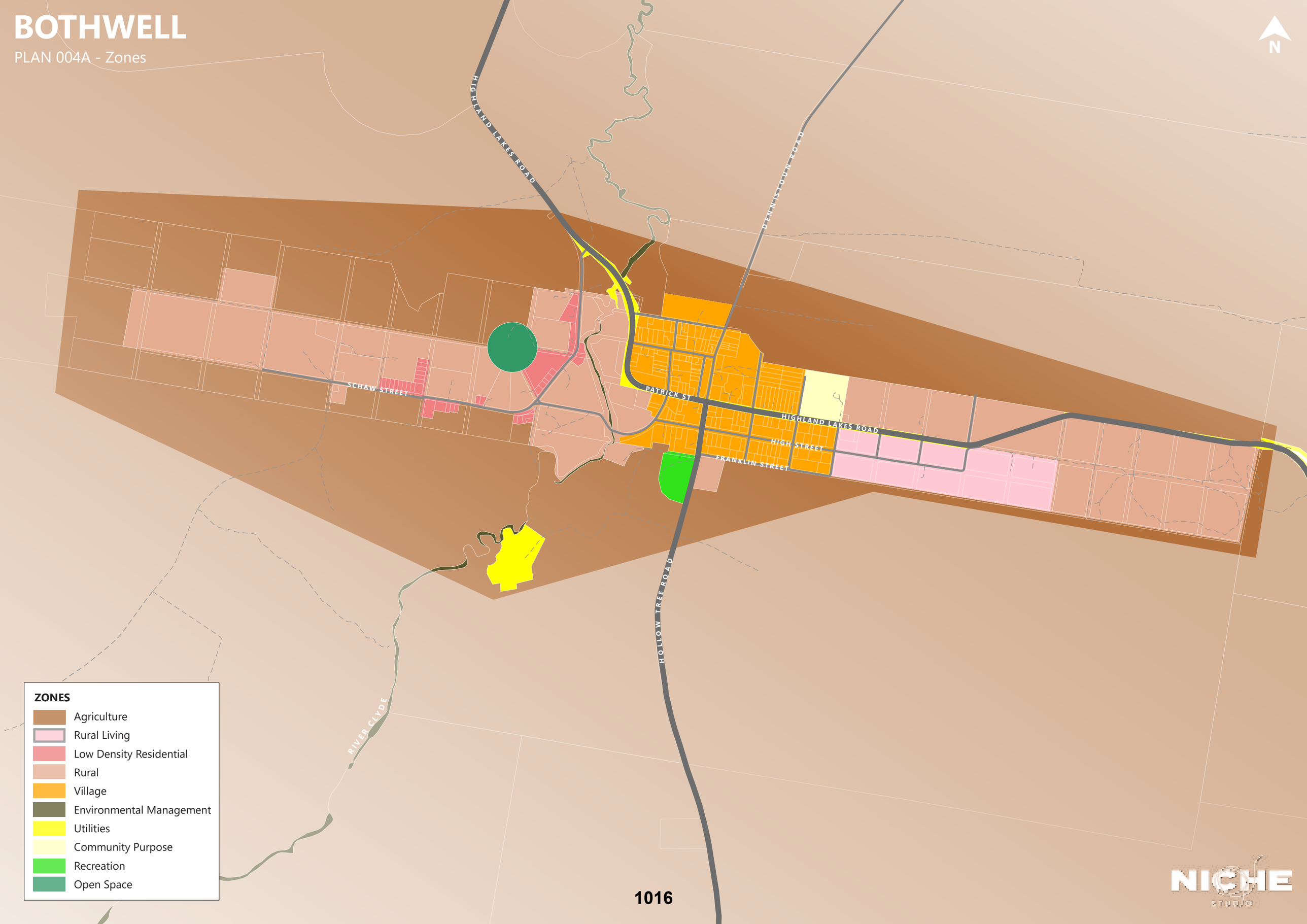
Land set aside for public utilities, such as the sewerage treatment plant in the southern part of the study area, and underlying Highlands Lake Road, is zoned Utilities. The land that Bothwell District High School partly occupies, at the corner of Highland Lakes Road and Michael Street is zoned Community Purpose.

The majority of the remainder of the land within township boundaries is zoned Rural, with land zoned for Agriculture purposes occupying the rest of the study area.



BOTHWELL

PLAN 004A - Zones



MOVEMENT

Bothwell is situated on Highland Lakes Road, which is the major road running from the Midland Highway at Melton Mowbray to the Bass Highway at Deloraine, and is maintained by the Department of State Growth. This road is the main access for residents and visitors to access Bothwell, while Bothwell town itself has a network of minor sealed and unsealed roads.

There are two vehicle bridges over the River Clyde, one on Highlands Lakes Road and the other on Arthur Crescent. Neither of these bridges have pedestrian accessways.

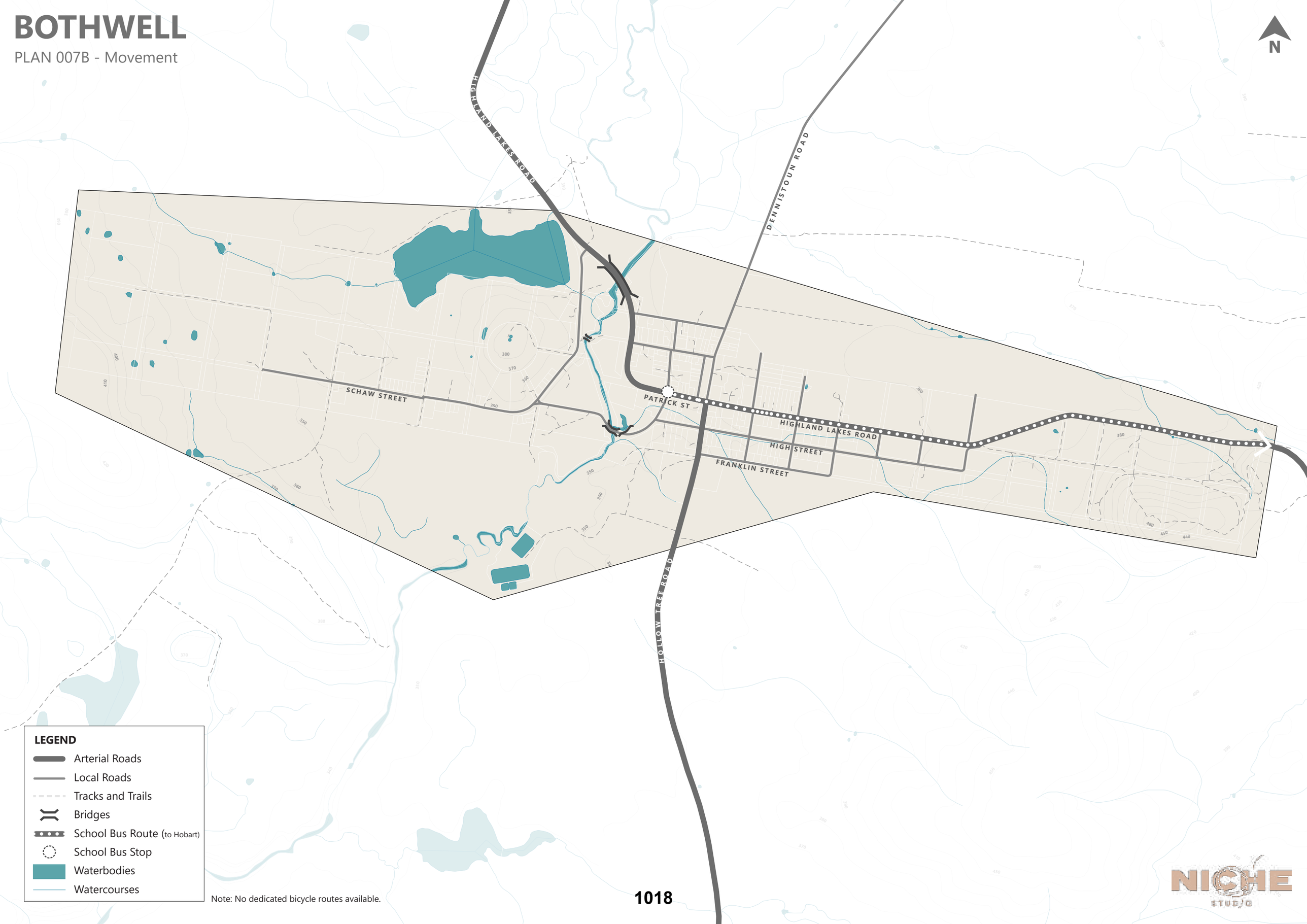
The Department of State Growth indicated they would support increased tourism opportunities with consideration given to management of additional traffic, with improved wayfinding and safety for the local community. There are government grants available for active transport facilities and EV chargers.

A school bus route, running from a stop on the corner of Patrick Street and Arthur Street to Hobart, connects upper high school students to further education. There are no other forms of public transport in the town. No dedicated bicycle routes have been mapped in the study area.



BOTHWELL

PLAN 007B - Movement



LEGEND

- Arterial Roads
- Local Roads
- Tracks and Trails
- Bridges
- School Bus Route (to Hobart)
- School Bus Stop
- Waterbodies
- Watercourses

Note: No dedicated bicycle routes available.

HAZARDS

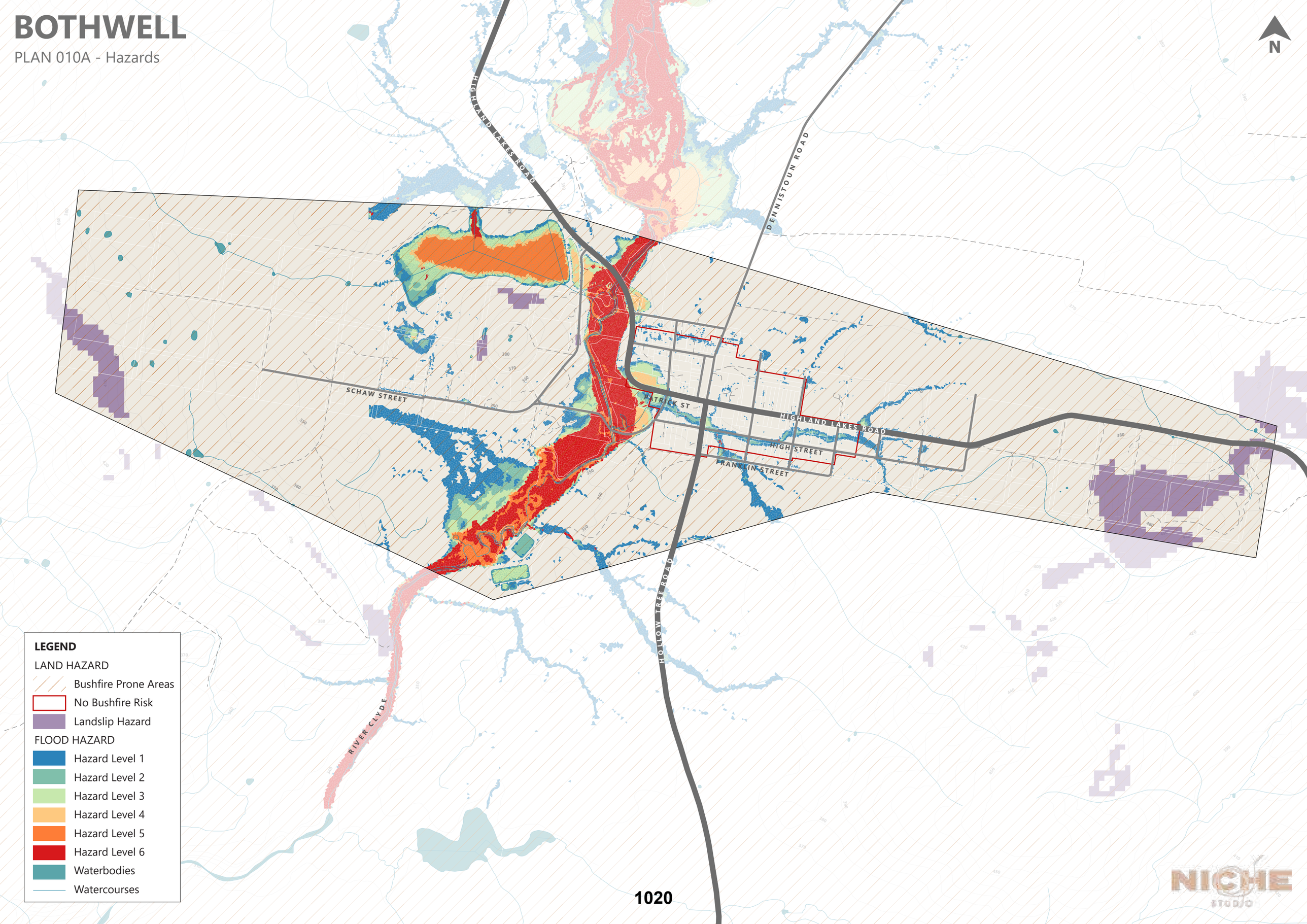
The majority of the Bothwell study area is subject to a Bushfire Prone Area hazard. This requires additional requirements for proposed subdivisions, and consideration in building design. Flood hazard mapping shows that land adjacent to the River Clyde is most severely at risk, with a flood hazard level of 6.

The River Clyde Flood Mapping Study (GHD 2023) was developed to provide informed recommendations to better manage floodwaters. There are several features that influence flooding in the River Clyde catchment area. These include the high rainfall in the area, the steep terrain, and the narrow valleys that can cause rapid runoff and flash flooding. Additionally, the flat floodplain areas are vulnerable to overflow during periods of heavy rainfall. Some low band landslip hazard is present in the western and eastern edges of town.



BOTHWELL

PLAN 010A - Hazards





PHYSICAL & NATURE BASED FEATURES

The natural environment of Bothwell comprises areas for waterway protection along the banks of the River Clyde and other minor waterways. There are several flood-dependent ecosystems in the River Clyde catchment area, including wetlands, which play an important role in reducing the impact of flooding. The preservation of these ecosystems is crucial for reducing the risk of flooding in the catchment area.

Areas of native vegetation are mapped through the study area, to the western and northern sides of Mount Adelaide. The south-eastern corner of the study area comprises a small portion of a larger Threatened Native Vegetation Community, *Eucalyptus tenuiramis* forest and woodlands on sediments. It has been extensively cleared across Tasmania for agriculture.

BOTHWELL

PLAN 013A - Physical and Nature Based Features

HIGHLAND LAKES ROAD

DENNISTOUN ROAD

SCHAW STREET

PATRICK ST

HIGHLAND LAKES ROAD

HIGH STREET

FRANKLIN STREET

HOLLOW TREE ROAD

N

LEGEND

- Threatened Native Vegetation Communities
- 22 Eucalyptus Tenuiramis Forest and Woodland on Sediments

CODE OVERLAYS

- Priority Vegetation
- Waterway and Coastal Protection Area

FOREST GROUPS

- Eucalypt Low Forest group

TASVEG 4.0

- Native Grassland
- Dry Eucalypt Forest and Woodland
- Non Eucalypt Forest and Woodland
- Other Natural Environments

NICHE STUDIO

SERVICING & INFRASTRUCTURE

The majority of Bothwell is serviced with town water and reticulated sewerage. Town water is gravity fed from TasWater tanks on Mount Adelaide, while the sewerage treatment ponds are located 1km to the south of the township.

Bothwell's water is supplied by the Clyde River, and a new water treatment plant has approval. Liaison with TasWater and Tasmanian Irrigation determined that the optimal location of this site is on Last Street, west of Mt Adelaide. The current sewerage infrastructure is considered ample to manage projected growth.

Central Highlands Council Stormwater indicated that the stormwater infrastructure in Bothwell is currently performing well since recent upgrades. Consideration of stormwater treatment capacity is an important factor when considering any rezoning opportunities. The supply of new residential lots is hampered by the 'first mover pays' infrastructure provision policy of several major infrastructure providers, which can effectively lock up some areas behind infrastructure bottlenecks.

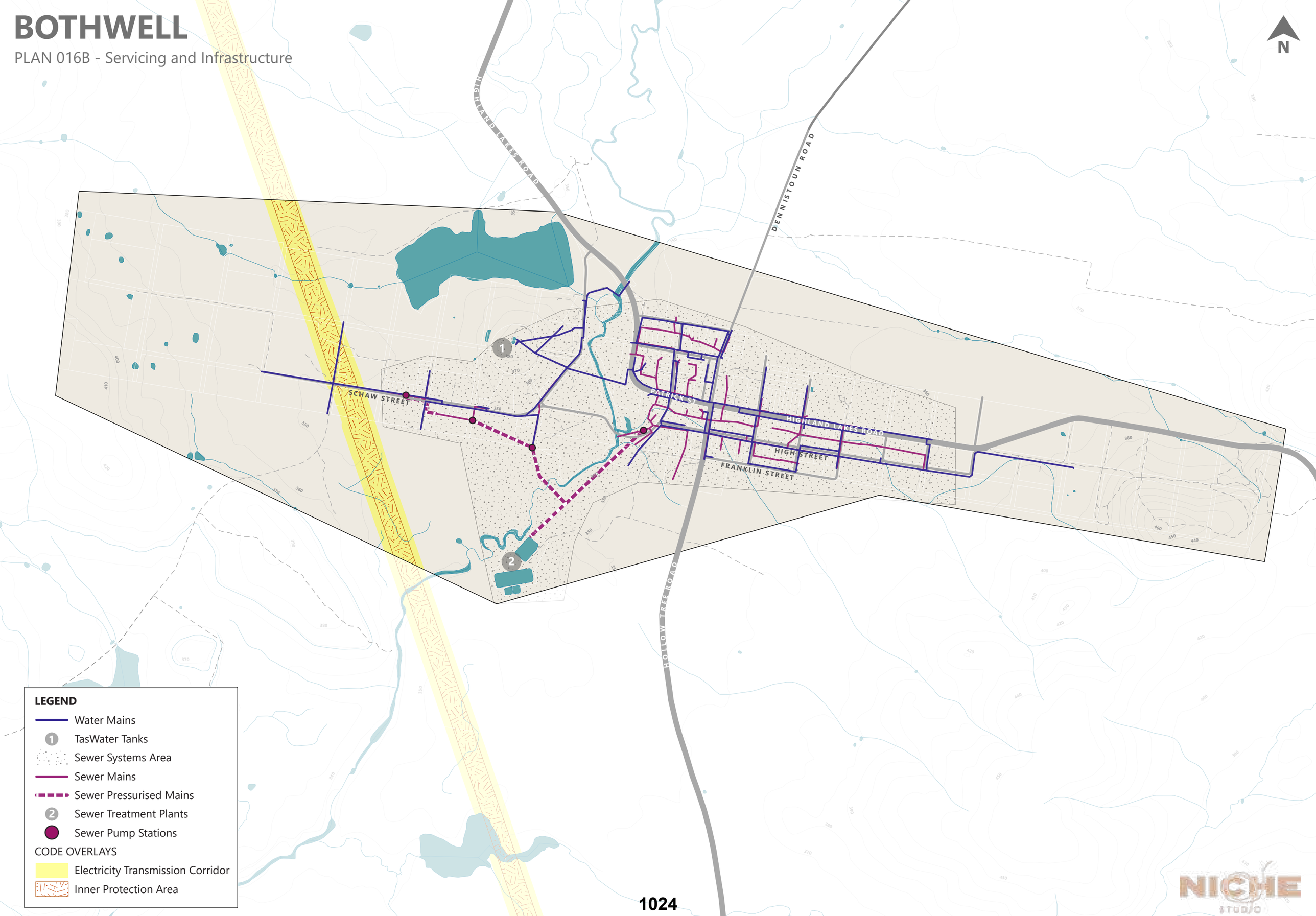
An electricity transmission corridor in the western portion of the study area restricts construction of dwellings and other substantial structures. No piped gas service is provided in Bothwell.

According to 2016 Census data, 62.1% of households in Bothwell accessed the internet from their dwelling. Telstra, Vodafone and Optus all offer 4G coverage for mobile phones in Bothwell and surrounds.



BOTHWELL

PLAN 016B - Servicing and Infrastructure



LEGEND

- Water Mains
- 1 TasWater Tanks
- Sewer Systems Area
- Sewer Mains
- Sewer Pressurised Mains
- 2 Sewer Treatment Plants
- Sewer Pump Stations

CODE OVERLAYS

- Electricity Transmission Corridor
- Inner Protection Area

COMMUNITY FACILITIES, CHARACTER & HERITAGE

Bothwell has a distinctive central core of well-preserved Georgian sandstone structures. More than 40 buildings and places, including cottages, the former manse, St Luke's Uniting Church and cemetery, the Bothwell Post Office, the Town Hall, St Michael and All Angels Church, the Castle Hotel, Birch Cottage, the Queen's Square War Memorial, Thorpe Mill and Farm, Ratho and the sandstone paving and kerbing on Queen, Alexander, Patrick and Dalrymple Streets are listed on the Tasmanian Heritage Register. This register is managed by the Tasmanian Heritage Council, with assistance from Heritage Tasmania, and places listed are considered to be of special interest in the broader context of the state or territory. Places listed are protected through the Heritage Act to ensure any future changes proposed complement significant aspects of the heritage listed place.

The majority of the study area is also covered by a Local Heritage Precinct Code Overlay.

A large number of community facilities are evident across Bothwell and are listed and marked in the plan adjacent. Of note, the Bothwell District High School (Kinder to Year 12) is currently strong and self-sustaining in enrolment numbers. Children travel to the school from the Highlands and Central Lakes area, while an upcoming school district boundary review is likely to benefit Bothwell District High School.

BOTHWELL

PLAN 019D - Facilities, Character and Heritage

RATHO FARM GOLF LINKS

MOUNT ADELAIDE

ADELAIDE STREET

WENTWORTH STREET

LOGAN STREET

ELIZABETH STREET

DENNISTOUN ROAD

MARKET PLACE

GEORGE STREET

MICHAEL STREET

MARY STREET

PATRICK STREET

HIGH STREET

FRANKLIN STREET

ARTHUR CRESCENT

HOLLOW TREE ROAD

BOTHWELL RECREATION GROUND

RIVER CLYDE

1026

N

FACILITIES

1 Ratho Farm Golf
2 Mount Adelaide
3 Bothwell Police Station
4 Bothwell Fire Brigade
5 CH Council Bothwell Depot
6 Bothwell CWA Hall
7 Bothwell Grange B&B
8 Bothwell Library
9 CH Council Office
10 Batts Cottage
11 Bothwell Post Office
12 St Lukes Uniting Church
13 Bothwell Cemetary
14 Public Toilets
15 Tennis Courts
16 Bothwell Camping Ground and Caravan Park
17 Bothwell Visitors Centre
18 Australasian Golf Museum
19 St Michael and All Angels Anglican Church
20 Bothwell Medical Centre
21 St Andrew's Catholic Church
22 CH Pharmacy
23 Castle Hotel
24 Bothwell Garage Roadhouse
25 Bothwell Superstore
26 Bothwell District High School
27 Bothwell Pool
28 Bothwell Recreation Ground and Football Club
29 Sealy's Store
30 White's Corner Accommodation
31 Halls Ammo
32 Elders
33 Old Bootmaker Shop

LEGEND

- Recreation Ground
- Community Facilities
- Utilities
- Local Heritage Precinct Code Overlay
- Tasmanian Heritage Registered Properties
- Waterbodies
- Watercourses

NICHE STUDIO

BOTHWELL TOWNSHIP STRUCTURE PLAN

THE VISION

A VISION FOR BOTHWELL

Bothwell will continue to evolve as a historic town that embraces and shares its heritage with residents and tourists, offering unmatched opportunities for adventure, hospitality and recreation.

Supported by a productive, resilient economy, Bothwell will continue to develop as a welcoming, connected community and gateway to the highland lakes, that thrives sustainably in the unique natural environment of the Central Highlands.



EMERGING COMMUNITY THEMES

From the extensive consultation conducted by Niche, several common themes emerged that guided the development of the Township Structure Plan for Bothwell.

The following chapters discuss our analysis of each theme.

A SUSTAINABLE & LIVEABLE MUNICIPALITY

A PRODUCTIVE & RESILIENT ECONOMY

A THRIVING TOURISM SECTOR

A SUSTAINABLE AND LIVEABLE MUNICIPALITY

SETTLEMENT & LAND SUPPLY

Central Highlands has a small population base, with low but consistent population growth recorded over the past decade. Low growth will challenge the prospect of economic growth, especially industries that rely on population-based demand. Population retention and attraction will be critical for economic resilience and growth, particularly attracting young to middle aged working families. This typically relies on suitable housing, employment and community infrastructure and services to be available and/or accessible.

Central Highlands has a series of advantages that could be better promoted to attract residents and visitors, including the regional lifestyle, housing affordability, the heritage characteristics of townships, and the natural environment of the river.

Low dwelling growth and very limited residential development is evident. This is from a combination of low population growth, but also scarcity of readily developable sites that are available to the market. More investment in new housing should be encouraged in the main settlements of Bothwell, Ouse and Hamilton. However, according to landowners and developers, the viability of residential subdivision and development is marginal. The supply of new residential lots is hampered by the 'first mover pays' infrastructure provision policy of several major infrastructure providers, which can effectively lock up some areas behind infrastructure bottlenecks.

Appropriately zoned land supply that can accommodate housing is limited in Bothwell, especially in the Village Zone. There is a need to ensure that the urban area has suitable land supply available to accommodate more housing. Logical expansion of the Village Zone could be considered to encourage more housing to be delivered in Bothwell. This could also address viability challenges of residential development.

Land supply analysis reveals that Bothwell has:

- 2.28ha of vacant Village zoned land across 10 lots, and further 0.25ha of underutilised land;
- 0.43ha of vacant Low Density Residential zoned land across 4 lots, and a further 1.97ha of land within one underutilised site.
- 10ha of vacant Rural Living zoned land across 6 lots, and a further 8ha of underutilised land across 4 lots.

Village Zoned land that is vacant and available for development and occupation in Bothwell is scarce. There is limited capacity for the urban area of Bothwell to accommodate subdivision and new housing development. Existing capacity within Village Zoned land is mostly confined to individual sites that could accommodate a single dwelling or small lot subdivision.

Based on a minimum subdivision area of 600sqm, vacant and underutilised Village Zone land supply in Bothwell has an estimated theoretical capacity to accommodate around 25-30 new residential lots. Realising this capacity depends on whether individual landowners facilitate residential subdivision. The extent to which this could occur is highly uncertain, particularly given that the Village Zone can also permit commercial and community uses.

The Rural Living Zoned land to the east of Bothwell's urban area remains vacant and inactive. There may be an opportunity to investigate the expansion of the Village Zone to encompass vacant Rural Living land to accommodate more housing and improve the development viability of areas within the township boundary.

ECONOMIC ANALYSIS

Major investment and infrastructure projects planned in the region such as Tarraleah Hydropower redevelopment, Weasel Solar Farm and Cellars Hill and St Patricks Plains and Bashan Wind Farms will attract a notable number of workers to the region during the construction phase of the projects. Accommodating key workers in the region will be a major challenge due to the lack of housing options and community facilities, especially childcare, available in the region.

Central Highlands has an aging population, with a higher proportion of older cohorts (e.g. seniors, elderly). The aging of the resident population is expected to continue over time, and is likely to increase demand for health care and medical services, as well as aged care facilities, requiring a working age population to support the needs of this aging population base.

Central Highlands has a higher level of socioeconomic disadvantage compared with the national average. This is more than likely attributed to lower labour force participation and low access to essential services such as health care, medical services, and so on.

There is a lack of public transport available in Central Highlands. There is one bus that runs between Bothwell and Hobart (via Brighton) for school transport, with no access for the general public. However, there are currently no bus services that link Bothwell, Ouse and Hamilton to each other or to the broader region.


LAND SUPPLY STATUS
Underutilised
Vacant
ZONES
Community Purpose
Low Density Residential
Rural
Rural Living A
Village
1032

STAKEHOLDER & COMMUNITY ASPIRATIONS

Bothwell is highly valued for its strong sense of community spirit, with residents appreciating the towns willingness to participate in community activities. The town celebrates a calming and quiet atmosphere, alongside an abundance of existing amenities such as a community pool and historic golf course. Bothwell's distinct connection to the natural environment and rural simplicity was echoed as a strength throughout the vision workshops.

Key feedback received from the community in relation to sustainability and liveability measures included:

- Movement and Servicing
    - Bothwell needs accessible active transport routes including upgrading existing footpaths, as well as establishing new bicycle and walking trails.
    - The introduction of public transport provisions, as well as improvement to road safety through the town and connecting towns roads.
    - Maintenance of heritage buildings.
    - Provision of long daycare facilities.
- Physical and Nature
    - Works to clean up the towns environment such as community clean up days, river cleans, and removal of willows and weeds.
    - Increased access for pool
    - Physical Education programs, shade, water safety.
    - Expansion of the pedestrian trail network with a riverfront trail linking Bothwell, Ratho, Thorpe Mill and the Nant distillery.
    - Increased proofing and protection for the built form of the towns from natural disasters.

The community were also concerned about the lack of affordable and available land for housing, with one respondent noting that landowners cannot be forced to subdivide land to provide smaller lots for housing. While this is true, by rezoning and preparing more land than required to meet forecast demand, this can account for land owners who choose not to subdivide or develop their landholdings.

Constraints on development and service provision in a region can impact on future plans for growth. Discussions with key government stakeholders responsible for managing infrastructure within the Central Highlands revealed that areas requiring upgrades and improvements include:

- Installation of a new water treatment plant by TasWater.
- Completion of the recent Bothwell Flooding Study, including GIS data and mapping sets has provided recommendations for Council to implement, although some level of flooding after high rainfall events may still be likely due to topography and soil type.

- The Department of State Growth would support increased tourism opportunities with additional traffic management options, and improved wayfinding. There are State government grants available for provision and maintenance of active transport facilities and EV chargers.

Council's Planning and Engineering team provided the following feedback:

- The current tennis courts could be relocated to the Recreation Grounds, forming an active recreation 'hub' and providing the opportunity for the current caravan park to expand onto the existing tennis courts.
- Investigate provision of an off-leash dog exercise area.
- Potential for childcare centre, utilising existing buildings in the short-term, while investigating the feasibility of a purpose-built centre.

A SUSTAINABLE & LIVEABLE TOWN - OBJECTIVES & STRATEGIES

1. To celebrate the existing character of Bothwell

1.1 Continue to support the operation of the Ratho Farm Golf Course and the Australian Golf Museum to celebrate Bothwell's rich golf history, including an improved pedestrian link between the two.

1.2 Continue to maintain Council-owned heritage buildings, ensuring preservation of their unique character and contribution to the town's existing built form.

1.3 Encourage the retention of historically important buildings no longer needed for their original purpose by utilising their space for town community festivals and events, or for appropriate re-use by the private sector that respects heritage values and includes a level of public access.

1.4 Continue to promote and enforce the design criteria contained within the Central Highlands Local Provisions Schedule for the Bothwell Heritage Precinct that seeks to retain and amplify the characteristics of the existing built form.

1.5 Support proposals in Bothwell that propose renovation or re-purposing of privately owned heritage buildings.

1.6 Investigate provision of Design Guidelines for Bothwell that complement the statutory provisions of the Central Highlands Local Provisions Schedule. These may include images, diagrams and frequently asked questions in everyday language to assist the community in understanding the requirements of the Bothwell Heritage Precinct.

1.7 Consider identification of iconic scenic landscapes of the Central Highlands municipality, and whether protection of these landscapes is feasible within the Central Highlands Local Provisions Schedule. These landscapes may include sections of Highlands Lake Road and Hollow Tree Road.

1.8 Rezone Mount Adelaide to part utility, as shown on Plan 042B, to reflect location of TasWater infrastructure and land use.

2. To retain existing local residents within the township

2.1 Support new residential development proposals in Bothwell to increase housing supply and provide greater housing choice for existing and new residents.

2.2 Advocate for State Government funding to assist the implementation of additional recreational and social facilities, as well as infrastructure projects to improve the safety and walkability of the town.

2.3 Implement recommendations from Bothwell Flood Study (2023), including initiation of a Planning Scheme Amendment for land in Bothwell requiring identification of flood prone area.

3. To attract new residents to the township

3.1 Rezone land parcels as indicated on Plan 042B to Village Zone and Low Density Residential Zone to facilitate availability of serviced land for development of diverse housing typologies.

3.2 Support private development that provides a diversity of housing typologies that promote a mixture of demographics such as individuals, young families, and elderly.

3.3 Advocate for funding to prepare a Resident Attraction Strategy to attract new residents to live in the municipality, focusing on attracting young and middle aged working families.

3.4 Promote lifestyle and affordability advantages of Central Highlands through the use of marketing campaigns that attract new residents to live and work in the municipality that:

- Target younger demographics through the use of social media platforms to showcase community life and local attractions.
- Undertake a renewal of the existing Central Highlands website to create a user-friendly interface that showcases important information on housing, community facilities, and upcoming community events.
- Create advertisement campaigns that highlight the attractiveness of living within the Central Highlands region and promotes the affordability of home ownership within Bothwell.
- Create partnership programmes with local real estate companies to showcase existing and future available properties and promote the benefits of rural living.

3.5 Investigate feasibility of future housing provision and township growth at Investigation Areas 1 and 2 on Plan 042B.

3.6 Advocate to the Department of State Growth for a business case to support establishing a bus network between towns in the Central Highlands and to larger service centres.

4. To identify gaps in key social and community services such as health, education and aged care.

4.1 Rezone the entire parcel of land with Bothwell District High School to Community Purpose (as shown on Plan 042B).

4.2 Advocate to the State Government to ensure the sustained operation of Bothwell District High School.

4.3 Support with Department for Education, Children and Young People the opening of an out of school hours care service co-located with the school. This facility could be expanded to offer long daycare to the 0-5 age group.

4.4 Reflect the outputs of the communities future educational needs by implementing actions outlined in the Bothwell District High School Future Needs survey.

4.5 Investigate feasibility of opening childcare services through provision of funding, supporting community based childcare models, facilitating re-use of existing buildings, assistance with grant applications, or attracting a service provider, as a short term solution.

4.6 Consider provision of subsidised long daycare services in a purpose-built facility, potentially co-located with Council-owned aged care facility, as a medium and long term solution (Item 26 on Plan 031B).

4.7 Continue to support provision of library services to the community including hours and service provision that meet community needs (Item 16 in Plan 031B).

4.8 Ensure community infrastructure funding sourced from renewable energy operators is utilised to meet established community and infrastructure needs in Bothwell.

4.9 Support provision of a community Makers Shed.

4.10 Investigate provision of Youth programs and activities.

4.11 Review swimming pool access by the community and determine whether usage would benefit from upgrades (Item 8, Plan 031B) such as:

- Accessibility upgrades
- External cover (roof)
- Opening hour changes

5. To prioritise existing and future community needs.

5.1 Ensure future housing and growth is located in serviced areas.

5.2 Adopting a new policy ensuring developers contribute proportionally to the cost of any required infrastructure upgrades considered necessary to facilitate future development.

5.3 Investigate potential infrastructure bottlenecks that may be blocking areas of the town from being developed due to the 'first mover pays' policy of some major infrastructure providers, and investigate the feasibility implementing a pro-active strategy to resolve such impasses.

5.4 Investigate the feasibility of using existing community buildings or Council-owned land in Bothwell for child care services.

5.5 Develop a detailed streetscape/townscape plan to:

- Determine where upgrades are required to the public realm.
- Investigate whether current heritage provisions are appropriate and whether design guidelines are required.

5.6 Upgrade footpaths as required to deliver a connected pedestrian network through Bothwell, including:

- Link the Bothwell Recreation Ground to Patrick Street (Item 5 on Plan 031B).
- Address drainage and footpaths on Schaw Street as future development requires, (Item 3 on Plan 031B).
- Upgrades to Croaker's Alley (Item 1 on Plan 031B).
- Maintenance of footpath on Queen Street (Item 7 on Plan 031B).

5.7 Undertake a Community Needs Assessment.

5.8 Advocate for provision of community services as identified as lacking in the Bothwell Structure Plan and Community Needs Assessment.

5.9 Utilise funding provided by renewable energy operators to fulfil community services as defined in the Community Needs Assessment.

5.10 Undertake an Integrated Transport Strategy for Central Highlands, focusing on improvements to active transport networks, identifying gaps in transport linkages, upgrades required to increase efficiency, sustainability and safety and focus on creating a connected municipality.

5.11 Provide a pedestrian footbridge over the river adjacent to existing traffic bridge, linking the historic golf course and tourist attraction of Ratho to Bothwell township.

5.12 Investigate feasibility of a walking trail on the western side of the River Clyde linking Bothwell to Ratho, Thorpe Mill and Nant Distillery.

5.13 Provide a walking trail from Bothwell Town up Mount Adelaide to the lookout and access to the open space.

5.14 Consider a traffic study, with State Government support, to determine if traffic calming and slowing interventions are required, such as stop signs at intersections (Item 6 on Plan 031B).

5.15 Support development proposals that aim to fulfil under-served needs within Bothwell.

6. To deliver a comprehensive Settlement Strategy and Structure Plan that promotes a sustainable and liveable town.

6.1 Ensure the Central Highlands Settlement Strategy and Structure Plans consider the following:

- Need for adequate Village Zone land supply that is available and 'development ready' to accommodate new housing in Bothwell.
- Need to diversify the housing stock to support changing demographic needs and preferences, especially older/ageing residents.
- Partner with aged care and social housing providers in projects to increase the housing stock for these groups.
- Direct housing growth to Bothwell.
- Encourage an increase in the number of rental properties available.
- Addressing viability challenges that present barriers to residential development and housing growth in Bothwell.

6.2 Implement the Bothwell Structure Plan as outlined in the implementation plan.

6.3 Review Implementation of the Bothwell Structure Plan periodically to ensure timelines and action items are achieved.

7. To ensure the provision of adequate open space

7.1 Review the provision of open space within the municipality.

7.2 Produce an Open Space Strategy.

7.3 Consider development of a “Greening the Streets” Strategy to:

- Extend the formal tree avenues to the eastern entrance of Bothwell, and westwards from Croakers’ Alley entry to the traffic bridge. (Item 22 on Plan 031B).
- Increase shading at recreation grounds and public open space (Item 19 on Plan 031B).
- Explore additional areas of Public Realm for greening.

7.4 Upgrade and expand community infrastructure in parks and open spaces, such as seating, rubbish bins, water fountains (Item 25 on Plan 031B).

7.5 Relocate tennis courts to the recreation precinct at Hollow Tree Road to create an active recreation hub (Item 9 on Plan 031B) and allow existing tennis court site to be used for additional caravan / motor home parking.

7.6 Add community adult exercise equipment to recreation spaces (Item 15 in Plan 031B).

7.7 Continue to remove declared weeds, including the invasive willow species from river banks (Item 21 in Plan 031B).

7.8 Investigate the potential of consolidating all riverfront land on the western bank of the River Clyde south of Patrick Street to public ownership. This could provide a large area of public open space.

7.9 Investigate the potential to provide an off-leash dog exercise area.

A PRODUCTIVE AND RESILIENT ECONOMY

SETTLEMENT & LAND SUPPLY

The retail, commercial, tourism, accommodation, civic and recreation uses in Bothwell are discussed below:

- Bothwell includes the only pharmacy in Central Highlands.
- There is a Roadhouse and a Superstore that are adjacent to one another, and provide fuel and convenience based goods for locals, visitors and stopover travellers.
- The main Council offices are located in Bothwell.
- Bothwell offers a library, pool, post office and visitor centre.

ECONOMIC ANALYSIS

Bothwell is spatially separate from Hamilton and Ouse, and largely operates in isolation from these towns. The retail and commercial offering is limited in Bothwell, but the town performs an important civic, recreation and community role that differentiates it from Hamilton and Ouse. Importantly, Bothwell serves a daily service role for farms and small rural settlements within the hinterland service area.

The resident catchment in Bothwell (~500 residents) is not currently of a scale that could viably support notable retail and commercial growth. If the resident population in Bothwell recorded notable growth over time, there would be an opportunity for the town to support new speciality and/or convenience based retailers (e.g. bakery, butcher, convenience supermarket). It is likely however, that residents would continue to be directed to higher order centres such as Bridgewater and Greater Hobart for higher order needs (e.g. full-line supermarket, bulky goods, etc).

To catalyse retail and commercial investment that aligns with the activity centre role of towns, it is likely that a higher level of demand is needed; from a combination of residents and visitors.

Population-service industries are underrepresented. Attracting new retail, hospitality and health-related businesses to establish in Ouse, Hamilton and Bothwell should be encouraged.

The region is at the heart of the State's proposed Renewable Energy Zone and is very well placed to attract renewable energy investment, especially hydropower, wind and solar.

Renewable energy projects typically generate a high number of jobs during the construction phase, and a low number of jobs during the operational phase. However, a critical mass of projects may attract new permanent workers to the region. Renewable energy projects such as hydro, solar and wind farms have the potential to raise municipal rates and community funds, which could be directed for community benefit. Determining how these funds should be spent within the community should be considered. Renewable energy projects can create environmental and amenity impacts, which should seek to be minimised wherever possible. Negative impacts may be acceptable to the community if linked to local economic productivity and improvements to social services and infrastructure. It is now increasingly expected that renewable energy projects include ongoing community infrastructure funding for the benefit of local communities.

Commercial and industrial businesses are accommodated in the Village Zone within townships, and there is currently no standalone land areas or precincts dedicated to industrial and commercial activities. There may be an opportunity to investigate establishing an industrial and/or commercial precinct in the region that is well-located, has service capabilities, and is strategic in terms of serving supply-chain activities from key industries such as horticulture, forestry, and renewable energy projects

The internet service, speeds and coverage is fairly unreliable across Central Highlands, which limits digital access and connectivity. The road network in Central Highlands is critical for accessibility and connectivity for residents, workers and businesses. The condition and maintenance of regional roads is an ongoing issue and requires ongoing advocacy with the Department of State Growth.

T20. RETAIL & COMMERCIAL ROLE

Township	Approx. population	Classification	Role
Bothwell	500	Local centre (small)	Community & civic Basic convenience retail; and Stopover visitor servicing.
Ouse	300	Local centre (small)	Convenience retail; and Stopover visitor servicing.
Hamilton	240	Local centre (small)	Stopover visitor servicing (hospitality, accommodation)

Source: Urban Enterprise, 2024

STAKEHOLDER & COMMUNITY ASPIRATIONS

The vision for the future of Bothwell is one which seeks to protect and celebrate the existing heritage of the town whilst utilising the ample heritage buildings for community-based activities. Residents and visitors envisioned the town rich in heritage-based tourism with bountiful facilities to service a growing population of residents and visitors. The lack of medical services in and surrounding the town is a considerable worry for the people of Bothwell, so an increased availability of permanent medical services is present in the towns future vision. The town also envisions a settlement that provides adequate childcare facilities and better connectivity between the community and education facilities. The youth of Bothwell raised concerns about the longevity of the town and the lack of local job opportunities.

Many families want their children to stay in Bothwell, but the lack of job prospects, available and affordable housing, and community services such as childcare result in young people and families leaving the region. Conversely, older residents envisage the ability to age in place, potentially down-sizing from larger rural properties to supported living in town, but are constrained by lack of available and suitable housing typologies.

Key feedback received from the community in relation to sustainability and liveability measures included:

Community and Heritage

- Maintenance of heritage and increased use of heritage buildings for community activities.
- Need childcare and better connection between the community and schools.
- Need for permanent doctor and aged care services.
- Other submissions received indicated that while Council can play a role in distributing community benefit funds from renewable energy providers, the community should also have a level of involvement in this determination.

Infrastructure and Facility Recommendations

- Community infrastructure (Camping, outdoor seating, BBQ, children's/ youth activities i.e. skate park, improvement to playground).
- Increased medical, aged care facilities and a grocery store.
- The proposed renewable energy projects in the broader Central Highlands municipality provide an opportunity for industrial uses to co-locate.

PRODUCTIVE & RESILIENT ECONOMY - OBJECTIVES & STRATEGIES

8. To grow and foster employment opportunities unique to the area, reflecting the individuality of the location.

8.1 Encourage the growth of employment opportunities by supporting the development of new commercial facilities that offer a unique but in-demand need for the community.

8.2 Advocate to State Government for sufficient funding to ensure the ongoing operation of community facilities such as Bothwell District High School, Bothwell Police Station, and Bothwell Fire Brigade.

8.3 Collaborate with renewable energy providers to identify opportunities in the region for future employment and training.

8.4 Consider advocating to Skills Tasmania for support in establishing a Vocational Education and Training hub in Central Highlands focused on agriculture and the renewable energy industry.

8.5 Advocate to the Department of Natural Resources and Environment for investment in pilot innovative niche agriculture projects in the region.

8.6 Encourage and support the development of cottage industries, such as local food-based businesses.

8.7 Support the development of home-based businesses, including the provision of in-home licensed daycare.

9. To sustainably grow the value of the existing agriculture sector.

9.1 Advocate for ongoing improvements and upgrades to regional irrigation schemes that are fundamental to the agriculture and horticulture sectors.

9.2 Encourage and support young farmers in the region.

9.3 Support and enhance highly specialised agriculture activities, especially within irrigated areas in Central Highlands.

9.4 Support agricultural supply-chain and rural service activities to establish in suitable locations in Central Highlands.

10. To advocate for the sustainable growth of new agricultural opportunities.

10. 1 Encourage intensive and high value activities within irrigated areas.

10.2 Facilitate the promotion of agricultural opportunities to industry. These may include:

- Export market opportunities;
- Domestic market opportunities;
- Information around innovation and technology in the agriculture sector that could be harnessed;
- Off-farm income opportunities;
- Value-add opportunities.

10.3 Facilitate and participate in an annual roundtable event for local agriculture industry representatives. Discussion points should include:

- Current challenges/barriers to industry growth;
- Accommodation options for full-time employees and seasonal workers;
- Provision of required community services such as child care to attract staff;
- Opportunities for industry growth; and
- Research and innovation.

11. To actively support the development of renewable energy and green infrastructure projects.

11.1 Attract renewable energy projects to develop in the proposed Central Highlands Renewable Energy Zone.

11.2 Advocate to landowner of large agricultural holdings to consider the opportunities of sustainable and/or renewable energy production and green infrastructure.

11.3 Advocate to landowners of large agricultural holdings within the proposed REZ to consider the opportunities of Agri-solar development.

11.4 Advocate for and support new investment in commercial and industrial activities that serve the renewable energy project supply-chain.

11.5 Facilitate the attraction and retention of workers associated with the renewable energy and green infrastructure industry by:

- Implementing programs that subsidise key workers accommodation associated with local renewable and green infrastructure projects.
- Supporting development that offers a variety of housing typology including medium density development to encourage demographics such as young professionals to move to Bothwell.
- Implementing and supporting programs that provide and subsidise key community services such as childcare and medical.
- Investigate opportunities for co-working spaces to encourage the attraction of small businesses and digital nomads associated with local renewable and green infrastructure projects.

11.6 Advocate for ongoing improvements and upgrades to hydro schemes and projects (e.g. Tarraleah).

11.7 Advocate for a mechanism to collect community infrastructure funding from renewable energy operators.

11.8 Facilitate the apportioning of community infrastructure funding to meet needed services and infrastructure in Bothwell.

11.9 Support the rezoning of land to facilitate energy intensive industrial and business uses co-located with the Cellars Hill Wind Farm and Weasel Solar Farm.

11.10 Encourage industrial land uses to locate within the Weasel Plains precinct, outside Bothwell and with good connection to existing infrastructure.

11.11 Support community-led renewable energy projects in the municipality and other green initiatives. Projects should consider capacity building and social inclusion across the community and seek to reduce energy costs. These may include provision of infrastructure such as residential solar panels rather than provision of monetary rebates on power bills.

11.12 Support provision of short-stay workforce accommodation.

12. To support the growth of local industrial and innovation opportunities.

12.1 Liaise with renewable energy project proponents as they arise (e.g. hydro, wind, solar, battery projects).

12.2 Investigate industrial land requirements to facilitate projected growth of renewable energy sector.

12.3 Seek to minimise visual amenity, agricultural and environmental impacts of renewable energy projects.

12.4 Seek to collect funds from proponents and re-distribute for community projects and initiatives that improve liveability and socioeconomic outcomes.

13. To improve existing digital and transport infrastructure.

13.1 Advocate for relevant road improvements and upgrades to ensure efficient and safe vehicle movements across the municipality, specifically:

- Linkages to Melton-Mowbray and greater Hobart (Item 13 on Plan 031B).
- Straighten bends in Hollow Tree Road (Item 12 on Plan 031B).

13.2 Advocate for improved digital infrastructure, including internet coverage, speeds and reliability.

13.3 Ensure that developers contribute proportionally to any required upgrades to transport infrastructure considered necessary for successful development.

13.4 Investigate, with Elders, an improved traffic solution for large trucks accessing the Elders yard off Queen Street.

14. To encourage the growth of existing and new retail and commercial services.

14.1 Encourage retail/commercial premises to remain as such.

14.2 Attract new retail and commercial businesses to establish in Bothwell.

14.3 Support growth and development of existing retail and commercial businesses (Item 14 in Plan 031B)

A THRIVING TOURISM SECTOR

SETTLEMENT & LAND SUPPLY

Servicing the needs of short-stay visitors, there is a Council-owned caravan park in Bothwell that is well-utilised, although a pub and two cafés are the only hospitality operators.

Ratho Golf Course is located to the north west of the town centre, and includes a function centre and accommodation. The Bothwell Visitor Centre is located adjacent to the Central Highlands Golf Museum. Both venues are staffed by volunteers and are actively seeking to expand the network of community members who donate their time.

The Bothwell pool is open to the public.

ECONOMIC DRIVERS

The primary product strengths in Central Highlands include:

- Sightseeing, hiking, bushwalking and camping in state forests and national parks;
- Recreational boating and fishing in the network of lakes and rivers; and
- History and heritage significance of townships and settlements.

Signature attractions and experiences in the region include:

- Fly fishing in Great Lake, Woods Lake, Arthurs Lake, Little Pine Lagoon and Penstock Lagoon and the broader 'thousand lakes' area;
- National Parks and conservation areas such as Mount Field National Park, Walls of Jerusalem National Park,
- Franklin-Gordon Wild Rivers National Park;

- Ratho Golf Course and the Australasian Golf Museum in Bothwell provide heritage sporting tourism, with Ratho being one of the oldest continuously operated golf courses in the southern hemisohere.
- Steppes Hall and walk
- Highlands Power Trail, including Waddamana Power Station
- Multi-day hikes such as the overland track, Tasmanian trail, labyrinth trail and Lake Antimony trail.
- Boating and fishing in Great Lake, Arthurs Lake and other lakes north of Bothwell.
- Whiskey distilleries at Lawrenny Estate (Ouse), Lower Marsh (Apsley), New Norfolk (in Derwent Valley) and Kempton (in Southern Midlands).
- The region has high tourism and visitor growth potential, primarily linked to the natural advantages of the area.
- The towns of Ouse, Hamilton and Bothwell all receive a high number of visitors travelling through and stopping over, particularly from self-drive camping and caravan visitors. These towns could perform a greater visitor servicing role.
- There is a high level of self-drive visitors that travel within and across the region, including a high proportion of caravan/RV's. There is a need to ensure that visitor preferences are being met through infrastructure, services and amenity.
- The Council owned and operated caravan parks in Bothwell and Hamilton are well utilised. There may be an opportunity to improve and/or expand the offering.
- Potential for greater activation and promotion of signature nature and water-based experiences, including hiking, camping, fishing, cycling and kayaking.
- There is an opportunity to support further development and investment in farm gate and agri-tourism.
- There is an opportunity to support further development and investment in visitor accommodation and hospitality offering.
- Destination functions and events are an effective way to attract visitors to the region. Supporting existing and new events that attract visitation and align with regional strengths should be encouraged.

- The heritage townships of Hamilton and Bothwell could seek to attract new visitor market segments such as higher yielding couples and families from Greater Hobart.

- There is a potential for Central Highlands to improve destination branding and increase destination awareness as a key region in central Tasmania.

STAKEHOLDER & COMMUNITY ASPIRATIONS

Bothwell's historic nature and connection to the sport of golf provides tourists with motivation to visit and stay within the town. The 'location' nature of the town provides a unique opportunity for tourists to "stopover" suggesting provisions for visitor accommodation and camping facilities are an area to be capitalised on.

THRIVING TOURISM SECTOR - OBJECTIVES & STRATEGIES

15. To enhance the visitor service role of Bothwell.

15.1 Consider provision of an EV charger.

15.2 Optimise towns for capturing the RV market by focusing on improving RV friendly infrastructure.

15.3 Consider expansion and upgrades to the Council-owned caravan parks in Bothwell, potentially expanding onto land used for the current tennis court if that is relocated to the Recreation Ground.

15.4 Add signage to the caravan park to allow for easy identification of location by visitors (Item 4 on Plan 031B).

15.5 Attract and encourage investment in new commercial accommodation.

15.6 Review wayfinding and tourist signage in Bothwell. Identify any gaps in the provision of wayfinding and tourist signs in strategic areas.

15.7 Encourage tourism and community events within and proximate to townships.

15.8 Review opening hours of visitor centre to ensure potential visitors to the region are welcomed (Item 18 on Plan 031B).

15.9 Upgrade the amenity of the intersection of Patrick and Queen Street. Consider implementation of footpaths, pedestrian refuges and landscaping (Item 10, Plan 031B).

16. To facilitate development of tourism attractors in the region.

16.1 Develop and implement a Destination and Tourism Action Plan in conjunction with local tourism operators.

16.2 Advocate for funding through relevant State and Federal Government streams to prepare a series of cultural, historical, and community events such as:

- Heritage walks and tours
- Community festivals and exhibitions

- Cultural and educational programmes
- Culinary trails
- Local ambassador programmes

16.3 Support growth in visitation related to signature water and nature-based attractions and activities, including hiking, bushwalking, fishing, boating, hunting and camping.

16.4 Attract and facilitate high quality tourism and hospitality operators to establish in Central Highlands.

16.5 Collaborate with Hydro Tasmania to provide linkages to the Hydro Power Trail.

16.6 Advocate for the conversion of heritage properties for tourism / hospitality uses in Bothwell.

16.7 Advocate for the re-opening of Nant Distillery north of Bothwell.

16.8 Support agri-tourism and farm-gate experiences on regional properties.

16.9 Establish a regular farmer's market, with direct to public sales.

16.10 Support new trail and mountain biking experiences in the region.

16.11 Encourage new tourism and community events to be held in the municipality.

16.12 Support heritage-based tourism opportunities that celebrate the built and natural heritage of Bothwell.

17. To improve activation and accessibility of the region's signature water and nature based assets.

17.1 Improve promotional and wayfinding signage across popular water and nature-based areas

17.2 Improve public access and activation of water and nature-based areas.

17.3 Review available community infrastructure such as seating, rubbish bins, and lighting, and enhance or upgrade as required (Item 2, Plan 031B).

17.4 Provide a walking trail along the river that links to key destinations within Bothwell (Item 24 in Plan 031B).

17.5 Maintain the attraction of the River Clyde by ensuring best-practice stormwater management guidelines are followed by key stakeholders, landowners and developers (Item 23, Plan 031B).

BOTHWELL TOWNSHIP STRUCTURE PLAN:

IMPLEMENTATION

IMPLEMENTATION

The Bothwell Township Structure Plan reviews three key themes and outlines 17 key objectives and associated strategies. These objectives have been tied to key actions to enable Council's practical application, namely:

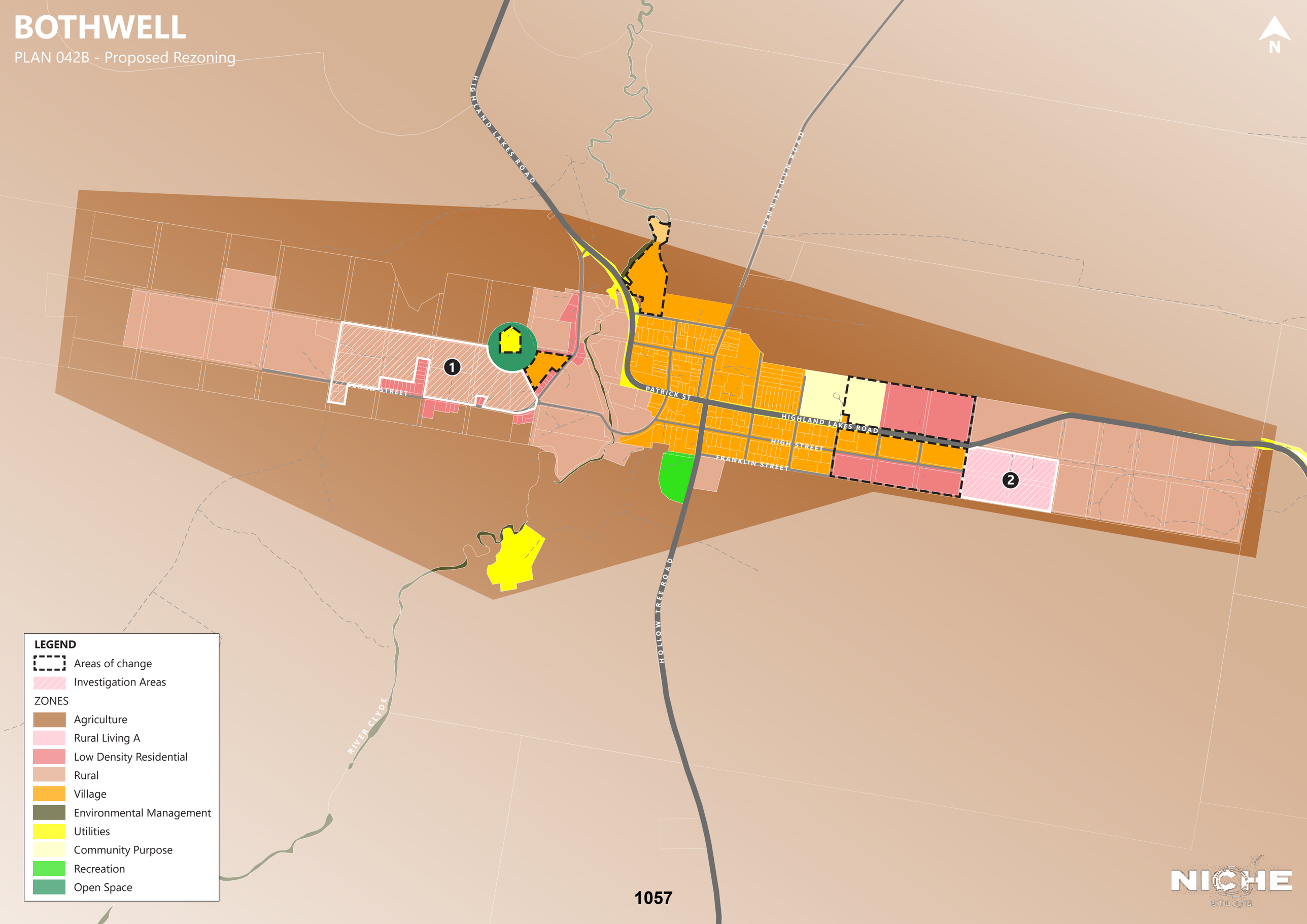
- Implement
- Advocate
- Facilitate

By recognising which strategies Council can implement directly, and which requires external intervention ensures the ongoing realisation of the Bothwell Township vision.

The following two pages illustrate spatial recommendations from the objectives and strategies. These have been tested with the community, working group and Councillors. The first illustrates recommended zoning upgrades to reflect growth projections and are a direct response to the three key themes. The community strongly voiced their desire for immediate upgrades to a number of existing facilities within the township area including footpaths, public park upgrades and public buildings. These are identified on the second plan.

BOTHWELL

PLAN 042B - Proposed Rezoning



BOTHWELL

PLAN 031B - Fine Grain Recommendations

RATHO FARM GOLF LINKS

MOUNT ADELAIDE

ADELAIDE STREET

WENTWORTH STREET

SCHAW STREET

LOGAN STREET

ARTHUR CRESCENT

RIVER CLYDE

ELIZABETH STREET

DENNISTOUN ROAD

QUEEN STREET

MARKET PLACE

GEORGE STREET

MICHAEL STREET

PATRICK STREET

HIGH STREET

MARY STREET

FRANKLIN STREET

HOLLOW TREE ROAD

BOTHWELL RECREATION GROUND

1058

N

RECOMMENDATIONS

1. Improve access and trail through Croaker's Alley
2. Streetscape improvements; bin required.
3. Address flooding at Schaw Street and add footpaths
4. Redo caravan park and add better signage
5. Add footpaths on Patrick Street to recreation reserve
6. Need stop signs at main intersection
7. Improve accessibility at Queen Street and Elders
8. Add roof on swimming pool and improve access
9. Relocate tennis courts to Bothwell Recreation Ground
10. Provide footpath and streetscape improvements
11. Consider closure of Queen Street to through traffic
12. Advocate to DoSG to straighten bends along Hollow Tree Road
13. Advocate to DoSG to upgrade road to Melton-Mowbray
14. Support upgrades to local retail premises
15. Add adult exercise machines in parks
16. Advocate for greater access to library services
17. Improve access to recreation centre, including upgraded pedestrian linkages from Bothwell and footpaths within recreation ground
18. Increase visitor centre open hours
19. Increase shading in recreation grounds
20. Retain churches and keep them open
21. Continue to remove willows from river
22. Add tree avenue on way into town
23. Implement management plans for ongoing river health
24. Add walking trail by the river
25. Add seating in parks
26. Investigate potential to expand aged care

LEGEND

- Sports Reserves
- Community Facilities
- Utilities
- Local Heritage Place Code Overlay
- Tasmanian Heritage Registered Areas
- Waterbodies
- Watercourses

NICHE STUDIO

PRIORITIES

To ensure successful implementation of the Bothwell Structure Plan, the following priorities and timeframes should be considered.

A = Advocate | I = Implement | F = Facilitate

Short Term = 3 years | Medium Term = 5 -10 years | Long Term = 10+ years

A SUSTAINABLE, LIVEABLE TOWN			**SHORT**	**MEDIUM**	**LONG**
1.1	To celebrate the existing character of Bothwell				
	Advocate/ Facilitate	Continue to support the operation of the Ratho Farm Golf Course and the Australian Golf Museum to celebrate Bothwell's rich golf history, including an improved pedestrian link between the two.	Ongoing		
	Implement	Continue to maintain Council-owned heritage buildings, ensuring preservation of their unique character and contribution to the town's existing built form.	Ongoing		
	Facilitate	Encourage the retention of historically important buildings no longer needed for their original purpose by utilising their space for town community festivals and events, or for appropriate re-use by the private sector that respects heritage values and includes a level of public access.	Ongoing		
	Implement	Continue to promote and enforce the design criteria contained within the Central Highlands Local Provisions Schedule for the Bothwell Heritage Precinct that seeks to retain and amplify the characteristics of the existing built form.	Ongoing		
	Facilitate	Support proposals in Bothwell that propose renovation or re-purposing of privately owned heritage buildings.	Ongoing		
	Implement	Investigate provision of Design Guidelines for Bothwell that complement the statutory provisions of the Central Highlands Local Provisions Schedule. These may include images,			

			SHORT	MEDIUM	LONG
		diagrams and frequently asked questions in everyday language to assist the community in understanding the requirements of the Bothwell Heritage Precinct.			
	Implement	Consider identification of iconic scenic landscapes of the Central Highlands municipality, and whether protection of these landscapes is feasible within the Central Highlands Local Provisions Schedule. These landscapes may include sections of Highlands Lake Road and Hollow Tree Road.			
	Implement	Rezone Mount Adelaide to part utility, as shown on Plan 042B, to reflect location of TasWater infrastructure and land use.			
1.2	To retain existing local residents within the township				
	Facilitate	Support new residential development proposals in Bothwell to increase housing supply and provide greater housing choice for existing and new residents.			
	Advocate	Advocate for State Government funding to assist the implementation of additional recreational and social facilities, as well as infrastructure projects to improve the safety and walkability of the town.			
	Implement	Implement recommendations from Bothwell Flood Study (2023), including initiation of a Planning Scheme Amendment for land in Bothwell requiring identification of flood prone area.			
1.3	To attract new residents to the township				
	Implement	Rezone land parcels as indicated on Plan 042B to Village Zone and Low Density Residential Zone to facilitate availability of serviced land for development of diverse housing typologies.			
	Facilitate	Support private development that provides a diversity of housing typologies that promote a mixture of demographics such as individuals, young families, and elderly.	Ongoing		
	Advocate	Advocate for funding to prepare a Resident Attraction Strategy to attract new residents to live in the municipality, focusing on attracting young and middle aged working families.			

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
	Implement	Promote lifestyle and affordability advantages of Central Highlands through the use of marketing campaigns that attract new residents to live and work in the municipality that: • Target younger demographics through the use social media platforms to showcase community life and local attractions. • Undertake a renewal of the existing Central Highlands website to create a user-friendly interface that showcases important information on housing, community facilities, and upcoming community events. • Create advertisement campaigns that highlight the attractiveness of living within the Central Highlands region and promotes the affordability of home ownership within Bothwell. • Create partnership programmes with local real estate companies to showcase existing and future available properties and promote the benefits of rural living.			
	Implement	Investigate feasibility of future housing provision and township growth at Investigation Areas 1 and 2 on Plan 042B.			
	Advocate	Advocate to the Department of State Growth for a business case to support establishing a bus network between towns in the Central Highlands and to larger service centres.			
1.4	To identify gaps in key social and community services such as health, education and aged care.				
	Implement	Rezone the entire parcel of land with Bothwell District High School to Community Purpose (as shown on Plan 042B).			
	Advocate	Advocate to the State Government to ensure the sustained operation of Bothwell District High School.			
	Facilitate	Support with Department for Education, Children and Young People the opening of an out of school hours care service co-located with the school. This facility could be expanded to offer long daycare to the 0-5 age group.			

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
	Implement	Reflect the outputs of the communities future educational needs by implementing actions outlined in the Bothwell District High School Future Needs survey.			
	Facilitate	Investigate feasibility of opening childcare services through provision of funding, supporting community based childcare models, facilitating re-use of existing buildings, assistance with grant applications, or attracting a service provider, as a short term solution.			
	Implement	Consider provision of subsidised long daycare services in a purpose-built facility, potentially co-located with Council-owned aged care facility as a medium and long term solution (Item 26 on Plan 031B).			
	Facilitate/ Advocate	Continue to support provision of library services to the community including hours and service provision that meet community needs (Item 16 in Plan 031B)	Ongoing		
	Implement	Ensure community infrastructure funding sourced from renewable energy operators is utilised to meet established community and infrastructure needs in Bothwell.			
	Implement	Support provision of a community Makers Shed			
	Implement	Investigate provision of Youth programs and activities.			
	Implement	Review swimming pool access by the community and determine whether usage would benefit from upgrades (Item 8, Plan 031B) such as: • Accessibility upgrades • External cover (roof) • Opening hour changes			
1.5	To prioritise existing and future community needs.				
	Facilitate	Ensure future housing and growth is located in serviced areas.	Ongoing		

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
	Implement	Adopting a new policy ensuring developers contribute proportionally to the cost of any required infrastructure upgrades considered necessary to facilitate future development.			
	Implement	Investigate potential infrastructure bottlenecks that may be blocking areas of the town from being developed due to the 'first mover pays' policy of some major infrastructure providers, and investigate the feasibility implementing a pro-active strategy to resolve such impasses.			
	Facilitate	Investigate the feasibility of using existing community buildings or Council-owned land in Bothwell for child care services.			
	Implement	Develop a detailed streetscape/townscape plan to: • Determine where upgrades are required to the public realm. • Investigate whether current heritage provisions are appropriate and whether design guidelines are required.			
	Implement	Upgrade footpaths as required to deliver a connected pedestrian network through Bothwell, including: • Link the Bothwell Recreation Ground to Patrick Street (Item 5 on Plan 031B). • Address drainage and footpath upgrades on Schaw Street, as future development requires, (Item 3 on Plan 031B). • Upgrades to Croaker's Alley (Item 1 on Plan 031B). • Maintenance of footpath on Queen Street (Item 7 on Plan 031B).			
	Implement	Undertake a Community Needs Assessment.			
	Advocate	Advocate for provision of community services as identified as lacking in the Bothwell Structure Plan and Community Needs Assessment.			

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
	Implement	Utilise funding provided by renewable energy operators to fulfil community services as defined in the Community Needs Assessment.			
	Implement	Undertake an Integrated Transport Strategy for Central Highlands, focusing on improvements to active transport networks, identifying gaps in transport linkages, upgrades required to increase efficiency, sustainability and safety and focus on creating a connected municipality.			
	Implement	Provide a pedestrian footbridge over the river adjacent to existing traffic bridge, linking the historic golf course and tourist attraction of Ratho to Bothwell township.			
	Implement	Investigate feasibility of a walking trail on the western side of the River Clyde linking Bothwell to Ratho, Thorpe Mill and Nant Distillery.			
	Implement	Provide a walking trail from Bothwell Town up Mount Adelaide to the lookout and access to the open space.			
	Implement	Consider a traffic study, with State Government support, to determine if traffic calming and slowing interventions are required, such as stop signs at intersections (Item 6 on Plan 031B).			
	Facilitate	Support development proposals that aim to fulfil under-served needs within Bothwell.	Ongoing		
1.6	To deliver a comprehensive Settlement Strategy and Structure Plan that promotes a sustainable and liveable town.				
	Implement	Ensure the Central Highlands Settlement Strategy and Structure Plans consider the following: • Need for adequate Village Zone land supply that is available and 'development ready' to accommodate new housing in Bothwell. • Need to diversify the housing stock to support changing demographic needs and preferences, especially older/ageing residents. • Partner with aged care and social housing providers in projects to increase the housing stock for these groups.			

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
		• Direct housing growth to Bothwell. • Encourage an increase in the number of rental properties available. • Addressing viability challenges that present barriers to residential development and housing growth in Bothwell.			
	Implement	Implement the Bothwell Structure Plan as outlined in the implementation plan.			
	Implement	Review Implementation of the Bothwell Structure Plan periodically to ensure timelines and action items are achieved.	Ongoing		

1.7	To ensure the provision of adequate open space				
	Implement	Review the provision of open space within the municipality.			
	Implement	Produce an Open Space Strategy.			
	Implement	Consider development of a "Greening the Streets" Strategy to: • Extend the formal tree avenues to the eastern entrance of Bothwell, and westwards from Croakers' Alley entry to the traffic bridge. (Item 22 on Plan 031B) • Increase shading at recreation grounds and public open space (Item 19 on Plan 031B). • Explore additional areas of Public Realm for greening.			
	Implement	Upgrade and expand community infrastructure in parks and open spaces, such as seating, rubbish bins, water fountains (Item 25 on Plan 031B).			
	Implement	Relocate tennis courts to the recreation precinct at Hollow Tree Road to create an active recreation hub (Item 9 on Plan 031B) and allow existing tennis court site to be used for additional caravan / motor home parking.			
	Implement	Add community adult exercise equipment to recreation spaces (Item 15 in Plan 031B).			

	Implement	Continue to remove declared weeds, including the invasive willow species from river banks (Item 21 in Plan 031B).	Ongoing		
	Implement	Investigate the potential of consolidating all riverfront land on the western bank of the River Clyde south of Patrick Street to public ownership. This could provide a large area of public open space.			
	Implement	Investigate the potential to provide an off-leash dog exercise area.			

A PRODUCTIVE, RESILIENT ECONOMY			SHORT	MEDIUM	LONG
2.1	To grow and foster employment opportunities unique to the area, reflecting the individuality of the location.				
	Advocate	Encourage the growth of employment opportunities by supporting the development of new commercial facilities that offer a unique but in-demand need for the community.	Ongoing		
	Advocate	Advocate to State Government for sufficient funding to ensure the ongoing operation of community facilities such as Bothwell District High School, Bothwell Police Station, and Bothwell Fire Brigade.			
	Facilitate/Advocate	Collaborate with renewable energy providers to identify opportunities in the region for future employment and training.			
	Advocate	Consider advocating to Skills Tasmania for support in establishing a Vocational Education and Training hub in Central Highlands focused on agriculture and the renewable energy industry.			
	Advocate	Advocate to the Department of Natural Resources and Environment for investment in pilot innovative niche agriculture projects in the region.			
	Facilitate	Encourage and support the development of cottage industries, such as local food-based businesses.	Ongoing		
	Facilitate	Support the development of home-based businesses, including the provision of in-home licensed daycare.	Ongoing		
2.2	To sustainably grow the value of the existing agriculture sector.				
	Advocate	Advocate for ongoing improvements and upgrades to regional irrigation schemes that are fundamental to the agriculture and horticulture sectors.	Ongoing		
	Facilitate	Encourage and support young farmers in the region.	Ongoing		

A PRODUCTIVE, RESILIENT ECONOMY			SHORT	MEDIUM	LONG
	Advocate	Support and enhance highly specialised agriculture activities, especially within irrigated areas in Central Highlands.	Ongoing		
	Advocate	Support agricultural supply-chain and rural service activities to establish in suitable locations in Central Highlands.	Ongoing		

2.3	To advocate for the sustainable growth of new agricultural opportunities.		
	Advocate	Encourage intensive and high value activities within irrigated areas.	
	Facilitate	Facilitate the promotion of agricultural opportunities to industry. These may include: • Export market opportunities; • Domestic market opportunities; • Information around innovation and technology in the agriculture sector that could be harnessed; • Off-farm income opportunities; • Value-add opportunities.	Ongoing
	Facilitate	Facilitate and participate in an annual roundtable event for local agriculture industry representatives. Discussion points should include: • Current challenges/barriers to industry growth; • Accommodation options for full-time employees and seasonal workers; • Provision of required community services such as child care to attract staff; • Opportunities for industry growth; and • Research and innovation.	Ongoing

2.4	To actively support the development of renewable energy and green infrastructure projects.				
	Advocate	Attract renewable energy projects to develop in the proposed Central Highlands Renewable Energy Zone.			
	Advocate	Advocate to landowner of large agricultural holdings to consider the opportunities of sustainable and/or renewable energy production and green infrastructure.			
	Advocate	Advocate to landowners of large agricultural holdings within the proposed REZ to consider the opportunities of Agri-solar development.			
	Advocate	Advocate for and support new investment in commercial and industrial activities that serve the renewable energy project supply-chain.	Ongoing		
	Facilitate/ Implement	Facilitate the attraction and retention of workers associated with the renewable energy and green infrastructure industry by: • Implementing programs that subsidise key workers accommodation associated with local renewable and green infrastructure projects. • Supporting development that offers a variety of housing typology including medium density development to encourage demographics such as young professionals to move to Bothwell. • Implementing and supporting programs that provide and subsidise key community services such as childcare and medical. • Investigate opportunities for co-working spaces to encourage the attraction of small businesses and digital nomads associated with local renewable and green infrastructure projects.			
	Advocate	Advocate for ongoing improvements and upgrades to hydro schemes and projects (e.g. Tarraleah).	Ongoing		
	Advocate	Advocate for a mechanism to collect community infrastructure funding from renewable energy operators.			

	Facilitate	Facilitate the apportioning of community infrastructure funding to meet needed services and infrastructure in Bothwell.	Ongoing
	Facilitate	Support the rezoning of land to facilitate energy intensive industrial and business uses co-located with the Cellars Hill Wind Farm and Weasel Solar Farm	
	Facilitate	Encourage industrial land uses to locate within the Weasel Plains precinct, outside Bothwell and with good connection to existing infrastructure.	
	Facilitate	Support community-led renewable energy projects in the municipality and other green initiatives. Projects should consider capacity building and social inclusion across the community and seek to reduce energy costs. These may include provision of infrastructure such as residential solar panels rather than provision of monetary rebates on power bills.	Ongoing
	Advocate	Support provision of short-stay workforce accommodation.	Ongoing

2.5	To support the growth of local industrial and innovation opportunities.				
	Facilitate	Liaise with renewable energy project proponents as they arise (e.g. hydro, wind, solar, battery projects).	Ongoing		
	Facilitate	Investigate industrial land requirements to facilitate projected growth of renewable energy sector.			
	Implement	Seek to minimise visual amenity, agricultural and environmental impacts of renewable energy projects.	Ongoing		
	Implement	Seek to collect funds from proponents and re-distribute for community projects and initiatives that improve liveability and socioeconomic outcomes.	Ongoing		
2.6	To improve existing digital and transport infrastructure.				
	Advocate	Advocate for relevant road improvements and upgrades to ensure efficient and safe vehicle movements across the municipality, specifically: • Linkages to Melton-Mowbray and greater Hobart (Item 13 on Plan 031B). • Straighten bends in Hollow Tree Road (Item 12 on Plan 031B).			
	Advocate	Advocate for improved digital infrastructure, including internet coverage, speeds and reliability.	Ongoing		
	Implement	Ensure that developers contribute proportionally to any required upgrades to transport infrastructure considered necessary for successful development.			
	Facilitate	Investigate, with Elders, an improved traffic solution for large trucks accessing the Elders yard off Queen Street.			
2.7	To encourage the growth of existing and new retail and commercial services.				
	Facilitate	Encourage retail/commercial premises to remain as such.	Ongoing		
	Advocate	Attract new retail and commercial businesses to establish in Bothwell.	Ongoing		

	Facilitate	Support growth and development of existing retail and commercial businesses (Item 14 in Plan 031B)	Ongoing

A THRIVING TOURISM SECTOR			SHORT	MEDIUM	LONG
3.1	To enhance the visitor service role of Bothwell				
	Implement	Consider provision of an EV charger.			
	Implement/ Facilitate	Optimise towns for capturing the RV market by focusing on improving RV friendly infrastructure.	Ongoing		
	Implement	Consider expansion and upgrades to the Council-owned caravan parks in Bothwell, potentially expanding onto land used for the current tennis court if that is relocated to the Recreation Ground.			
	Implement	Add signage to the caravan park to allow for easy identification of location by visitors (Item 4 on Plan 031B).			
	Facilitate	Attract and encourage investment in new commercial accommodation.			
	Implement	Review wayfinding and tourist signage in Bothwell. Identify any gaps in the provision of wayfinding and tourist signs in strategic areas.			
	Advocate	Encourage tourism and community events within and proximate to townships.	Ongoing		
	Implement	Review opening hours of visitor centre to ensure potential visitors to the region are welcomed (Item 18 on Plan 031B).			
	Implement	Upgrade the amenity of the intersection of Patrick and Queen Street. Consider implementation of footpaths, pedestrian refuges and landscaping (Item 10, Plan 031B).			
3.2	To facilitate development of tourism attractors in the region.				
	Advocate/ Implement	Develop and implement a Destination and Tourism Action Plan in conjunction with local tourism operators.	Ongoing		

A THRIVING TOURISM SECTOR			SHORT	MEDIUM	LONG
	Advocate	Advocate for funding through relevant State and Federal Government streams to prepare a series of cultural, historical, and community events such as: • Heritage walks and tours • Community festivals and exhibitions • Cultural and educational programmes • Culinary trails • Local ambassador programmes	Ongoing		
	Facilitate	Support growth in visitation related to signature water and nature-based attractions and activities, including hiking, bushwalking, fishing, boating, hunting and camping.	Ongoing		
	Facilitate/ Advocate	Attract and facilitate high quality tourism and hospitality operators to establish in Central Highlands.	Ongoing		
	Facilitate	Collaborate with Hydro Tasmania to provide linkages to the Hydro Power Trail.			
	Advocate	Advocate for the conversion of heritage properties for tourism / hospitality uses in Bothwell.			
	Advocate	Advocate for the re-opening of Nant Distillery north of Bothwell.			
	Facilitate	Support agri-tourism and farm-gate experiences on regional properties.	Ongoing		
	Facilitate	Establish a regular farmer's market, with direct to public sales.			
	Facilitate	Support new trail and mountain biking experiences in the region.			
	Advocate	Encourage new tourism and community events to be held in the municipality.			
	Facilitate	Support heritage-based tourism opportunities that celebrate the built and natural heritage of Bothwell.			

A THRIVING TOURISM SECTOR			SHORT	MEDIUM	LONG
3.3	To improve activation and accessibility of the region's signature water and nature based assets.				
	Implement	Improve promotional and wayfinding signage across popular water and nature-based areas			
	Implement	Improve public access and activation of water and nature-based areas.			
	Implement	Review available community infrastructure such as seating, rubbish bins, and lighting, and enhance or upgrade as required (Item 2, Plan 031B).			
	Implement	Provide a walking trail along the river that links to key destinations within Bothwell (Item 24 in Plan 031B).			
	Implement	Maintain the attraction of the River Clyde by ensuring best-practice stormwater management guidelines are followed by key stakeholders, landowners and developers (Item 23, Plan 031B).	Ongoing		

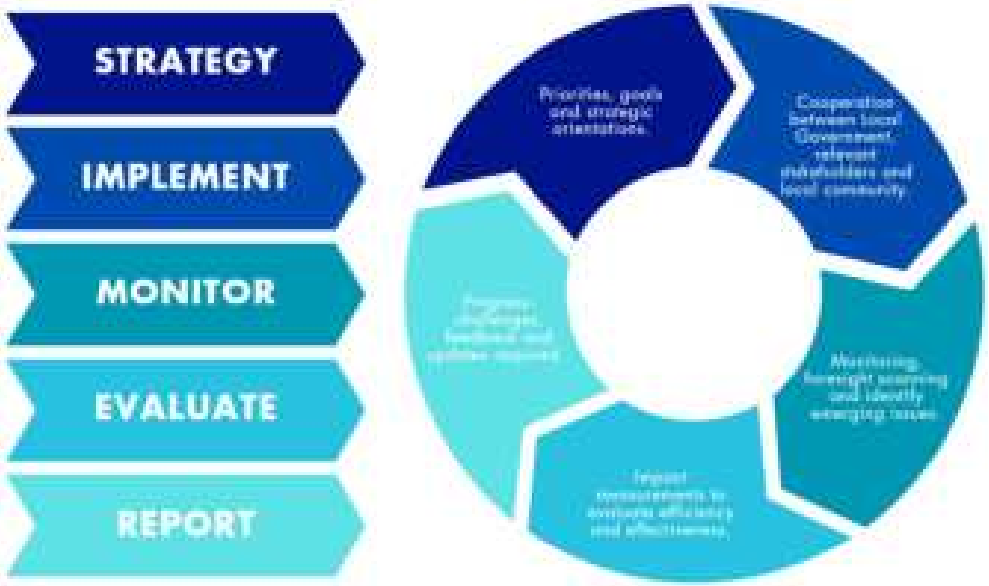
MONITORING

The Bothwell Township Structure Plan should be reviewed **every five years** to ensure the vision and key objectives are reflected in the ongoing development of the precinct. Similarly, as the township changes over time, the Structure Plan should be reviewed to ensure the vision and key objectives reflect the needs and preferences of the local community.

It is recommended that a review of the Bothwell Township Structure Plan vision and key objectives against the Central Highlands Planning Scheme is undertaken every **five years** to ensure that the Scheme and the Structure Plan are aligned.

Further, it is recommended that the Bothwell Township Structure Plan is reviewed in **fifteen years** to ensure that the vision and key objectives are still reflective of the existing community preferred strategic direction.

The following policy cycle highlights the key phases of implementing a strategic plan. Community consultation should be undertaken at each phase, with participation from a diverse representation of the community encouraged.



BOTHWELL TOWNSHIP STRUCTURE PLAN:

APPENDICES

APPENDIX A: Background Report

APPENDIX B: Consultation Summary Report

APPENDIX C: Economic Analysis

APPENDIX D: Central Highlands Council, Socio-Economic Futures: A strategic, dynamic analysis & directions, by Creating Preferred Futures (2025)

CENTRAL HIGHLANDS

HAMILTON TOWNSHIP STRUCTURE PLAN



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Central Highlands Council acknowledges and pays respect to the Tasmanian Aboriginal Community as the traditional and original owners and continuing custodians of this land and acknowledge and pay respect to Elders, past, present and emerging.



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INTRODUCTION – CENTRAL HIGHLANDS

Central Highlands Council, located in central Tasmania between the State's two major cities of Hobart and Launceston, has begun to experience significant change with growing employment, an ageing population and an increasing demand for housing. The area offers competitive employment and economic advantages in agriculture, tourism, electricity supply and emerging renewable energy opportunities. This unique economic environment is underpinned by the local environment, natural assets and resources. These forces are generating new imperatives to critically reflect on how best to ensure the resilience and liveability of each of the regional townships within the municipality.

Geographically, Central Highlands is one of the largest municipalities in Tasmania, covering around 12% of the state's land area (8,010 square kilometres). Conversely, Central Highlands is the least densely populated local government area in Tasmania, with around 2,520 residents.

Central Highlands Council recognised the need for holistic strategic planning to guide future preferred development for three key towns within the municipality of Bothwell, Hamilton and Ouse. These towns play vital roles in providing essential services, accommodation options, and acting as gateways for visitors who wish to explore the natural beauty and heritage of the Central Highlands region of Tasmania.

Recent public notification of the Central Highlands Draft Local Provisions Schedule resulted in substantial feedback and representations from the community. Whilst some representations highlighted potential rezoning issues in the townships, feedback has particularly emphasized the need for strategic land use planning exercises in these townships.



GROWTH & EVOLUTION OF OUR REGION

In addition to the adoption of a new Local Provisions Schedule at a municipal level, in 2024 a state government planning review of the Southern Tasmania region was initiated in the form of the Southern Tasmania Regional Land Use Strategy (STRLUS). This strategy is intended to provide a long-term plan for managing growth and change in Southern Tasmania over the next 25 years, whilst protecting our natural environment.

The intention is that detailed structure planning exercises undertaken within each of the municipalities, such as Central Highlands, will feed into the STRLUS review and guide the ongoing evolution of townships such as Hamilton.

Accordingly, the specific strategic direction for each township, outlining a vision, existing assets, challenges, and a future plan for service and infrastructure delivery needs to be reviewed and updated. Strategic thinking is necessary to determine how to best balance investment across those towns with projected growth, while ensuring communities have fair access to the facilities and services necessary for liveability.

To do this, it is important to understand how each community uses the facilities in their town, what they need and value, and how/where they access services not available locally.

This approach will ensure the individual towns are as self-contained as possible while also supporting the towns to function in a broader network supporting the provision of housing, employment, tourism opportunities and key community infrastructure to ensure the wellbeing of residents for years to come.

As such, the Hamilton Township Structure Plan will provide key guidance to both the State Government and Council enabling Central Highlands to advocate, facilitate and/or implement recommendations around funding, community infrastructure, tourism and housing investment.



PLANNING FOR GROWTH - HAMILTON

Hamilton is located approximately 73km northwest of Hobart. While Hamilton's population is relatively small (241 people as of 2021 Census data), it serves as an administrative and service centre for surrounding rural areas, offering a post office, café, pub and Council offices.

Hamilton is a historic Georgian sandstone village, located beside the River Clyde. The charm of the heritage buildings is enhanced by the beauty of the natural environment. The Platypus Walk is a recently revegetated and upgraded walk along the River Clyde, offering easy access to some of the beautiful scenery of the Derwent Valley.

Initial considerations for the Hamilton study area included:

- Potential rezoning of land, and consideration of current zoning provisions.
- Opportunities to enhance and strengthen the tourism potential of Hamilton.
- Useability, efficiency and safety of the movement network for residents and visitors, particularly pedestrian and cyclist linkages.
- Addressing pedestrian safety on the Lyell Highway
- Access to recreational spaces and facilities.
- The potential to upgrade and/or expand the camping ground.
- The infrastructure and servicing requirements of the town, especially the capacity and location of the current sewerage treatment plant.
- Communications and television blackspots.

The Hamilton Structure Plan has been developed by Niche Studio for Central Highlands Council (CHC) with the assistance of Urban Enterprise, Entura, relevant government agencies, service authorities, major stakeholders and, critically, the local community.

The report has been prepared in accordance with the current *Tasmanian Planning Scheme – Central Highlands Local Provisions Schedule (2023).*

The Structure Plan sets out the overarching themes to guide future development and growth within the township of Hamilton. Objectives and strategies designed to enhance economic development opportunities, plan for aspirational growth rates and protect and enhance the historic character of Hamilton are outlined as logical conclusions to the detailed opportunity and constraint analysis conducted.

To guide the Central Highlands municipality in setting an aspirational economic vision for the future, Council commissioned an independent socio-economic analysis. This report supports the directions outlined by Urban Enterprise and proposes targeted future actions to facilitate the aspirational growth needed to ensure Central Highlands becomes a revitalised, sustainable community into the future. The report, *Socio-Economic Futures: A strategic, dynamic analysis & directions*, has been appended.

HAMILTON

PLAN 003B - Study Area

N

NORTH STREET
BOOMER ROAD
RIVER CLYDE
LINNET STREET
LYELL HIGHWAY
FRANKLIN PLACE
BLACK GULLY CREEK
PONSONBY STREET
CHURCH CREEK
UPPER MILL ROAD
MOUNT ROAD
HAMILTON PLAINS ROAD

THE WORK WE ARE BUILDING ON

In developing a Structure Plan for Hamilton, Niche completed a range of background investigations across the project to ensure that a thorough investigation into the opportunities and constraints of the town was made.

Phase 1 included an analysis of the physical opportunities and constraints of the study area.

A background review of relevant policy and strategy documents was also conducted, serving to ground the Structure Plan in a current regional context. The background report is attached as Appendix 1.

Initial targeted community consultation with selected community organisations and key stakeholders was also undertaken in Phase 1. These conversations were designed to highlight current issues facing the region and draw out themes and opportunities as seen by local community members. Input from key government agencies was also invited, as servicing and infrastructure provision plays an important role in growth and development.

Phase 2 focused on engaging the community and building a collaborative vision for the future of Hamilton. Niche developed a comprehensive understanding for the region and the elements of the built and natural environment valued by the community. The community workshopped potential improvements for Hamilton across six main themes, as detailed further in this Structure Plan.

Four key types of community consultation were undertaken to inform the preparation the Structure Plan, in the form of online surveys and communication, intercept surveys, visioning workshop, and targeted one-on-one discussions. A detailed discussion of the consultation undertaken, together with the findings that arose, can be found in the Community Consultation Summary Report, appended to this report.

Phase 3 required Niche to collate and investigate the themes arising from background analysis and community consultation, in conjunction with priorities and aspirations as set by Council and considering State-level guidelines as set out by the Southern Tasmanian Regional Land Use Strategy (STRLUS).

This has culminated in the Structure Plan as stepped through in the following report.

RESEARCH

Conduct work internally and with expert consultants to research the local place, including the planning context, with the goal of understanding the environment which we are looking to contribute to.

LISTEN & LEARN

Conduct authentic community and stakeholder engagement, listening to feedback and ideas with the goal of learning about what matters to locals.

DESIGN EXCELLENCE

Through a robust analysis process, understand and achieve 'design excellence' for urban planning and design with the goal of raising the bar for placemaking in the area.

THE TOWNSHIP OF HAMILTON

A detailed analysis of existing constraints and potential opportunities was conducted as part of Phase 1 of the Structure Plan project, including review of current planning-related reporting, documentation and policy applicable to the Central Highlands municipality.

Mapping existing constraints, including current zoning, hazards, environmental considerations and servicing within the study area has been used to inform development of the Hamilton Structure Plan, and these are described in detail in the following sections.

Building on the mapped constraints, an in-depth investigation of economic drivers, demographics and housing was conducted by Urban Enterprise. The major findings from the economic analysis centred around the aging population of the municipality as compared to the population of greater Tasmania. This then has flow-on effects to the local economy, community infrastructure needs and housing requirements. Accentuating the unique needs of the municipality is the pressure that a large number of holiday homes and shacks, and a largely transient workforce employed in the renewable energy sector place on the municipality – requiring services that cannot be supported by the year-round resident population of Central Highlands.

If required services and facilities are absent from an area, it can be difficult to attract new residents. Conversely, if population growth remains low, it is difficult to attract the required development that would support population growth. However, the lifestyle and affordability advantages in the region, coupled with the commuting distance to greater Hobart, represent opportunities that could be capitalised on to build improved resident populations.

The needs and expectations of an aging population for a liveable, inviting place are different to those of young families or working age residents, and this in turn presents opportunities and challenges for Hamilton and the municipality at large.

LAND USE

The main core of the town fronting Lyell Highway/Franklin Place is zoned Village, with some lots of Open Space fronting the River Clyde through the township.

The main road and sewerage treatment facility, and the waste management facility and quarry on the corner of Mount Road and Hamilton Plains Road are zoned Utilities.

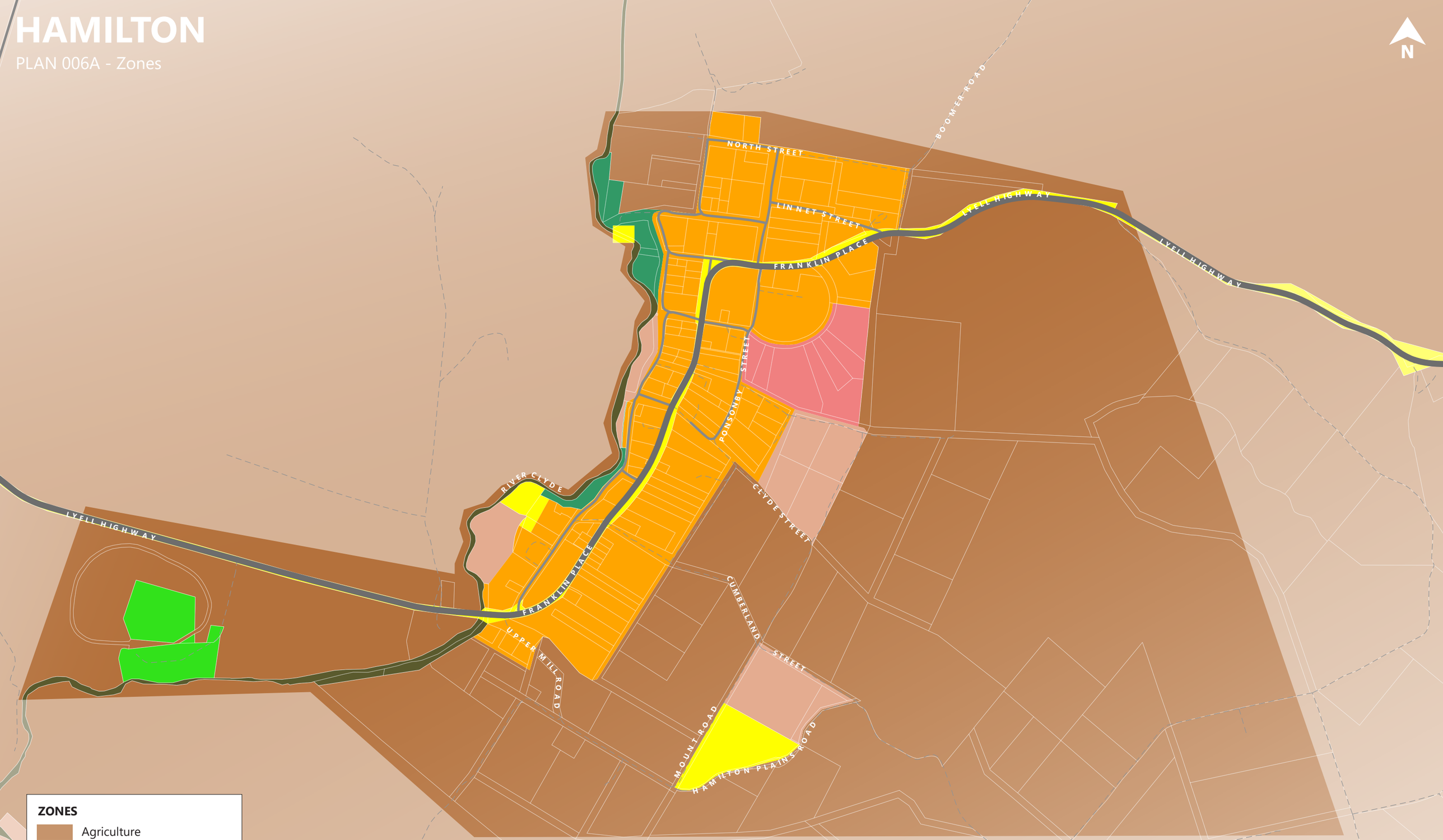
There are a few lots of land zoned Rural, and a pocket of land zoned as Low Density Residential on the land behind St Peter's Anglican Church.

The Hamilton township is surrounded by land zoned Agriculture. There is a small pocket of land zoned for Recreation at the Showgrounds to the west of the study area along the Lyell Highway.



HAMILTON

PLAN 006A - Zones



MOVEMENT

The Lyell Highway is the main road through Hamilton, connecting the town to New Norfolk to the south-east, and Ouse and Queenstown to the north-west. The Lyell Highway is maintained by the Department of State Growth, who are responsible for any required upgrades. A network of minor local roads gives Hamilton a semblance of a grid network, oriented around the Lyell Highway. Unsealed local “back roads” connect to this grid network and the Lyell Highway.

There is one bridge over the River Clyde for vehicles on the Lyell Highway. A school bus is available to transport students to New Norfolk. No public transport is available in the town.

There are no dedicated bicycle routes in Hamilton.



HAMILTON

PLAN 009A - Movement

N

NORTH STREET
LINNET STREET
FRANKLIN PLACE
PONSONBY STREET
BOOMER ROAD
LYELL HIGHWAY
RIVER CLYDE
CLYDE STREET
UPPER MILL ROAD
MOUNT ROAD
HAMILTON PLAINS ROAD

LEGEND

- Arterial Roads
- Local Roads
- Tracks and Trails
- Bridges
- School Bus Route (to New Norfolk)
- School Bus Stop
- Waterbodies
- Watercourses

Note: No dedicated bicycle routes available.

HAZARDS

Aside from the central core of some lots along Lyell Highway, the remainder of the study area is considered to be Bushfire Prone. This has implications in dwelling design and construction, together with requirements for vegetation management in this area. Given adjacent land use tends to be agriculture, focused on cropping, the bushfire risk when assessed by a suitably qualified person is generally adjudged minimal.

The siting of Hamilton, on the downslope of a hill next to the River Clyde leaves most of the eastern section of the study area vulnerable to landslip hazard.

No formal flood mapping is available for Hamilton, although the River Clyde runs adjacent to the town, and the open space on the eastern bank of the river is inundated during times of high water levels.



HAMILTON

PLAN 012A - Hazards

N

NORTH STREET
BOOMER ROAD
LINNET STREET
FRANKLIN PLACE
LYELL HIGHWAY
PONSONBY STREET
RIVER CLYDE
CLYDE STREET
LYELL HIGHWAY
FRANKLIN PLACE
UPPER MILL ROAD
MOUNT ROAD
HAMILTON PLAINS ROAD

LEGEND

- Bushfire Prone Areas
- No Bushfire Risk
- Landslip Hazard
- Waterbodies
- Watercourses

1100

NICHE STUDIO



PHYSICAL & NATURE BASED FEATURES

Hamilton is located on the lower slopes of nearby hills, and the eastern bank of the River Clyde.

Notably, the Threatened Native Vegetation Community of Riparian Scrub occurs along the River Clyde. This vegetation community is between 2-5m in height and can also be found around Lake Meadowbank.

This vegetation community is important as it increases required fauna habitat and improves water quality by reducing run-off.

The western banks of the River Clyde have been cleared and replaced with pasture, willow and/or other exotic species. This is detrimental to the ecology of the river system and can have flow-on effects with an increase in flooding risk and severity.

HAMILTON

PLAN 015A - Physical and Nature Based Features

N

NORTH STREET
LINNET STREET
FRANKLIN PLACE
BOOMER ROAD
LYELL HIGHWAY
PONSONBY STREET
CLYDE STREET
RIVER CLYDE
UPPER MILL ROAD
MOUNT ROAD
HAMILTON PLAINS ROAD

34

LEGEND

- Threatened Native Vegetation Communities
- 34 Riparian Scrub

CODE OVERLAYS

- Priority Vegetation
- Waterway and Coastal Protection Area

TASVEG 4.0

- Native Grassland
- Dry Eucalypt Forest and Woodland
- Non Eucalypt Forest and Woodland
- Scrub, Heathland and Coastal Complexes
- Other Natural Environments

NICHE STUDIO

SERVICING & INFRASTRUCTURE

The majority of land zoned Village is serviced with town water. Village zoned land on the eastern bank of the River Clyde has access to reticulated sewerage; no land on the western bank has access to reticulated sewerage as it is a currently operational large farming allotment.

Attenuation areas for odour are present around the sewerage treatment facility and the waste disposal site.

The community has requested that the sewerage treatment facility be relocated, but TasWater has flagged that this is not a consideration and the current location and functioning of the plant is more than adequate to cater for existing demand and future population growth. The supply of new residential lots is hampered by the 'first mover pays' infrastructure provision policy of several major infrastructure providers, which can effectively lock up some areas behind infrastructure bottlenecks.



HAMILTON

PLAN 018B - Servicing and Infrastructure

N

NORTH STREET

LINNET STREET

FRANKLIN PLACE

PONSONBY STREET

BOOMER ROAD

LYELL HIGHWAY

CLYDE STREET

RIVER CLYDE

1

FRANKLIN PLACE

UPPER MILL ROAD

MOUNT ROAD

HAMILTON PLAINS ROAD

LEGEND

- Water Mains
- Sewer Systems Area
- Sewer Mains
- Sewer Pressurised Mains
- 1 Sewer Treatment Plants
- Sewer Pump Stations

CODE OVERLAYS

- Electricity Transmission Corridor
- Inner Protection Area
- Attenuation Area (from Disposal Site)
- Attenuation Area (from Sewage Treatment Lagoon)

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COMMUNITY FACILITIES, CHARACTER & HERITAGE

Hamilton is a small rural village with a collection of well-preserved historic sandstone buildings, retaining a peaceful country feel.

The Tasmanian Heritage Register lists 25 places of heritage significance in Hamilton. These include cottages, the Hamilton hotel and stables, the Old Post Office, the School House, St Peter's Church and Cemetery, and the Council Chambers and Cottage. The Hamilton Heritage Centre occupies the Old Warder's Cottage and consists of a two-roomed cottage with displays, church records and farm and household items.

The majority of the Village Zone within Hamilton is also subject to a local Heritage Precinct Code Overlay. This overlay seeks to preserve the heritage character of the town with any proposed development.

Community facilities in Hamilton include such key items as highlighted on the adjacent plan including:

- Hamilton Showground
- Hamilton Catholic Cemetery
- Hamilton Inn Café, Post Office and Pub
- Central Highlands Council Office, Hall and History Room
- Hamilton Police Station
- Public Toilets
- Picnic and Camping Area
- Tennis Courts
- Hamilton Fire Station and Men's Shed
- St Peter's Anglican Church
- Platypus Walk

Of particular note is the Hamilton Camping Ground which is popular with tourists. This attractive campground beside the Clyde River has excellent facilities which were recently upgraded including a children's playground, dump point, toilets, showers, laundry facilities and barbecue.

HAMILTON

PLAN 021D - Character and Heritage

N

BOOMER ROAD
NORTH STREET
LINNET STREET
LYELL HIGHWAY
FRANKLIN PLACE
CLYDE STREET
CUMBERLAND STREET
UPPER MILL ROAD
MOUNT ROAD
HAMILTON PLAINS ROAD
RIVER CLYDE
BICENTENNIAL PARK
HAMILTON CAMPING FACILITIES
DISPOSAL SITE
1106

LEGEND

- Recreation Ground
- Community Facilities
- Utilities
- Mining
- Disposal
- Local Heritage Precinct Code Overlay
- Tasmanian Heritage Registered Properties
- Waterbodies
- Watercourses

FACILITIES

1. Hamilton Showground
2. Hamilton Catholic Cemetery
3. Hamilton Inn Cafe, Post Office and Pub
4. CH Council Office, Hall and History Room
5. Hamilton Police Station
6. Public Toilets
7. Picnic and Camping Area
8. Old School House
9. Private Heritage Cottages
10. James Jackson's Emporium (recently closed)
11. Tennis Courts
12. Glen Clyde House
13. Hamilton Fire Station and Men's Shed
14. St Peter's Anglican Church
15. Derwent Catchment Project
16. Council Owned Platypus Walk
17. Pump Station
18. Self-Service Petrol Station

NICHE STUDIO

HAMILTON TOWNSHIP STRUCTURE PLAN:

THE VISION

A VISION FOR HAMILTON

Hamilton embraces and celebrates the heritage character of its attractive heart as the centre of the town.

Hamilton will be recognised as a key destination, offering attractions, infrastructure and services that encourage both tourists and residents to stay longer in the town.

Hamilton will thrive as a prosperous, sustainable community leveraging on innovative natural assets and the unspoilt environment of the Central Highlands.



EMERGING COMMUNITY THEMES

From the extensive consultation conducted by Niche, several common themes emerged that guided the development of the Township Structure Plan for Hamilton.

The following chapters discuss our analysis of each theme.

A SUSTAINABLE & LIVEABLE MUNICIPALITY

A PRODUCTIVE & RESILIENT ECONOMY

A THRIVING TOURISM SECTOR

A SUSTAINABLE AND LIVEABLE MUNICIPALITY

SETTLEMENT & LAND SUPPLY

Central Highlands has a small population base, with low but consistent population growth recorded over the past decade. Low growth will challenge the prospect of economic growth, especially industries that rely on population-based demand. Population retention and attraction will be critical for economic resilience and growth, particularly attracting young to middle aged working families. This typically relies on suitable housing, employment and community infrastructure and services to be available and/or accessible.

Central Highlands has a series of advantages that could be better promoted to attract residents and visitors, including the regional lifestyle, housing affordability, the heritage characteristics of townships, and the natural environment.

Low dwelling growth and very limited residential development is evident. This is from a combination of low population growth, but also scarcity of readily developable sites that are available to the market. More investment in new housing should be encouraged in the main settlements of Bothwell, Ouse and Hamilton. According to landowners and developers, the viability of residential subdivision and development is marginal.

A greater supply of vacant Village Zoned land is available in Hamilton, but very limited housing demand is evident.

Land supply analysis reveals that Hamilton has:

- 11.17 ha of vacant Village zoned land across 31 lots, and further 10.21 ha of underutilised land across 7 lots;
- 6.91 ha of vacant Low Density Residential zoned land across 6 lots.
- There is no Rural Living zoned land in Hamilton.

Hamilton has the greatest land supply availability in the Village Zone, with several vacant sites concentrated at the northern and southern gateways of the settlement. There is also a cluster of Low Density Residential Zoned sites at the juncture of Ponsonby Street and Arthur Street. Note that the large lot on the corner of Lyell Highway utilised for recreation, and home to tennis courts and playground, is currently zoned Village. This is reflected in the plan below as underutilised land, but not within the figures given above. It is proposed to rezone this site to Open Space and Community Purpose, to more accurately reflect land usage.

Based on a minimum subdivision area of 600sqm, vacant Village Zone land supply in Hamilton has an estimated theoretical capacity to accommodate around 80-100 new residential lots. Theoretical lot capacity in Hamilton increases substantially when adding underutilised land supply.

The lack of available utilities infrastructure, including water, drainage and sewerage, significantly impacts on the viability of further development. With TasWater's 'first mover' tactical approach to the provision of new infrastructure for subdivision, this acts as a significant brake to housing growth and development. The supply of new residential lots is hampered by the 'first mover pays' infrastructure provision policy of several major infrastructure providers, which can effectively lock up some areas behind infrastructure bottlenecks.

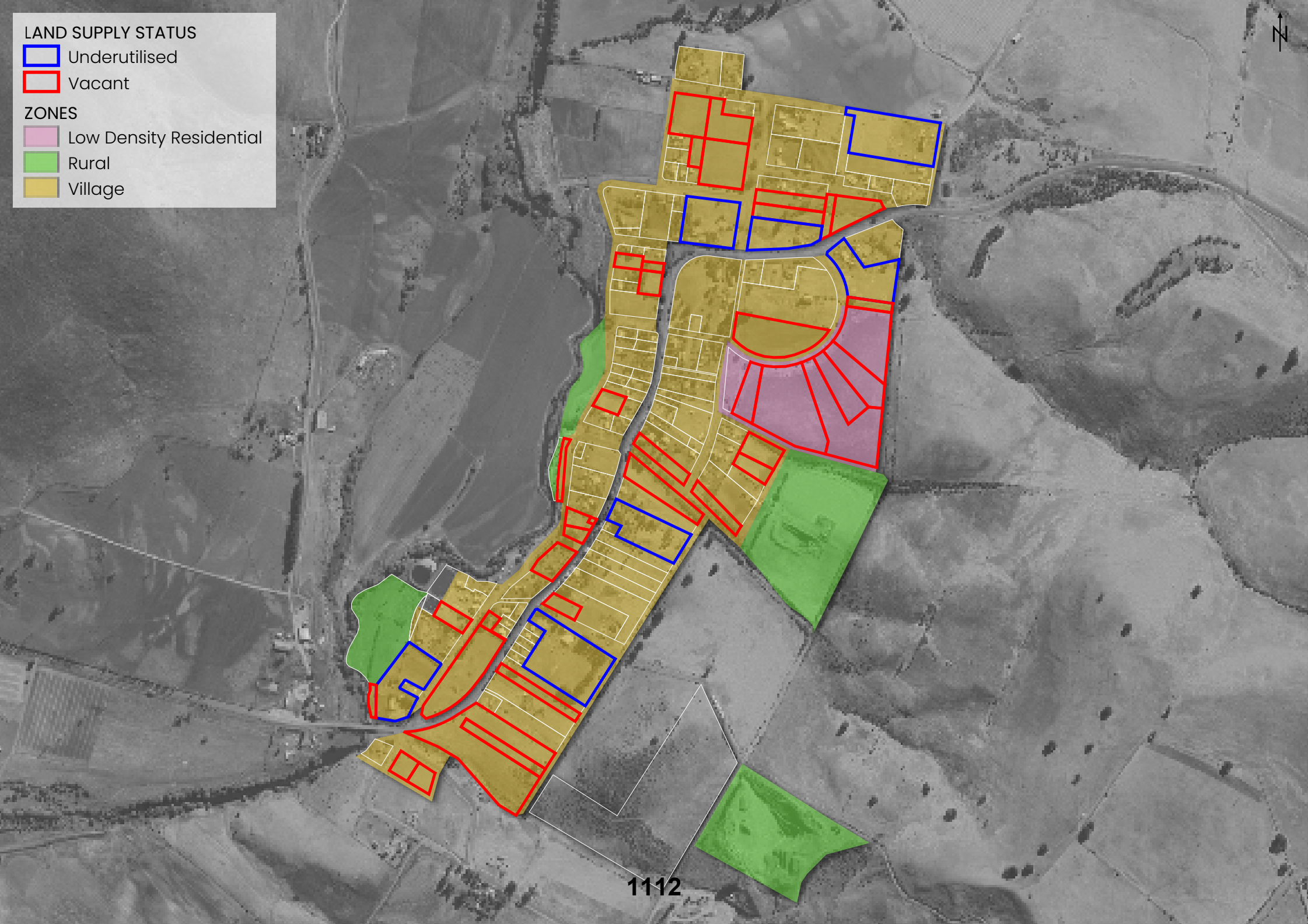
ECONOMIC ANALYSIS

Major investment and infrastructure projects planned in the region such as Tarraleah Hydropower redevelopment, Weasel Plains Solar Farm and Cellars Hill and St Patricks Plains and Bashan Wind Farms will attract a notable number of workers to the region during the construction phase of the projects. Accommodating key workers in the region will be a major challenge due to the lack of housing options and community facilities and services, e.g. childcare, available in the region.

Central Highlands has an aging population, with a higher proportion of older cohorts (e.g. seniors, elderly). The aging of the resident population is expected to continue over time, and is likely to increase demand for health care and medical services, as well as aged care facilities, requiring a working age population to support the needs of this aging population base.

Central Highlands has a higher level of socioeconomic disadvantage compared with the national average. This is more than likely attributed to lower labour force participation and low access to essential services such as health care, medical services, and so on.

There is a lack of public transport available in Central Highlands. There are currently no bus services that link Bothwell, Ouse and Hamilton to each other or to the broader region.


LAND SUPPLY STATUS
Underutilised
Vacant
ZONES
Low Density Residential
Rural
Village
N
1112

STAKEHOLDER & COMMUNITY ASPIRATIONS

Residents of Hamilton valued the closeness of the community, recognising it as a major strength of the town. The heritage buildings and unique natural environment are also key strengths highly valued by the community. Facilitating service infrastructure provision to vacant lots within the township will enable the further growth and development of the town.

Key responses during the community consultation periods expressed the following ideas, grouped into themes:

Movement and Servicing

- Improvements to camping facilities – allowing more access for RV's as well as the introduction of walking paths.
- Introduction of public transport – specifically school buses for children.
- Need improvement to internet and telecommunication connection.

Community and Heritage

- The community want a school and medical facilities, (which could be potentially provided at Ouse).
- They are protective over their heritage buildings and want them to be maintained, specifically the church and cemetery – heritage sites to be clearly signed.
- Responses suggest that the town needs a commercial magnet - allow for economic and social prosperity.

Nature and Physical

- Park and showgrounds are "lovely" but need to be open and accessible.
- Need a viewing platform for the Platypus Walk.

SUSTAINABLE & LIVEABLE TOWN - OBJECTIVES & STRATEGIES

1. To celebrate the existing character of Hamilton

1.1. Continue to maintain Council-owned heritage buildings that contribute to the established character of Hamilton.

1.2. Continue to promote and enforce the design criteria contained within the Central Highlands Local Provisions Schedule for the Hamilton Heritage Precinct that seeks to retain and amplify the characteristics of the existing built form.

1.3. Promote opportunities for landowners to support maintenance of privately-owned heritage buildings through application for grant funding, such as the State Government Built Heritage Grants Scheme e.g. the heritage cottages marked as 12 on Plan 032E.

1.4. Support the retention of historically important buildings by utilising their space for town community festivals and events, such as St Peter's Anglican Church (marked as 11 on Plan 032E) and the Old School building (marked as 13 on Plan 032E).

1.5. Investigate provision of Design Guidelines for Hamilton that complement the statutory provisions of the Central Highlands Local Provisions Schedule. These may include images, diagrams and frequently asked questions in everyday language to assist the community in understanding the requirements of the Hamilton Heritage Precinct.

1.6. Encourage new buildings to respond to the surrounding established character of Hamilton.

1.7. Extend existing native vegetation planting along Council-owned land fronting the river, as marked in point 10 on Plan 032E.

1.8. Consider identification of iconic scenic landscapes of the Central Highlands municipality, and whether protection of these landscapes is feasible within the Central Highlands Local Provisions Schedule.

2. To retain existing local residents within the township

2.1 Support new residential development proposals in Hamilton to increase housing supply and provide greater housing choice for existing and new residents.

2.2 Advocate for improved infrastructure from TasWater.

2.3 Advocate for State Government funding to improve active transport connections and network within Hamilton:

- Construct pedestrian paths on existing bridges (Item 2 on Plan 032E).
- Improve footpath to viewing bay (Item 1 on Plan 032E).
- Ensure the footpath by the river to the caravan park is universally accessible.

- Construct new and upgrade existing active transport routes that are accessible for all ages and abilities.

2.4 Activities, programs and events for children, youth and families.

3. To attract new residents to the township

3.1 Advocate for funding to prepare a Resident Attraction Strategy to attract new residents to live in the municipality, focusing on attracting young and middle aged working families.

3.2 Promote lifestyle and affordability advantages of Central Highlands through the use of marketing campaigns that attract new residents to live and work in the municipality:

- Target younger demographics through the use of social media platforms to showcase community life and local attractions.
- Undertake a renewal of the existing Central Highlands website to create a user-friendly interface that showcases important information on housing, community facilities, and upcoming community events.
- Create advertisement campaigns that highlight the attractiveness of living within the Central Highlands region and promotes the affordability of home ownership within Hamilton.
- Create partnership programmes with local real estate companies to showcase existing and future available properties and promote the benefits of rural living.

3.3 Support development of new community facilities and services in Hamilton.

3.4 Investigate opportunities to provide key worker accommodation within the township.

3.5 Advocate to the Department of State Growth for a business case to support establishing a bus network between towns in the Central Highlands and to larger service centres.

3.6 Support private development that provides a diversity of housing typologies that promote a mixture of demographics such as individuals, young families, and elderly.

3.7 Prepare a Land Capability Assessment to determine whether the lots zoned Agriculture in Investigation Area 1 (shown on Plan 045D) are appropriately zoned.

3.8 Activities, programs and events for children, youth and families.

4. To identify gaps in key social and community services such as health, education and aged care.

4.1 Rezone the parcel of land containing the Hamilton Fire Station and Landcare to Community Purpose, as shown in Plan 045D.

4.2 Support development proposals that aim to fulfil under-served community needs within Hamilton.

4.3 Complete a Community Needs Assessment for Hamilton.

4.4 Advocate for provision of community services as identified as lacking in the Community Needs Assessment and Hamilton Structure Plan.

4.5 Ensure community infrastructure funding sourced from renewable energy operators is utilised to meet established community and infrastructure needs in Hamilton.

4.6 Advocate to Libraries Tasmania to expand the network of library locations, and the opening hours of libraries within the Central Highlands.

5. To prioritise existing and future community needs.

5.1 Ensure future housing and growth is located in serviced areas.

5.2 Develop a detailed streetscape/townscape plan to:

- Determine where upgrades are required to the public realm.
- Investigate whether current heritage provisions are appropriate and whether design guidelines are required.

5.3 Consider adopting a policy that developer contributions to the cost of any required servicing upgrade necessary to facilitate future development.

5.4 Investigate potential infrastructure bottlenecks that may be blocking areas of the town from being developed due to the 'first mover pays' policy of some major infrastructure providers, and investigate the feasibility implementing a pro-active strategy to resolve such impasses.

5.5 Consider implementation of an equitable contribution split in meeting required gaps in Council infrastructure provision to allow progression of key developments, and lobby other infrastructure providers to do the same.

5.6 Investigate whether there is a piece of 'bottlenecking' service infrastructure that Council could deliver to free up development ready land.

5.7 Support development proposals that would meet daily needs of current and future community members.

5.8 Undertake an Integrated Transport Strategy for Central Highlands, focusing on improvements to active transport networks, identifying gaps in transport linkages, upgrades required to increase efficiency, sustainability and safety and focus on creating a connected municipality.

5.9 Maintain Council-owned roads to ensure safe and efficient vehicle movement within and between towns, and upgrade as necessary (Item 7 and 9 on Plan 032E).

5.10 Facilitate the maintenance of shared roads, accessways and communal infrastructure on Crown reserves, potentially via a shared contribution scheme.

5.11 Advocate to TasWater for the relocation of the sewerage treatment ponds (item 3 on Plan 032E).

5.12 Advocate to the Department of State Growth for safety upgrades to the Lyell Highway, such as:

- Mitigation of the blind spot marked as Item 5 on Plan 032E.
- Removal of tree hazards, marked as Item 4 on Plan 032E

5.13 Add a bus shelter at the sports reserve on Franklin Place, marked as 6 on Plan 032E.

6. To deliver a comprehensive Settlement Strategy and Structure Plan that promotes a sustainable and liveable town.

6.1 Ensure the Central Highlands Settlement Strategy and Structure Plans consider the following:

- The need for adequate Village Zone land supply that is available and 'development ready' to accommodate new housing.
- The need to diversify the housing stock to support changing demographic needs and preferences, especially older/ageing residents.
- Partner with aged care and social housing providers in projects to increase the housing stock for these groups.
- Direct housing growth to Hamilton.
- Encourage an increase in the number of rental properties available.

6.2 Implement the Hamilton Structure Plan as outlined in the implementation plan.

6.3 Review implementation of the Hamilton Structure Plan periodically to ensure timelines and action items are achieved.

7. To ensure the provision of adequate open space

7.1 Rezone the current Village Zone land on Franklin Place comprising the oval and tennis court to Recreation Zone, as shown in Plan 045D.

7.2 Rezone Council-owned land adjoining the River Clyde to Open Space, as shown in Plan 045D. Consider its potential use as an overflow area for caravans and campers.

7.3 Ensure adequate funding is provided to facilitate the continued maintenance and operation of the Bicentennial Park, as marked 15 on Plan 032E.

7.4 Review the provision of open space within the municipality.

7.5 Produce an Open Space Strategy for the municipality.

7.6 Improvements to the existing recreation space (shown as item 19 on Plan 032E). These could include:

- Skatepark.
- Upgraded playground equipment (this could include such items as a tunnel slide etc).
- Shade over the playground equipment.

- Installation of a fenced dog park.

7.7 Investigate whether the oval at the old school could be repurposed to provide active recreation opportunities such as basketball/netball courts, ball wall and/or football posts.

7.8 Provide active recreation opportunities for children, such as a formal playground or informal playspace, leveraging on the unique natural characteristics of the town.

A PRODUCTIVE AND RESILIENT ECONOMY

SETTLEMENT & LAND SUPPLY

Key observations about Hamilton's retail, commercial, civic and recreational land use are as follows:

- Hamilton's retail offering is very limited.
- There is a pub and café (Hamilton Inn), which includes the town post office.
- There is a Council-owned caravan park (with amenities block) that is well-utilised.
- Several cafes and bakeries have operated in Hamilton, but most have closed due to lack of employees or potential purchasers willing to take businesses over.
- Council has offices based in Hamilton, including the finance, general administration and community services departments.

ECONOMIC ANALYSIS

The town centre of Hamilton (~240 residents) primarily performs a visitor servicing/stopover tourism role, with some provision of services for the surrounding rural hinterland. The visitor servicing role for all three towns is important in sustaining the viability of existing operators, given the small local resident population. No retail and commercial operators currently exist in Hamilton, and therefore local retail needs cannot be met in the town. Ouse includes a small IGA express, which serves residents of Ouse and Hamilton for convenience based goods. Local residents of Ouse and Hamilton typically travel to New Norfolk and/or Brighton for higher order retail and commercial needs.

Ouse and Hamilton can be regarded as 'sister towns' due to their proximity. Hamilton serves as a destination town, with a charming heritage core of Georgian sandstone buildings, while Ouse is the service centre, offering retail and community facilities.

To catalyse retail and commercial investment that aligns with the activity centre role of towns, it is likely that a higher level of demand is needed; from a combination of residents and visitors.

Population-service industries are underrepresented. Attracting new retail, hospitality and health-related businesses to establish in Ouse, Hamilton and Bothwell should be encouraged.

The region is well placed to attract renewable energy investment, especially hydropower, wind and solar. Renewable energy projects typically generate a high number of jobs during the construction phase, and a low number of jobs during the operational phase. However, a critical mass of projects may attract new permanent workers to the region. Renewable energy projects such as hydro, solar, and wind farms have the potential to raise municipal rates and community funds, which could be directed for community benefit. Determining how these funds should be spent within the community should be considered. Renewable energy projects can create environmental and amenity impacts, and should sought to be minimised where possible, especially linked to economic productivity.

Commercial and industrial businesses are accommodated in the Village Zone within townships, and there is currently no standalone land areas or precincts dedicated to industrial and commercial activities. There may be an opportunity to investigate establishing an industrial and/or commercial precinct in the region that is well-located, has service capabilities, and is strategic in terms of serving supply-chain activities from key industries such as horticulture and renewable energy projects

The internet service, speeds and coverage is fairly unreliable across Central Highlands, which limits digital access and connectivity.

The road network in Central Highlands is critical for accessibility and connectivity for residents, workers and businesses. The condition and maintenance of regional roads is an ongoing issue and requires ongoing advocacy with the Department of State Growth.

T20. RETAIL & COMMERCIAL ROLE

Township	Approx. population	Classification	Role
Bothwell	500	Local centre (small)	Community & civic Basic convenience retail; and Stopover visitor servicing
Ouse	300	Local centre (small)	Convenience retail; and Stopover visitor servicing
Hamilton	240	Local centre (small)	Stopover visitor servicing (hospitality, accommodation)

Source: Urban Enterprise, 2024

STAKEHOLDER & COMMUNITY ASPIRATIONS

The community consultation process garnered the following responses regarding ensuring Hamilton has a productive and resilient economy into the future.

Community and Heritage

- Maintenance of heritage (need grants for this) and increased use of heritage buildings for community activities i.e. church used for choir.
- Need childcare and better connection between the community and schools. One suggestion was a community daycare where parents take care of other children if they are home (suggested to have police check to maintain this).
- Need a permanent doctor and aged care services.
- Raised by the community was the potential to re-open the school at Ouse, demonstrating the sentiment in the community of Ouse and Hamiton as 'sister towns'.

Specifically, the following improvements were identified:

- Community infrastructure (Camping, outdoor seating, BBQ, children's/ youth activities i.e. skate park, improvement to playground).
- Facilitation of a shearing school and cooking school.
- Increased medical, aged care facilities and a grocery store. There is recognition that medical and aged care facilities should be provided in Ouse, primarily because the physical infrastructure already exists there.

PRODUCTIVE & RESILIENT ECONOMY - OBJECTIVES & STRATEGIES

8. To grow and foster employment opportunities unique to the area, reflecting the individuality of the location.

8.1 Encourage the reinvigoration of local retail services by:
- Supporting the development of new commercial services located along Franklin Place.
- Implementing programs that offer subsidise rental agreements for commercial services establishing on Franklin Place.

8.2 Advocate for funding of existing specialist local knowledge bases, such as revegetation and catchment management, to develop and grow innovative employment opportunities.

8.3 Support development proposals for provision of commercial and community services that are strategically located, have access to infrastructure services and provide value to the town.

8.4 Encourage and support development of cottage industries, such as local food-based businesses.

8.5 Investigate opportunities to explore new economic opportunities, including carbon and nature offset pilot programs.

8.6 Collaborate with renewable energy providers to identify opportunities in the region.

8.7 Advocate to the Department of Natural Resources and Environment for investment in pilot innovative niche agriculture projects in the region.

9. To sustainably grow the value of the existing agriculture sector.

9.1 Consider use of Council-owned showgrounds land for provision of short-stay accommodation for seasonal workers, following land rationalisation.

9.2 Encourage and support young farmers in the region.

9.3 Advocate for ongoing improvements and upgrades to regional irrigation schemes that are fundamental to the agriculture and horticulture sectors.

9.4 Support and enhance highly specialised agriculture activities, especially within irrigated areas in Central Highlands.

9.5 Support agricultural supply-chain and rural service activities to establish in suitable locations in Central Highlands.

9.6 Explore opportunities to establish farm-gate sales or a regular farmer's market with direct sales to the general public.

10. To advocate for the sustainable growth of new agricultural opportunities.

10.1 Encourage intensive and high value activities within irrigated areas.

10.2 Advocate for the promotion of agricultural opportunities to industry. These may include:

- Export market opportunities;
- Domestic market opportunities;
- Information around innovation and technology in the agriculture sector that could be harnessed;
- Off-farm income opportunities;
- Value-add opportunities.

11. To actively support the development of renewable energy and green infrastructure projects.

11.1 Attract renewable energy projects to develop in the Central Highlands proposed Renewable Energy Zone.

11.2 Advocate to landowners of large agricultural holdings to consider renewable / sustainable energy projects.

11.3 Advocate to landowners of large agricultural holdings within the proposed REZ to consider the opportunities of Agri-solar development.

11.4 Advocate for and support new investment in commercial and industrial activities that serve the renewable energy project supply-chain.

11.5 Facilitate the attraction and retention of workers associated with the renewable energy and green infrastructure industry by:

- Implementing programs that subsidise key workers accommodation associated with local renewable and green infrastructure projects.
- Supporting development that offers a variety of housing typology including medium density development to encourage demographics such as young professionals to move to Hamilton.
- Implementing and supporting programs that provide and subsidise key community services such as childcare and medical.
- Investigate opportunities for co-working spaces to encourage the attraction of small businesses and digital nomads associated with local renewable and green infrastructure projects.

11.6 Seek ways to leverage from ongoing improvements and upgrades to hydro schemes and projects (e.g. Tarraleah) to meet identified community needs in Hamilton.

11.7 Advocate for a mechanism to collect community infrastructure funding from renewable energy operators establishing in Central Highlands proposed Renewable Energy Zone.

11.8 Facilitate the apportioning of community infrastructure funding to meet needed community services and infrastructure in Hamilton.

11.9 Support community-led renewable energy projects in the municipality and other green initiatives. Projects should consider capacity building and social inclusion across the community and seek to reduce energy costs. These may include provision of infrastructure such as residential solar panels rather than provision of monetary rebates on power bills.

12. To support the growth of local industrial and innovation opportunities.

12.1 Support development of high-value niche market proposals, especially within primary production sectors such as agriculture and aquaculture.

12.2 Consider establishment of a local small business group to enable knowledge sharing and support between local business owners.

12.3 Liaise with renewable energy project proponents as they arise (e.g. hydro, wind, solar, battery projects).

12.4 Investigate industrial land requirements to facilitate projected growth of renewable energy sector.

12.5 Seek to minimise visual amenity, agricultural and environmental impacts of renewable energy projects.

12.6 Seek to collect funds from proponents and re-distribute for community projects and initiatives that improve liveability and socioeconomic outcomes.

13. To improve existing digital and transport infrastructure.

13.1 Advocate for road network improvements and upgrades to ensure efficient and safe vehicle movements across the municipality.

13.2 Explore opportunities for Hamilton to build on service offerings to road freight utilising the Lyell Highway.

13.3 Ensure that developers contribute proportionally to any required upgrades to transport infrastructure necessary for successful development.

13.4 Advocate for improved digital infrastructure, including internet coverage, speeds and reliability.

14. To encourage the growth of existing and new retail and commercial services.

14.1 Encourage retail/commercial premises to remain as such.

14.2 Attract new retail and commercial businesses to establish in Hamilton.

14.3 Engage with the community on strategies to retain existing retail and commercial services in Hamilton.

14.4 Facilitate establishment of markets for locally made goods.

A THRIVING TOURISM SECTOR

SETTLEMENT & LAND SUPPLY

A pub and café are the only hospitality operators in Hamilton. There is a Council-owned caravan park in Hamilton that is well-utilised.

ECONOMIC DRIVERS

The primary product strengths in Central Highlands include:

- Sightseeing, hiking, bushwalking and camping in state forests and national parks;
- Recreational boating and fishing in the network of lakes and rivers; and
- History and heritage significance of townships and settlements.

Signature attractions and experiences in the region include:

- Existing successful farm-stay accommodation at Curringa Farm, offering farm tours, accommodation and food.
- Fly fishing in Lake Meadowbank and other hydro storages on the Derwent River, and the western lakes;
- National Parks and conservation areas such as Mount Field National Park, Walls of Jerusalem National Park,
- Franklin-Gordon Wild Rivers National Park;
- Multi-day hikes such as the overland track, Tasmanian trail, labyrinth trail and Lake Antimony trail.
- Boating and fishing in Lake St Clair, Great Lake, Arthurs Lake, Meadowbank Lake and Derwent River.
- Whiskey distilleries at Lawrenny Estate (Ouse), Lower Marsh (Apsley), New Norfolk (in Derwent Valley) and Kempton (in Southern Midlands).
- The region has high tourism and visitor growth potential, primarily linked to the natural advantages of the area.
- The towns of Ouse, Hamilton and Bothwell all receive a high number of visitors travelling through and stopping over, particularly from self-drive camping and caravan visitors. These towns could perform a greater visitor servicing role.
- There is a high level of self-drive visitors that travel within and across the region, including a high proportion of caravan/RV's. There is a need to ensure that visitor preferences are being met through infrastructure, services and amenity.

- Potential for greater activation and promotion of signature nature and water-based experiences, including hiking, camping, fishing, cycling and kayaking.
- There is potential to collaborate with HydroTas and build on the established Highlands Power Trail.
- There is an opportunity to support further development and investment in farm gate and agri-tourism.
- There is an opportunity to support further development and investment in visitor accommodation and hospitality offering.
- Destination functions and events are an effective way to attract visitors to the region. Supporting existing and new events that attract visitation and align with regional strengths should be encouraged.
- The heritage townships of Hamilton and Bothwell could seek to attract new visitor market segments such as higher yielding couples and families from Greater Hobart.
- There is a potential for Central Highlands to improve destination branding and increase destination awareness as a key region in central Tasmania.

STAKEHOLDER & COMMUNITY ASPIRATIONS

Community consultation responses that built on the theme of tourism and visitation in Hamilton were as follows.

For visitors, they appreciated the local amenities such as the pub and café as well as the cleanliness of the town. Many of the visitors to Hamilton interviewed stated that the camping facilities, such as the new toilets, as something they appreciated about the town.

Increased short-stay accommodation for visitors would serve tourists who are not travelling with camping equipment or an RV.

Hosting an annual event / festival in the town could drive visitors and day-trippers to the region; there are camp drafting events held at the Showgrounds.

THRIVING TOURISM SECTOR - OBJECTIVES & STRATEGIES

15. To enhance the visitor service role of Hamilton

15.1 Optimise Hamilton for capturing the RV market by focusing on improving RV friendly infrastructure.

15.2 Consider expanding and upgrading Council-owned caravan parks (marked as 18 on Plan 032E) in alternative locations other than along the River Clyde to limit the number of camping grounds located along the river (marked as 8 on Plan 032E).

15.3 Attract and encourage investment in new commercial accommodation.

15.4 Review wayfinding and tourist signage in Hamilton. Identify and address any gaps in the provision of wayfinding and tourist signs in strategic areas.

15.5 Encourage tourism and community events within and proximate to townships.

15.6 Consider development of an off-leash dog park to meet the needs of RV tourism.

15.7 Investigate drainage solutions to divert stormwater run-off from the existing caravan park.

16. To facilitate development of tourism attractors in the region.

16.1 Develop and implement a Destination and Tourism Action Plan in conjunction with local tourism operators.

16.2 Support growth in visitation related to signature water and nature-based attractions and activities, including hiking, bushwalking, fishing, boating, hunting and camping.

16.3 Advocate for funding through relevant State and Federal Government streams to prepare a series of cultural, historical, and community events such as:

- Heritage walks and tours
- Community festivals and exhibitions, including the existing Hamilton Show
- Cultural and educational programmes
- Culinary trails
- Local ambassador programmes

16.4 Attract and facilitate high quality tourism and hospitality operators to establish in Central Highlands.
16.5 Support provision of short-stay accommodation in Hamilton township.
16.6 Facilitate use of Hamilton Town Hall for arts and culture displays.
16.7 Support agri-tourism and farm-gate experiences on regional properties.
16.8 Support new trail and mountain biking experiences in the region.
16.9 Encourage new tourism and community events to be held in the municipality.
16.10 Rationalise land ownership of the Hamilton Showgrounds to facilitate flexibility of use by Council and community groups (marked as 16 on Plan 032E) and creation of a legal accessway.
16.11 Investigate alternative uses and utilisation of the Hamilton Showgrounds for tourism uses, festivals and events.
16.12 Extend and add viewing platforms for the Platypus Walk, shown as point 17 on Plan 032E.
16.13 Explore opportunities for educational/informative signs or plaques to be placed in public spaces.
16.14 Investigate the feasibility of creating a self-guided heritage trail.

17. To improve activation and accessibility of the region's signature water and nature based assets.

17.1 Improve promotional and wayfinding signage across popular water and nature-based areas
17.2 Improve public access and activation of water and nature-based areas.
17.3 Consider opportunities to provide walking and/or cycling trails that link towns in the Central Highlands or link to a signature water or nature-based asset.
17.4 Provide service infrastructure, such as public toilets, picnic tables and water fountains at popular water and nature-based areas.
17.5 Celebrate local settler and First Nation heritage values where appropriate.

HAMILTON TOWNSHIP STRUCTURE PLAN:

IMPLEMENTATION

IMPLEMENTATION

The Hamilton Township Structure Plan reviews three key themes and outlines 17 key objectives and associated strategies. These objectives have been tied to key actions to enable Council's practical application, namely:

- Implement
- Advocate
- Facilitate

By recognising which strategies Council can implement directly, and which requires external intervention ensures the ongoing realisation of the Hamilton Township vision.

The following two pages illustrate spatial recommendations from the objectives and strategies. These have been tested with the community, working group and Councillors. The first illustrates recommended zoning upgrades to reflect growth projections and are a direct response to the three key themes. The community strongly voiced their desire for immediate upgrades to a number of existing facilities within the township area including footpaths, public park upgrades and public buildings. These are identified on the second plan.

HAMILTON

PLAN 045D - Proposed Rezoning

N

NORTH STREET
BOOMER ROAD
LINNET STREET
LYELL HIGHWAY
FRANKLIN PLACE
RONSONBY STREET
RIVER CLYDE
CLYDE STREET
CUMBERLAND STREET
UPPER MILL ROAD
HAMILTON PLAINS ROAD
1

LEGEND

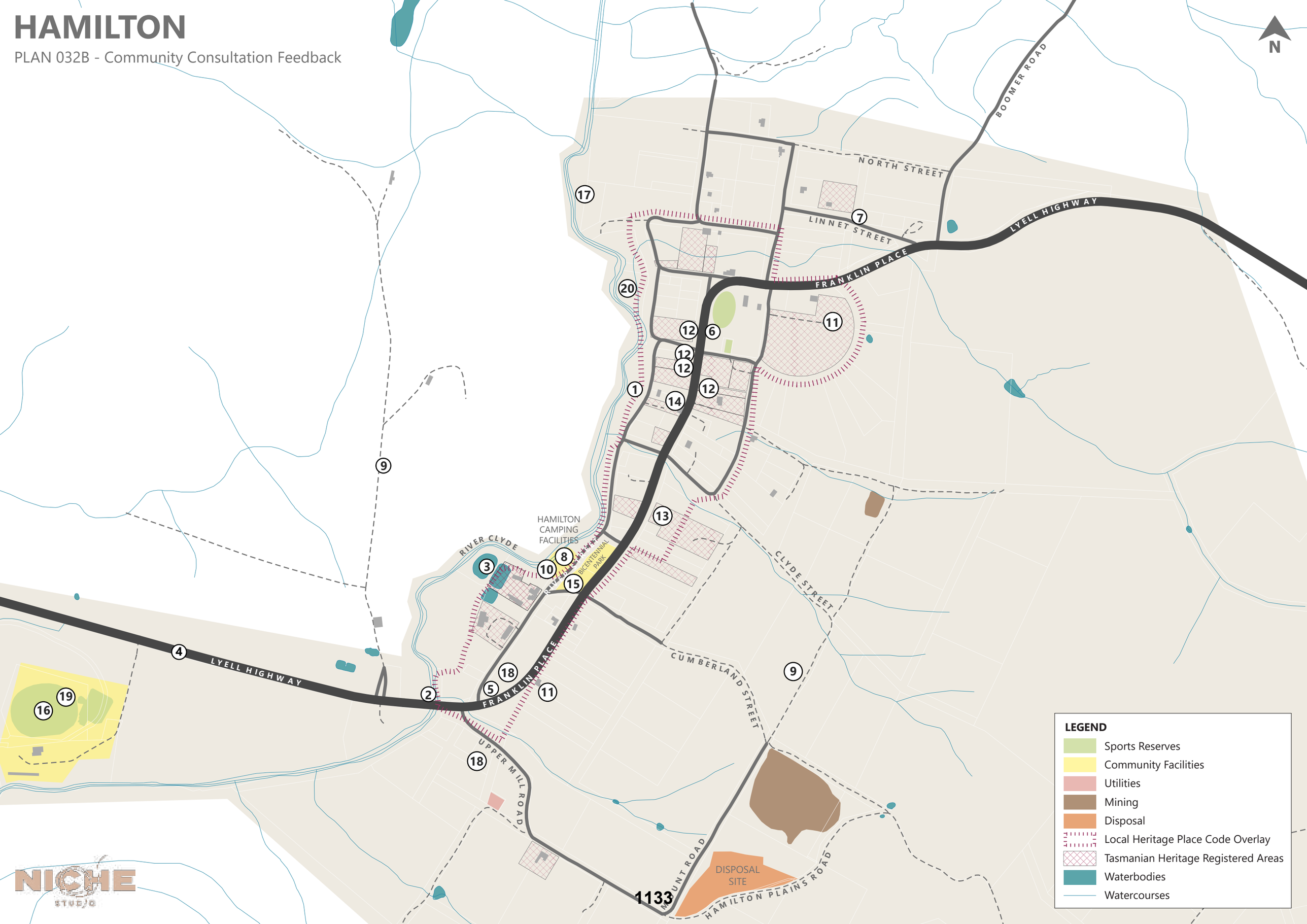
- Areas of change
- Investigation Area
- Recreation Reserves

ZONES

- Agriculture
- Low Density Residential
- Rural
- Village
- Environmental Management
- Utilities
- Recreation
- Open Space
- Community Purpose

HAMILTON

PLAN 032B - Community Consultation Feedback



PRIORITIES

To ensure successful implementation of the Hamilton Structure Plan, the following priorities and timeframes should be considered.

A = Advocate | I = Implement | F = Facilitate

Short Term = 3 years | Medium Term = 5 -10 years | Long Term = 10+ years

A SUSTAINABLE, LIVEABLE TOWN			**SHORT**	**MEDIUM**	**LONG**
1.1	To celebrate the existing character of Hamilton				
	Implement	Continue to maintain Council-owned heritage buildings that contribute to the established character of Hamilton.	Ongoing		
	Implement	Continue to promote and enforce the design criteria contained within the Central Highlands Local Provisions Schedule for the Hamilton Heritage Precinct that seeks to retain and amplify the characteristics of the existing built form.	Ongoing		
	Advocate	Promote opportunities for landowners to support maintenance of privately-owned heritage buildings through application for grant funding, such as the State Government Built Heritage Grants Scheme e.g. the heritage cottages marked as 12 on Plan 032E.			
	Facilitate	Support the retention of historically important buildings by utilising their space for town community festivals and events, such as St Peter's Anglican Church (marked as 11 on Plan 032E) and the Old School building (marked as 13 on Plan 032E).	Ongoing		
	Implement	Investigate provision of Design Guidelines for Hamilton that complement the statutory provisions of the Central Highlands Local Provisions Schedule. These may include images, diagrams and frequently asked questions in everyday language to assist the community in understanding the requirements of the Hamilton Heritage Precinct.			
	Facilitate	Encourage new buildings to respond to the surrounding established character of Hamilton.	Ongoing		

			SHORT	MEDIUM	LONG
	Implement	Extend existing native vegetation planting along Council-owned land fronting the river, as marked in point 10 on Plan 032E.			
	Implement	Consider identification of iconic scenic landscapes of the Central Highlands municipality, and whether protection of these landscapes is feasible within the Central Highlands Local Provisions Schedule.			
1.2	To retain existing local residents within the township				
	Facilitate	Support new residential development proposals in Hamilton to increase housing supply and provide greater housing choice for existing and new residents.			
	Advocate	Advocate for improved infrastructure from TasWater.			
	Advocate	Advocate for State Government funding to improve active transport connections and network within Hamilton: • Construct pedestrian paths on existing bridges (Item 2 on Plan 032E). • Improve footpath to viewing bay (Item 1 on Plan 032E). • Ensure the footpath by the river to the caravan park is universally accessible. • Construct new and upgrade existing active transport routes that are accessible for all ages and abilities.			
	Facilitate	Activities, programs and events for children, youth and families.	Ongoing		
1.3	To attract new residents to the township				
	Advocate	Advocate for funding to prepare a Resident Attraction Strategy to attract new residents to live in the municipality, focusing on attracting young and middle aged working families.			
	Implement	Promote lifestyle and affordability advantages of Central Highlands through the use of marketing campaigns that attract new residents to live and work in the municipality:			

		• Target younger demographics through the use social media platforms to showcase community life and local attractions. • Undertake a renewal of the existing Central Highlands website to create a user-friendly interface that showcases important information on housing, community facilities, and upcoming community events. • Create advertisement campaigns that highlight the attractiveness of living within the Central Highlands region and promotes the affordability of home ownership within Hamilton. • Create partnership programmes with local real estate companies to showcase existing and future available properties and promote the benefits of rural living.		■	
	Facilitate	Support development of new community facilities and services in Hamilton.	Ongoing		
	Facilitate	Investigate opportunities to provide key worker accommodation within the township.		■	
	Advocate	Advocate to the Department of State Growth for a business case to support establishing a bus network between towns in the Central Highlands and to larger service centres.		■	
	Facilitate	Support private development that provides a diversity of housing typologies that promote a mixture of demographics such as individuals, young families, and elderly.	Ongoing		
	Implement	Prepare a Land Capability Assessment to determine whether the lots zoned Agriculture in Investigation Area 1 (shown on Plan 045D) are appropriately zoned.	■		
	Facilitate	Activities, programs and events for children, youth and families.	Ongoing		
1.4	To identify gaps in key social and community services such as health, education and aged care.				
	Implement	Rezone the parcel of land containing the Hamilton Fire Station and Landcare to Community Purpose, as shown in Plan 045D.	■		
	Facilitate	Support development proposals that aim to fulfil under-served community needs within Hamilton.	Ongoing		

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
	Implement	Complete a Community Needs Assessment for Hamilton.			
	Advocate	Advocate for provision of community services as identified as lacking in the Community Needs Assessment and Hamilton Structure Plan.			
	Implement	Ensure community infrastructure funding sourced from renewable energy operators is utilised to meet established community and infrastructure needs in Hamilton.	Ongoing		
	Advocate	Advocate to Libraries Tasmania to expand the network of library locations, and the opening hours of libraries within the Central Highlands.			
1.5	To prioritise existing and future community needs.				
	Facilitate	Ensure future housing and growth is located in serviced areas.	Ongoing		
	Implement	Develop a detailed streetscape/townscape plan to • Determine where upgrades are required to the public realm. • Investigate whether current heritage provisions are appropriate and whether design guidelines are required.			
	Implement	Consider adopting a policy that developer contributions to the cost of any required servicing upgrade necessary to facilitate future development.	Ongoing		
	Implement	Investigate potential infrastructure bottlenecks that may be blocking areas of the town from being developed due to the 'first mover pays' policy of some major infrastructure providers, and investigate the feasibility implementing a pro-active strategy to resolve such impasses.			
	Implement	Consider implementation of an equitable contribution split in meeting required gaps in Council infrastructure provision to allow progression of key developments, and lobby other infrastructure providers to do the same			

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
	Facilitate	Investigate whether there is a piece of 'bottlenecking' service infrastructure that Council could deliver to free up development ready land.			
	Facilitate	Support development proposals that would meet daily needs of current and future community members.	Ongoing		
	Implement	Undertake an Integrated Transport Strategy for Central Highlands, focusing on improvements to active transport networks, identifying gaps in transport linkages, upgrades required to increase efficiency, sustainability and safety and focus on creating a connected municipality.	Ongoing		
	Implement	Maintain Council-owned roads to ensure safe and efficient vehicle movement within and between towns, and upgrade as necessary (Item 7 and 9 on Plan 032E).	Ongoing		
	Facilitate	Facilitate the maintenance of shared roads, accessways and communal infrastructure on Crown reserves, potentially via a shared contribution scheme.			
	Advocate	Advocate to TasWater for the relocation of the sewerage treatment ponds (item 3 on Plan 032E).			
	Advocate	Advocate to the Department of State Growth for safety upgrades to the Lyell Highway, such as: • Mitigation of the blind spot marked as Item 5 on Plan 032E. • Removal of tree hazards, marked as Item 4 on Plan 032E			
	Implement	Add a bus shelter at the sports reserve on Franklin Place, marked as 6 on Plan 032E.			
1.6	To deliver a comprehensive Settlement Strategy and Structure Plan that promotes a sustainable and liveable town				
	Facilitate	Ensure the Central Highlands Settlement Strategy and Structure Plans consider the following: • The need for adequate Village Zone land supply that is available and 'development ready' to accommodate new housing. • The need to diversify the housing stock to support changing demographic needs and preferences, especially older/ageing residents.			

		• Partner with aged care and social housing providers in projects to increase the housing stock for these groups. • Direct housing growth to Hamilton. • Encourage an increase in the number of rental properties available.			
	Implement	Implement the Hamilton Structure Plan as outlined in the implementation plan.			
	Implement	Review implementation of the Hamilton Structure Plan periodically to ensure timelines and action items are achieved.	Ongoing		

1.7	To ensure the provision of adequate open space				
	Implement	Rezone the current Village Zone land on Franklin Place comprising the oval and tennis court to Recreation Zone, as shown in Plan 045D.			
	Implement	Rezone Council-owned land adjoining the River Clyde to Open Space, as shown in Plan 045D. Consider its potential use as an overflow area for caravans and campers.			
	Facilitate	Ensure adequate funding is provided to facilitate the continued maintenance and operation of the Bicentennial Park, as marked 15 on Plan 032E.	Ongoing		
	Implement	Review the provision of open space within the municipality.			
	Implement	Produce an Open Space Strategy for the municipality.			
	Implement	Improvements to the existing recreation space (shown as item 19 on Plan 032E). These could include: • Skatepark. • Upgraded playground equipment (this could include such items as a tunnel slide etc). • Shade over the playground equipment. • Installation of a fenced dog park.			
	Facilitate	Investigate whether the oval at the old school could be repurposed to provide active recreation opportunities such as basketball/netball courts, ball wall and/or football posts.			
	Implement	Provide active recreation opportunities for children, such as a formal playground or informal playspace, leveraging on the unique natural characteristics of the town.			

A PRODUCTIVE, RESILIENT ECONOMY			SHORT	MEDIUM	LONG
2.1	To grow and foster employment opportunities unique to the area, reflecting the individuality of the location.				
	Facilitate	Encourage the reinvigoration of local retail services by: • Supporting the development of new commercial services located along Franklin Place. • Implementing programs that offer subsidise rental agreements for commercial services establishing on Franklin Place.	Ongoing		
	Advocate	Advocate for funding of existing specialist local knowledge bases, such as revegetation and catchment management, to develop and grow innovative employment opportunities.			
	Facilitate	Support development proposals for provision of commercial and community services that are strategically located, have access to infrastructure services and provide value to the town.	Ongoing		
	Facilitate	Encourage and support development of cottage industries, such as local food-based businesses.	Ongoing		
	Facilitate/ Advocate	Investigate opportunities to explore new economic opportunities, including carbon and nature offset pilot programs.			
	Facilitate/ Advocate	Collaborate with renewable energy providers to identify opportunities in the region.			
	Advocate	Advocate to the Department of Natural Resources and Environment for investment in pilot innovative niche agriculture projects in the region.			
2.2	To sustainably grow the value of the existing agriculture sector.				
	Implement	Consider use of Council-owned showgrounds land for provision of short-stay accommodation for seasonal workers, following land rationalisation.			
	Facilitate	Encourage and support young farmers in the region.	Ongoing		

A PRODUCTIVE, RESILIENT ECONOMY			SHORT	MEDIUM	LONG
	Advocate	Advocate for ongoing improvements and upgrades to regional irrigation schemes that are fundamental to the agriculture and horticulture sectors.	Ongoing		
	Advocate	Support and enhance highly specialised agriculture activities, especially within irrigated areas in Central Highlands.	Ongoing		
	Advocate	Support agricultural supply-chain and rural service activities to establish in suitable locations in Central Highlands.	Ongoing		
	Implement/ Facilitate	Explore opportunities to establish farm-gate sales or a regular farmer's market with direct sales to the general public.			

2.3	To advocate for the sustainable growth of new agricultural opportunities.				
	Advocate	Encourage intensive and high value activities within irrigated areas.			
	Advocate	Advocate for the promotion of agricultural opportunities to industry. These may include: • Export market opportunities; • Domestic market opportunities; • Information around innovation and technology in the agriculture sector that could be harnessed; • Off-farm income opportunities; • Value-add opportunities.	Ongoing		
2.4	To actively support the development of renewable energy and green infrastructure projects.				
	Advocate	Attract renewable energy projects to develop in the Central Highlands proposed Renewable Energy Zone.			
	Advocate	Advocate to landowners of large agricultural holdings to consider renewable / sustainable energy projects.			
	Advocate	Advocate to landowners of large agricultural holdings within the proposed REZ to consider the opportunities of Agri-solar development.			
	Advocate	Advocate for and support new investment in commercial and industrial activities that serve the renewable energy project supply-chain.	Ongoing		
	Facilitate/ Implement	Facilitate the attraction and retention of workers associated with the renewable energy and green infrastructure industry by: • Implementing programs that subsidise key workers accommodation associated with local renewable and green infrastructure projects.			

		• Supporting development that offers a variety of housing typology including medium density development to encourage demographics such as young professionals to move to Hamilton. • Implementing and supporting programs that provide and subsidise key community services such as childcare and medical. • Investigate opportunities for co-working spaces to encourage the attraction of small businesses and digital nomads associated with local renewable and green infrastructure projects.	
	Implement	Seek ways to leverage from ongoing improvements and upgrades to hydro schemes and projects (e.g. Tarraleah) to meet identified community needs in Hamilton.	Ongoing
	Advocate	Advocate for a mechanism to collect community infrastructure funding from renewable energy operators establishing in Central Highlands proposed Renewable Energy Zone.	
	Facilitate	Facilitate the apportioning of community infrastructure funding to meet needed community services and infrastructure in Hamilton.	Ongoing
	Facilitate	Support community-led renewable energy projects in the municipality and other green initiatives. Projects should consider capacity building and social inclusion across the community and seek to reduce energy costs. These may include provision of infrastructure such as residential solar panels rather than provision of monetary rebates on power bills.	Ongoing
2.5	To support the growth of local industrial and innovation opportunities.		
	Facilitate	Support development of high-value niche market proposals, especially within primary production sectors such as agriculture and aquaculture.	Ongoing
	Facilitate	Consider establishment of a local small business group to enable knowledge sharing and support between local business owners.	

	Facilitate	Liaise with renewable energy project proponents as they arise (e.g. hydro, wind, solar, battery projects).	Ongoing
	Facilitate	Investigate industrial land requirements to facilitate projected growth of renewable energy sector.	
	Implement	Seek to minimise visual amenity, agricultural and environmental impacts of renewable energy projects.	Ongoing
	Implement	Seek to collect funds from proponents and re-distribute for community projects and initiatives that improve liveability and socioeconomic outcomes.	Ongoing

2.6	To improve existing digital and transport infrastructure.				
	Advocate	Advocate for road network improvements and upgrades to ensure efficient and safe vehicle movements across the municipality.			
	Facilitate	Explore opportunities for Hamilton to build on service offerings to road freight utilising the Lyell Highway.			
	Implement	Ensure that developers contribute proportionally to any required upgrades to transport infrastructure necessary for successful development.			
	Advocate	Advocate for improved digital infrastructure, including internet coverage, speeds and reliability.	Ongoing		
2.7	To encourage the growth of existing and new retail and commercial services.				
	Facilitate	Encourage retail/commercial premises to remain as such.	Ongoing		
	Advocate	Attract new retail and commercial businesses to establish in Hamilton.	Ongoing		
	Facilitate	Engage with the community on strategies to retain existing retail and commercial services in Hamilton.			
	Facilitate	Facilitate establishment of markets for locally made goods.	Ongoing		

A THRIVING TOURISM SECTOR			SHORT	MEDIUM	LONG
3.1	To enhance the visitor service role of Hamilton				
	Implement/ Facilitate	Optimise Hamilton for capturing the RV market by focusing on improving RV friendly infrastructure.	Ongoing		
	Implement	Consider expanding and upgrading Council-owned caravan parks (marked as 18 on Plan 032E) in alternative locations other than along the River Clyde to limit the number of camping grounds located along the river (marked as 8 on Plan 032E).			
	Facilitate	Attract and encourage investment in new commercial accommodation.			
	Implement	Review wayfinding and tourist signage in Hamilton. Identify and address any gaps in the provision of wayfinding and tourist signs in strategic areas.			
	Advocate	Encourage tourism and community events within and proximate to townships.	Ongoing		
	Implement	Consider development of an off-leash dog park to meet the needs of RV tourism.			
	Implement	Investigate drainage solutions to divert stormwater run-off from the existing caravan park.			
3.2	To facilitate development of tourism attractors in the region.				
	Advocate/ Implement	Develop and implement a Destination and Tourism Action Plan in conjunction with local tourism operators.	Ongoing		
	Facilitate	Support growth in visitation related to signature water and nature-based attractions and activities, including hiking, bushwalking, fishing, boating, hunting and camping.	Ongoing		
	Advocate	Advocate for funding through relevant State and Federal Government streams to prepare a series of cultural, historical, and community events such as: • Heritage walks and tours • Community festivals and exhibitions, including the existing Hamilton Show	Ongoing		

		• Cultural and educational programmes • Culinary trails • Local ambassador programmes			
	Facilitate/ Advocate	Attract and facilitate high quality tourism and hospitality operators to establish in Central Highlands.	Ongoing		
	Facilitate	Support provision of short-stay accommodation in Hamilton township.	Ongoing		
	Advocate	Facilitate use of Hamilton Town Hall for arts and culture displays.			
	Advocate	Support agri-tourism and farm-gate experiences on regional properties.	Ongoing		
	Facilitate	Support new trail and mountain biking experiences in the region.			
	Advocate	Encourage new tourism and community events to be held in the municipality.			
	Implement	Rationalise land ownership of the Hamilton Showgrounds to facilitate flexibility of use by Council and community groups (marked as 16 on Plan 032E) and creation of a legal accessway.			
	Facilitate	Investigate alternative uses and utilisation of the Hamilton Showgrounds for tourism uses, festivals and events.			
	Implement	Extend and add viewing platforms for the Platypus Walk, shown as point 17 on Plan 032E.			
	Implement	Explore opportunities for educational/informative signs or plaques to be placed in public spaces.			
	Implement	Investigate the feasibility of creating a self-guided heritage trail.			
3.3	To improve activation and accessibility of the region's signature water and nature based assets.				
	Advocate	Improve promotional and wayfinding signage across popular water and nature-based areas			
	Implement	Improve public access and activation of water and nature-based areas.			

A THRIVING TOURISM SECTOR			SHORT	MEDIUM	LONG
	Implement	Consider opportunities to provide walking and/or cycling trails that link towns in the Central Highlands or link to a signature water or nature-based asset.			
	Implement	Provide service infrastructure, such as public toilets, picnic tables and water fountains at popular water and nature-based areas.			
	Facilitate	Celebrate local settler and First Nation heritage values where appropriate.	Ongoing		

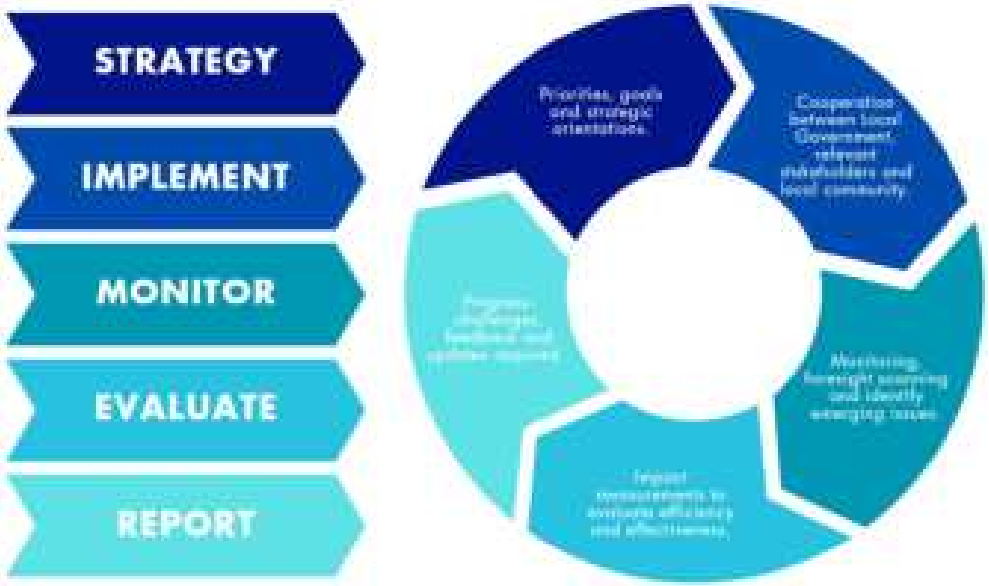
MONITORING

The Hamilton Township Structure Plan should be reviewed every **five years** to ensure the vision and key objectives are reflected in the ongoing development of the precinct. Similarly, as the township changes over time, the Structure Plan should be reviewed to ensure the vision and key objectives reflect the needs and preferences of the local community.

It is recommended that a review of the Hamilton Township Structure Plan vision and key objectives against the Central Highlands Planning Scheme is undertaken every **five years** to ensure that the Scheme and the Structure Plan are aligned.

Further, it is recommended that the Hamilton Township Structure Plan is reviewed in **fifteen years** to ensure that the vision and key objectives are still reflective of the existing community preferred strategic direction.

The following policy cycle highlights the key phases of implementing a strategic plan. Community consultation should be undertaken at each phase, with participation from a diverse representation of the community encouraged.



HAMILTON TOWNSHIP STRUCTURE PLAN:

APPENDICES

APPENDIX A: Background Report

APPENDIX B: Consultation Summary Report

APPENDIX C: Economic Analysis

APPENDIX D: Central Highlands Council, Socio-Economic Futures: A strategic, dynamic analysis & directions, by Creating Preferred Futures. 2025

NICHE STUDIO

CENTRAL HIGHLANDS

OUSE TOWNSHIP STRUCTURE PLAN



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Central Highlands Council acknowledges and pays respect to the Tasmanian Aboriginal Community as the traditional and original owners and continuing custodians of this land and acknowledge and pay respect to Elders, past, present and emerging.



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Document Issue and Status Record

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INTRODUCTION – CENTRAL HIGHLANDS

Central Highlands Council, located in central Tasmania between the State's two major cities of Hobart and Launceston, has begun to experience significant change with growing employment, an ageing population and an increasing demand for housing. The area offers competitive employment and economic advantages in agriculture, tourism, hydro-electricity supply and emerging renewable energy opportunities. This unique economic environment is underpinned by the local environment, natural assets and resources. These forces are generating new imperatives to critically reflect on how best to ensure the resilience and liveability of each of the regional townships within the municipality.

Geographically, Central Highlands is one of the largest municipalities in Tasmania, covering around 12% of the state's land area (8,010 square kilometres). Conversely, Central Highlands is the least densely populated local government area in Tasmania, with around 2,520 residents (ABS Census, 2021).

Central Highlands Council recognised the need for holistic strategic planning to guide future preferred development for three key towns within the municipality of Bothwell, Hamilton and Ouse. These towns play vital roles in providing essential services, accommodation options, and acting as gateways for visitors who wish to explore the natural beauty and heritage of the Central Highlands region of Tasmania.

Recent public notification of the Central Highlands Draft Local Provisions Schedule resulted in substantial feedback and representations from the community. Whilst some representations highlighted potential rezoning issues in the townships, feedback has particularly emphasized the need for strategic land use planning exercises in these townships.



GROWTH & EVOLUTION OF OUR REGION

In addition to the adoption of a new Local Provisions Schedule at a municipal level, a state government planning review of the Southern Tasmania region was initiated in 2024, in the form of the Southern Tasmania Regional Land Use Strategy (STRLUS). This strategy is intended to provide a long-term plan for managing growth and change in Southern Tasmania over the next 25 years, whilst protecting our natural environment.

The intention is that detailed structure planning exercises undertaken within each of the municipalities, such as Central Highlands, will feed into the STRLUS review and guide the ongoing evolution of townships such as Ouse.

Accordingly, the specific strategic direction for each township, outlining a vision, existing assets, challenges, and a future plan for service and infrastructure delivery needs to be reviewed and updated. Strategic thinking is necessary to determine how to best balance investment across those towns with projected growth, while ensuring communities have fair access to the facilities and services necessary for liveability.

To do this, it is important to understand how each community uses the facilities in their town, what they need and value, and how/where they access services not available locally. This approach will ensure the individual towns are as self-contained as possible while also supporting the towns to function in a broader network supporting the provision of housing, education, employment, tourism opportunities and key community infrastructure to ensure the wellbeing of residents for years to come.

As such, the Ouse Township Structure Plan will provide key guidance to both the State Government and Council enabling Central Highlands to advocate, facilitate and/or implement recommendations around funding, community infrastructure, tourism and housing investment.



PLANNING FOR GROWTH - OUSE

Ouse, located approximately 15km northwest of Hamilton and approximately 47km southwest of Bothwell is the second largest town in the Central Highlands municipality, with a population of 326 residents.

Sitting on the banks of the River Ouse, the town is a gateway to the surrounding wilderness areas offering basic amenities including a general store, a hotel, and a community centre. It serves as a base for outdoor enthusiasts, including fishermen, bushwalkers, and campers, who wish to explore nearby lakes, forests, and national parks.

Initial considerations for the Ouse study area included:

- Provision of services and facilities to residents and visitors, including health and aged care services and tourism services.
- Potential rezoning of former Education Department land next to school from Rural/Agriculture to Village.
- The movement network throughout the town, especially with regards to safety and connectivity.
- Potential for rezoning of land to accommodate residential and commercial growth and development.
- Capacity of infrastructure and services, including water and sewerage.
- Flood impacts from the River Ouse.
- Strengthening the town's visitor potential as the gateway to the 'Western Wilds' fishing and bushwalking areas.
- Proximity of the Agriculture Zone to the town, consideration of relevant flood prone land and the broader landscape setting of the town.
- An EV charging point has also been installed in Ouse.

The Ouse Structure Plan has been developed by Niche Studio for Central Highlands Council (CHC) with the assistance of Urban Enterprise, Entura, relevant government agencies, service authorities, major stakeholders and, critically, the local community.

The report has been prepared in accordance with the current *Tasmanian Planning Scheme – Central Highlands Local Provisions Schedule (2023)*.

The Structure Plan sets out the overarching themes to guide future development and growth within the township of Ouse. Objectives and strategies designed to enhance economic development opportunities, plan for aspirational growth rates and protect and enhance the historic character of Ouse are outlined as logical conclusions to the detailed opportunity and constraint analysis conducted.

To guide the Central Highlands municipality in setting an aspirational economic vision for the future, Council commissioned an independent socio-economic analysis. This report supports the directions outlined by Urban Enterprise and proposes targeted future actions to facilitate the aspirational growth needed to

ensure Central Highlands becomes a revitalised, sustainable community into the future. The report, *Socio-Economic Futures: A strategic, dynamic analysis & directions*, has been appended.

OUSE

PLAN 002B - Study Area



THE WORK WE ARE BUILDING ON

In developing a Structure Plan for Ouse, Niche completed a range of background investigations across the project to ensure that a thorough investigation into the opportunities and constraints of the town was made.

Phase 1 included an analysis of the physical opportunities and constraints of the study area.

A background review of relevant policy and strategy documents was also conducted, serving to ground the Structure Plan in a current regional context. The background report is attached as Appendix 1.

Initial targeted community consultation with selected community organisations and key stakeholders was also undertaken in Phase 1. These conversations were designed to highlight current issues facing the region and draw out themes and opportunities as seen by local community members. Input from key government agencies was also invited, as servicing and infrastructure provision plays an important role in growth and development.

Phase 2 focused on engaging the community and building a collaborative vision for the future of Ouse. Niche developed a comprehensive understanding for the region and the elements of the built and natural environment valued by the community. The community workshopped potential improvements for Ouse across six main themes, as detailed further in this Structure Plan.

Four key types of community consultation were undertaken to inform the preparation the Structure Plan, in the form of online surveys and communication, intercept surveys, visioning workshop, and targeted one-on-one discussions. A detailed discussion of the consultation undertaken, together with the findings that arose, can be found in the Community Consultation Summary Report, appended to this report.

Phase 3 required Niche to collate and investigate the themes arising from background analysis and community consultation, in conjunction with priorities and aspirations as set by Council and considering State-level guidelines as set out by the Southern Tasmanian Regional Land Use Strategy (STRLUS).

This has culminated in the Structure Plan as stepped through in the following report.

RESEARCH

Conduct work internally and with expert consultants to research the local place, including the planning context, with the goal of understanding the environment which we are looking to contribute to.

LISTEN & LEARN

Conduct authentic community and stakeholder engagement, listening to feedback and ideas with the goal of learning about what matters to locals.

DESIGN EXCELLENCE

Through a robust analysis process, understand and achieve 'design excellence' for urban planning and design with the goal of raising the bar for placemaking in the area.

THE TOWNSHIP OF OUSE

A detailed analysis of existing constraints and potential opportunities was conducted as part of Phase 1 of the Structure Plan project, including review of current planning-related reporting, documentation and policy applicable to the Central Highlands municipality.

Mapping existing constraints, including current zoning, hazards, environmental considerations and servicing within the study area has been used to inform development of the Ouse Structure Plan, and these are described in detail in the following sections.

Building on the mapped constraints, an in-depth investigation of economic drivers, demographics and housing was conducted by Urban Enterprise. The major findings from the economic analysis centred around the aging population of the municipality as compared to the population of greater Tasmania. This then has flow-on effects to the local economy, community infrastructure needs and housing requirements. Accentuating the unique needs of the municipality is the pressure that a large number of holiday homes and shacks, and a largely transient workforce employed in the renewable energy sector place on the municipality – requiring services that cannot be supported by the year-round resident population of Central Highlands.

If required services and facilities are absent from an area, it can be difficult to attract new residents. Conversely, if population growth remains low, it is difficult to attract the required development that would support population growth. However, the lifestyle and affordability advantages in the region, coupled with the commuting distance to greater Hobart, represent opportunities that could be capitalised on to build improved resident populations.

The needs and expectations of an aging population for a liveable, inviting place are different to those of young families or working age residents, and this in turn presents opportunities and challenges for Ouse and the municipality at large.

LAND USE

Ouse comprises a central core of land zoned Village on the western bank of the River Ouse. To the south of the Village zone is a large lot of Recreation zoned land. Directly adjacent to the western bank of the river, and fronting the Lyell Highway are two large lots zoned Open Space. A large lot zoned for Recreation is located on the eastern bank of the river, reflecting the position of the Ouse Community Country Club, with Rural lots adjacent to the east and south-east.

The locations of major roads and sewerage treatment facilities are reflected in Utilities zoned land, with land surrounding the school to the north-west of Ouse zoned as Community Purpose. The remainder of land within the study area is zoned Agriculture.



OUSE

PLAN 005A - Zones

LAKE REPULSE ROAD

LYELL HIGHWAY

VICTORIA VALLEY ROAD

RIVER OUSE

RIVER OUSE

RIVER OUSE

TOR HILL ROAD

WATER STREET

TOR HILL ROAD

LYELL HIGHWAY

N

ZONES

- Agriculture
- Rural
- Village
- Environmental Management
- Utilities
- Community Purpose
- Recreation
- Open Space

NICHE STUDIO

MOVEMENT

Ouse is located on the Lyell Highway, 15 km north-west of Hamilton and 53km north-west of New Norfolk. The Lyell Highway is maintained by the Department of State Growth (DSG), who are responsible for any required upgrades. DSG have indicated that they would support increased tourism opportunities with consideration given to management of additional traffic, with improved wayfinding and safety for the local community

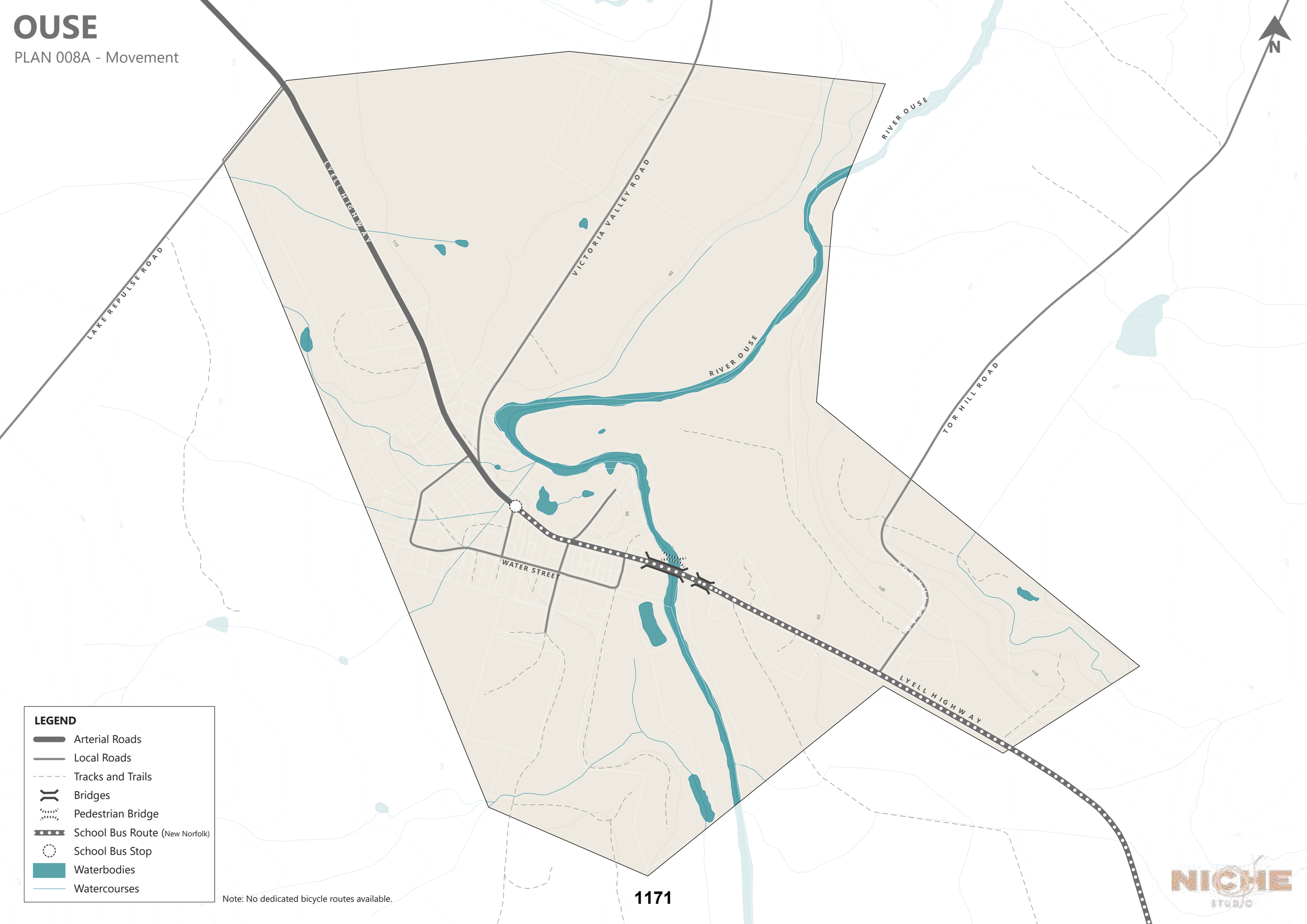
There is a vehicle bridge and a separate pedestrian bridge across the River Ouse on Lyell Highway, which forms the main street of the town. There are minor local roads forming the remainder of the town centre.

A school bus route runs to New Norfolk for students. No public transport is available in town. No dedicated bicycle routes are available in town.



OUSE

PLAN 008A - Movement



LEGEND

- Arterial Roads
- Local Roads
- Tracks and Trails
- Bridges
- Pedestrian Bridge
- School Bus Route (New Norfolk)
- School Bus Stop
- Waterbodies
- Watercourses

Note: No dedicated bicycle routes available.

HAZARDS

The majority of the Ouse study area is subject to consideration of a Bushfire Prone Area. This excludes the central core of the town fronting Lyell Highway on the western bank of the River Ouse.

There is a small amount of landslip hazard through the Ouse Community Country Club land in the eastern part of the study area.

No flooding information has been made available for the River Ouse, but the catastrophic floods of 2016 reflect the importance of considering this as a constraint to future development in the town.

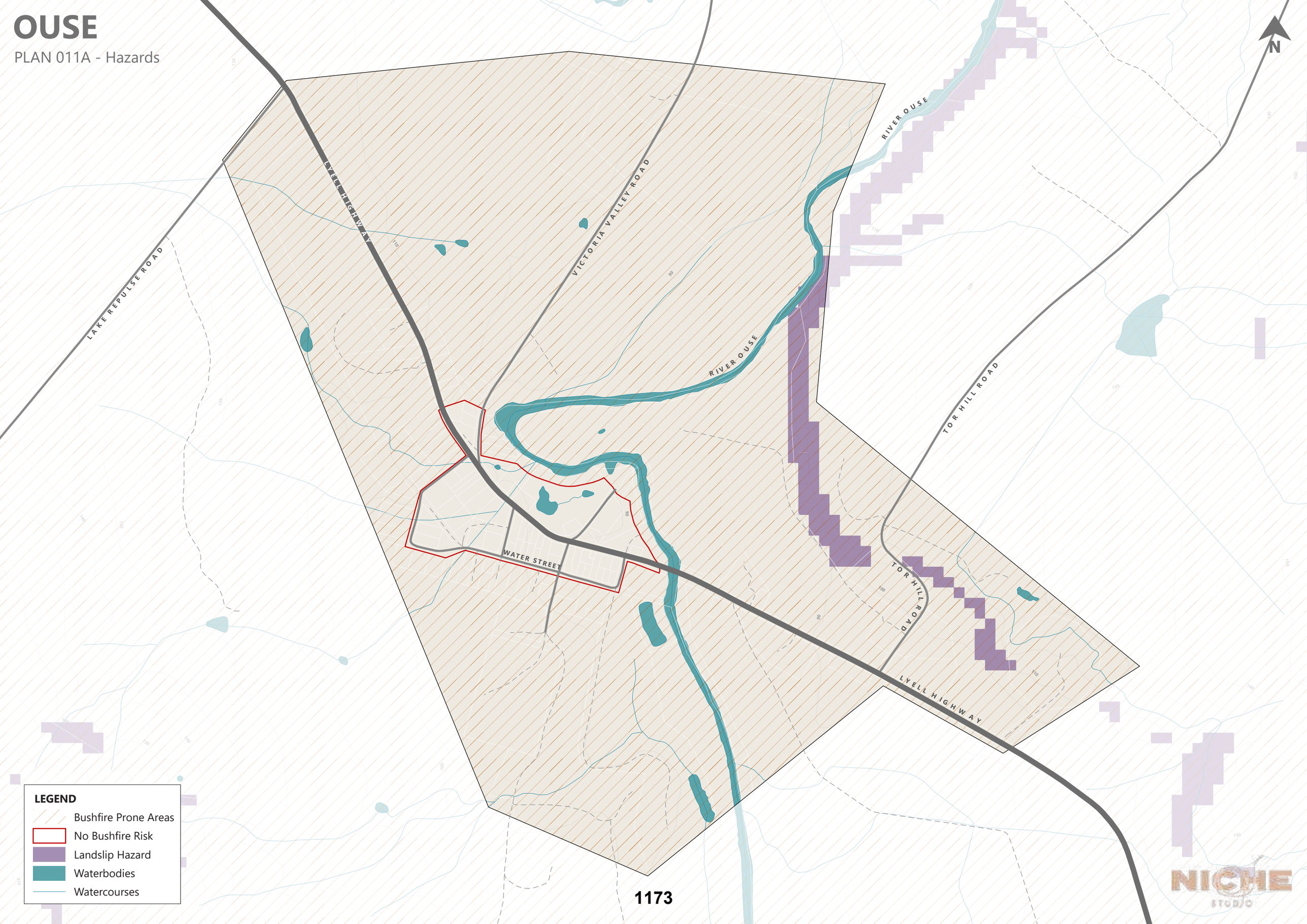
Development of sensitive uses such as residential or educational is not recommended in flood-prone areas. Land adjacent to the River Ouse that is prone to flooding is better utilised for recreational purposes, although consideration of inundation hazards should be made when constructing and installing footpaths and recreational infrastructure.

Should the pedestrian footbridge across the River Ouse be raised to the height of the vehicle bridge, this will prevent flood debris becoming entangled and forming an impromptu dam. This may reduce the impact of flooding upstream.



OUSE

PLAN 011A - Hazards



PHYSICAL & NATURE BASED FEATURES

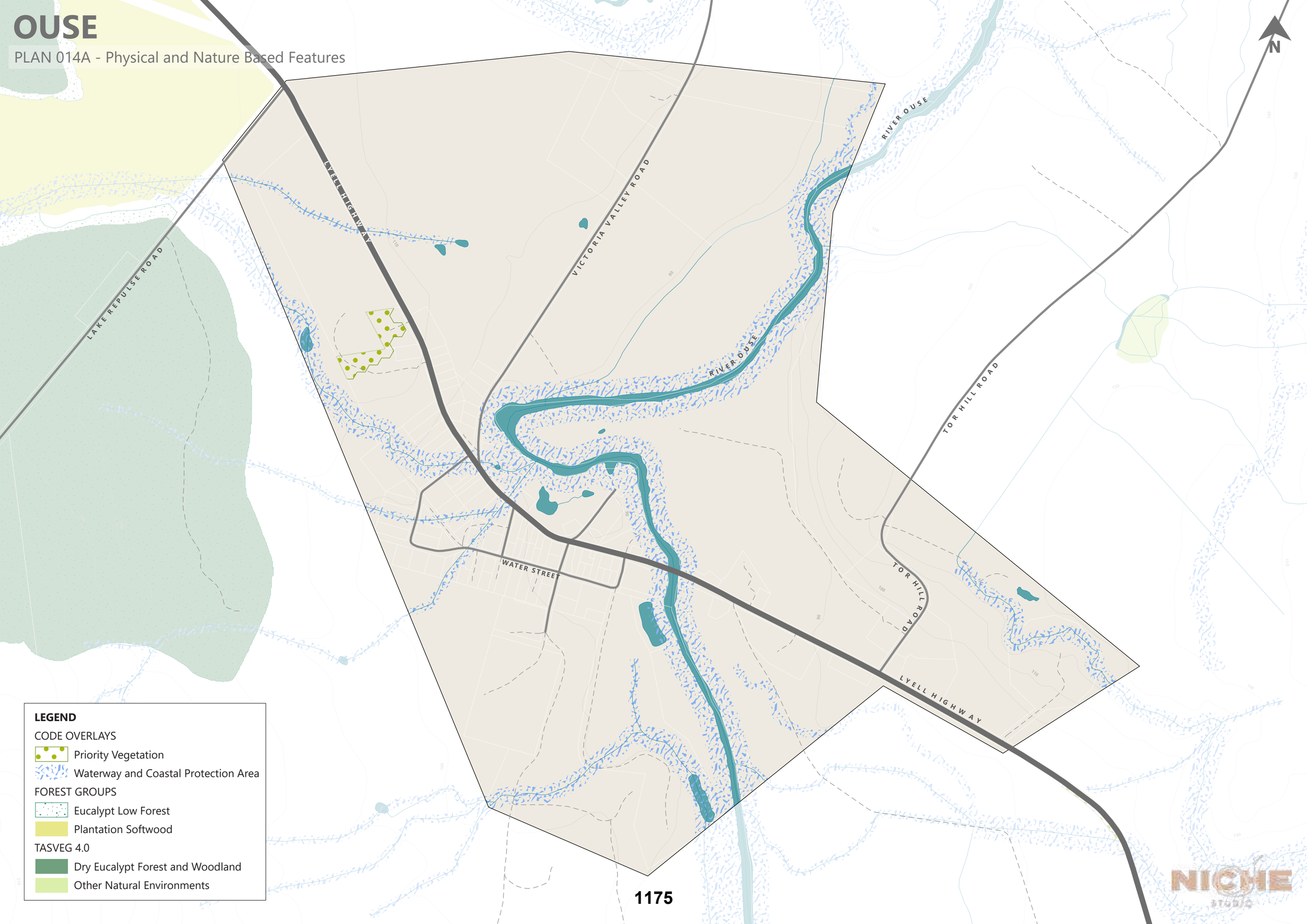
The Ouse study area has a small area of priority vegetation in the north-west of the study area. No Threatened Native Vegetation Communities exist in the Ouse study area.

Following the waterways, there are areas of waterway and coastal protection running parallel on each bank.



OUSE

PLAN 014A - Physical and Nature Based Features



LEGEND

CODE OVERLAYS

- Priority Vegetation
- Waterway and Coastal Protection Area

FOREST GROUPS

- Eucalypt Low Forest
- Plantation Softwood

TASVEG 4.0

- Dry Eucalypt Forest and Woodland
- Other Natural Environments

SERVICING & INFRASTRUCTURE

The majority of the study area is serviced with town water. The majority of the western bank of the study area has access to reticulated sewerage.

The sewerage treatment ponds are located to the south west of the River Ouse, accessed from Water Street. They are surrounded by an Attenuation Code Overlay, in order to assist in odour mitigation.

An electricity transmission corridor, together with associated easements, runs through the north and south-eastern corner of the study area. This may pose a constraint to future residential development, but currently runs through land zoned for Agriculture purposes.

The supply of new residential lots is hampered by the 'first mover pays' infrastructure provision policy of several major infrastructure providers, which can effectively lock up some areas behind infrastructure bottlenecks.



OUSE

PLAN 017B - Servicing and Infrastructure

N

LAKE REPULSE ROAD

LYELL HIGHWAY

VICTORIA VALLEY ROAD

RIVER OUSE

RIVER OUSE

TOR HILL ROAD

WATER STREET

TOR HILL ROAD

LYELL HIGHWAY

1

LEGEND

- Water Mains
- Sewer Systems Area
- Sewer Mains
- Sewer Pressurised Mains
- 1 Sewer Treatment Plant

CODE OVERLAYS

- Electricity Transmission Corridor
- Inner Protection Area
- Attenuation Area (from Sewage Treatment Lagoon)

1177

NICHE STUDIO

COMMUNITY FACILITIES, CHARACTER & HERITAGE

Ouse has several places registered on the Tasmanian Heritage Register, including the Catholic and Anglican churches. There are no local heritage provisions for the Ouse study area in the LPS.

Community facilities in Ouse include:

- Ouse Fire Station
- Roadhouse
- Public Toilets
- Post Office and IGA
- Hotel
- Community Health Centre
- Town Hall
- Ambulance Tasmania
- Community Country Club and Golf Course
- Ouse On-line Access Centre
- Ash Cottage Community House

Prior to discussions with the Department of Education, Communities and Young People (DECYP), anecdotal advice suggested that the school at Ouse was in abeyance. DECYP confirmed there is no active enrolments at Ouse District School in 2024, and children are travelling to other schools in the broader region, including Glenora District School and Westerway Primary School.

The most recent enrolment numbers at Ouse District School comprised nine students in late 2022. Children received education at Ouse District School two to three days per week and travelled by bus to Westerway Primary School the other days to ensure social interaction and further education opportunities. Parents were supportive of this arrangement.

DECYP engaged a third-party demographer to review the broader school enrolments in the region. They also engaged with the Tarraleah project to understand if there would be any significant increase in enrolment numbers if the project was to commence. The conclusion was that there would not be any significant increase in number of children requiring education. This may be considered the case if nothing changes. Additional major renewable energy projects and substantial investments in horticulture in the area would, for example, necessitate a re-evaluation.

Only communities can close schools. As such, the Department put a recommendation to the Minister to put Ouse District School into recess, with a review of the enrolment in Term 3 2024, and also a review of the boundary intake areas for the broader area. If Ouse District School goes into recess, the site would be handed to Facilities Office (outside of the remit of DECYP). They would engage with Council and the community over the future potential use of the site. The site is currently used by a daycare, though the numbers are diminishing for that facility as well. There are also some ad-hoc uses managed by DECYP. There are two school staff houses next to Ouse DS at the moment; both are on the same title. There is potential for future use of those houses and/or the land but that would be up to Facilities Office.

OUSE

PLAN 020D - Facilities, Character and Heritage

FACILITIES

1 Ouse Cemetery
2 Immaculate Conception Catholic Church
3 Ouse District School
4 Ouse Fire Station
5 Ouse Roadhouse
6 Ouse Town Hall and Public Toilets
7 Ouse Post Office & IGA Xpress
8 Lachlan Hotel
9 St John the Baptist Church
10 Ouse Sports Ground and Basketball Court
11 Grace Nicholas Park
12 Ambulance
13 Former Ouse Child Health Centre
14 Ouse Golf and Country Club
15 Ouse Bowls Club
16 Ouse Online Access Centre
17 EV Charging Station
18 Ash Cottage Community House
19 TasWater Ponds (Aerated)
20 Ouse Cafe
21 Bottleshop

LEGEND

Open Space Reserves
Community Facilities
Tasmanian Heritage Registered Properties
Pedestrian Bridge
Waterbodies
Watercourses

LYELL HIGHWAY
VICTORIA VALLEY ROAD
RIVER OUSE
TOR HILL ROAD
CROSS STREET
WATER STREET
TICKNELL STREET
BLACK HILL CREEK
CEMETERY
OUSE DISTRICT SCHOOL
OUSE GOLF COURSE
GRACE NICHOLAS PARK
OUSE SPORTS GROUND

1179

N

NICHE STUDIO

OUSE TOWNSHIP STRUCTURE PLAN:

THE VISION

A VISION FOR OUSE

Ouse is a peaceful town nestled on the banks of the River Ouse, connected to the inviting natural environment daily through opportunities for recreation and movement.

As a gateway to the productive agricultural region of the Central Highlands and to the West Coast, Ouse will support the everyday needs of its community and visitors. Ouse will continue to offer a serene location for young families and key workers to reside, as a liveable, welcoming town.



EMERGING COMMUNITY THEMES

From the extensive consultation conducted by Niche, several common themes emerged that guided the development of the Township Structure Plan for Ouse.

The following chapters discuss our analysis of each theme.

A SUSTAINABLE & LIVEABLE MUNICIPALITY

A PRODUCTIVE & RESILIENT ECONOMY

A THRIVING TOURISM SECTOR

A SUSTAINABLE AND LIVEABLE MUNICIPALITY

SETTLEMENT & LAND SUPPLY

Central Highlands has a small population base, with low but consistent population growth recorded over the past decade. Low growth will challenge the prospect of economic growth, especially industries that rely on population-based demand. Population retention and attraction will be critical for economic resilience and growth, particularly attracting young to middle aged working families. This typically relies on suitable housing, employment and community infrastructure and services to be available and/or accessible.

Central Highlands has a series of advantages that could be better promoted to attract residents and visitors, including the regional lifestyle, housing affordability, the heritage characteristics of townships, and the natural environment.

Low dwelling growth and very limited residential development is evident. This is from a combination of low population growth, but also scarcity of readily developable sites that are available to the market. More investment in new housing should be encouraged in the main settlements of Bothwell, Ouse and Hamilton. According to landowners and developers, the viability of residential subdivision and development is marginal. The supply of new residential lots is hampered by the 'first mover pays' infrastructure provision policy of several major infrastructure providers, which can effectively lock up some areas behind infrastructure bottlenecks.

Land supply analysis reveals that Ouse has:

- 2.283ha of vacant Village zoned land across 15 lots.
- There is no Low Density or Rural Living Zoned land in Ouse.

With the exception of several vacant sites, Ouse has limited vacant land supply available, especially compared with Hamilton.

Based on a minimum subdivision area of 600sqm, vacant and underutilised Village Zone land supply in Ouse has an estimated theoretical capacity to accommodate around 20-35 new residential lots.

There are two vacant Council owned sites to the north and south of the Lyell Highway. The northern site is zoned Village, whereas the southern site is zoned Recreation. There may be an opportunity to investigate more productive use and utilisation of Council owned land.

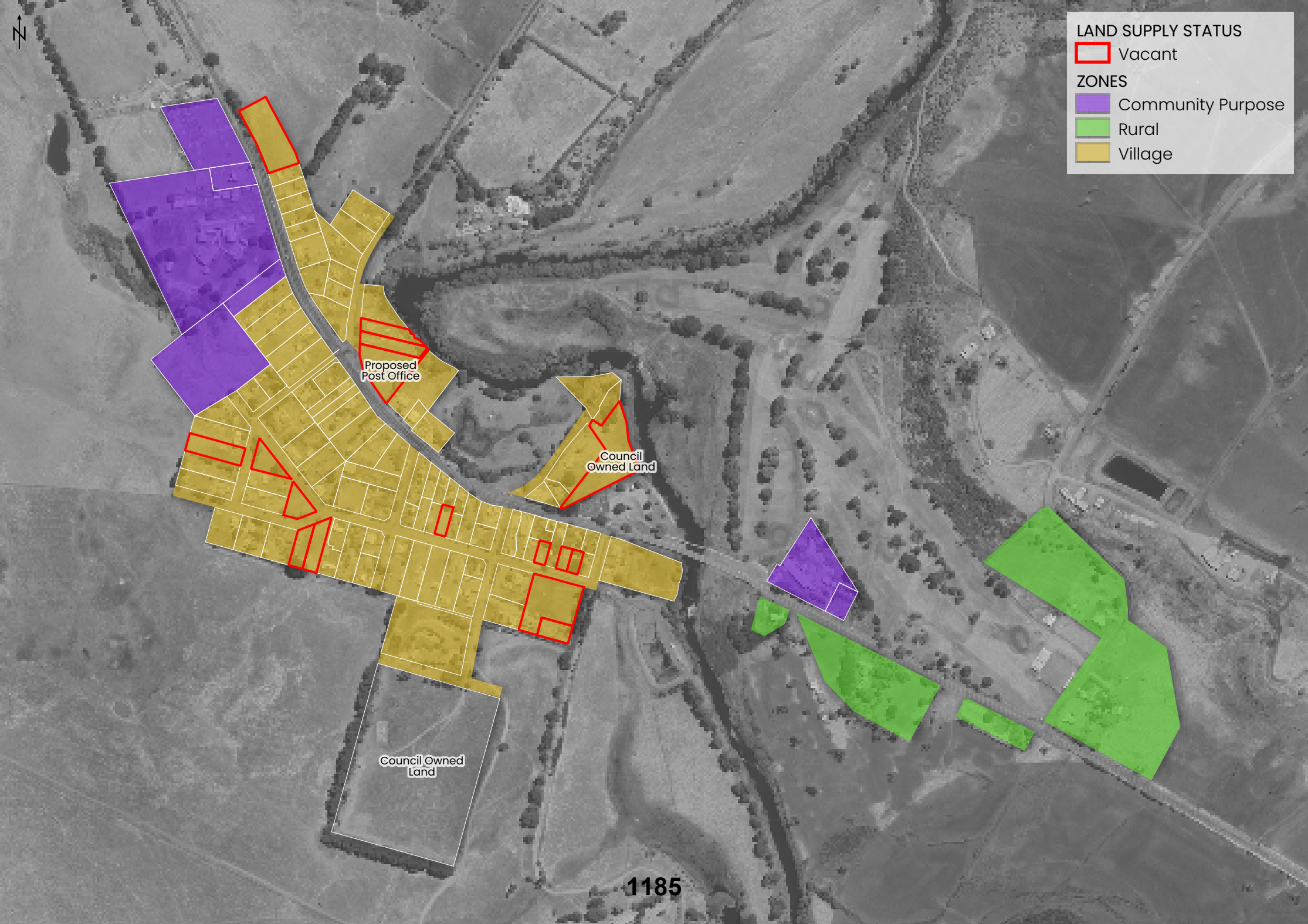
ECONOMIC ANALYSIS

Major investment and infrastructure projects planned in the region such as Tarraleah Hydropower redevelopment, Weasel Plains Solar Farm, Bashan Wind Farm, and Cellars Hill and St Patricks Plains Wind Farms will attract a notable number of workers to the region during the construction phase of the projects. Accommodating key workers in the region will be a major challenge due to the lack of rental housing, commercial accommodation and short term rentals available.

Central Highlands has an aging population, with a higher proportion of older cohorts (e.g. seniors, elderly). The aging of the resident population is expected to continue over time, and is likely to increase demand for health care and medical services, as well as aged care facilities, requiring a working age population to support the needs of this aging population base.

Central Highlands has a higher level of socioeconomic disadvantage compared with the national average. This is more than likely attributed to lower labour force participation and low access to essential services such as health care, medical services, and so forth.

There is a lack of public transport available in Central Highlands. There is one bus that runs between Bothwell and Hobart (via Brighton) for school transport, with no access for the general public. However, there are currently no bus services that link Bothwell, Ouse and Hamilton to each other or to the broader region.


LAND SUPPLY STATUS
Vacant
ZONES
Community Purpose
Rural
Village
Proposed Post Office
Council Owned Land
Council Owned Land
1185

STAKEHOLDER & COMMUNITY ASPIRATIONS

Ouse is highly valued for its 'peacefulness', with residents appreciating the strong connection to the natural area and subsequent rural lifestyle. The towns existing amenities were seen consistently as a strength of Ouse, specifically the pub, golf course and fuel service stop. A strength mentioned across all who participated in the vision workshop was Ouse's connection to its surrounding natural environment.

Notably, the Ouse community lacks trust in Council and other levels of government to establish or protect existing services. There have been a loss of many community services and facilities over time, and a consensus from residents was that they felt consistently unheard and unserved.

Key feedback received from the community in relation to sustainability and liveability measures included:

- **Movement and Servicing**
    - Ouse needs new and improved footpaths.
    - The current speed limit needs to be changed due to closure of school.
- **Community and Heritage**
    - Childcare must be maintained, and many of the participants called for the school to return.
    - An ageing population and lack of access to facilities was mentioned as a concern. Participants identified a need for medical facilities as well as aged care.
    - The town doesn't have many heritage buildings; focus was on retaining the info/ history centre to educate visitors.
- **Physical and Nature**
    - Connection to the surrounding natural environment is something that is valued highly in Ouse, therefore participants request new and improved footpaths and walkways, especially near the river.
    - Improving existing recreation infrastructure, specifically the half court located at the Ouse Recreation Ground; more recreational activities for children.
    - The school building in the town has been shut down, so participants suggest utilising the school's facilities such as the kitchen and gym by community groups would retain the building as a valuable community asset.

SUSTAINABLE & LIVEABLE MUNICIPALITY - OBJECTIVES & STRATEGIES

1. To define and enhance the character of Ouse

1.1 Continue to support the operation of the Ouse Golf Course by utilising the facility to host sporting and community events.

1.1 Support the retention of historically important buildings (such as the St John the Baptist Anglican Church) by utilising their space for town community festivals and events.

1.2 Rezone St John the Baptist Anglican Church to Community Purpose from Village to reflect correct land use and purpose of the church, as shown on Ouse Rezoning Plan 044E.

1.3 Promote opportunities for landowners to support maintenance of privately-owned heritage buildings through application for grant funding, such as the State government Built Heritage Grants Scheme.

1.4 Investigate provision of Design Guidelines for Ouse that complement the statutory provisions of the Central Highlands Local Provisions Schedule. These may include images, diagrams and frequently asked questions in everyday language to assist the community in understanding and defining the preferred future character of Ouse.

1.5 Encourage new development to respond to the preferred future character of Ouse.

1.6 Upgrade and demarcate the car park adjacent to the Lyell Highway (marked as 2 on Plan 033C), including provision of safe pedestrian access, linkages to surrounding footpaths and provision of landscaping.

1.7 Advocate to State government for funding to support a streetscape masterplan, including traffic study, for the Lyell Highway section passing through Ouse.

1.8 Invest in upgrades to the public realm, including footpath improvements, regular maintenance of weeds, required drainage upgrades and provision of street lighting and furniture.

1.9 Consider identification of iconic scenic landscapes of the Central Highlands municipality, and whether protection of these landscapes is feasible within the Central Highlands Local Provisions Schedule.

2. To retain existing local residents within the township

2.1 Support new residential development proposals in Ouse to increase housing supply and provide greater housing choice for existing and new residents, including aged care and key worker accommodation.

2.2 Improve residential amenity by supporting the implementation of additional recreational and social facilities within Ouse by:

- Encourage the refurbishment and improvement of the Golf Club House (marked as 8 on Plan 033C) located near Tor Hill Road.
- Finalising works associated with the half court (marked as 15 on Plan 033C).
- Support continuance of existing childcare (marked as 11 on Plan 033C).

2.3 Advocate for State Government funding to improve the walkability of Ouse by providing upgrades and construction of new active travel infrastructure by:

- Improving existing footpaths along Lyell Highway (marked as 1 on Plan 033C).
- Improving and raising above flood-level existing footbridge over the River Ouse (marked as 5 on Plan 033C).
- Constructing new footpath connection from Grace Nicholas Park to Bridge Hotel Road and Council-owned open space (marked as 7 on Plan 033C).
- Constructing new floodproof footpaths adjacent to the River Ouse (marked as 3 on Plan 033C).

2.4 Advocate for Department of State Growth to conduct a traffic safety study on the Lyell Highway as it passes through Ouse. This will inform potential recommendations for traffic calming measures and enhance resident safety.

2.5 Advocate for State Government funding to improve existing safety by providing improvements to vehicular movement and parking provisions within the town of Ouse by:

- Improving the carparking provisions within the centre of Ouse (marked as 2 on Plan 033C).
- Undertaking works associated with widening the Lyell Highway (marked as 4 on Plan 033C).
- Implementing additional lighting at the east end of Water Street (marked as 10 on Plan 033C).
- Preparation of a streetscape and traffic masterplan for the Lyell Highway.

3. To attract new residents to the township

3.1 Advocate for funding to prepare a Resident Attraction Strategy to attract new residents to live in the municipality, focusing on attracting young and middle-aged working families.

3.2 Investigate opportunities for developing Council owned land (marked as 14 on Plan 033C) to provide a mixture of residential typologies including affordable housing.

3.3 Support private development that provides a diversity of housing typologies that promote a mixture of demographics such as individuals, young families, and elderly.

3.4 Rezone Council-owned recreation reserve on Water Street to Village Zone, as shown on Ouse Rezoning Plan 044E to support potential provision of affordable housing.

3.5 Investigate opportunities to partner with community housing providers to supply assisted living units, potentially on Council-owned land.

3.6 Consider re-zoning of land parcels on Tor Hill Road adjoining the golf course and eastern settlement boundary to Low Density Residential (as shown on Ouse Rezoning Plan 044E.

3.7 Investigate opportunities to provide key worker accommodation for existing and future industries within close proximity to the township.

3.8 Promote lifestyle and affordability advantages of Central Highlands through the use of marketing campaigns that attract new residents to live and work in the municipality that:

- Target younger demographics through the use of social media platforms to showcase community life and local attractions.
- Undertake a renewal of the existing Central Highlands website to create a user-friendly interface that showcases important information on housing, community facilities, and upcoming community events.
- Create advertisement campaigns that highlight the attractiveness of living within the Central Highlands region and promotes the affordability of home ownership within Bothwell.
- Create partnership programmes with local real estate companies to showcase existing and future available properties and promote the benefits of rural living.

3.9 Investigate feasibility of future housing provision and township growth at Investigation Area 1 on Ouse Rezoning Plan 044E.

3.10 Advocate to the Department of State Growth for a business case to support establishing a bus network between towns in the Central Highlands and to larger service centres.

4. To identify gaps in key social and community services such as health, education and aged care.

4.1 Support the rezoning of land from Village to Community Purpose in the following locations:

- Ouse Fire Station
- St John the Baptist Anglican Church

4.2 Support the rezoning of land to Open Space in the following locations:

- Grace Nicholas Park

4.3 Advocate to the State Government to enable the re-opening and revitalisation of the Ouse District School (marked as 12 on Plan 033C).

4.4 Advocate to the State Government for adaptive re-use of the Ouse District School, including adult education programs, child care and kindergarten services, and community development programs.

4.5 Investigate feasibility of expanding existing childcare service through provision of funding, assistance with grant applications, or attracting a service provider.

4.6 Advocate to the State and Federal Governments for sufficient funding to attract medical staff and provide upgrades to the Central Highlands Rural Health Centre (marked as 13 on Plan 033C).

4.7 Support HATCH in their advocacy to support the health of the local community.

4.8 Consider reuse opportunities for the Ash Cottage Community House.

4.9 Ensure community infrastructure funding sourced from renewable energy operators is utilised to meet established community and infrastructure needs in Ouse.

5. To prioritise existing and future community needs.

5.1 Ensure location of future housing and growth in serviced areas.

5.2 Consider adopting a policy that developer contributions to the cost of any required servicing upgrade necessary to facilitate future development.

5.3 Investigate potential infrastructure bottlenecks that may be blocking areas of the town from being developed due to the 'first mover pays' policy of some major infrastructure providers, and investigate the feasibility implementing a pro-active strategy to resolve such impasses.

5.4 Consider implementation of an equitable contribution split in meeting required gaps in Council infrastructure provision to allow progression of key developments, and lobby other infrastructure providers to do the same.

5.5 Conduct flood mapping of the River Ouse and implement any recommendations arising to ensure protection of community safety and assets.

5.6 Develop a strategy to attract and retain primary health care staff for the existing medical centre.

5.7 Undertake a Community Needs Assessment.

5.8 Advocate for provision of community services as identified as lacking in the Community Needs Assessment and Ouse Structure Plan.

5.9 Develop a detailed streetscape/townscape plan to:

- Determine where upgrades are required to the public realm.
- Investigate whether current heritage provisions are appropriate and whether design guidelines are required.

5.10 Rezone the parcel of land at 10 Cross Street from Community Purpose to Village, to reflect the transition of ownership from public hands into private, as shown on Plan 044E.

5.11 Support development proposals that aim to fulfil under-served community needs within Ouse.

5.12 Undertake an Integrated Transport Strategy for Central Highlands, focusing on improvements to active transport networks, identifying gaps in transport linkages, upgrades required to increase efficiency, sustainability and safety and focus on creating a connected municipality.

6. To deliver a comprehensive Settlement Strategy and Structure Plan that promotes a sustainable and liveable town.

6.1 Ensure the Central Highlands Settlement Strategy and Structure Plans consider the following:

- The need for adequate Village Zone land supply that is available and 'development ready' to accommodate new housing.
- The need to diversify the housing stock to support changing demographic needs and preferences, especially older/ageing residents.
- Partner with aged care and social housing providers in projects to increase the housing stock for these groups.
- Direct housing growth to Ouse.
- Encourage an increase in the number of rental properties available.
- Addressing viability challenges that present barriers to residential development and housing growth in Ouse.

6.2 Implement the Ouse Structure Plan as outlined in the implementation plan.

6.3 Review implementation of the Ouse Structure Plan periodically to ensure timelines and action items are achieved.

7. To ensure the provision of adequate open space

7.1 Review the provision of open space and recreational space within the municipality.

7.2 Produce an Open Space Strategy.

7.3 Consider development of a "Greening the Streets" Strategy to:

- Increase shading at recreation grounds and public open space;
- Provide streetscape enhancement along Lyell Highway; and
- Identify opportunities for further greening in the public realm.

7.4 Improve open space amenity by supporting the implementation of additional recreational and leisure facilities within Ouse by:

- Constructing a walking trail along the River Ouse to the north of the town (marked as 3 on Plan 033C) on Council-owned and Crown land.
- Upgrading playground facilities at Grace Nicholas Park (marked as 6 on Plan 033C).
- Providing additional recreation opportunities on Council-owned land off Bridge Hotel Road (marked as 7 on Plan 033C).
- Maintaining and explore opportunities to expand recreational facilities surrounding the existing half court development (marked as 15 on Plan 033C).
- Upgrade and expand community infrastructure in parks and open spaces, such as seating, rubbish bins, water fountains.

A PRODUCTIVE AND RESILIENT ECONOMY

SETTLEMENT & LAND SUPPLY

Key observations on retail, commercial, civic and recreational land use in Ouse includes the following:

- Ouse includes the only convenience supermarket in Central Highlands (IGA X-Press)
- There is an existing pub (Lachlan Hotel), which also includes a bakery/café.
- There is a roadhouse that provides fuel and convenience based goods for locals and stopover travellers.
- Ouse includes the only health/medical centre in Central Highlands (Central Highlands Rural Health Centre), but this facility does not currently have primary care providers.
- Ouse has an online access centre.

ECONOMIC ANALYSIS

The town centre of Ouse (~300 residents) primarily performs a visitor servicing/stopover tourism role, and services the daily requirements of residents within the rural hinterland. The visitor servicing role for all three towns is important in sustaining the viability of existing operators, given the small local resident population.

Ouse includes a small IGA express, which serves residents of Ouse and Hamilton for convenience based goods.

Local residents of Ouse and Hamilton typically travel to New Norfolk and/or Brighton for higher order retail and commercial needs.

Ouse and Hamilton can be regarded as 'sister towns' due to their proximity. Hamilton serves as a destination town, with a charming heritage core of Georgian sandstone buildings, while Ouse is the service centre, offering retail and community facilities.

To catalyse retail and commercial investment that aligns with the activity centre role of towns, it is likely that a higher level of demand is needed; from a combination of residents and visitors. To catalyse retail and commercial investment that aligns with the activity centre role of towns, it is likely that a higher level of demand is needed; from a combination of residents and visitors.

Population-service industries are underrepresented. Attracting new retail, hospitality and health-related businesses to establish in Ouse, should be encouraged.

The region is well placed to attract renewable energy investment, especially hydropower, wind and solar. Renewable energy projects typically generate a high number of jobs during the construction phase, and a low number of jobs during the operational phase. However, a critical mass of projects may attract new permanent workers to the region. Renewable energy projects such as solar and wind farms have the potential to raise municipal rates and community funds, which could be directed for community benefit. Determining how these funds should be spent within the community should be considered. Renewable energy projects can create environmental and amenity impacts, and should sought to be minimised where possible, especially linked to economic productivity.

Commercial and industrial businesses are accommodated in the Village Zone within townships, and there is currently no standalone land areas or precincts dedicated to industrial and commercial activities. There may be an opportunity to investigate establishing an industrial and/or commercial precinct in the region that is well-located, has service capabilities, and is strategic in terms of serving supply-chain activities from key industries such as horticulture and renewable energy projects.

The internet service, speeds and coverage is fairly unreliable across Central Highlands, which limits digital access and connectivity.

The road network in Central Highlands is critical for accessibility and connectivity for residents, workers and businesses. The condition and maintenance of regional roads is an ongoing issue and requires ongoing advocacy with the Department of State Growth.

T20. RETAIL & COMMERCIAL ROLE

Township	Approx. population	Classification	Role
Bothwell	500	Local centre (small)	Community & civic; Basic convenience retail; and Stopover visitor servicing.
Ouse	300	Local centre (small)	Convenience retail; and Stopover visitor servicing.
Hamilton	240	Local centre (small)	Stopover visitor servicing (hospitality, accommodation)

Source: Urban Enterprise, 2024

STAKEHOLDER & COMMUNITY ASPIRATIONS

Discussion with the Ouse community during the community engagement process highlighted the following key aspirations.

The vision for the future of Ouse is one which has an increased number of facilities. Residents and visitors envisioned the town having increased shopping and retail options as well as camping facilities. Loss of access to a local doctor and pharmacy concerns the community. With an aging population, medical care is a priority for most residents, and they dislike travelling to New Norfolk or Oatlands or Hobart to visit a medical professional. Most see that increased facilities will attract people to the town and therefore result in the town being busier in the future.

PRODUCTIVE & RESILIENT ECONOMY - OBJECTIVES & STRATEGIES

8. To grow and foster employment opportunities unique to the area, reflecting the individuality of the location.

8.1 Encourage the retention and growth of existing employment opportunities within the health care industry by:

- Facilitating upgrades to the existing aged care units at the Central Highlands Rural Health Centre.
- Implementing programs that subsidise key workers accommodation associated with the health care sector.

8.2 Investigate opportunities to foster and develop cottage industry such as small-scale or home-based businesses, including food manufacture.

8.3 Collaborate with renewable energy providers to identify opportunities in the region.

8.4 Advocate to the Department of Natural Resources and Environment for investment in pilot innovative niche agriculture projects in the region.

8.5 Promote opportunities for growth of the commercial sector in Ouse by:

- Encouraging development of a "ribbon" of commercial/tourism uses along the Lyell Highway (item 17 on Plan 033C).
- Improving wayfinding along Lyell Highway to promote commercial facilities to passing traffic.
- Supporting the addition of commercial facilities that offer a new service to the local economy.
- Advocating to State Government for funding to provide monetary incentives that encourage innovation within the service-based economy of Ouse.

9. To sustainably grow the value of the existing agriculture sector.

9.1 Advocate for ongoing improvements and upgrades to regional irrigation schemes that are fundamental to the agriculture and horticulture sectors.

9.2 Support and enhance highly specialised agriculture activities, especially within established irrigated areas in Central Highlands.

9.3 Support agricultural supply-chain and rural service activities to establish in suitable locations in Central Highlands.

9.4 Explore opportunities to establish farm-gate sales or a regular farmer's market with direct sales to the general public.

10. To advocate for the sustainable growth of new agricultural opportunities.

10.1 Encourage intensive and high value activities within irrigated areas.

10.2 Promote agricultural opportunities to industry. These may include:

- Export market opportunities;
- Domestic market opportunities;
- Information around innovation and technology in the agriculture sector that could be harnessed;
- Off-farm income opportunities;
- Value-add opportunities.

10.3 Facilitate and participate in an annual roundtable event for local agriculture industry representatives. Discussion points should include:

- Current challenges/barriers to industry growth;
- Provision of housing and community facility opportunities for key workers;
- Opportunities for industry growth; and
- Research and innovation.

11. To actively support the development of renewable energy and green infrastructure projects.

11.1 Attract renewable energy projects to develop in the Central Highlands proposed Renewable Energy Zone.

11.2 Advocate to landowners of large agricultural holdings to consider renewable / sustainable energy projects.

11.3 Advocate to landowners of large agricultural holdings within the proposed REZ to consider the opportunities of Agri-solar development.

11.4 Advocate for and support new investment in commercial and industrial activities that serve the renewable energy project supply-chain.

11.5 Facilitate the attraction and retention of workers associated with the renewable energy and green infrastructure industry by:

- Implementing programs that subsidise key workers accommodation associated with local renewable and green infrastructure projects.
- Supporting development that offers a variety of housing typology including medium density development to encourage demographics such as young professionals to move to Ouse.
- Implementing and supporting programs that provide and subsidise key community services such as childcare and medical.
- Investigate opportunities for co-working spaces to encourage the attraction of small businesses and digital nomads associated with local renewable and green infrastructure projects.

11.6 Seek ways to leverage from ongoing improvements and upgrades to hydro schemes and projects (e.g. Tarraleah) to meet identified community needs in Ouse.

11.7 Advocate for a mechanism to collect community infrastructure funding from renewable energy operators establishing in Central Highlands proposed Renewable Energy Zone.

11.8 Facilitate the apportioning of community infrastructure funding to meet needed community services and infrastructure in Ouse.

11.9 Support community-led renewable energy projects in the municipality and other green initiatives. Projects should consider capacity building and social inclusion across the community and seek to reduce local energy costs. These may include provision of infrastructure such as residential solar panels rather than provision of monetary rebates on power bills.

12. To support the growth of local industrial and innovation opportunities.

12.1 Liaise with renewable energy project proponents as they arise (e.g. hydro, wind, solar, battery projects).

12.2 Investigate industrial land requirements to facilitate projected growth of renewable energy sector.

12.3 Seek to minimise visual amenity, agricultural and environmental impacts of renewable energy projects.

12.4 Seek to collect funds from proponents and re-distribute for community projects and initiatives that improve liveability and socioeconomic outcomes.

13. To improve existing digital and transport infrastructure.

13.1 Advocate for road network improvements and upgrades to ensure efficient and safe vehicle movements across the municipality.

13.2 Explore opportunities to build on service offerings to road freight utilising the Lyell Highway.

13.3 Ensure that developers contribute proportionally to any required upgrades to transport infrastructure considered necessary for successful development.

13.4 Advocate for improved digital infrastructure, including internet coverage, speeds and reliability.

14. To encourage the growth of existing and new retail and commercial services.

14.1 Encourage retail/commercial premises to remain as such.

14.2 Attract new retail and commercial businesses to establish in Ouse.

A THRIVING TOURISM SECTOR

SETTLEMENT & LAND SUPPLY

Ouse offers the only convenience supermarket in the Central Highlands, and serves primarily a service stop-over role for visitors, with access to fuel sales and meals available at the pub. There is no provision for short-stay accommodation in town. Ouse has a publicly accessible EV charging station.

ECONOMIC DRIVERS

The primary product strengths in Central Highlands include:

- Sightseeing, hiking, bushwalking and camping in state forests and national parks;
- The Tasmanian Trail, which connects Devonport to Dover, runs through Ouse. There is a campground located at the Ouse Recreation Ground that services hikers, cyclists and horse-riders travelling this trail;
- Recreational boating and fishing in the network of lakes and rivers; and
- History and heritage significance of townships and settlements.

Signature attractions and experiences in the region include:

- Fly fishing in Lake Meadowbank and other hydro storages on the Derwent River, and the western lakes;
- Hydro Power Trail, including the heritage hydro power station at Waddamana;
- National Parks and conservation areas such as Mount Field National Park, Walls of Jerusalem National Park,
- Franklin-Gordon Wild Rivers National Park;
- Multi-day hikes such as the overland track, Tasmanian trail, labyrinth trail and Lake Antimony trail.
- Boating and fishing in Lake St Clair, Meadowbank Lake and Derwent River.
- Whiskey distillery's at Lawrenny Estate (Ouse), Lower Marsh (Apsley), New Norfolk (in Derwent Valley) and Kempton (in Southern Midlands).

- The region has high tourism and visitor growth potential, primarily linked to the natural advantages of the area.
- The towns of Ouse, Hamilton and Bothwell all receive a high number of visitors travelling through and stopping over, particularly from self-drive camping and caravan visitors. These towns could perform a greater visitor servicing role.
- There is a high level of self-drive visitors that travel within and across the region, including a high proportion of caravan/RV's. There is a need to ensure that visitor preferences are being met through infrastructure, services and amenity.
- Potential for greater activation and promotion of signature nature and water-based experiences, including hiking, camping, fishing, cycling and kayaking.
- There is an opportunity to support further development and investment in farm gate and agri-tourism.
- There is an opportunity to support further development and investment in visitor accommodation and hospitality offering.
- Destination functions and events are an effective way to attract visitors to the region. Supporting existing and new events that attract visitation and align with regional strengths should be encouraged.
- There is a potential for Central Highlands to improve destination branding and increase destination awareness as a key region in central Tasmania.

STAKEHOLDER & COMMUNITY ASPIRATIONS

The community raised several thoughts about tourism in Ouse during the community consultation period. These included the following.

The towns being "stopover" towns for people driving across the state should be capitalised on. This is suggested as a consideration when planning for tourism growth. Ouse is a gateway to the western wilds, and is the first town that people return to on their journey back. There is the possibility to capitalise on this adventure and environmental tourism market.

THRIVING TOURISM SECTOR - OBJECTIVES & STRATEGIES

15. To enhance the visitor service role of Ouse.

15.1 Optimise towns for capturing the RV market by focusing on improving RV friendly infrastructure.

15.2 Consider addition of an RV dump point for black water disposal.

15.3 Attract and encourage investment in new commercial accommodation.

15.4 Review wayfinding and tourist signage in Ouse. Identify any gaps in the provision of wayfinding and tourist signs in strategic areas.

15.5 Leverage off the towns existing golf course facilities to provide unique tourism opportunities surrounding sports tourism.

15.6 Encourage alternative tourism and community events within and proximate to townships.

15.7 Encourage availability of 24 hour fuel.

15.8 Promote availability of electric charging station to tourists and day visitors.

16. To facilitate development of tourism attractors in the region.

16.1 Promote the growth of agri-tourism opportunities through the support of initiatives such as:

- Encouraging local farmers to explore Farm Stays that offer accommodation, farm tours, petting zoos.
- Encouraging local farmers to engage in Farm-to-Table activities that promote local produce and products.

16.2 Develop and implement a Destination and Tourism Action Plan in conjunction with local tourism operators.

16.3 Advocate for funding through relevant State and Federal Government streams to prepare a series of cultural, historical, and community events such as:

- Heritage walks and tours;
- Community festivals and exhibitions;
- Cultural and educational programmes;

- Culinary trails;
- Local ambassador programmes.

16.4 Support growth in visitation related to signature water and nature-based attractions and activities, including hiking, bushwalking, fishing, boating, hunting and camping.

16.5 Attract and facilitate high quality tourism and hospitality operators to establish in Central Highlands.

16.6 Support new trail and mountain biking experiences in the region.

16.7 Collaborate with the Tasmanian Trail to promote Ouse as a stop-over and provisioning point for people using the trail.

16.8 Encourage new tourism and community events to be held in the municipality.

16.9 Support provision of short-stay accommodation in Ouse.

17. To improve activation and accessibility of the region's signature water and nature-based assets.

17.1 Improve promotional and wayfinding signage across popular water and nature-based areas.

17.2 Improve public access and activation of water and nature-based areas.

17.3 Review available community infrastructure such as seating, rubbish bins, and lighting, and enhance or upgrade as required.

17.4 Celebrate built and First Nations heritage locations, where appropriate.

OUSE TOWNSHIP STRUCTURE PLAN:

IMPLEMENTATION

IMPLEMENTATION

The Ouse Township Structure Plan reviews three key themes and outlines 17 key objectives and associated strategies. These objectives have been tied to key actions to enable Council's practical application, namely:

- Implement
- Advocate
- Facilitate

By recognising which strategies Council can implement directly, and which requires external intervention ensures the ongoing realisation of the Ouse Township vision.

The following two pages illustrate spatial recommendations from the objectives and strategies. These have been tested with the community, working group and Councillors. The first illustrates recommended zoning upgrades to reflect growth projections and are a direct response to the three key themes. The community strongly voiced their desire for immediate upgrades to a number of existing facilities within the township area including footpaths, public park upgrades and public buildings. These are identified on the second plan.

OUSE

PLAN 044E - Proposed Rezoning

LAKE REPULSE ROAD
LYELL HIGHWAY
VICTORIA VALLEY ROAD
RIVER OUSE
RIVER OUSE
RIVER OUSE
TOR HILL ROAD
WATER STREET
TOR HILL ROAD
LYELL HIGHWAY
1
N

LEGEND

- Areas of change
- Investigation Areas
- Public Toilets
- Half Court
- Trees

ZONES

- Agriculture
- Rural
- Village
- Low Density Residential
- Environmental Management
- Utilities
- Community Purpose
- Recreation
- Open Space

1208

NICHE

OUSE

PLAN 033C - Fine Grain Recommendations

RECOMMENDATIONS

1 Improve footpaths along highway
2 Upgrade and demarcate parking areas
3 Add walking trail along river to the north of town
4 Widen highway
5 Upgrade footbridge
6 Provide park near river
7 Add new path from bus stop to above new park
8 Support upgrade of club house near Tor Hill Road
9 Consider additional recreational facilities near housing development to south of town
10 Add lighting at east end of Water Street
11 Maintain childcare
12 Revitalise the school
13 Upgrade the medical centre
14 Consider affordable housing development
15 Finish half court and include other recreational activities
16 Improve water access to golf course
17 "Ribbon" tourism/retail use along Lyell Highway
18 New footpaths
19 Improve bus facilities for school student pickup area

LEGEND

- Open Space Reserves
- Community Facilities
- Tasmanian Heritage Registered Areas
- Waterbodies
- Watercourses

LYELL HIGHWAY
VICTORIA VALLEY ROAD
RIVER OUSE
TOR HILL ROAD
CROSS STREET
WATER STREET
TICKNELL STREET
BLACK HILL CREEK
CEMETERY
OUSE DISTRICT SCHOOL
OUSE GOLF COURSE
GRACE NICHOLAS PARK
OUSE SPORTS GROUND
1209
N
NICHE STUDIO

PRIORITIES

To ensure successful implementation of the Ouse Structure Plan, the following priorities and timeframes should be considered.

A** = **Advocate** | **I** = **Implement** | **F** = **Facilitate

Short Term = 3 years | Medium Term = 5 -10 years | Long Term = 10+ years

A SUSTAINABLE, LIVEABLE TOWN			**SHORT**	**MEDIUM**	**LONG**
1.1	To define and enhance the character of Ouse				
	Facilitate	Continue to support the operation of the Ouse Golf Course (marked as 17 on Plan 033C) by utilising the facility to host sporting and community events.	Ongoing		
	Facilitate	Support the retention of historically important buildings (such as the St John the Baptist Anglican Church) by utilising their space for town community festivals and events.	Ongoing		
	Implement	Rezone St John the Baptist Anglican Church to Community Purpose from Village to reflect correct land use and purpose of the church, as shown on Ouse Rezoning Plan 044E.			
	Facilitate	Promote opportunities for landowners to support maintenance of privately-owned heritage buildings through application for grant funding, such as the State government Built Heritage Grants Scheme.			
	Implement	Investigate provision of Design Guidelines for Ouse that complement the statutory provisions of the Central Highlands Local Provisions Schedule. These may include images, diagrams and frequently asked questions in everyday language to assist the community in understanding and defining the preferred future character of Ouse.			
	Facilitate	Encourage new development to respond to the preferred future character of Ouse.	Ongoing		
	Implement	Upgrade and demarcate the car park adjacent to the Lyell Highway (marked as 2 on Plan 033C), including provision of safe pedestrian access, linkages to surrounding footpaths and provision of landscaping.			
	Advocate	Advocate to State government for funding to support a streetscape masterplan, including traffic study, for the Lyell Highway section passing through Ouse.			

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
	Implement	Invest in upgrades to the public realm, including footpath improvements, regular maintenance of weeds, required drainage upgrades and provision of street lighting and furniture.	Ongoing		
	Implement	Consider identification of iconic scenic landscapes of the Central Highlands municipality, and whether protection of these landscapes is feasible within the Central Highlands Local Provisions Schedule.			
1.2	To retain existing local residents within the township				
	Facilitate	Support new residential development proposals in Ouse to increase housing supply and provide greater housing choice for existing and new residents, including aged care and key worker accommodation.	Ongoing		
	Implement	Improve residential amenity by supporting the implementation of additional recreational and social facilities within Ouse by: • Encourage the refurbishment and improvement of the Golf Club House (marked as 8 on Plan 033C) located near Tor Hill Road. • Finalising works associated with the half court (marked as 15 on Plan 033C). • Support continuance of existing childcare (marked as 11 on Plan 033C).			
	Advocate	Advocate for State Government funding to improve the walkability of Ouse by providing upgrades and construction of new active travel infrastructure by: • Improving existing footpaths along Lyell Highway (marked as 1 on Plan 033C). • Improving and raising above flood-level existing footbridge over the River Ouse (marked as 5 on Plan 033C). • Constructing new footpath connection from Grace Nicholas Park to Bridge Hotel Road and Council-owned open space (marked as 7 on Plan 033C). • Constructing new floodproof footpaths adjacent to the River Ouse (marked as 3 on Plan 033C).			
	Advocate	Advocate for Department of State Growth to conduct a traffic safety study on the Lyell Highway as it passes through Ouse. This will inform potential recommendations for traffic calming measures and enhance resident safety.			

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
	Advocate	Advocate for State Government funding to improve existing safety by providing improvements to vehicular movement and parking provisions within the town of Ouse by: • Improving the carparking provisions within the centre of Ouse (marked as 2 on Plan 033C). • Undertaking works associated with widening the Lyell Highway (marked as 4 on Plan 033C). • Implementing additional lighting at the east end of Water Street (marked as 10 on Plan 033C). • Preparation of a streetscape and traffic masterplan for the Lyell Highway.			
1.3	To attract new residents to the township				
	Advocate	Advocate for funding to prepare a Resident Attraction Strategy to attract new residents to live in the municipality, focusing on attracting young and middle-aged working families.			
	Implement	Investigate opportunities for developing Council owned land (marked as 14 on Plan 033C) to provide a mixture of residential typologies including affordable housing.			
	Facilitate	Support private development that provides a diversity of housing typologies that promote a mixture of demographics such as individuals, young families, and elderly.			
	Implement	Rezone Council-owned recreation reserve on Water Street to Village Zone, as shown on Ouse Rezoning Plan 044E to support potential provision of affordable housing.			
	Advocate/ Facilitate	Investigate opportunities to partner with community housing providers to supply assisted living units, potentially on Council-owned land.			
	Implement	Consider re-zoning of land parcels on Tor Hill Road adjoining the golf course and eastern settlement boundary to Low Density Residential (as shown on Ouse Rezoning Plan 044E.			
	Facilitate	Investigate opportunities to provide key worker accommodation for existing and future industries within close proximity to the township.			
	Implement	Promote lifestyle and affordability advantages of Central Highlands through the use of marketing campaigns that attract new residents to live and work in the municipality that: • Target younger demographics through the use of social media platforms to showcase community life and local attractions.			

A SUSTAINABLE, LIVEABLE TOWN			SHORT	MEDIUM	LONG
		• Undertake a renewal of the existing Central Highlands website to create a user-friendly interface that showcases important information on housing, community facilities, and up-coming community events. • Create advertisement campaigns that highlight the attractiveness of living within the Central Highlands region and promotes the afford-ability of home ownership within Bothwell. • Create partnership programmes with local real estate companies to showcase existing and future available properties and promote the benefits of rural living.			
	Implement	Investigate feasibility of future housing provision and township growth at Investigation Area 1 on Ouse Rezoning Plan 044E.			
	Advocate	Advocate to the Department of State Growth for a business case to support establishing a bus network between towns in the Central Highlands and to larger service centres.			
1.4	To identify gaps in key social and community services such as health, education and aged care.				
	Implement	Support the rezoning of land from Village to Community Purpose in the following locations: • Ouse Fire Station • St John the Baptist Anglican Church			
	Implement	Support the rezoning of land to Open Space in the following locations: • Grace Nicholas Park			
	Advocate	Advocate to the State Government to enable the re-opening and revitalisation of the Ouse District School (marked as 12 on Plan 033C).			
	Advocate	Advocate to the State Government for adaptive re-use of the Ouse District School, including adult education programs, child care and kindergarten services, and community development programs.			
	Facilitate	Investigate feasibility of expanding existing childcare service through provision of funding, assistance with grant applications, or attracting a service provider.			
	Advocate	Advocate to the State and Federal Governments for sufficient funding to attract medical staff and provide upgrades to the Central Highlands Rural Health Centre (marked as 13 on Plan 033C).	Ongoing		
	Facilitate	Support HATCH in their advocacy to support the health of the local community.	Ongoing		
	Implement	Consider reuse opportunities for the Ash Cottage Community House.			
	Implement	Ensure community infrastructure funding sourced from renewable energy operators is utilised to meet established community and infrastructure needs in Ouse.	Ongoing		

1.5	To prioritise existing and future community needs.		
	Facilitate	Ensure location of future housing and growth in serviced areas.	Ongoing
	Implement	Consider adopting a policy that developer contributions to the cost of any required servicing upgrade necessary to facilitate future development.	Ongoing
	Implement	Investigate potential infrastructure bottlenecks that may be blocking areas of the town from being developed due to the 'first mover pays' policy of some major infrastructure providers, and investigate the feasibility implementing a pro-active strategy to resolve such impasses.	
	Implement	Consider implementation of an equitable contribution split in meeting required gaps in Council infrastructure provision to allow progression of key developments, and lobby other infrastructure providers to do the same.	
	Implement	Conduct flood mapping of the River Ouse and implement any recommendations arising to ensure protection of community safety and assets.	
	Facilitate	Develop a strategy to attract and retain primary health care staff for the existing medical centre.	
	Implement	Undertake a Community Needs Assessment.	
	Advocate	Advocate for provision of community services as identified as lacking in the Community Needs Assessment and Ouse Structure Plan.	
	Implement	Develop a detailed streetscape/townscape plan to: • Determine where upgrades are required to the public realm. • Investigate whether current heritage provisions are appropriate and whether design guidelines are required.	
	Implement	Rezone the parcel of land at 10 Cross Street from Community Purpose to Village, to reflect the transition of ownership from public hands into private, as shown on Plan 044E.	
	Facilitate	Support development proposals that aim to fulfil under-served community needs within Ouse.	Ongoing
	Implement	Undertake an Integrated Transport Strategy for Central Highlands, focusing on improvements to active transport networks, identifying gaps in transport linkages, upgrades required to increase efficiency, sustainability and safety and focus on creating a connected municipality.	

1.6	To deliver a comprehensive Settlement Strategy and Structure Plan that promotes a sustainable and liveable town.				
	Facilitate	Ensure the Central Highlands Settlement Strategy and Structure Plans consider the following: • The need for adequate Village Zone land supply that is available and 'development ready' to accommodate new housing. • The need to diversify the housing stock to support changing demographic needs and preferences, especially older/ageing residents. • Partner with aged care and social housing providers in projects to increase the housing stock for these groups. • Direct housing growth to Ouse. • Encourage an increase in the number of rental properties available. • Addressing viability challenges that present barriers to residential development and housing growth in Ouse.			
	Implement	Implement the Ouse Structure Plan as outlined in the implementation plan.			
	Implement	Review implementation of the Ouse Structure Plan periodically to ensure timelines and action items are achieved.	Ongoing		
1.7	To ensure the provision of adequate open space				
	Implement	Review the provision of open space and recreational space within the municipality.			
	Implement	Produce an Open Space Strategy.			
	Implement	Consider development of a "Greening the Streets" Strategy to: Constructing a walking trail along the River Ouse to the north of the town (marked as 3 on Plan 32A). - Increase shading at recreation grounds and public open space; - Provide streetscape enhancement along Lyell Highway; and - Identify opportunities for further greening in the public realm.			
	Implement	Improve open space amenity by supporting the implementation of additional recreational and leisure facilities within Ouse by: • Constructing a walking trail along the River Ouse to the north of the town (marked as 3 on Plan 033C) on Council-owned and Crown land. • Upgrading playground facilities at Grace Nicholas Park (marked as 6 on Plan 033C).			

		• Providing additional recreation opportunities on Council-owned land off Bridge Hotel Road (marked as 7 on Plan 033C). • Maintaining and explore opportunities to expand recreational facilities surrounding the existing half court development (marked as 16 on Plan 033C). • Upgrade and expand community infrastructure in parks and open spaces, such as seating, rubbish bins, water fountains.			

A PRODUCTIVE, RESILIENT ECONOMY			**SHORT**	**MEDIUM**	**LONG**
2.1	To grow and foster employment opportunities unique to the area, reflecting the individuality of the location.				
	Facilitate	Encourage the retention and growth of existing employment opportunities within the health care industry by: • Facilitating upgrades to the existing aged care units at the Central Highlands Rural Health Centre. • Implementing programs that subsidise key workers accommodation associated with the health care sector.	Ongoing		
	Facilitate	Investigate opportunities to foster and develop cottage industry such as small-scale or home-based businesses, including food manufacture.	Ongoing		
	Facilitate **Advocate**	Collaborate with renewable energy providers to identify opportunities in the region.			
	Advocate	Advocate to the Department of Natural Resources and Environment for investment in pilot innovative niche agriculture projects in the region.			
	Facilitate **Advocate**	Promote opportunities for growth of the commercial sector in Ouse by: • Encouraging development of a "ribbon" of commercial/tourism uses along the Lyell Highway (item 17 on Plan 033C). • Improving wayfinding along Lyell Highway to promote commercial facilities to passing traffic. • Supporting the addition of commercial facilities that offer a new service to the local economy. • Advocating to State Government for funding to provide monetary incentives that encourage innovation within the service-based economy of Ouse.			

A PRODUCTIVE, RESILIENT ECONOMY			SHORT	MEDIUM	LONG
2.2	To sustainably grow the value of the existing agriculture sector.				
	Advocate	Advocate for ongoing improvements and upgrades to regional irrigation schemes that are fundamental to the agriculture and horticulture sectors.	Ongoing		
	Advocate	Support and enhance highly specialised agriculture activities, especially within established irrigated areas in Central Highlands.	Ongoing		
	Advocate	Support agricultural supply-chain and rural service activities to establish in suitable locations in Central Highlands.	Ongoing		
	Implement Facilitate	Explore opportunities to establish farm-gate sales or a regular farmer's market with direct sales to the general public.			
2.3	To advocate for the sustainable growth of new agricultural opportunities.				
	Advocate	Encourage intensive and high value activities within irrigated areas.			
	Advocate	Promote agricultural opportunities to industry. These may include: • Export market opportunities; • Domestic market opportunities; • Information around innovation and technology in the agriculture sector that could be harnessed; • Off-farm income opportunities; • Value-add opportunities.	Ongoing		
	Facilitate	Facilitate and participate in an annual roundtable event for local agriculture industry representatives. Discussion points should include: • Current challenges/barriers to industry growth; • Provision of housing and community facility opportunities for key workers; • Opportunities for industry growth; and • Research and innovation.	Ongoing		
2.4	To actively support the development of renewable energy and green infrastructure projects.				

A PRODUCTIVE, RESILIENT ECONOMY			SHORT	MEDIUM	LONG
	Advocate	Attract renewable energy projects to develop in the Central Highlands proposed Renewable Energy Zone.			
	Advocate	Advocate to landowners of large agricultural holdings to consider renewable / sustainable energy projects.			
	Advocate	Advocate to landowners of large agricultural holdings within the proposed REZ to consider the opportunities of Agri-solar development.			
	Advocate	Advocate for and support new investment in commercial and industrial activities that serve the renewable energy project supply-chain.	Ongoing		
	Facilitate Implement	Facilitate the attraction and retention of workers associated with the renewable energy and green infrastructure industry by: • Implementing programs that subsidise key workers accommodation associated with local renewable and green infrastructure projects. • Supporting development that offers a variety of housing typology including medium density development to encourage demographics such as young professionals to move to Ouse. • Implementing and supporting programs that provide and subsidise key community services such as childcare and medical. • Investigate opportunities for co-working spaces to encourage the attraction of small businesses and digital nomads associated with local renewable and green infrastructure projects			
	Implement	Seek ways to leverage from ongoing improvements and upgrades to hydro schemes and projects (e.g. Tarraleah) to meet identified community needs in Ouse.	Ongoing		
	Advocate	Advocate for a mechanism to collect community infrastructure funding from renewable energy operators establishing in Central Highlands proposed Renewable Energy Zone.			
	Facilitate	Facilitate the apportioning of community infrastructure funding to meet needed community services and infrastructure in Ouse.	Ongoing		
	Facilitate	Support community-led renewable energy projects in the municipality and other green initiatives. Projects should consider capacity building and social inclusion across the community and seek to	Ongoing		

		reduce local energy costs. These may include provision of infrastructure such as residential solar panels rather than provision of monetary rebates on power bills.	
2.5	To support the growth of local industrial and innovation opportunities.		
	Facilitate	Liaise with renewable energy project proponents as they arise (e.g. hydro, wind, solar, battery projects).	Ongoing
	Facilitate	Investigate industrial land requirements to facilitate projected growth of renewable energy sector.	
	Implement	Seek to minimise visual amenity, agricultural and environmental impacts of renewable energy projects.	Ongoing
	Implement	Seek to collect funds from proponents and re-distribute for community projects and initiatives that improve liveability and socioeconomic outcomes.	Ongoing
2.6	To improve existing digital and transport infrastructure.		
	Advocate	Advocate for road network improvements and upgrades to ensure efficient and safe vehicle movements across the municipality.	
	Facilitate	Explore opportunities to build on service offerings to road freight utilising the Lyell Highway.	
	Facilitate	Ensure that developers contribute proportionally to any required upgrades to transport infrastructure considered necessary for successful development.	
	Advocate	Advocate for improved digital infrastructure, including internet coverage, speeds and reliability.	Ongoing
2.7	To encourage the growth of existing and new retail and commercial services.		
	Facilitate	Encourage retail/commercial premises to remain as such.	Ongoing
	Advocate	Attract new retail and commercial businesses to establish in Ouse.	Ongoing

A THRIVING TOURISM SECTOR			SHORT	MEDIUM	LONG
3.1	To enhance the visitor service role of Ouse				
	Implement **Facilitate**	Optimise towns for capturing the RV market by focusing on improving RV friendly infrastructure.	Ongoing		
	Implement	Consider addition of an RV dump point for black water disposal.			
	Facilitate	Attract and encourage investment in new commercial accommodation.			
	Implement	Review wayfinding and tourist signage in Ouse. Identify any gaps in the provision of wayfinding and tourist signs in strategic areas.			
	Facilitate	Leverage off the towns existing golf course facilities to provide unique tourism opportunities surrounding sports tourism.	Ongoing		
	Advocate	Encourage alternative tourism and community events within and proximate to townships.	Ongoing		
	Facilitate	Encourage availability of 24 hour fuel.	Ongoing		
	Implement	Promote availability of electric charging station to tourists and day visitors.	Ongoing		
3.2	To facilitate development of tourism attractors in the region.				
	Advocate	Promote the growth of agri-tourism opportunities through the support of initiatives such as: • Encouraging local farmers to explore Farm Stays that offer accommodation, farm tours, petting zoos. • Encouraging local farmers to engage in Farm-to-Table activities that promote local produce and products.	Ongoing		
	Implement **Advocate**	Develop and implement a Destination and Tourism Action Plan in conjunction with local tourism operators.			
	Advocate	Advocate for funding through relevant State and Federal Government streams to prepare a series of cultural, historical, and community events such as: • Heritage walks and tours; • Community festivals and exhibitions; • Cultural and educational programmes; • Culinary trails; • Local ambassador programmes.	Ongoing		

A THRIVING TOURISM SECTOR			SHORT	MEDIUM	LONG
	Facilitate	Support growth in visitation related to signature water and nature-based attractions and activities, including hiking, bushwalking, fishing, boating, hunting and camping.	Ongoing		
	Facilitate **Advocate**	Attract and facilitate high quality tourism and hospitality operators to establish in Central Highlands.	Ongoing		
	Facilitate	Support new trail and mountain biking experiences in the region.			
	Advocate	Collaborate with the Tasmanian Trail to promote Ouse as a stop-over and provisioning point for people using the trail.	Ongoing		
	Advocate	Encourage new tourism and community events to be held in the municipality.			
	Facilitate	Support provision of short-stay accommodation in Ouse.	Ongoing		
3.3	To improve activation and accessibility of the region's signature water and nature-based assets.				
	Advocate	Improve promotional and wayfinding signage across popular water and nature-based areas.			
	Implement	Improve public access and activation of water and nature-based areas.			
	Implement	Review available community infrastructure such as seating, rubbish bins, and lighting, and enhance or upgrade as required.			
	Facilitate	Celebrate built and First Nations heritage locations, where appropriate.	Ongoing		

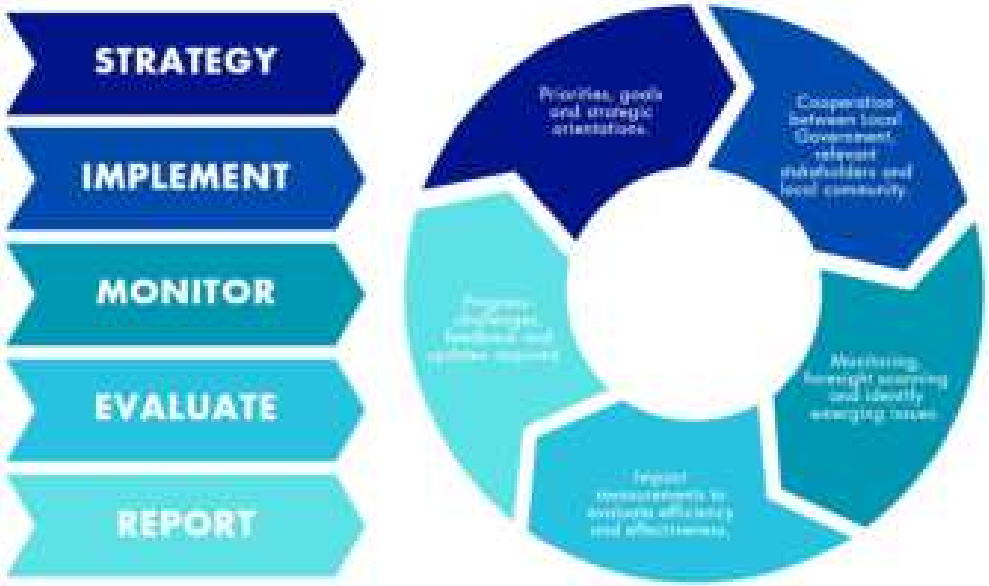
MONITORING

The Ouse Township Structure Plan should be reviewed **every five years** to ensure the vision and key objectives are reflected in the ongoing development of the precinct. Similarly, as the township changes over time, the Structure Plan should be reviewed to ensure the vision and key objectives reflect the needs and preferences of the local community.

It is recommended that a review of the Ouse Township Structure Plan vision and key objectives against the Central Highlands Planning Scheme is undertaken every **five years** to ensure that the Scheme and the Structure Plan are aligned.

Further, it is recommended that the Ouse Township Structure Plan is reviewed in **fifteen years** to ensure that the vision and key objectives are still reflective of the existing community preferred strategic direction.

The following policy cycle highlights the key phases of implementing a strategic plan. Community consultation should be undertaken at each phase, with participation from a diverse representation of the community encouraged.



OUSE TOWNSHIP STRUCTURE PLAN:

APPENDICES

APPENDIX A: Background Report

APPENDIX B: Consultation Summary Report

APPENDIX C: Economic Analysis

APPENDIX D: Central Highlands Council, Socio-Economic Futures: A strategic, dynamic analysis & directions, by Creating Preferred Futures. 2025

STCA FUTURE STRUCTURE AND COLLABORATIVE MODEL

Additional information for 16 December 2024 STCA meeting.

Background

At its last General Meeting on 15 July 2024 the STCA Board made the following resolution:

1. Agree in principle to pursue the option of replacing the Southern Tasmanian Councils Authority with an expanded Greater Hobart Strategic Partnership;
2. Seek views from Brighton and Sorell regarding joining the Greater Hobart Committee/Advisory Group and financial commitment;
3. Hold discussions with the Greater Hobart Committee/Advisory Group to understand the views of the committee members in respect to extending membership to Brighton and Sorell and the process to enact it;
4. Hold discussions with the Greater Hobart Strategic Partnership to understand the views of the committee members in respect to extending oversight to all southern councils and the process to enact it;
5. Seek advice on the process to wind up the Southern Tasmanian Councils Authority; and
6. Following completion of points 2 to 5 of this motion, prepare a report for the consideration of the STCA Committee to make a final decision on the matter.

Since this time Officers have held discussions with both the Greater Hobart Committee and the Greater Hobart Strategic Partnership in respect to the above decision.

While the Greater Hobart Committee has decided to offer adjunct membership to the Brighton and Sorell Council, the Greater Hobart Strategic Partnership has declined the proposal to expand its membership and remit to provide a regional collaboration service for the Southern Councils.

Accordingly, the decision by the Greater Hobart Strategic Partnership will effectively close any further consideration of the Board's July 15 decision.

An alternative proposal has been discussed with the CEOs/General Managers which would see RDA Tasmania step in to provide the role that was proposed for the Greater Hobart Strategic Partnership.

Budget and Resourcing

The annual proposed budget for the Secretariat function as outlined in the RDA Tasmania proposal is $75,500. This cost could be shared across the southern councils.

Broad payment categories based on population (Tas Treasury estimates 30 June 2023):

< 3,000 = $3,000

<10,000 = $4,000

<20,000 = $6,500

>20,000 = $9,500

LGA	*Estimated Population 30 June 2023*	*Proposed annual fee*
Brighton	19 998	$6,500
Central Highlands	2 595	$3,000
Clarence	63 663	$9,500
Derwent Valley	11 341	$4,000
Glamorgan-Spring Bay	5 237	$4,000
Glenorchy	50 808	$9,500
Hobart	55 964	$9,500
Huon Valley	19 454	$6,500
Kingborough	41 179	$9,500
Sorell	17 635	$6,500
Southern Midlands	6 912	$4,000
Tasman	2 686	$3,000
TOTAL	**297,472**	**$75,500**

Next Steps

- Agreement on the formation and funding of the network.
- Draft and agree a Terms of Reference and name.
- Develop a Memorandum of Understanding (MOU) or Service Agreement with RDA Tasmania detailing roles, responsibilities, and funding commitments.
- Manage the winding up of the Authority and transition arrangements (by 30 June 2024 or prior).
- Consider the continued involvement of the network in key southern activities including STRLUS and RCCI.

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13 December 2024

Proposal – RDA Tasmania Secretariat Function for Southern Tasmanian Councils Network

Purpose

This proposal outlines how RDA Tasmania could act as the Secretariat for a collaborative network of Southern Tasmanian Councils in lieu of the formal STCA model. The network aims to foster quarterly collaboration forums and joint policy setting focused on data and insights as well as managing shared service opportunities and regional project collaboration on an as needs basis.

Background

Southern Tasmanian Councils share overlapping priorities and challenges, including economic development, infrastructure, community well-being, and sustainable growth. A coordinated approach is crucial to maximise resources, improve efficiencies, and address shared challenges effectively.

RDA Tasmania, with its expertise in regional collaboration, strategic planning, and data-driven decision-making, is well-positioned to support this initiative.

Objectives

To deliver a network of Southern Councils to:

- Facilitate Collaboration: Provide a structured platform for councils to exchange knowledge, align priorities, and foster partnerships
- Leverage Data and Insights: Enable evidence-based decision-making by sharing regional data, analytics, and trends
- Encourage Efficiency: Identify shared service opportunities and streamline resource allocation
- Drive Strategic Projects: Support collaborative projects that address regional challenges and opportunities
- Enhance Governance: Provide administrative and logistical support to ensure forums are effective and outcomes focused
- Regional Communication: Provide a point of contact for stakeholders to engage at a southern scale.

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Proposed Role of RDA Tasmania

1. Secretariat Services (base function)

- Meeting Coordination: Plan, organise, and facilitate quarterly CEO/GM collaboration forums
    - Arrange venues (or virtual platforms)
    - Prepare agendas in consultation with member councils
    - Distribute meeting materials in advance.
- Documentation: Record minutes, track actions, and circulate summaries post-forum
- Membership Liaison: Be the point of contact and maintain communication with nominated council representatives, ensuring consistent engagement and participation
- Centralised Communication: Support (media and social media) content and presence as required
- Financial Administration: Provide financial services and reporting.

2. Data and Insights (base function)

- Maintain a repository of regional data and analytics, including:
    - Economic trends, workforce statistics, and infrastructure needs
    - Social and environmental indicators.
- Distribute relevant contemporary information and data across the member councils.

3. Strategic Project Support (as required and funded separately)

Subject to the agreement of the southern Councils:

- Provide tailored data analysis to inform discussions and support evidence-based decisions
- Facilitate identification of shared priority projects
- Assist in grant applications and project governance (eligible NFP entity)
- Coordinate project development and monitoring across councils
- Project administration and support for whole of region or sub-regional projects.

4. Shared Service Opportunities (as requested and funded separately)

Subject to the agreement of the southern Councils:

- Identify services with potential for regional collaboration
- Develop business cases for shared services to improve efficiency and reduce costs
- Monitor and evaluate shared service implementations.

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5. Advocacy and Reporting (base funding)

- Coordinate joint advocacy efforts to state and federal governments
- Prepare quarterly progress reports summarising outcomes and key insights from forums.

The proposed annual budget for this support role is $75,500, with additional project funding and grants being pursued on an agreed and case-by-case basis.

This funding would support administrative tasks as well as resource dedicated to coordination (within the network and with external parties as required), communication and engagement and facilitating network gatherings and occasional activities arising.

Governance Structure

- Membership: CEO/GM or delegate from each Southern Tasmanian Council
- Chairperson: Rotational leadership among councils, supported by RDA Tasmania
- Secretariat: RDA Tasmania as the operational backbone of the network
- Working Groups: Ad-hoc groups formed for specific initiatives or projects
- Terms of Reference: To underpin functioning including annual report and financial statements.

Expected Benefits

- Stronger regional collaboration and shared vision
- Enhanced capacity for data-driven decision-making
- Cost savings through shared services and coordinated efforts
- Increased success in securing funding for joint projects
- A unified voice in advocating for regional priorities
- Efficiency of using existing NFP entity and regional capacity.

RDA Tasmania would welcome the opportunity to serve as the Secretariat for the Southern Tasmanian Councils Network in the short to medium term, fostering collaboration and driving positive outcomes for the region. We look forward to engaging with council representatives to refine this proposal and begin implementation.

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We propose this function could be a two-year commitment to begin with, with an annual review, then reconsideration after two years.

Yours faithfully



James McKee
CEO & Director of Regional Development
Regional Development Australia – Tasmania Inc.