

AGENDA ATTACHMENTS

PLANNING COMMITTEE MEETING

TUESDAY 5TH DECEMBER 2023

Table of Contents

AGENDA ITEM 5.0

- Draft Planning Committee Minutes – Tuesday 110th October 20233

AGENDA ITEM 7.1

- Bushfire Assessment 13
- Wastewater Report 46
- Copy of Title 67
- Site Plan / Plan of Subdivision 69

Central Highlands Council

MINUTES

PLANNING COMMITTEE MEETING – 10TH OCTOBER 2023

Minutes of the **Planning Committee Meeting** (Special Committee of Central Highlands Council) held in the Bothwell Football Club & Community Centre, **Bothwell** on **Tuesday 10th October 2023**, commencing at **9.00am**.

1.0 PRESENT

Cr R Cassidy (Chairperson), Mayor L Triffitt, Deputy Mayor J Allwright and Cr J Hall.

2.0 IN ATTENDANCE

Cr A Bailey, Cr J Honner, Cr Y Miller, Cr D Meacham, Mrs K Hossack (General Manager), Mr G Rogers (Development & Environmental Services Manager) and Ms Joanne Housego (Minutes Secretary).

3.0 APOLOGIES

Nil

4.0 PECUNIARY INTEREST DECLARATIONS

In accordance with Regulation 8 (7) of the Local Government (Meeting Procedures) Regulations 2015, the Chairman requests Councillors to indicate whether they or a close associate have, or are likely to have, a pecuniary interest (any pecuniary or pecuniary detriment) in any item of the Agenda.

Nil

5.0 PERCEIVED INTEREST DECLARATIONS

Under the **Model Code of Conduct** made by Order of the Minister responsible for Local Government the following will apply to a Councillor –

PART 2 – Conflict of Interest that are not Pecuniary

(6) A Councillor who has an actual, potential or perceived conflict of interest in a matter before the Council must –

- (a) Declare the conflict of interest and the nature of the interest before discussion on the matter begins; and

- (b) Act in good faith and exercise reasonable judgement to determine whether a reasonable person would consider that the conflict of interest requires the Councillor to remove himself or herself physically from any Council discussion and remain out of the room until the matter is decided by the Council.

Nil

6.0 CONFIRMATION OF DRAFT MINUTES OF THE PLANNING COMMITTEE MEETING HELD 12TH SEPTEMBER 2023

RESOLUTION 01/10.2023/PC

Moved: Mayor L Triffitt

Seconded: Cr J Hall

THAT the Draft Minutes of the Planning Committee Meeting of Council held on Tuesday 12th September 2023 to be confirmed.

CARRIED

FOR the Motion

Mayor L Triffitt, Deputy Mayor J Allwright, Cr Cassidy and Cr J Hall.

7.0 PUBLIC QUESTION TIME

In accordance with Council's Policy No 2017-49 *Public Comment on Planning Agenda Items at Committee Meetings* a person may speak about an item on the agenda to be considered by the Planning Committee during public question time or at the beginning of the item, as determined by the Chairperson.

Speakers should follow the procedure below:

1. Only those people that have:
 - (a) Initiated the planning decision under the *Land Use Planning and Approvals Act 1993* (Act) ("Applicant"); or
 - (b) The owner of the land subject to the planning decision ("Owner"); or
 - (c) made a representation within the statutory notice period in relation to a planning decision ("Representor")

will be entitled to speak at a Planning Committee Meeting ("Meeting").
2. Prior to the commencement of the Meeting a person who wishes to address the Meeting must:
 - i. Notify the Council in writing by close of business on the Friday prior to the Planning Committee meeting of the person's intention to address the Meeting, including with the following detail:
 - (a) Identify whether the person is the Applicant or a Representor;
 - (b) If a Representor, the date the person made a representation in respect to the planning decision; and
 - (c) the relevant planning decision by the Council allocated number, or by reference to the land to which it relates (eg, by certificate of title, PID or address);
 - (d) the question or topic on which the person wishes to speak.
 - ii. Notify the Chairperson of his or her arrival prior to the commencement of the PCM and complete a register.
3. If a person has complied with the procedure in 2 above, the person will be entitled speak at the meeting.
4. The Chairperson will determine the order of speakers.
5. All people entitled to speak will be given equal opportunity to speak.

6. Each person will be limited to **5 minutes** unless otherwise allowed by the Chairperson.
7. A person may make a statement only or ask questions that are directed through the Chairperson.
8. A person may not direct questions to staff members unless directed through the Chairperson. The Chairperson may ask staff members to answer any question.
9. The Council is under no obligation to answer questions. Questions may be taken on notice by the Planning Committee. The Planning Committee may answer such questions at its discretion.
10.
 - (a) Planning Committee members may ask questions of the person speaking.
 - (b) Councillors present who are not members of the Planning Committee may ask questions or seek clarification only at the discretion of the Chairperson.
11. The Applicant may be given notice of a person's intention to speak. The Applicant will be given an opportunity to speak in reply, limited to 5 minutes unless otherwise allowed by the Chairperson. If the Applicant is not present at the Meeting, the Planning Committee may provide the Applicant with an opportunity to respond.
12. No debate or argument is permitted at any time.
13. Members of the gallery must not interject while another party is speaking.

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

Mr Anthony Waring of Big Tree Investments (Applicant for Item 7.1) was in attendance and spoke to the future plans for the proposed development.

7.0 PLANNING REPORTS

7.1 DA 2022/82 : 16 LOT SUBDIVISION : 40,46,48,50,56,58,60 & 64 ARTHURS LAKE ROAD, WILBURVILLE

Proposal

An application to subdivide 8 existing lots into 16 lots at Arthurs Lake Road, Wilburville was made to council in August 2022 by the applicant PDA Surveyors.

The subdivision comprises of the following:

40 Arthurs Lake Road – Subdivided into 2 lots,	Lot 1 at 2667m ²
	Lot 2 at 1566m ²
46 Arthurs Lake Road – Subdivided into 2 lots,	Lot 3 at 2622m ²
	Lot 4 at 1519m ²
48 Arthurs Lake Road – Subdivided into 2 lots,	Lot 5 at 2569m ²
	Lot 6 at 1802m ²
50 Arthurs Lake Road – Subdivided into 2 lots,	Lot 7 at 2827m ²
	Lot 8 at 1870m ²
56 Arthurs Lake Road – Subdivided into 2 lots,	Lot 9 at 2993m ²
	Lot 10 at 2269m ²
58 Arthurs Lake Road – Subdivided into 2 lots,	Lot 11 at 2913m ²
	Lot 12 at 2175m ²
60 Arthurs Lake Road – Subdivided into 2 lots,	Lot 13 at 3030m ²
	Lot 14 at 2209m ²
64 Arthurs Lake Road – Subdivided into 2 lots,	Lot 15 at 2860m ²
	Lot 16 at 2082m ²

The proposal is discretionary owing to being a subdivision and is assessed against the subdivision standards for the Low Density Residential pursuant to section 12.0 of the Central Highlands Interim Planning Scheme 2015.

RESOLUTION 02/10.2023/PC

Moved: Mayor L Triffitt

Seconded: Cr J Hall

THAT the Planning Committee make the following recommendation to Council acting as the Planning Authority:

Option 1

1. Approve in accordance with the Recommendation:-

In accordance with section 57 of the Land Use Planning and Approvals Act 1993 the Planning Authority **Approve** the DA2022/82 Subdivision 8 Lots into 16 Lots at land described as 40, 46, 48, 50, 56, 58, 60 & 64 Arthurs Lake Road, Wilburville (CT 178097 folios 2,4,5,6,9,10,11 &13), subject to conditions in accordance with the Recommendation.

Recommended Conditions

CONDITIONS

General

1. The subdivision layout 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 permit unless, as the applicant and the only person with a right of appeal, you notify Council in writing that you propose to commence the use or development before this date, in accordance with Section 53 of the *Land Use Planning and Approvals Act 1993*.

Bushfire Hazard Management

3. The development and works must be carried out in accordance with Livingston Natural Resource Services, dated 30 November 2022, version 1.
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. Prior to the sealing of the Final Plan of Survey an agreement 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.

Staged Development

6. The subdivision must be carried out in the approved stages or in accordance with a staged development plan submitted to and approved by Council's General Manager.

Public Open Space

7. In accordance with the provisions of Section 117 of the *Local Government (Building and Miscellaneous Provisions) Act 1993*, payment of a cash contribution for Public Open Space must be made to the Council prior to sealing the Final Plan of Survey. The cash contribution amount is to be equal to 5% of the value of the land being subdivided in the plan of subdivision at the date of lodgement of the Final Plan of Survey. The value is to be determined by a Land Valuer within the meaning of the *Land Valuers Act 2001* at the developers' expense.
8. The cash-in-lieu of public open space must be in the form of a direct payment made before the sealing of the final plan of survey or, alternatively, in the form of a Bond or Bank guarantee to cover payment within ninety (90) days after demand, made after the final plan of survey has taken effect.

Transfer of Reserves

9. All roads or footways must be shown as "Road" or "Footway" on the final plan of survey and transferred to the Central Highlands Council by Memorandum of Transfer submitted with the final plan.

Easements

10. Easements must be created over all drains, pipelines, wayleaves and services in accordance with the requirements of the Council's Municipal Engineer. The cost of locating and creating the easements shall be at the subdivider's full cost.

Endorsements

11. The final plan of survey must be noted that Council cannot or will not provide a means of drainage to all lots shown on the plan of survey.

Covenants

12. 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

13. 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.
14. A fee of \$180.00, 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.
15. Prior to Council sealing the final plan of survey for each stage, security for an amount clearly in excess of the value of all outstanding works and maintenance required by this permit must be lodged with the Central Highlands Council. The security must be in accordance with section 86(3) of the *Local Government (Building & Miscellaneous Provisions) Council 1993*. The amount of the security shall be determined by the Council's Municipal Engineer.
16. 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.
17. The subdivider must pay any Titles Office lodgment fees direct to the Recorder of Titles.

Water Quality

18. Where a development exceeds a total of 250 square metres of ground disturbance a soil and water management plan (SWMP) prepared in accordance with the guidelines *Soil and Water Management on Building and Construction Sites*, by the Derwent Estuary Programme and NRM South, must be approved by Council's Municipal Engineer before development of the land commences.
19. Temporary run-off, erosion and sediment controls must be installed in accordance with the approved SWMP and must be maintained at full operational capacity to the satisfaction of Council's Municipal Engineer until the land is effectively rehabilitated and stabilised after completion of the development.
20. The topsoil on any areas required to be disturbed must be stripped and stockpiled in an approved location shown on the detailed soil and water management plan for reuse in the rehabilitation of the site. Topsoil must not be removed from the site until the completion of all works unless approved otherwise by the Council's Municipal Engineer.
21. All disturbed surfaces on the land, except those set aside for roadways, footways and driveways, must be covered with top soil and, where appropriate, re-vegetated and stabilised to the satisfaction of the Council's Municipal Engineer.

Weed Management

22. Prior to the carrying out of any works approved or required by this approval, the subdivider must provide a weed management plan detailing measures to be adopted to control any weeds on the site and 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 Municipal Engineer and of the Regional Weed Management Officer, Department of Primary Industries Water and Environment.

Property Services

23. Property services must be contained wholly within each lots served or an easement to the satisfaction of the Council's Municipal Engineer or responsible authority.

Existing Services

24. 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.

Sizing of Services

25. All services must be sized and located to service the ultimate potential development of the site to the satisfaction of Council's Municipal Engineer or the responsible authority.

Telecommunications, Electrical and Gas Reticulation

26. Electrical and telecommunications services must be provided to each lot in accordance with the requirements of the responsible authority and the satisfaction of Council's Municipal Engineer.
27. Prior to the work being carried out a drawing of the electrical reticulation and telecommunications reticulation in accordance with the appropriate authority's requirements and relevant Australian Standards must be submitted to and endorsed by the Council's Municipal Engineer.
28. A Letter of Release from each authority confirming that all conditions of the Agreement between the Owner and authority have been complied with and that future lot owners will not be liable for network extension or upgrade costs, other than individual property connections at the time each lot is further developed, must be submitted to Council prior to the sealing of the final plan of survey.

Access to Arthurs Lake Road

29. A separate vehicle access must be provided from the road carriageway to each lot. Accesses must be sealed with a minimum width of 3 metres at the property boundary and located and constructed in accordance with the standards shown on standard drawings SD-1009 *Rural Roads - Typical Standard Access* and SD-1012 *Intersection and Domestic Access Sight Distance Requirements* prepared by the IPWE Aust. (Tasmania Division) (attached) and the satisfaction of Council's Municipal Engineer.
30. Access road construction standards may be varied by Council's Municipal Engineer.
31. Prior to Council Sealing Final Plans, all vehicular accesses must be completed to the satisfaction of Council's Municipal Engineer and in accordance with the Bushfire Prone Area Code of the Central Highlands Interim Planning Scheme 2015 and the Bushfire Hazard Report, prepared by Livingston Natural Resource Services, dated 30 November 2022, Version 1.

Engineering Drawings

32. Engineering design drawings to the satisfaction of the Council's Municipal Engineer must be submitted to and approved by the Central Highlands Council before development of the land commences.
33. Engineering design drawings are to be prepared by a qualified and experienced civil engineer, or other person approved by Council's Municipal Engineer, in accordance with Standards Australia (1992): *Australian Standard AS1100.101 Technical Drawing – General principles*, Homebush, and Standards Australia (1984): *Australian Standard AS1100.401 Technical Drawing – Engineering survey and engineering survey design drawing*, Homebush, and must show -
 - (a) All existing and proposed services required by this permit;
 - (b) All existing and proposed roadwork required by this permit;
 - (c) Measures to be taken to provide sight distance in accordance with the relevant standards of the planning scheme;
 - (d) Measures to be taken to limit or control erosion and sedimentation;
 - (e) Any other work required by this permit.

34. Two sets of preliminary engineering design drawings are to be initially submitted to Council for inspection and comment. Following this, four (4) sets of final engineering plans are to be submitted for final approval by Council. The approved engineering design drawings shall form part of this permit when approved.
35. Council will keep two (2) sets of approved drawings and two (2) sets will be returned to the subdivider's engineer. One (1) set of the approved engineering design drawings must be kept on site at all times during construction.
36. Approved engineering design drawings will remain valid for a period of 2 years from the date of approval of the engineering drawings.
37. All new public infrastructure and subdivision work must be designed and constructed to the satisfaction of Council's Municipal Engineer and in accordance with the following -
 - *Local Government (Building & Miscellaneous Provisions) Act 1993;*
 - *Local Government (Highways) Act;*
 - *Drains Act 1954;*
 - *Waterworks Clauses Act;*
 - Australian Standards;
 - Building and Plumbing Regulations;
 - Relevant By-laws and Council Policy;
 - Current IPWEA (Tasmanian Division) and central Highlands Council Municipal Standard Drawings;
 - Current IPWEA and central Highlands Council Municipal Standard Specification.

Construction Amenity

38. The development must only be carried out between the following hours unless otherwise approved by the Council's Manager Environment and Development Services:

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

39. All subdivision 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.
 - (b) Transport of materials, goods or commodities to or from the land.
 - (c) Appearance of any building, works or materials.
40. 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 Municipal Engineer.
41. 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.

Construction

42. The subdivider must provide not less than 48 hours written notice to Council's Municipal Engineer before commencing construction works on site or within a council roadway. The written notice must be accompanied by evidence of payment of the Building and Construction Industry Training Levy where the cost of the works exceeds \$12,000.

43. The subdivider must provide not less than 48 hours written notice to Council's Municipal Engineer before reaching any stage of works requiring inspection by Council unless otherwise agreed by the Council's Manager Engineering Services.
44. A fee for supervision of any works to which Section 10 of the *Local Government (Highways) Council 1982* applies must be paid to the Central Highlands Council unless carried out under the direct supervision of an approved practising professional civil engineer engaged by the owner and approved by the Council's Municipal Engineer. The fee must equal not less than three percent (3%) of the cost of the works.

Survey Pegs

45. Survey pegs to be stamped with lot numbers and marked for ease of identification.
46. Prior to the works being taken over by Council, evidence must be provided from a registered surveyor that the subdivision has been re-pegged following completion of substantial subdivision construction work. The cost of the re-peg survey must be included in the value of any security.

'As Constructed' Drawings

47. Prior to the works being placed on the maintenance period an "as constructed" drawing of all engineering works provided as part of this approval must be provided to Council to the satisfaction of the Council's Municipal Engineer. These drawings must be prepared by a qualified and experienced civil engineer or other person approved by the Municipal Engineer and provided in both digital and "hard copy" format.

Defects Liability Period

48. The subdivision must be placed onto a 6-month statutory defects liability period in accordance with section 86 of the *Local Government (Buildings and Miscellaneous Provisions) Act 1993*, Councils Specification and Policy following the completion of the works in accordance with the approved engineering plans and permit conditions.

THE FOLLOWING ADVICE APPLIES TO THIS PERMIT: -

- A. This permit does not imply that any other approval required under any other legislation or by-law 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. 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.
- 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 SWMP must show the following:
 - (a) Allotment boundaries, north-point, contours, layout of roads, driveways, building envelopes and reticulated services (including power and telephone and any on-site drainage or water supply), impervious surfaces and types of all existing natural vegetation;
 - (b) Critical natural areas such as drainage lines, recharge area, wetlands, and unstable land;
 - (c) Estimated dates of the start and completion of the works;
 - (d) Timing of the site rehabilitation or landscape program;
 - (e) Details of land clearing and earthworks or trenching and location of soil stockpiles associated with roads, driveways, building sites, reticulated services and fire hazard protection.

- (f) Arrangements to be made for surface and subsurface drainage and vegetation management in order to prevent sheet and tunnel erosion.
- (g) Temporary erosion and sedimentation controls to be used on the site.
- (h) Recommendations for the treatment and disposal of wastewater in accordance with Standards Australia (2000), AS/NZS 1547: *On-site wastewater management*, Standards Australia, Sydney.

F. Appropriate temporary control measures include, but are not limited to, the following (refer to brochure attached):

- Minimise site disturbance and vegetation removal;
- Diversion of up-slope run-off around cleared and/or disturbed areas, or areas to be cleared and/or disturbed, provided that such diverted water will not cause erosion and is directed to a legal discharge point (eg. temporarily connected to Council's storm water system, a watercourse or road drain);
- Sediment retention traps (e.g. sediment fences, straw bales, grass turf filter strips, etc.) at the down slope perimeter of the disturbed area to prevent unwanted sediment and other debris escaping from the land;
- Sediment retention traps (e.g. sediment fences, straw bales, etc.) around the inlets to the stormwater system to prevent unwanted sediment and other debris blocking the drains;
- Stormwater pits and inlets installed and connected to the approved stormwater system before the roadwork's are commenced; and
- Rehabilitation of all disturbed areas as soon as possible.

G. The owner is advised that an engineering plan assessment and inspection fee of 1% of the value of the approved engineering works, or a minimum of \$220.00, must be paid to Council in accordance with Council's fee schedule.

H. 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.

CARRIED

FOR the Motion

Mayor L Triffitt, Deputy Mayor J Allwright, Cr R Cassidy and Cr J Hall.

8.0 OTHER BUSINESS

Nil

9.0 CLOSURE

The Chairperson thanked everyone for their contribution and declared the meeting closed at **9.30am**.



Proposed Subdivision
937 Ellendale Road, Ellendale
Bushfire Hazard Report



Applicant: J & A Dalley
October 2023, J9025v2

Contents	
1.0 Introduction	3
2.0 Proposal.....	3
3.0 Site Description	3
4.0 Bushfire Hazard Assessment.....	5
4.1 Vegetation	5
4.2 slopes	5
4.3 Bushfire Attack Level.....	6
5.0 Bushfire Prone Areas Code	6
5.1 Hazard Management Areas	6
5.1.1 Building areas	6
5.1.2 Hazard Management Area requirements.....	7
5.2 Public and firefighting Access	7
5.2.1 Public Roads.....	7
5.2.2 Property access (for building compliance)	7
5.3 Water supplies for firefighting	8
6.0 Compliance	9
6.1 Planning Compliance	9
6.2 Building Compliance (for future development)	10
7.0 Summary.....	10
8.0 Limitations Statement	11
9.0 References.....	12
Appendix A - Plan of Subdivision	
Appendix B - BAL assessment tables	
Appendix C - Bushfire Hazard Management Plan	
Appendix D - Planning Certificate	

1.0 Introduction

This Bushfire Hazard Report has been completed to form part of supporting documentation for a planning permit application for a eight lot plus balance subdivision. The proposed subdivision occurs in a Bushfire-prone Area defined by the Tasmanian Planning Scheme – Central Highlands (the Scheme). This report has been prepared by Mark Van den Berg a qualified person under Part 4a of the *Fire Service Act 1979* of Geo Environmental Solutions Pty Ltd for J & A Dalley

The report considers all the relevant standards of Code C13 of the planning scheme, specifically;

- The requirements for appropriate Hazard Management Areas (HMA's) in relation to building areas;
- The requirements for Public and Private access;
- The provision of water supplies for firefighting purposes;
- Compliance with the planning scheme, and
- The provision of a Bushfire Hazard Management Plan to facilitate appropriate compliant future development.

2.0 Proposal

The proposal is for the subdivision of land resulting in eight new lots and balance as described by the proposed plan of subdivision in appendix A. Public access to new lots will be provided by existing public roadways. The development is proposed to occur in 3 stages. Lots 1 to 7 are undeveloped; the balance lot contains an existing dwelling.

3.0 Site Description

The subject site comprises private land on one title at 937 Ellendale Road, Ellendale, FR: 170358/1 (figure 1). The site occurs in the municipality of the Central Highlands, this application is administered through the Tasmanian Planning Scheme – Central Highlands which makes provision for subdivision. The proposed development occurs within the Village zone. The site is located within the Ellendale settled area, approximately 0.85 km north of Slashers Sugarloaf (figure 1). The surrounding landscape is characterised by grasslands with scattered native vegetation remnants extending into landscape scale forests. Land use adjacent to the proposal comprises residential development on lots of various sizes and grassland vegetation (figure 2).

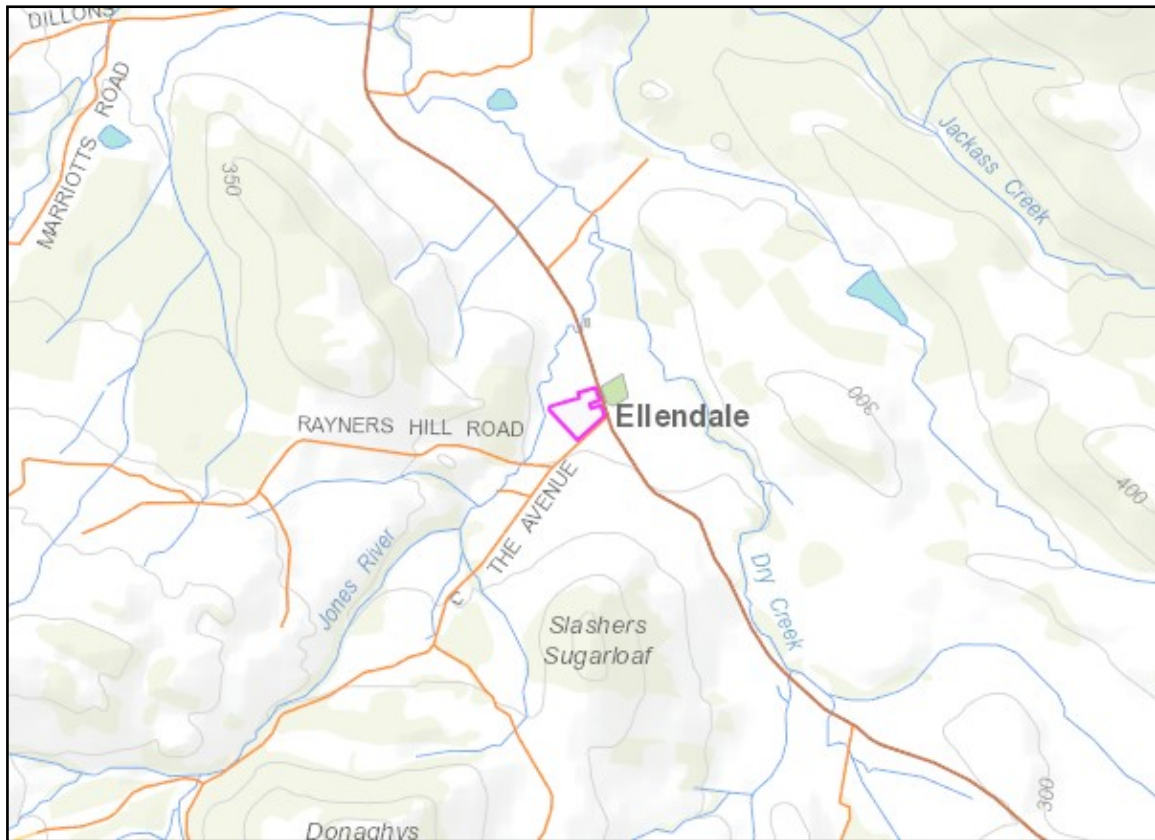


Figure 1. The site in a topographical context, pink line defines the parent lot (approximate).



Figure 2. Aerial photo of the site, pink line denotes the parent lot (approximate).

4.0 Bushfire Hazard Assessment

4.1 Vegetation

The site and adjacent lands within 100 metres of the proposed building areas carry Grassland vegetation (figures 3 to 5). The highest risk vegetation occurs to the north-west of the sites.

4.2 slopes

The effective slopes in relation to the proposed building areas are gentle (<5 degrees) and are unlikely to have a significant influence on the bushfire attack at the sites.



Figure 3. Grassland vegetation within and adjacent to lot 7 looking north from the building area within lot 7.



Figure 4. Existing dwelling within the balance lot looking west from Ellendale Road, existing Taswater hydrant located in middle of frame in front of fence.



Figure 5. Grassland vegetation within lots 5, 6 & 7 looking west from the building area within lot 7.



Figure 6. Grassland vegetation within lots 1, 2, 3 and 4 looking north-east from The Avenue.

4.3 Bushfire Attack Level

An assessment of vegetation and topography was undertaken within and adjacent to the proposed building areas for each lot. A bushfire attack level assessment in accordance with AS3959-2018 was completed which has determined the bushfire attack level for each building area (appendix B). The building areas and bushfire attack levels are identified on the BHMP.

5.0 Bushfire Prone Areas Code

Code C13 of the planning scheme articulates requirements for the provision of hazard management areas, standards for access and firefighting water supplies and requirements for hazard management for staged subdivisions.

5.1 Hazard Management Areas

Hazard management areas are required to be established and/or maintained for all lots, they provide an area around the building within which fuels are managed to reduce the impacts of direct flame contact, radiant heat and ember attack on the building. The balance lot will require the HMA to be established prior to sealing of titles.

The Bushfire Hazard Management Plan (BHMP) shows building areas (for habitable buildings) and associated Hazard Management Areas for each lot, guidance for establishment and maintenance of HMA's is provided below.

This subdivision will take place in three stages. Stage 1 involves dividing the balance lot, while stage 2 includes dividing of lots 1 to 4 with stage 3 dividing lots 5 to 8. The BHMP (Bushfire Hazard Management Plan) specifies hazard management areas for stage 1 and stage 2 to benefit the existing development on the balance lot and future development on lots 1 to 4. Each lot within this subdivision is reliant on hazard management on adjacent lots. A suitable instrument to ensure the maintenance of each lot in a minimum fuel condition should be included as part of the sealing of titles for each stage. Management of bushfire fuels on balance stages is the responsibility of the developer and should form a permit condition.

5.1.1 Building areas

Building areas for habitable buildings are shown on the BHMP. Each lot has been assessed and a Bushfire Attack Level (BAL) assigned to it. If future buildings are located within the building area and comply with the minimum setbacks for the lot, the buildings may be constructed to the bushfire attack level assigned to that lot. If associated structures like sheds or other non-habitable buildings exist or are proposed, they do not need to conform to a BAL unless they are within 6 metres of the habitable building.

5.1.2 Hazard Management Area requirements

A hazard management area is the area, between a habitable building or building area and the bushfire prone vegetation which provides access to a fire front for firefighting, 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. This can be achieved through, but is not limited to the following strategies;

- Remove fallen limbs, sticks, leaf and bark litter;

- Maintain grass at less than a 100mm height;
- Avoid or minimise the use of flammable mulches (especially against buildings);
- Thin out under-story vegetation to provide horizontal separation between fuels;
- Prune low-hanging tree branches (<2m from the ground) to provide vertical separation between fuel layers;
- Remove or prune larger trees to establish and maintain horizontal separation between tree canopies;
- Minimise the storage of flammable materials such as firewood;
- Maintain vegetation clearance around vehicular access and water supply points;
- Use low-flammability plant species for landscaping purposes where possible;
- Clear out any accumulated leaf and other debris from roof gutters and other debris accumulation points.

It is not necessary to remove all vegetation from the hazard management area, trees and shrubs may provide protection from wind borne embers and radiant heat under some circumstances if other fuels are appropriately managed.

5.2 Public and firefighting Access

5.2.1 Public Roads

There is no proposal for the construction of new public roadways, in this circumstance there are no applicable standards for the construction of new public roads.

5.2.2 Property access (for building compliance)

5.2.2.1 requirements for Lots 5 and 6.

Property access will be required to be used to access static firefighting water connection points on lots 5 and 6, property access for lots 5 and 6 is required to comply with the following standards:

- a) All-weather construction;
- b) Load capacity of at least 20 tonnes, including for bridges and culverts;
- c) Minimum carriageway width of 4 metres;
- d) Minimum vertical clearance of 4 metres;
- e) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
- f) Cross falls of less than 3° (1:20 or 5%);
- g) Dips less than 7° (1:8 or 12.5%) entry and exit angle;
- h) Curves with a minimum inner radius of 10 metres;

- i) Maximum gradient of 15° (1:3.5 or 28%) for sealed roads, and 10° (1:5.5 or 18%) for unsealed roads; and
- j) Terminate with a turning area for fire appliances provided by one of the following:
 - (i) A turning circle with a minimum inner radius of 10 metres;
 - (ii) A property access encircling the building; or
 - (iii) A hammerhead “T” or “Y” turning head 4 metres wide and 8 metres long.

5.2.2.2 requirements for Lots 1 to 4, lot 7, lot 8 and Balance Lot

Property access length is less than 30 metres or property access is not required to access a firefighting water supply connection point, in this circumstance there are no minimum design or construction standards applicable to property access.

5.3 Water supplies for firefighting

5.3.1 Requirements for lots 5 and 6.

The building areas are serviced by a reticulated water supply system with fire hydrants. However, due to the proximity of the existing fire hydrants to the building areas, dedicated, static, firefighting water supplies will be provided in accordance with table 1 below.

Table 1. Requirements for Static Water Supplies dedicated for Firefighting.

Element		Requirement
A.	Distance between building area to be protected and water supply	The following requirements apply: (a) The building area to be protected must be located within 90 metres of the firefighting water point of a static water supply; and (b) The distance must be measured as a hose lay, between the firefighting water point and the furthest part of the building area
B.	Static Water Supplies	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 3959:2018, 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.
C.	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a firefighting water 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; (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.
D.	Signage for static water connections	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: (a) comply with water tank signage requirements within AS 2304:2019; or (b) comply with the Tasmania Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service.
E.	Hardstand A hardstand area for fire appliances must be provided:	(a) No more than three metres from the firefighting water 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.

5.3.2 Requirements for lots 1 to 4, lots 7, 8 and Balance lot.

Dedicated water supplies for firefighting will be provided by existing fire hydrants connected to a reticulated water supply system managed by TasWater. The existing hydrants will be required to conform with the following specifications;

- The building area to be protected must be located within 120 metres of a fire hydrant; and
- The distance must be measured as a hose lay, between the firefighting water point and the furthest part of the building area.

If the requirements of the above (s5.3.2) cannot be achieved for lot 2, the requirements of s5.3.1 will apply.

6.0 Compliance

6.1 Planning Compliance

Table 2 summarises the compliance requirements for subdivisions in bushfire prone areas against Code C13 as they apply to this proposal. A planning certificate has been issued for the associated BHMP as being compliant with the relevant standards as outlined below and is located in appendix D.

Table 2. Compliance with Code C13 of the Tasmanian Planning Scheme – Clarence

Clause	Compliance
C13.4 Use or development exempt from this code	Not applicable.
C13.5 1 Vulnerable Uses	Not applicable.
E13.5.2 Hazardous Uses	Not applicable
C13.6.1 Subdivision: Provision of hazard management areas	The Bushfire Hazard Management Plan is certified by an accredited person. Each lot within the subdivision has a building area and associated

	<p>hazard management area shown which is suitable for BAL-12.5 and BAL-19 construction standards. Hazard management areas are able to be contained within each individual lot, therefore there is no requirement for part 5 agreements or easements to facilitate hazard management off site.</p> <p>The proposal is compliant with the acceptable solution at A1(b).</p>
C13.6.2 Subdivision: Public and firefighting access	<p>There is no proposal for the construction of new public roadways or fire trails as part of this development. Minimum standards for property access have been specified for all lots consistent with table C13.2.</p> <p>The Bushfire Hazard Management Plan is certified by an accredited person.</p> <p>The proposal is compliant with the acceptable solution at A1(b).</p>
C13.6.3 Subdivision: Provision of water supply for firefighting purposes	<p>The building areas for lots 1 to 4 and lots 7,8 and balance lot are serviced by an existing reticulated water supply system with fire hydrants and meet the specifications of s5.3.2 of this report. Lots 5 and 6 will be provided with static firefighting water supplies in accordance table C13.5</p> <p>The proposal is compliant with the acceptable solution at A2(b)</p>

6.2 Building Compliance (for future development)

Future residential development may not require assessment for bushfire management requirements at the planning application stage. Subsequent building applications will require demonstrated compliance with the Directors Determination. If future development is undertaken in compliance with the Bushfire Hazard Management Plan associated with this report, a building surveyor may rely upon it for building compliance purposes if it is not more than 6 years old.

7.0 Summary

The proposed development occurs within a bushfire-prone area. The vegetation is classified as Grassland, with the highest risk presented by vegetation to the north and north-west of the building areas.

A bushfire hazard management plan has been developed and shows building areas with hazard management areas and construction standards, the location of proposed property access and requirements for the provision of firefighting water supplies. It provides requirements for management of the bushfire risk for each stage to ensure future compliant development.

8.0 Limitations Statement

This Bushfire Hazard Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and the applicant. To the best of GES's knowledge, the information presented herein represents the Client's requirements at the time of printing of the report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that described in this report. In preparing this report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible bushfire hazard condition and does not provide a guarantee that no loss of property or life will occur as a result of bushfire. As stated in AS3959-2018 "It should be borne in mind that the measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions". In addition, no responsibility is taken for any loss which is a result of actions contrary to AS3959-2018 or the Tasmanian Planning Commission Bushfire code.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required. No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third party

9.0 References

Building Regulations 2016 (Tas.) Division 6.

Determination, Director of Building Control – Bushfire-Hazard Areas. Version 1.1, April 2021.

Consumer, Building and Occupational Services, Department of Justice, Tasmania

Standards Australia 2018, *Construction of buildings in bushfire prone areas*, Standards Australia, Sydney.

Tasmanian Planning Scheme – State Planning Provisions. C13 Bushfire-prone Areas Code.

Tasmanian Planning Commission, Hobart. 2022.

Appendix A - Site Plan



Appendix B – BAL Assessment tables

Table 1. Bushfire Attack Level (BAL) Assessment - Balance Lot

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland [^]	flat 0°	0 to 30 metres	36 metres	BAL-12.5
	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	30 to 48 metres		
	Grassland [^]	flat 0°	48 to 100 metres		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 45 metres	Title boundary	BAL-12.5
	Grassland [^]	flat 0°	45 to 100 metres		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to >100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		

[^] Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

^{*} Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^{^^} Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Table 2. Bushfire Attack Level (BAL) Assessment for Lot 1

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland [^]	flat 0°	0 to 100 metres	14 metres	BAL-12.5
	--	--	--		
	--	--	--		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f) ^{^^}	upslope	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 80 metres	Title boundary	BAL-LOW
	Grassland [^]	flat 0°	80 to 100 metres		
	--	--	--		
	--	--	--		

[^] Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

^{*} Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^{^^} Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Table 3. Bushfire Attack Level (BAL) Assessment for Lot 2

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland [^]	flat 0°	0 to 53 metres	14 metres	BAL-12.5
	--	--	--		
	--	--	--		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f) ^{^^}	upslope	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 55 metres	Title boundary	BAL-LOW
	Grassland [^]	flat 0°	55 to 100 metres		
	--	--	--		
	--	--	--		

[^] Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

^{*} Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^{^^} Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Table 4. Bushfire Attack Level (BAL) Assessment for Lot 3

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland [^]	flat 0°	0 to 100 metres	14 metres	BAL-12.5
	--	--	--		
	--	--	--		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f) ^{^^}	upslope	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 32 metres	Title boundary	BAL-12.5
	Grassland [^]	flat 0°	32 to 100 metres		
	--	--	--		
	--	--	--		

[^] Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

^{*} Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^{^^} Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Table 5. Bushfire Attack Level (BAL) Assessment for Lot 4

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland [^]	flat 0°	0 to 100 metres	14 metres	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f) ^{^^}	upslope	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 10 metres	3 metres	BAL-19
	Grassland [^]	flat 0°	10 to 100 metres		
	--	--	--		
	--	--	--		

[^] Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

^{*} Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^{^^} Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Table 6. Bushfire Attack Level (BAL) Assessment for Lot 5

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland^	flat 0°	0 to 100 metres	14 metres	BAL-12.5
	--	--	--		
	--	--	--		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f)^	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f)^	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Grassland^	flat 0°	0 to 100 metres	14 metres	BAL-12.5
	--	--	--		
	--	--	--		
	--	--	--		

^ Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

* Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^^ Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Table 7. Bushfire Attack Level (BAL) Assessment for Lot 6

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland [^]	flat 0°	0 to 100 metres	14 metres	BAL-12.5
	--	--	--		
	--	--	--		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f) ^{^^}	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Grassland [^]	flat 0°	0 to >100 metres	14 metres	BAL-19
	--	--	--		
	--	--	--		
	--	--	--		

[^] Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

^{*} Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^{^^} Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Table 8. Bushfire Attack Level (BAL) Assessment for Lot 7

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland^	flat 0°	0 to 100 metres	10 metres	BAL-19
	--	--	--		
	--	--	--		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f)^	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f)^	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Exclusion 2.2.3.2 (e, f)^	flat 0°	0 to 53 metres	Title boundary	BAL-LOW
	Grassland^	flat 0°	53 to 100 metres		
	--	--	--		
	--	--	--		

^ Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

* Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^^ Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Table 9. Bushfire Attack Level (BAL) Assessment for Lot 8

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North	Grassland^	flat 0°	0 to 56 metres	10 metres	BAL-19
	Exclusion 2.2.3.2 (e, f)^	flat 0°	56 to 100 metres		
	--	--	--		
	--	--	--		
East	Exclusion 2.2.3.2 (e, f)^	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
South	Exclusion 2.2.3.2 (e, f)^	flat 0°	0 to 100 metres	Title boundary	BAL-LOW
	--	--	--		
	--	--	--		
	--	--	--		
West	Grassland^	flat 0°	0 to 100 metres	10 metres	BAL-19
	--	--	--		
	--	--	--		
	--	--	--		

^ Vegetation classification as per AS3959-2018 and Figures 2.4 (A) to 2.4 (H).

* Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.

^^ Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

Appendix C

Bushfire Hazard Management Plan



BUSHFIRE HAZARD MANAGEMENT PLAN

Bushfire Hazard Management Plan, 937 Ellendale Road,
Ellendale. October 2023. J9025v2
Tasmanian Planning Scheme - Central Highlands

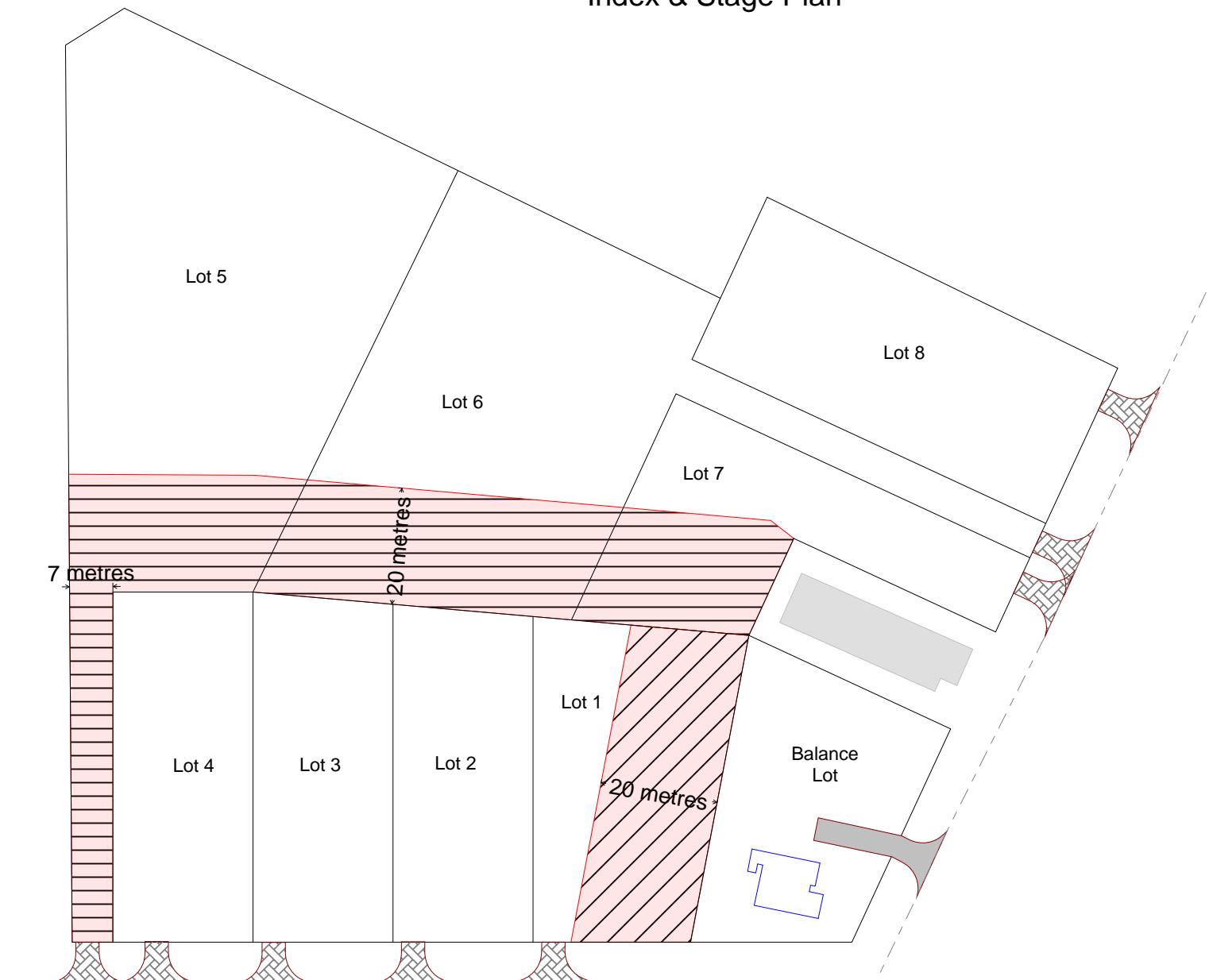


GEO-ENVIRONMENTAL

SOLUTIONS

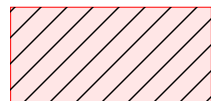
29 Kirksway Place, Battery Point.
T| 62231839 E| office@geosolutions.net.au

Index & Stage Plan

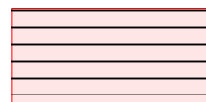


Staging

Stage 1 - Balance Lot
Stage 2 - Lots 1 to 4
Stage 3 - Lots 5 to 8



Stage 1 Hazard Management Area



Stage 2 Hazard Management Area

Note:
Each Lot to be maintained in a
minimum fuel condition

Hazard Management Area

A hazard management area is the area, between a habitable building or building area and the 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. This can be achieved through, but is not limited to the following actions;

- Remove fallen limbs, sticks, leaf and bark litter;
- Maintain grass at less than a 100mm height;
- Remove pine bark and other flammable mulch (especially from against buildings);
- Thin out under-story vegetation to provide horizontal separation between fuels;
- Prune low-hanging tree branches (<2m from the ground) to provide (vertical separation between fuel layers);
- Prune larger trees to maintain horizontal separation between canopies;
- Minimise the storage of flammable materials such as firewood;
- Maintain vegetation clearance around vehicular access and water supply points;
- Use low-flammability species for landscaping purposes where appropriate;
- Clear out any accumulated leaf and other debris from roof gutters and other accumulation points.

It is not necessary to remove all vegetation from the hazard management area, trees may provide protection from wind borne embers and radiant heat under some circumstances.

Certification No. J9025

Mark Van den Berg
Acc. No. BFP-108
Scope 1, 2, 3A, 3B, 3C.

Do not scale from these drawings.
Dimensions to take precedence over
scale. Written specifications to take
precedence over diagrammatic
representations.

J & M Dalley
959 Ellendale Road,
Ellendale, Tas., 7140

C.T.: 170358/1
PID: 3122492

Date: 06/10/2023

Bushfire Hazard Management Plan 937 Ellendale
Road, Ellendale. October 2023. J9025v2
Bushfire Management Report 937 Ellendale
Road, Ellendale. October 2023. J9025v2

Drawing Number:
A01

Sheet 1 of 4
Prepared by:
MvdB
Page 37



BUSHFIRE HAZARD MANAGEMENT PLAN

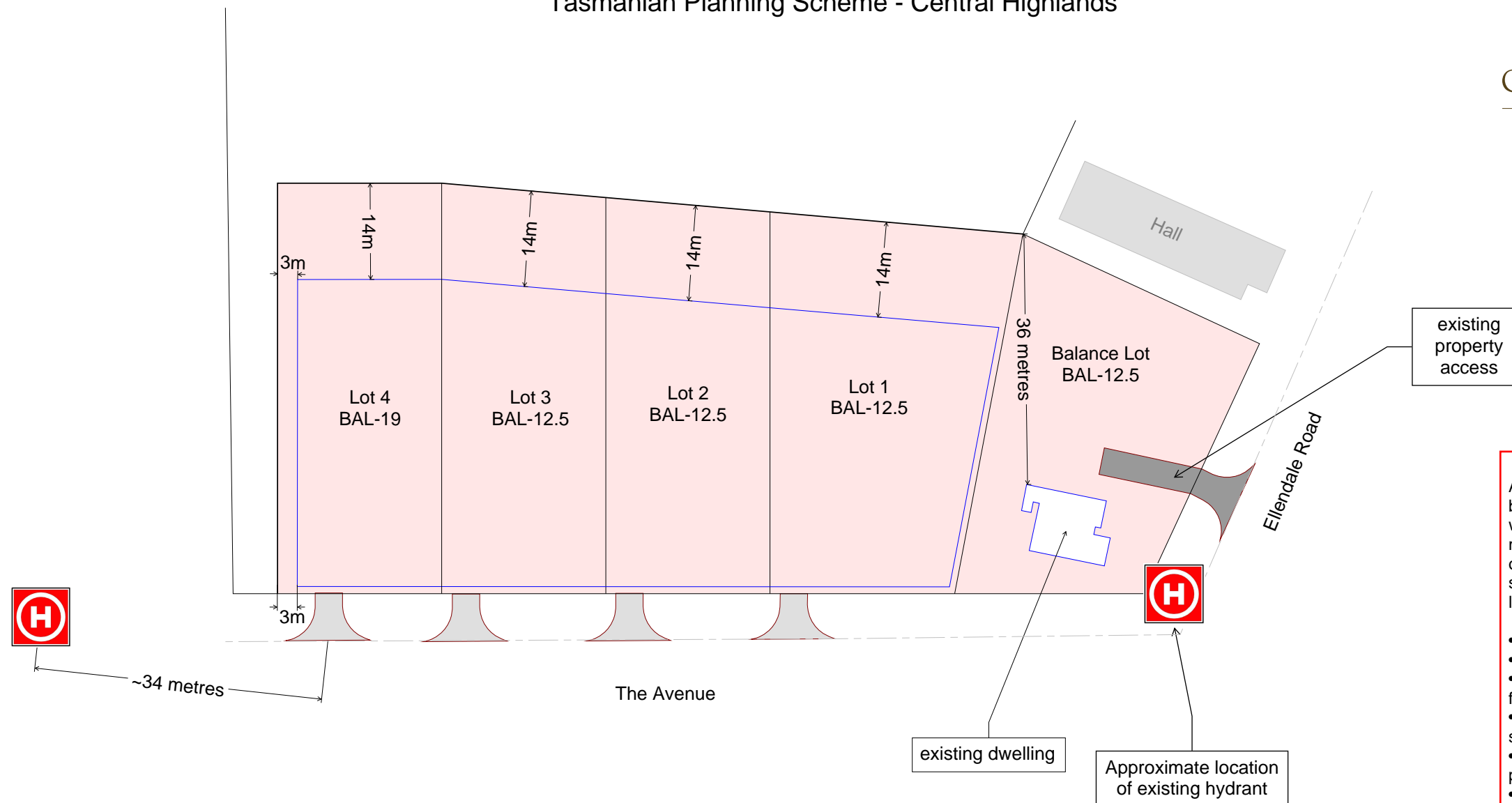
Bushfire Hazard Management Plan, 937 Ellendale Road,
Ellendale. October 2023. J9025v2
Tasmanian Planning Scheme - Central Highlands



GEO-ENVIRONMENTAL

SOLUTIONS

29 Kirksway Place, Battery Point.
T| 62231839 E| office@geosolutions.net.au



Compliance Requirements

Standards for Property Access

Property access is not required for a fire appliance to access a firefighting water point. In this circumstance there are no specific design or construction requirements for property access.

Water Supplies for Firefighting

Dedicated water supplies for firefighting will be provided by an existing fire hydrant connected to a reticulated water supply system managed by Tas Water. The existing hydrant will be required to conform with the following specifications;

- The building area to be protected must be located within 120 metres of a fire hydrant; and
- The distance must be measured as a hose lay, between the firefighting water point and the furthest part of the building area.

If the requirements of the above cannot be achieved for lot 2, the requirements for static water supplies will apply as per s5.3.1 of the Bushfire Hazard Report.

Hazard Management Areas

A hazard management area is required to be established and maintained for the life of the building and is shown on this BHMP. Guidance for the establishment and maintenance of the hazard management area is also provided.

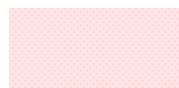
Note:
Each Lot to be maintained in a
minimum fuel condition



Building Area



Static Water Supply Point



Hazard Management Area

Hazard Management Area

A hazard management area is the area, between a habitable building or building area and the 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. This can be achieved through, but is not limited to the following actions;

- Remove fallen limbs, sticks, leaf and bark litter;
- Maintain grass at less than a 100mm height;
- Remove pine bark and other flammable mulch (especially from against buildings);
- Thin out under-story vegetation to provide horizontal separation between fuels;
- Prune low-hanging tree branches (<2m from the ground) to provide (vertical separation between fuel layers);
- Prune larger trees to maintain horizontal separation between canopies;
- Minimise the storage of flammable materials such as firewood;
- Maintain vegetation clearance around vehicular access and water supply points;
- Use low-flammability species for landscaping purposes where appropriate;
- Clear out any accumulated leaf and other debris from roof gutters and other accumulation points.

It is not necessary to remove all vegetation from the hazard management area, trees may provide protection from wind borne embers and radiant heat under some circumstances.

Certification No. J9025

Mark Van den Berg

Mark Van den Berg
Acc. No. BFP-108
Scope 1, 2, 3A, 3B, 3C.

Do not scale from these drawings.
Dimensions to take precedence over
scale. Written specifications to take
precedence over diagrammatic
representations.

J & M Dalley
959 Ellendale Road,
Ellendale, Tas., 7140

C.T.: 170358/1
PID: 3122492

Date: 06/10/2023

Bushfire Hazard Management Plan 937 Ellendale
Road, Ellendale. October 2023. J9025v2
Bushfire Management Report 937 Ellendale
Road, Ellendale. October 2023. J9025v2

Drawing Number:
A01

Sheet 2 of 4
Prepared by:
MvdB
Page 38



Compliance Requirements

Property Access

Property access length is 30 metres or greater; and access is required for a fire appliance to connect to a firefighting water point.

The following design and construction requirements apply to property access:

- All-weather construction;
- Load capacity of at least 20 tonnes, including for bridges and culverts;
- Minimum carriageway width of 4 metres;
- Minimum vertical clearance of 4 metres;
- Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
- Cross falls of less than 3° (1:20 or 5%);
- Dips less than 7° (1:8 or 12.5%) entry and exit angle;
- Curves with a minimum inner radius of 10 metres;
- Maximum gradient of 15° (1:3.5 or 28%) for sealed roads, and 10° (1:5.5 or 18%) for unsealed roads; and
- Terminate with a turning area for fire appliances provided by one of the following:
 - A turning circle with a minimum outer radius of 10 metres;
 - A property access encircling the building; or
 - A hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long

Water Supplies for Firefighting

The site is not serviced by a reticulated water supply, therefore a dedicated, static firefighting water supply will be provided in accordance with the following:

A) Distance between building area to be protected and water supply

The following requirements apply:

- The building area to be protected must be located within 90 metres of the fire fighting water point of a static water supply; and
- The distance must be measured as a hose lay, between the fire fighting water point and the furthest part of the building area.

B) Static Water Supplies

A static water supply:

- May have a remotely located offtake connected to the static water supply;
- May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times;
- 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 fire fighting sprinkler or spray systems;
- Must be metal, concrete or lagged by non-combustible materials if above ground; and
- 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:
 - metal;
 - non-combustible material; or
 - fibre-cement a minimum of 6 mm thickness.

C) Fittings and pipework associated with a fire fighting water point for a static water supply must:

- Have a minimum nominal internal diameter of 50mm; (2) Be fitted with a valve with a minimum nominal internal diameter of 50mm;
- Be fitted with a valve with a minimum nominal internal diameter of 50mm;
- Be metal or lagged by non-combustible materials if above ground;
- Where buried, have a minimum depth of 300mm (compliant with AS/NZS 3500.1-2003 Clause 5.23);
- Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to fire fighting equipment;
- Ensure the coupling is accessible and available for connection at all times;
- Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length);
- 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
- Where a remote offtake is installed, ensure the offtake is in a position that is:
 - Visible;
 - Accessible to allow connection by fire fighting equipment,
 - At a working height of 450 – 600mm above ground level; and
 - Protected from possible damage, including damage by vehicles.

D) Signage for static water connections

The fire fighting 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 Tasmania Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service

BUSHFIRE HAZARD MANAGEMENT PLAN

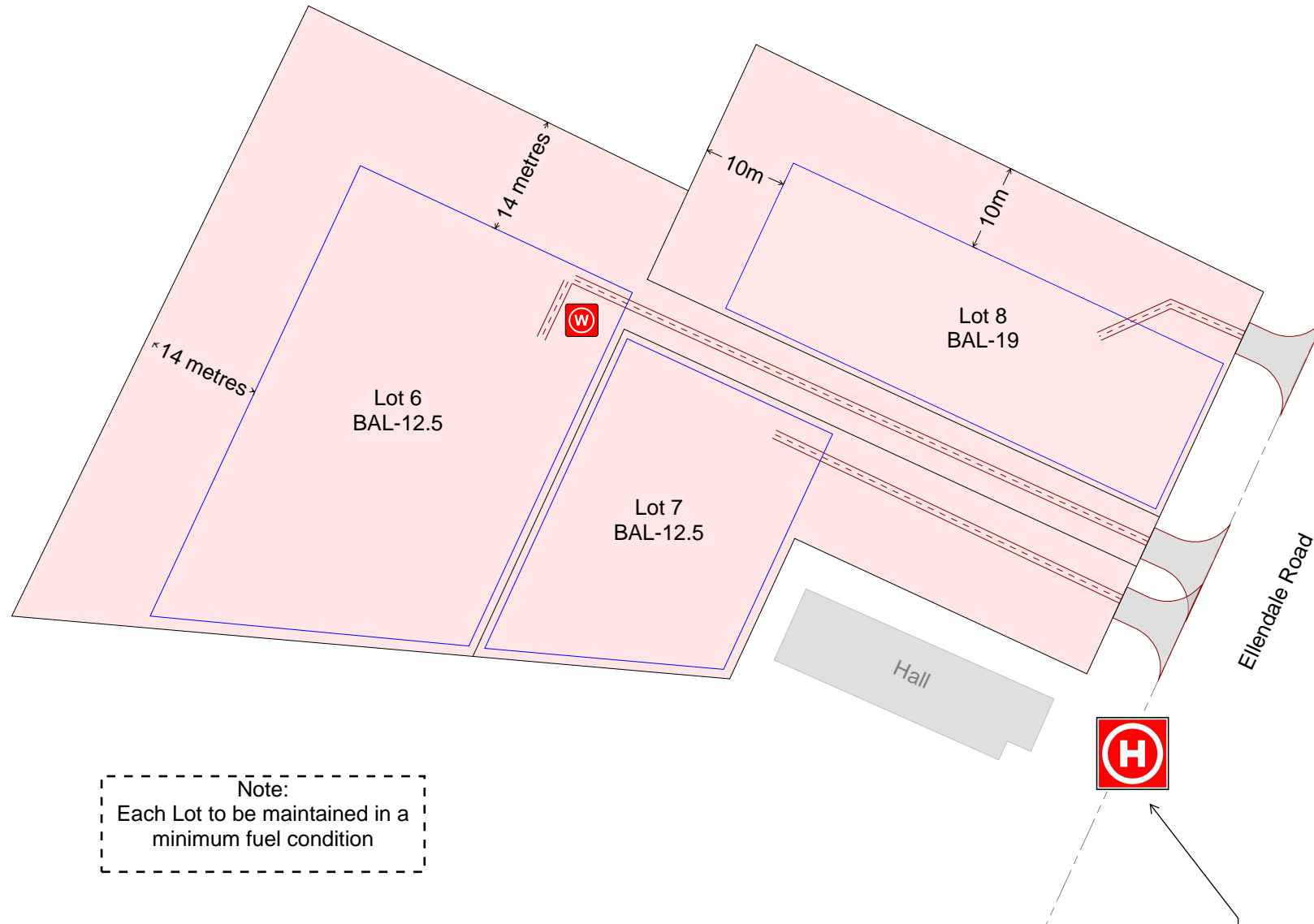
Bushfire Hazard Management Plan, 937 Ellendale Road,
Ellendale. October 2023. J9025v2
Tasmanian Planning Scheme - Central Highlands



GEO-ENVIRONMENTAL

SOLUTIONS

29 Kirksway Place, Battery Point.
T| 62231839 E| office@geosolutions.net.au



Note:
Each Lot to be maintained in a
minimum fuel condition

E) Hardstand

A hardstand area for fire appliances must be provided:

- No more than three metres from the fire fighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like);
- No closer than six metres from the building area to be protected;
- With a minimum width of three metres constructed to the same standard as the carriageway; and
- Connected to the property access by a carriageway equivalent to the standard of the property access.

Hazard Management Areas

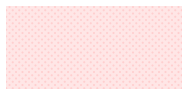
A hazard management area is required to be established and maintained for the life of the building and is shown on this BHMP. Guidance for the establishment and maintenance of the hazard management area is also provided.



Building Area



Static Water Supply Point



Hazard Management Area



Approximate location
of existing hydrant

Hazard Management Area

A hazard management area is the area, between a habitable building or building area and the 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. This can be achieved through, but is not limited to the following actions;

- Remove fallen limbs, sticks, leaf and bark litter;
- Maintain grass at less than a 100mm height;
- Remove pine bark and other flammable mulch (especially from against buildings);
- Thin out under-story vegetation to provide horizontal separation between fuels;
- Prune low-hanging tree branches (<2m from the ground) to provide (vertical separation between fuel layers);
- Prune larger trees to maintain horizontal separation between canopies;
- Minimise the storage of flammable materials such as firewood;
- Maintain vegetation clearance around vehicular access and water supply points;
- Use low-flammability species for landscaping purposes where appropriate;
- Clear out any accumulated leaf and other debris from roof gutters and other accumulation points.

It is not necessary to remove all vegetation from the hazard management area, trees may provide protection from wind borne embers and radiant heat under some circumstances.

Certification No. J9025

Mark Van den Berg
Acc. No. BFP-108
Scope 1, 2, 3A, 3B, 3C.

Do not scale from these drawings.
Dimensions to take precedence over
scale. Written specifications to take
precedence over diagrammatic
representations.

J & M Dalley
959 Ellendale Road,
Ellendale, Tas., 7140

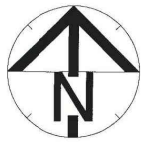
C.T.: 170358/1
PID: 3122492

Date: 06/10/2023

Bushfire Hazard Management Plan 937 Ellendale
Road, Ellendale. October 2023. J9025v2
Bushfire Management Report 937 Ellendale
Road, Ellendale. October 2023. J9025v2

Drawing Number:
A01

Sheet 3 of 4
Prepared by:
MvdB
Page 39



BUSHFIRE HAZARD MANAGEMENT PLAN

Bushfire Hazard Management Plan, 937 Ellendale Road,
Ellendale. October 2023. J9025v2
Tasmanian Planning Scheme - Central Highlands



29 Kirksway Place, Battery Point.
T| 62231839 E| office@geosolutions.net.au

Compliance Requirements

Property Access

Property access length is 30 metres or greater; and access is required for a fire appliance to connect to a firefighting water point.
The following design and construction requirements apply to property access:
(a) All-weather construction;
(b) Load capacity of at least 20 tonnes, including for bridges and culverts;
(c) Minimum carriageway width of 4 metres;
(d) Minimum vertical clearance of 4 metres;
(e) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
(f) Cross falls of less than 3° (1:20 or 5%);
(g) Dips less than 7° (1:8 or 12.5%) entry and exit angle;
(h) Curves with a minimum inner radius of 10 metres;
(i) Maximum gradient of 15° (1:3.5 or 28%) for sealed roads, and 10° (1:5.5 or 18%) for unsealed roads; and
(j) Terminate with a turning area for fire appliances provided by one of the following:
(i) A turning circle with a minimum outer radius of 10 metres;
(ii) A property access encircling the building; or
(iii) A hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long

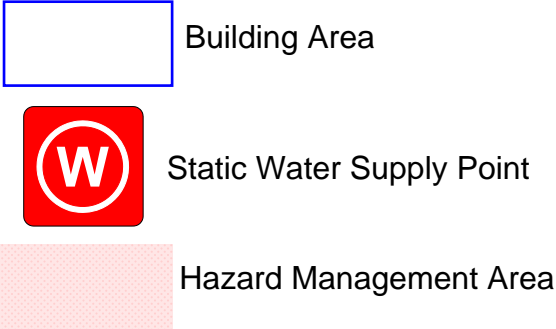
Water Supplies for Firefighting

The site is not serviced by a reticulated water supply, therefore a dedicated, static firefighting water supply will be provided in accordance with the following:

- A) Distance between building area to be protected and water supply
The following requirements apply:
(a) The building area to be protected must be located within 90 metres of the fire fighting water point of a static water supply; and
(b) The distance must be measured as a hose lay, between the fire fighting water point and the furthest part of the building area.
- B) Static Water Supplies
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 (fire fighting and other uses) but the specified minimum quantity of fire fighting 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 fire fighting 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.

- C) Fittings and pipework associated with a fire fighting water point for a static water supply must:
(a) Have a minimum nominal internal diameter of 50mm; (2) Be fitted with a valve with 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 fire fighting 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 fire fighting equipment,
(iii) At a working height of 450 – 600mm above ground level; and
(iv) Protected from possible damage, including damage by vehicles.

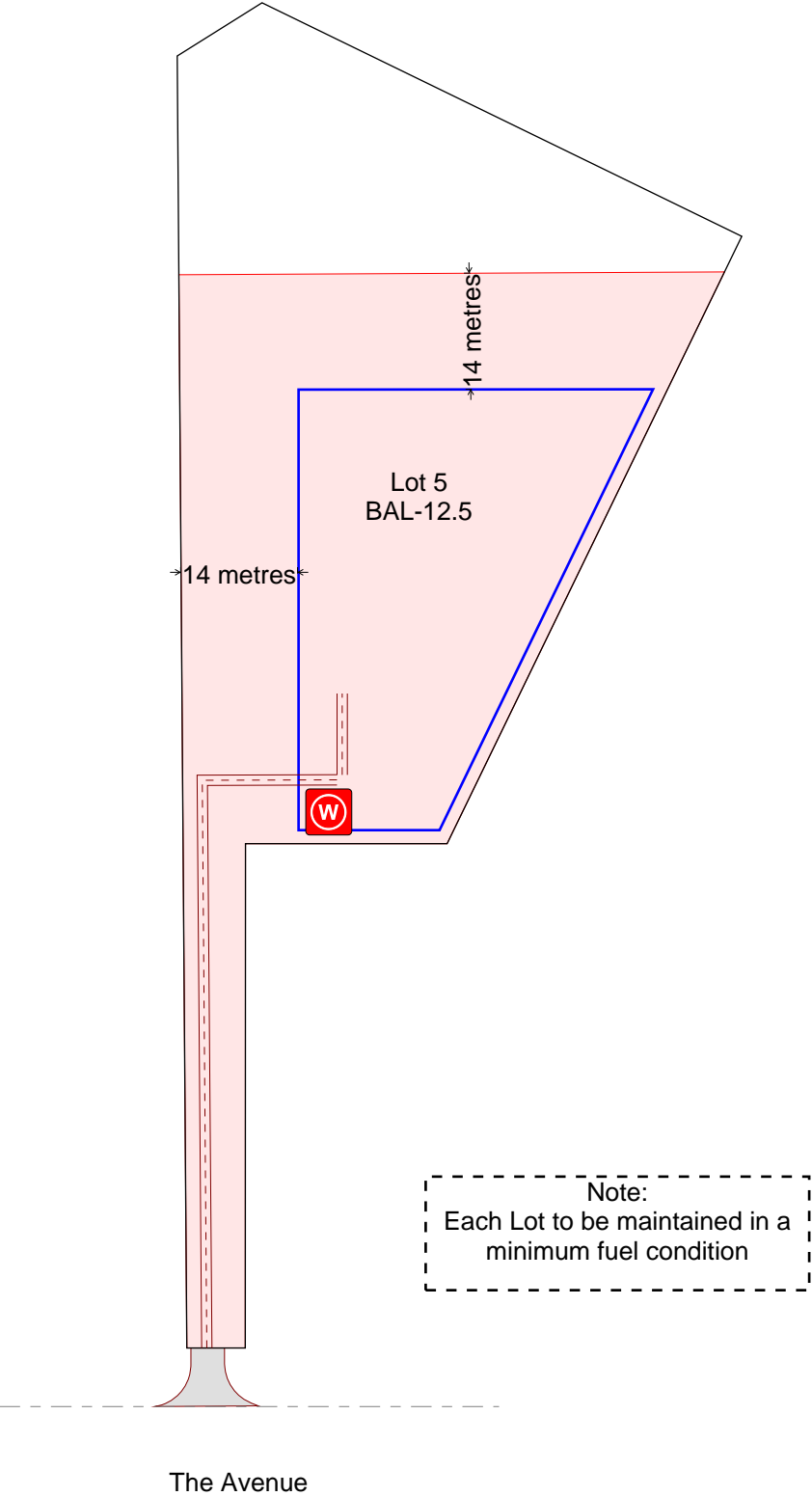
- D) Signage for static water connections
The fire fighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must comply with the Tasmania Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service



- E) Hardstand
A hardstand area for fire appliances must be provided:
(a) No more than three metres from the fire fighting water 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.

Hazard Management Areas

A hazard management area is required to be established and maintained for the life of the building and is shown on this BHMP. Guidance for the establishment and maintenance of the hazard management area is also provided.



Hazard Management Area

A hazard management area is the area, between a habitable building or building area and the 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. This can be achieved through, but is not limited to the following actions;

- Remove fallen limbs, sticks, leaf and bark litter;
- Maintain grass at less than a 100mm height;
- Remove pine bark and other flammable mulch (especially from against buildings);
- Thin out under-story vegetation to provide horizontal separation between fuels;
- Prune low-hanging tree branches (<2m from the ground) to provide (vertical separation between fuel layers;
- Prune larger trees to maintain horizontal separation between canopies;
- Minimise the storage of flammable materials such as firewood;
- Maintain vegetation clearance around vehicular access and water supply points;
- Use low-flammability species for landscaping purposes where appropriate;
- Clear out any accumulated leaf and other debris from roof gutters and other accumulation points.

It is not necessary to remove all vegetation from the hazard management area, trees may provide protection from wind borne embers and radiant heat under some circumstances.

Certification No. J9025

Mark Van den Berg
Acc. No. BFP-108
Scope 1, 2, 3A, 3B, 3C.

Do not scale from these drawings. Dimensions to take precedence over scale. Written specifications to take precedence over diagrammatic representations.	J & M Dalley 959 Ellendale Road, Ellendale, Tas., 7140	C.T.: 170358/1 PID: 3122492	Date: 06/10/2023	Bushfire Hazard Management Plan 937 Ellendale Road, Ellendale. October 2023. J9025v2 Bushfire Management Report 937 Ellendale Road, Ellendale. October 2023. J9025v2	Drawing Number: A01	Sheet 4 of 4 Prepared by: MvdB Page 40
--	--	--------------------------------	------------------	---	------------------------	---

Appendix D

Planning Certificate

BUSHFIRE-PRONE AREAS CODE

CERTIFICATE¹ UNDER S51(2)(d) *LAND USE PLANNING AND APPROVALS ACT 1993*

1. Land to which certificate applies

The subject site includes property that is proposed for use and development and includes all properties upon which works are proposed for bushfire protection purposes.

Street address:

937 Ellendale Road, Ellendale

Certificate of Title / PID:

FR: 170358/1PID: 3122492

2. Proposed Use or Development

Description of proposed Use and Development:

Eight lot plus Balance subdivision

Applicable Planning Scheme:

Tasmanian Planning Scheme – Central Highlands

3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
Plan of Subdivision	Allan Wise	28/07/2023	21031-C01
Bushfire Hazard Report 937 Ellendale Road, Ellendale. October 2023. J9025v2	Mark Van den Berg	06/10/2023/	2
Bushfire Hazard Management Plan 937 Ellendale Road, Ellendale. October 2023. J9025v2	Mark Van den Berg	06/10/2023	2

¹ This document is the approved form of certification for this purpose and must not be altered from its original form.

4. Nature of Certificate

The following requirements are applicable to the proposed use and development:

<input type="checkbox"/>	E1.4 / C13.4 – Use or development exempt from this Code	
	Compliance test	Compliance Requirement
<input type="checkbox"/>	E1.4(a) / C13.4.1(a)	Insufficient increase in risk

<input type="checkbox"/>	E1.5.1 / C13.5.1 – Vulnerable Uses	
	Acceptable Solution	Compliance Requirement
<input type="checkbox"/>	E1.5.1 P1 / C13.5.1 P1	<i>Planning authority discretion required. A proposal cannot be certified as compliant with P1.</i>
<input type="checkbox"/>	E1.5.1 A2 / C13.5.1 A2	Emergency management strategy
<input type="checkbox"/>	E1.5.1 A3 / C13.5.1 A2	Bushfire hazard management plan

<input type="checkbox"/>	E1.5.2 / C13.5.2 – Hazardous Uses	
	Acceptable Solution	Compliance Requirement
<input type="checkbox"/>	E1.5.2 P1 / C13.5.2 P1	<i>Planning authority discretion required. A proposal cannot be certified as compliant with P1.</i>
<input type="checkbox"/>	E1.5.2 A2 / C13.5.2 A2	Emergency management strategy
<input type="checkbox"/>	E1.5.2 A3 / C13.5.2 A3	Bushfire hazard management plan

<input checked="" type="checkbox"/>	E1.6.1 / C13.6.1 Subdivision: Provision of hazard management areas	
	Acceptable Solution	Compliance Requirement
<input type="checkbox"/>	E1.6.1 P1 / C13.6.1 P1	<i>Planning authority discretion required. A proposal cannot be certified as compliant with P1.</i>
<input type="checkbox"/>	E1.6.1 A1 (a) / C13.6.1 A1(a)	Insufficient increase in risk
<input checked="" type="checkbox"/>	E1.6.1 A1 (b) / C13.6.1 A1(b)	Provides BAL-19 for all lots (including any lot designated as 'balance').
<input type="checkbox"/>	E1.6.1 A1(c) / C13.6.1 A1(c)	Consent for Part 5 Agreement

<input checked="" type="checkbox"/>	E1.6.2 / C13.6.2 Subdivision: Public and fire fighting access	
	Acceptable Solution	Compliance Requirement
<input type="checkbox"/>	E1.6.2 P1 / C13.6.2 P1	<i>Planning authority discretion required. A proposal cannot be certified as compliant with P1.</i>
<input type="checkbox"/>	E1.6.2 A1 (a) / C13.6.2 A1 (a)	Insufficient increase in risk
<input checked="" type="checkbox"/>	E1.6.2 A1 (b) / C13.6.2 A1 (b)	Access complies with relevant Tables

<input checked="" type="checkbox"/>	E1.6.3 / C13.1.6.3 Subdivision: Provision of water supply for fire fighting purposes	
	Acceptable Solution	Compliance Requirement
<input checked="" type="checkbox"/>	E1.6.3 A1 (a) / C13.6.3 A1 (a)	Insufficient increase in risk (lots 1 to 4 and 7 and 8 and balance lot)
<input type="checkbox"/>	E1.6.3 A1 (b) / C13.6.3 A1 (b)	Reticulated water supply complies with relevant table.
<input type="checkbox"/>	E1.6.3 A1 (c) / C13.6.3 A1 (c)	Water supply consistent with the objective
<input type="checkbox"/>	E1.6.3 A2 (a) / C13.6.3 A2 (a)	Insufficient increase in risk
<input checked="" type="checkbox"/>	E1.6.3 A2 (b) / C13.6.3 A2 (b)	Static water supply complies with relevant Table (lots 5 and 6)
<input type="checkbox"/>	E1.6.3 A2 (c) / C13.6.3 A2 (c)	Static water supply consistent with the objective

5. Bushfire Hazard Practitioner

Name: Mark Van den Berg

Phone No: 03 62231839

Postal Address: 29 Kirksway Place
Battery Point Tas. 7004

Email Address: mvandenberg@geosolutions.net.au

Accreditation No: BFP – 108

Scope: 1, 2, 3a, 3b & 3c

6. Certification

I certify that in accordance with the authority given under Part 4A of the *Fire Service Act* 1979 that the proposed use and development:

- ☐ Is exempt from the requirement Bushfire-Prone Areas Code because, having regard to the objective of all applicable standards in the Code, there is considered to be an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures, or
- ☒ The Bushfire Hazard Management Plan/s identified in Section 3 of this certificate is/are in accordance with the Chief Officer's requirements and compliant with the relevant **Acceptable Solutions** identified in Section 4 of this Certificate.

Signed:
certifier



Name: Mark Van den Berg

06/10/2023

Certificate
Number: J9025

(for Practitioner Use only)

GES

GEO-ENVIRONMENTAL SOLUTIONS

ON-SITE WASTEWATER ASSESSMENT *937 Ellendale Road, Ellendale*

July 2023

Updated August 2023



Contents

1. Introduction.....	2
2. Planning Context	4
3. Site Information.....	4
3.1 Geology	5
3.1 Soil Distribution	5
4. Site Suitability for Onsite Wastewater Disposal	6
5. Conclusions.....	10
Appendix 1 –Trench Summary Reports.....	11
Appendix 2 – Bore Logs	14
Appendix 3 – Test Hole Locations	16
Appendix 4 – Building Act 2016 Compliance	17

1. Introduction

The proposed subdivision site is located at 937 Ellendale Road in the locality of Ellendale, Tasmania. The total current land area of existing lot (CT: 170358/1) is approximately 2.011ha, of which it is proposed to create eight (8) residential lots excluding the balance lot, which contains an existing dwelling. The proposed new lots will each have a minimum area of approximately 1,400m² while the balance lot has an area of approximately 1,732m² (see Appendix 2 – development plans). The site is not serviced with mains sewer, therefore onsite wastewater disposal would be required on the lots (see Figure 1 for study area).

The land area in question is nearly level to gently sloping with an average slope of 4% to the Northeast.

It is the scope of this report to consider the capability of said land to support sustainable residential use including on site wastewater disposal without sustaining environmental harm.

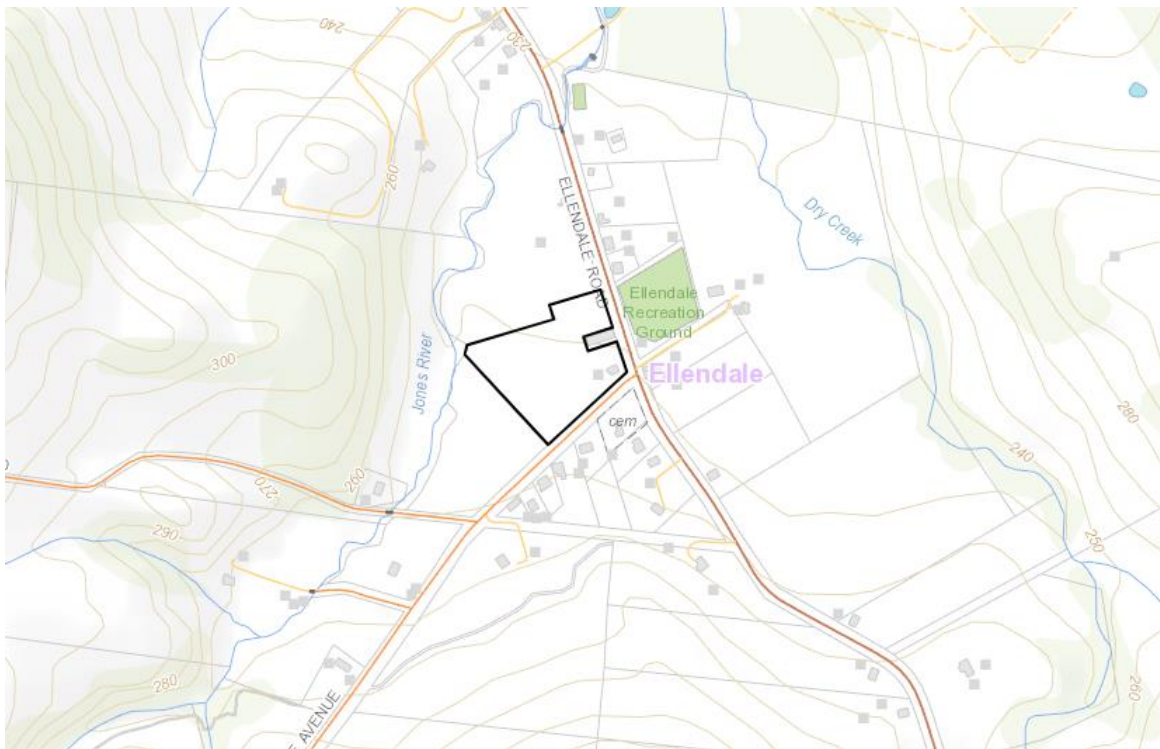


Figure 1 – Whole Site Location (subdivision site outlined black)

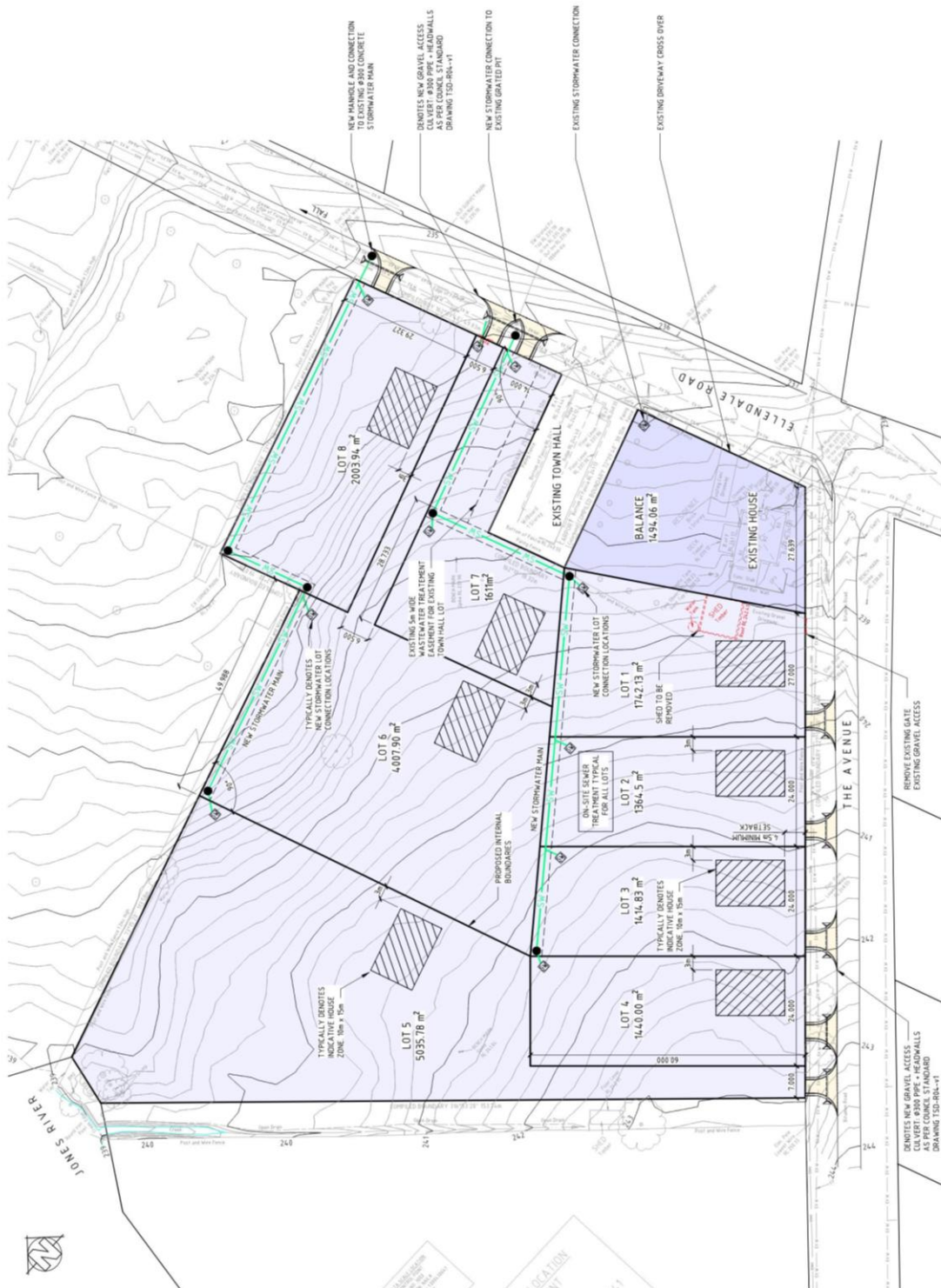


Figure 2 – Subdivision proposal

2. Planning Context

The land area proposed for subdivision falls within the Village Zone as defined by the Tasmanian Planning Scheme (see Figure 3). Therefore, the subdivision must comply with the requirements for the Village zoning as set out in Section 12.0 of the Tasmanian Planning Scheme – State Planning Provisions. Section 12.5.1 Lot Design stipulates a minimum lot size of 600m² (Acceptable Solutions). It is prudent to assess the proposal under the acceptable solutions to ensure that each lot can demonstrate capability of accommodating an on-site wastewater treatment system adequate for the future use and development of the land. As there is no instrument within the Scheme this is best demonstrated by examination against the Guidelines for on-site wastewater within the Building Act framework. Provided that the requirements are met regarding the provision of infrastructure, and the land is suitable for residential construction/on-site wastewater management the application to develop the land should proceed.

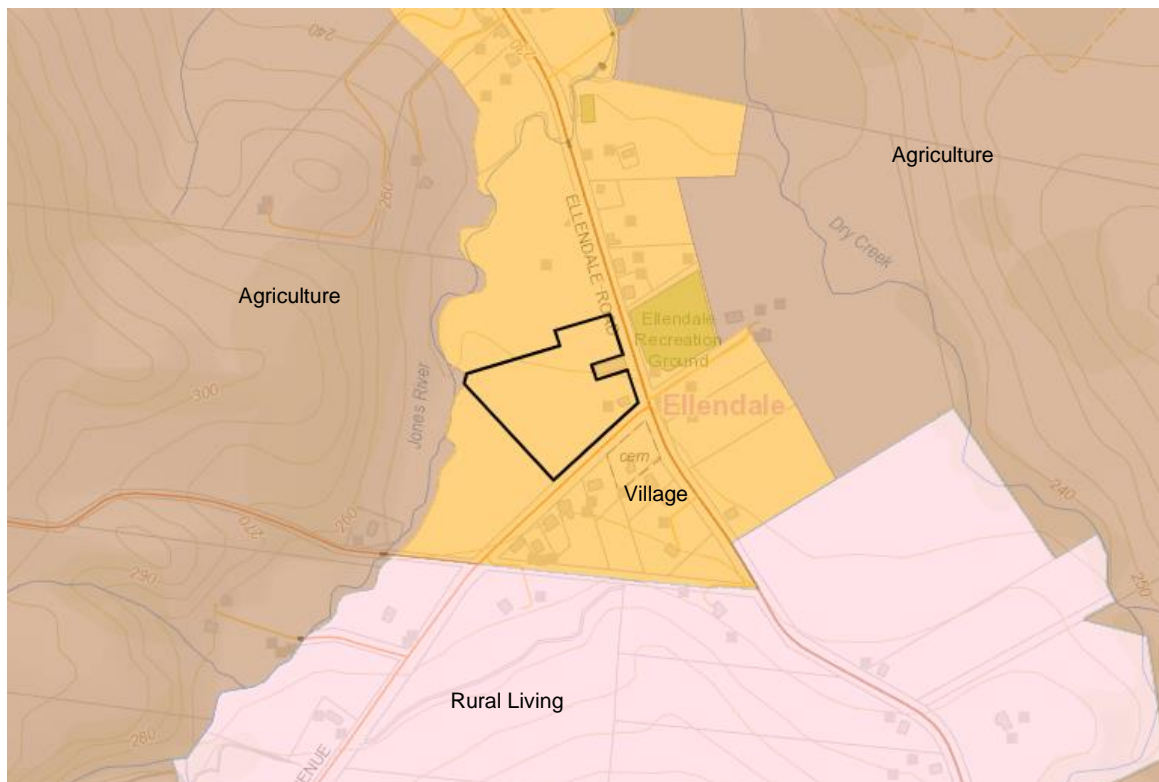


Figure 3 – Planning Zones – Tasmanian Planning Scheme (subdivision site outlined black)

3. Site Information

Site information pertaining to the capability of the land to sustain residential development without causing environmental harm was collected from desktop and field survey. Field survey was undertaken utilising an AMS PowerProbe auger system, with soil samples assessed according to AS1547-2012 for suitability for on-site wastewater management.

3.1 Geology

The study area falls within the Mineral Resources Tasmania, 1:250 000 Sheet which indicates the area is formed by a cover sequence of Quaternary aged sediments with Jurassic dolerite forming the perimeter of the bason. Site inspection confirmed aeolian sediments is the predominant parent material with dolerite remnants forming the imperfectly drained texture-contrast soils across the site, with a possible underlying basement of gravels and/or dolerite bedrock as mapped at higher elevations. These areas were examined as deep uniform clay soils to depths of generally over 2.00m with some variation in soil depth and horizon development expected across the site.

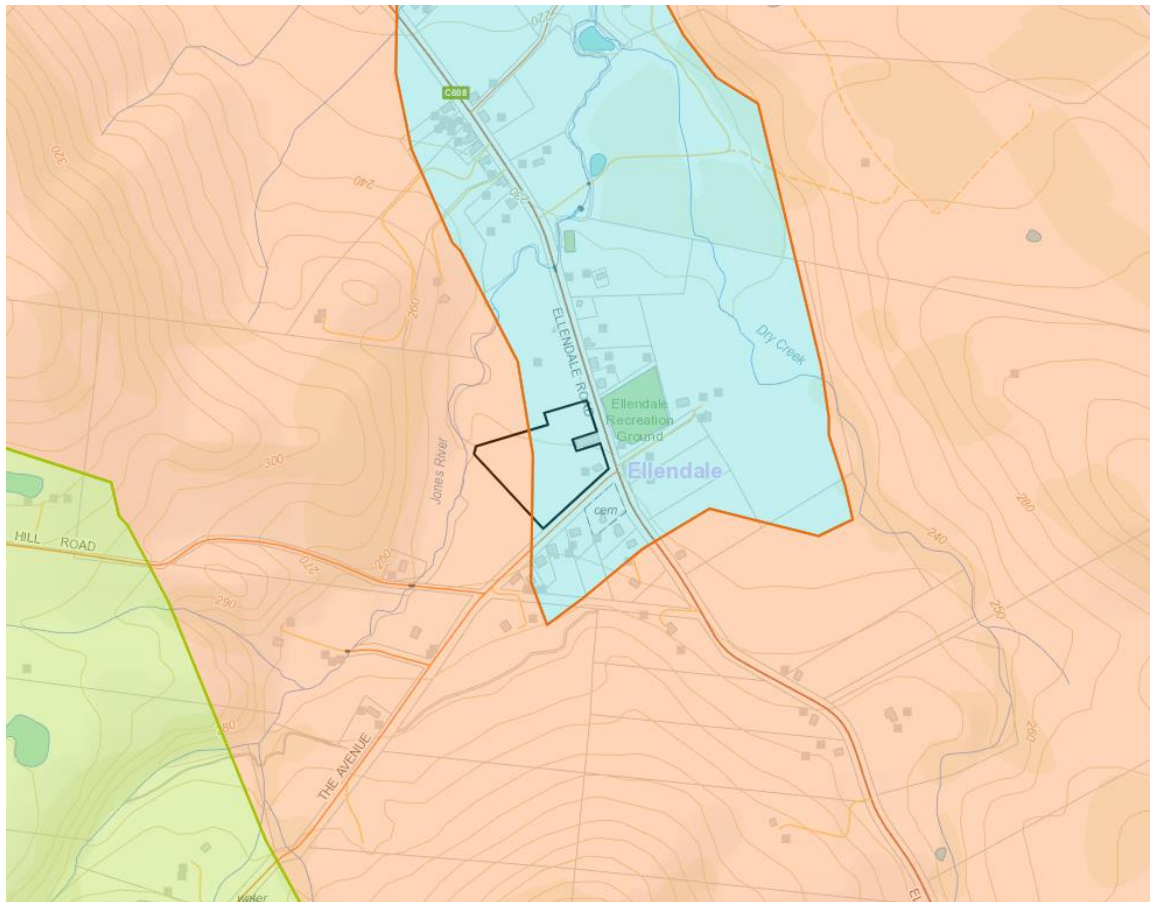


Figure 5 - MRT 1:250 000 Sheet Geological Survey (subdivision site outlined black)

3.1 Soil Distribution

The soil found on the property shows a close correlation with the weathered dolerite deposits typical of the area, with deep clays encountered to suggest derivation from the dolerite formation that comprises the moderately steep hills to the northwest and southwest of the site. Soil distribution within the proposed subdivision area was relatively uniform.

Soils on these deposits are characterised by moderately deep imperfectly drained texture-contrast profiles. The anticipated subsoil permeability under saturated conditions from samples across the site is expected to be in the order of 0.12 – 0.50m/day.

Soils of this type are generally reactive (AS2870-2011 **Class M to H-1**). These soils may also be prone to surface erosion when denuded of cover, and or subject to abnormal drainage conditions. Soils with high dispersion potential (e.g., Class 2.3) would be assessed as **Class P** according to AS2870-2011.

4. Site Suitability for Onsite Wastewater Disposal

The soils across the subdivision site were compared and classified according to AS/NZS1547-2012 (on-site wastewater management). Bore logs for each profile based upon onsite geotechnical drilling is presented in Appendix 2 whilst site and soil factors pertinent to wastewater disposal under AS1547-2012 are presented in Table 1 overleaf.

The soils across the site area classified according to AS1547-2012 as **Category 5 (Light CLAY)** with lower Long Term Acceptance Rates (LTAR's). Due to the duplex soils on site, it is recommended that appropriate application rates be assigned (refer to Table 1).

Modelling utilising a typical four-bedroom house on mains water with standard plumbing fixtures indicates that a disposal area of up to 600m² (300m² installed and 300m² reserve) should be set aside wastewater disposal on each lot (see Trench summary report attached). Based upon allowances for adequate down slope boundary setbacks and sufficient construction, access, and recreational space, then I recommend that a minimum area available for wastewater disposal of flow from any future dwelling to be 1200m² would be adequate for subdivision design. It should be noted that this area is based upon the installation of an Aerated Wastewater Treatment System (AWTS) or similar packaged system on each lot, with irrigation over a total area of 600m² (using a Design Irrigation Rate DIR of 3mm/day).

Alternatively, secondary treated wastewater may be managed with absorption with a total area of 180m² (using a Design Loading Rate of 10L/m²/day). However, some lots examined may also be suitable for traditional septic tank and absorption trench systems, with a typical total disposal area of up to 288m² required on each lot for a typical four-bedroom home (based upon a Design Loading Rate DLR of 7L/m²/day).

The total disposal areas outlined above include a 100% reserve area, whereby half of each total area is installed and half is reserve (e.g., 144m² installed and 144m² reserve for a septic). On each lot, the suitability of the wastewater systems outlined above will depend on the relative position of the dwelling, driveway, and other infrastructure to an area viable for wastewater disposal.

Soil depth does vary across the lots ranging from approximately 1.20m to over 2.00m, however given the relatively gentle slope across the site most of the lots would be suitable for in-ground absorption provided that soil depths in the proposed location is no less than 1.20m.

The existing dwelling on the balance lot appears to have a functioning wastewater system. A concrete septic tank is located to the Northwest of the dwelling. The exact location of the disposal area could not be verified; however, it is presumed to be located within the proposed lot boundary given that the site slopes in favour of a gravity system being located to the North of the existing dwelling.

Nutrient balance and sustainable wastewater application

The soils examined are moderately- to well-structured and have a moderate to high estimated Cation Exchange Capacity (CEC) at depth. Therefore, the soils have a good ability to retain applied nutrients in wastewater and the risk of nutrient attenuation associated with wastewater application is low.

Soil Dispersion

Soils derived from Jurassic dolerite are known to exhibit dispersive behaviour. Under some circumstances the presence of dispersive soils can also lead to significant erosion, and in particular tunnel erosion. Samples were taken at the site for assessment of dispersion. An Emerson (1968) Dispersion Test was conducted to determine if these samples were dispersive. Soil dispersive behaviour varied across the site, with some soil samples taken from site exhibiting no dispersion (Class 8) while others returned moderate to high results (Class 2:2 to 2:3). Modelling in the Trench program was therefore run using a value of “2”.

Given that dispersive behaviour varied across the site and may be localised to particular lots, it is recommended that adequate dispersion testing and soil classification is undertaken in proposed development areas on each lot to ensure the predicted soil behaviour and effluent disposal standards are met. On lots that exhibit soil dispersion an AWTs with irrigation is the recommended disposal method.

Lot number	Texture	Emerson Class	Description
1	Clay	2.3	Complete dispersion >50% affected
2	Clay	8	No dispersion
3	Clay	8	No dispersion
4	Clay	2.2	Some dispersion <50% affected

Sample Tested by: L. Ravanat

05/07/2023

Table 1.0 Summary of Site Factors Affecting Onsite Wastewater Disposal

Lot number	Soil Depth to Auger Refusal (m)	Slope Type, Magnitude and Aspect (%)	Soil Classification according to AS1547-2012	Potential Dispersion Risk	Sensitive Environmental Receptors	Suitability for AWTS/septic
Lot 1	2.00+	Simple 5% NE	Category 5 – Light CLAY	High	Watercourse 318m	AWTS/septic with suitable setbacks
Lot 2	1.20	Simple 5% NE	Category 5 – Light CLAY	Low	Watercourse 326m	AWTS with suitable setbacks
Lot 3	2.00+	Simple 4% NE	Category 5 – Light CLAY	Low	Watercourse 345m	AWTS with suitable setbacks
Lot 4	2.00+	Simple 3% NE	Category 5 – Light CLAY	Moderate	Watercourse 362m	AWTS with suitable setbacks
Lot 5	1.20	Simple 3% NE	Category 5 – Light CLAY	Moderate	Watercourse 128m	AWTS/septic with suitable setbacks
Lot 6	1.30	Simple 4% NE	Category 5 – Light CLAY	Moderate	Watercourse 200m	AWTS/septic with suitable setbacks
Lot 7	1.30	Simple 3% NE	Category 5 – Light CLAY	Moderate	Watercourse 200m	AWTS with suitable setbacks
Lot 8	1.40	Simple 6% NE	Category 5 – Light CLAY	Moderate	Watercourse 263m	AWTS/septic with suitable setbacks

Hydrological balance and wastewater disposal

Modelling of wastewater application on each lot was undertaken utilising the Trench program, long term weather average for Ellendale, and estimated flows from an average four-bedroom home on a mains water supply. This yielded a minimum application area of approximately 300m² for a secondary treatment system, which is further amended to 600m² to fulfil the requirements for a 100% reserve area. Based upon the modelling undertaken in Trench, the required areas are more than adequate to sustain long term wastewater application on each lot. It should however be noted that the modelling is based upon the installation of packaged treatment systems (e.g., AWTs) with irrigation for a single dwelling on each lot. Recommendations can be made about the suitability and design requirements of the system and the final decision of wastewater system approval rests with the permit authority at the time of site specific design to ensure the most compatible environmental and economic outcomes.

Setbacks distances to boundaries and sensitive features

The proposed lots have gentle slopes and the average slope of approximately 4% or 2° has been utilised to represent the indicative required setbacks. The minimum acceptable boundary setbacks modelled according to the acceptable solutions stipulated in Building Act 2016 for on-site wastewater management for the development are:

Table 2.0 – Building Act 2016 setback requirements

	4% (2 degrees)	
	Primary	Secondary
Upslope or level boundary	1.5m	1.5m
Downslope boundary	4m	3.5m
Upslope or level building	3m	3m
Downslope building	10m	2.5m
Downslope surface water	29m	19m
Groundwater	1.5m	0.6m
Limiting layer	1.5m	0.5m

**Note: See Appendix 4 for Building Act compliance.*

A subdivision proposal with lots of a minimum area of approximately 1200m² should allow for significant space on each lot for wastewater disposal with adequate setbacks in regards boundaries and sensitive features. Therefore, it is concluded that current subdivision plan results in lots compliant with the onsite wastewater guidelines and the Tasmanian Planning Scheme.

Site specific setbacks applied to each lot will require fine tuning at the special plumbing permit stage as access, parking, and building footprints are finalised in conjunction with wastewater disposal areas. Modelling at this planning stage does however suggest that sufficient room would be available on each lot to accommodate the required setbacks.

The subdivision area has no dams/drainage lines or permanent creeks; however, Jones River runs to the Northwest of the site >100m from any of the proposed lots. Therefore, there is little risk involved with onsite wastewater and downslope surface water.

5. Conclusions

In conclusion, I feel that the land area examined is capable of supporting residential development provided that the identified landscape constraints are addressed with appropriate site specific management strategies.

- The land surveyed is suitable for on site wastewater disposal utilising a packaged treatment plant with irrigation. Some lots may be suitable to a primary treatment system with absorption. Application area design will vary for each site depending upon the soil characteristics, final lot layout and construction type.
- Based upon the modelling undertaken a minimum lot size of 1200m² would be adequate to accommodate residential development and on site wastewater disposal.
- Appropriate setbacks from wastewater application areas must be assessed in the site specific building and wastewater design phase.
- The variation in soil depth and dispersive tendency across lots must be considered in system design.
- All earthworks on site must comply with AS3798-2007 and consideration should be given to drainage and sediment control on site during and after construction.
- The final approval for construction and wastewater disposal rests with the permit authority at the building approvals stage, and the recommendations in this report should not be viewed as blanket approval for any scale or type of residential development on each lot. Sites must be revisited for individual onsite wastewater assessments.
- The scale and type of residential development on each lot should therefore be appropriate to the environmental constraints of each Lot – therefore I recommend that geotechnical information be provided to prospective purchasers to allow informed decisions.

It is my professional opinion that the land surveyed is suitable to support residential development and on-site wastewater without sustaining environmental harm.



Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD
Environmental and Engineering Soil Scientist

Appendix 1 –Trench Summary Reports

GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report

Site assessment for on-site waste water disposal

Assessment for Andrew Dalley

Assess. Date 10-Jul-23

Ref. No.

Assessed site(s) 937 Ellendale Road, Ellendale

Site(s) inspected 27-Jun-23

Local authority Central Highlands Council

Assessed by John Paul Cumming

This report summarises wastewater volumes, climatic inputs for the site, soil characteristics and system sizing and design issues. Site Capability and Environmental sensitivity issues are reported separately, where 'Alert' columns flag factors with high (A) or very high (AA) limitations which probably require special consideration for system design(s). Blank spaces on this page indicate data have not been entered into TRENCH.

Wastewater Characteristics

Wastewater volume (L/day) used for this assessment = 900 (using a method independent of the no. of bedrooms)

Septic tank wastewater volume (L/day) = 300

Sullage volume (L/day) = 600

Total nitrogen (kg/year) generated by wastewater = 3.3

Total phosphorus (kg/year) generated by wastewater = 1.6

Climatic assumptions for site

(Evapotranspiration calculated using the crop factor method)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	54	46	57	70	74	76	80	86	90	91	68	66
Adopted rainfall (R, mm)	54	46	57	70	74	76	80	86	90	91	68	66
Retained rain (Rr, mm)	49	42	51	63	67	69	72	77	81	82	61	59
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	29	32	42	63	84	105	126
Evapotr. less rain (mm)	82	68	40	0	-25	-39	-40	-35	-18	2	44	67

Annual evapotranspiration less retained rain (mm) = 146

Soil characteristics

Texture = Light CLAY

Category = 5 Thick. (m) = 1.5

Adopted permeability (m/day) = 0.12

Adopted LTAR (L/sq m/day) = 3

Min depth (m) to water = 10

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site: All wastewater will be disposed of on the site
 The preferred method of on-site primary treatment: In a package treatment plant
 The preferred method of on-site secondary treatment: In-ground
 The preferred type of in-ground secondary treatment: None
 The preferred type of above-ground secondary treatment: None
 Site modifications or specific designs: Not needed

Suggested dimensions for on-site secondary treatment system

Total length (m) = 30
 Width (m) = 10
 Depth (m) = 0.5
 Total disposal area (sq m) required = 600
 comprising a Primary Area (sq m) of: 300
 and a Secondary (backup) Area (sq m) of: 300

Sufficient area is available on site

Comments

The calculated DIR for the Category 5 soils on site is 3mm/day, with a minimum irrigation area of 300m² required for a four-bedroom dwelling on mains water. Using a primary treatment system with a DLR of 7L/m²/day, a minimum absorption area of 144m² would be required.

GES P/L**Land suitability and system sizing for on-site wastewater management**

Trench 3.0 (Australian Institute of Environmental Health)

Site Capability Report**Site assessment for on-site waste water disposal**

Assessment for Andrew Dalley

Assess. Date 10-Jul-23

Ref. No.

Assessed site(s) 937 Ellendale Road, Ellendale

Site(s) inspected 27-Jun-23

Local authority Central Highlands Council

Assessed by John Paul Cumming

This report summarises data relating to the physical capability of the assessed site(s) to accept wastewater. Environmental sensitivity and system design issues are reported separately. The 'Alert' column flags factors with high (A) or very high (AA) site limitations which probably require special consideration in site acceptability or for system design(s). Blank spaces indicate data have not been entered into TRENCH.

Alert	Factor	Units	Value	Confid level	Limitation		Remarks
					Trench	Amended	
	Expected design area	sq m	1,200	V. high	Low		
	Density of disposal systems	/sq km	10	Mod.	Very low		
	Slope angle	degrees	2	High	Very low		
	Slope form	Convex spreading		High	Very low		
	Surface drainage	Imperfect		High	Moderate		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Infrequent		High	Moderate		
	Aspect (Southern hemi.)	Faces NE or NW		V. high	Low		
	Frequency of strong winds	Common		High	Low		
A	Wastewater volume	L/day	900	High	High		
	SAR of septic tank effluent		1.0	High	Low		
	SAR of sullage		1.6	High	Low		
	Soil thickness	m	1.5	V. high	Very low		
	Depth to bedrock	m	1.5	V. high	Moderate		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		5.5	High	Low		
	Soil bulk density	gm/cub. cm	1.4	High	Very low		
AA	Soil dispersion	Emerson No.	2	V. high	Very high		
	Adopted permeability	m/day	0.12	Mod.	Very low		
A	Long Term Accept. Rate	L/day/sq m	3	High	High		

Comments

GES P/L**Land suitability and system sizing for on-site wastewater management**

Trench 3.0 (Australian Institute of Environmental Health)

Environmental Sensitivity Report**Site assessment for on-site waste water disposal**

Assessment for Andrew Dalley

Assess. Date

10-Jul-23

Ref. No.

Assessed site(s) 937 Ellendale Road, Ellendale

Site(s) inspected

27-Jun-23

Local authority Central Highlands Council

Assessed by John Paul Cumming

This report summarises data relating to the environmental sensitivity of the assessed site(s) in relation to applied wastewater. Physical capability and system design issues are reported separately. The 'Alert' column flags factors with high (A) or very high (AA) limitations which probably require special consideration in site acceptability or for system design(s). Blank spaces indicate data have not been entered into TRENCH.

Alert	Factor	Units	Value	Confid level	Limitation		Remarks
					Trench	Amended	
	Cation exchange capacity	mmol/100g	100	High	Low		
	Phos. adsorp. capacity	kg/cub m	0.7	High	Moderate		
	Annual rainfall excess	mm	-146	High	Very low		
	Min. depth to water table	m	10	High	Very low		
	Annual nutrient load	kg	4.9	High	Very low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	3	High	Very low		
	Risk to adjacent bores	Very low		V. high	Very low		
	Surf. water env. value	Agric non-sensit		V. high	Low		
A	Dist. to nearest surface water	m	120	V. high	High		
	Dist. to nearest other feature	m	50	V. high	Moderate		
	Risk of slope instability	Very low		V. high	Very low		
	Distance to landslip	m	1000	V. high	Very low		

Comments

Appendix 2 – Bore Logs

TH 1 Depth (m)	USCS	Description
0.00 – 0.30	SM	Dark Brown Grey Sandy SILT : slightly moist loose consistency, visible boundary to
0.30 – 1.00	CH	Brown Grey Yellow CLAY : high plasticity, slightly moist soft to firm consistency, gradual boundary to
1.00 – 2.00+	CH	Brown Grey Yellow CLAY : high plasticity, slightly moist firm to stiff consistency, lower boundary undefined.

TH 2 Depth (m)	USCS	Description
0.00 – 0.20	SM	Dark Brown Grey Sandy SILT : slightly moist loose consistency, visible boundary to
0.20 – 0.80	CH	Brown Grey Yellow CLAY : high plasticity, slightly moist firm consistency, gradual boundary to
0.80 – 1.00	CL	Brown Grey Yellow CLAY with GRAVELS : low plasticity, slightly moist soft consistency, gradual boundary to
1.00 – 1.20	GW	Yellow Sandy GRAVEL : slightly moist very dense consistency, auger refusal.

TH 3 Depth (m)	USCS	Description
0.00 – 0.50	SM	Dark Brown Grey Sandy SILT : slightly moist loose consistency, visible boundary to
0.50 – 1.00	CH	Brown Grey Yellow CLAY : high plasticity, slightly moist firm to stiff consistency, gradual boundary to
1.00 – 2.00+	CI	Brown Grey Yellow CLAY : medium plasticity, slightly moist soft consistency, lower boundary undefined.

TH 4 Depth (m)	USCS	Description
0.00 – 0.50	SM	Dark Brown Grey Sandy SILT : slightly moist loose consistency, visible boundary to
0.50 – 2.00+	CH	Brown Grey Yellow CLAY : medium to high plasticity, slightly moist stiff consistency, lower boundary undefined.

TH 5 Depth (m)	USCS	Description
0.00 – 0.30	SM	Dark Brown Grey Sandy SILT : slightly moist loose consistency, visible boundary to
0.30 – 1.20	CI	Brown Orange Grey Sandy CLAY : low to medium plasticity, slightly moist soft consistency, lower boundary undefined.

TH 6 Depth (m)	USCS	Description
0.00 – 0.40	SM	Dark Brown Grey Sandy SILT : slightly moist loose consistency, visible boundary to
0.40 – 1.00	CI	Brown Orange Grey Sandy CLAY : low to medium plasticity, slightly moist soft consistency, gradual boundary to
1.00 – 1.30	SC	Yellow Clayey SAND : slightly moist dense consistency, auger refusal.

TH 7 Depth (m)	USCS	Description
0.00 – 0.40	SM	Dark Brown Grey Sandy SILT : slightly moist loose consistency, visible boundary to
0.40 – 1.10	CI	Brown Orange Grey Sandy CLAY : low to medium plasticity, slightly moist soft consistency, gradual boundary to
1.10 – 1.40	SC	Yellow Clayey SAND : slightly moist dense consistency, auger refusal.

Appendix 3 – Test Hole Locations



Appendix 4 – Building Act 2016 Compliance

Acceptable Solutions	Performance Criteria	Compliance
<p>A1</p> <p>Horizontal separation distance from a building to a land application area must comply with one of the following:</p> <ul style="list-style-type: none"> a) be no less than 6m; or b) be no less than: <ul style="list-style-type: none"> (i) 3m from an upslope building or level building; (ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building; (iii) If secondary treated effluent and subsurface application, no less than 2m plus 0.25m for every degree of average gradient from a downslope building. 	<p>P1</p> <p>a) The land application area is located so that</p> <ul style="list-style-type: none"> (i) the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low.; and (ii) is setback a sufficient distance from a downslope excavation around or under a building to prevent inadequately treated wastewater seeping out of that excavation 	<p>Complies with A1 (b) (i) Land application area will be located with a minimum separation distance of 3m from an upslope or level building.</p> <p>Complies with A1 (b) (ii) Land application area will be located with a minimum separation distance of 6m of downslope building.</p> <p>Complies with A1 (b) (iii) Land application area will be located with a minimum separation distance of 2.5m of downslope building.</p>
<p>A2</p> <p>Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b)</p> <ul style="list-style-type: none"> (a) be no less than 100m; or (b) be no less than the following: <ul style="list-style-type: none"> (i) if primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or (ii) if secondary treated effluent and subsurface application, 15m plus 2m for every degree of average gradient to down slope surface water. 	<p>P2</p> <p>Horizontal separation distance from downslope surface water to a land application area must comply with all of the following:</p> <ul style="list-style-type: none"> a) Setbacks must be consistent with AS/NZS 1547 Appendix R; b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable. 	<p>Complies with A2 (a) Land application area located > 100m from downslope surface water.</p>

<p>A3</p> <p>Horizontal separation distance from a property boundary to a land application area must comply with either of the following:</p> <p>(a) be no less than 40m from a property boundary; or</p> <p>(b) be no less than:</p> <ul style="list-style-type: none"> (i) 1.5m from an upslope or level property boundary; and (ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or (iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary. 	<p>P3</p> <p>Horizontal separation distance from a property boundary to a land application area must comply with all of the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.</p>	<p>Complies with A3 (b) (i) Land application area will be located with a minimum separation distance of 1.5m from an upslope or level property boundary.</p> <p>Complies with A3 (b) (ii) Land application area will be located with a minimum separation distance of 4m of downslope property boundary.</p> <p>Complies with A3 (b) (iii) Land application area will be located with a minimum separation distance of 3.5m of downslope property boundary.</p>
<p>A4</p> <p>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must be no less than 50m and not be within the zone of influence of the bore whether up or down gradient.</p>	<p>P4</p> <p>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable</p>	<p>Complies with A4 No bore or well identified within 50m</p>

<p>A5</p> <p>Vertical separation distance between groundwater and a land application area must be no less than:</p> <p>(a) 1.5m if primary treated effluent; or</p> <p>(b) 0.6m if secondary treated effluent</p>	<p>P5</p> <p>Vertical separation distance between groundwater and a land application area must comply with the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable</p>	<p>1.5m separation is required to comply with A5 (a)</p> <p>0.6m separation is required to comply with A5 (b)</p>
<p>A6</p> <p>Vertical separation distance between a limiting layer and a land application area must be no less than:</p> <p>(a) 1.5m if primary treated effluent; or</p> <p>(b) 0.5m if secondary treated effluent</p>	<p>P6</p> <p>Vertical setback must be consistent with AS/NZS1547 Appendix R.</p>	<p>1.5m separation is required to comply with A5 (a)</p> <p>0.5m separation is required to comply with A5 (a)</p>
<p>A7</p> <p>nil</p>	<p>P7</p> <p>A wastewater treatment unit must be located a sufficient distance from buildings or neighbouring properties so that emissions (odour, noise or aerosols) from the unit do not create an environmental nuisance to the residents of those properties</p>	<p>Complies</p>



DRIVEWAY PLAN
SCALE 1:500
1. SURVEY DRAWING BY "SURVEY PLUS" DATED 05-10-2022
2. LEVEL DATUM IS AHD (SEE LAND SURVEY DRAWING)
3. EXISTING SURFACE CONTOUR INTERVAL IS 0.2 METRES
4. REFER TO LAND SURVEY DRAWINGS FOR EXTRA NOTES
5. LAND SURVEYOR SHALL BE ENGAGED TO SETOUT PROJECT FROM THE CAD FILE OF THIS DESIGN.

CLIENT:		ANDREW AND JOY DALLEY		No.		AMENDMENT DESCRIPTION	DATE	PROPOSED SUBDIVISION OF LAND	
				A		CONCEPT ISSUE FOR COMMENT AND REVIEW	20-01-2023	937 ELLENDALE ROAD, ELLENDALE 7140, TASMANIA	
				B		UPDATED AND ISSUED FOR APPROVALS	26-05-2023	OVERALL SITE CONCEPT PLAN	
				C		LOT ADDED. STORMWATER LINE REDIRECTED	28-07-2023		
								SCALE	ALLAN WISE
								DRAWN	1:500
								DATE	JAN 2023
								DRAWING No.	21031-C01
								REVISION	C

SEARCH OF TORRENS TITLE

VOLUME 170358	FOLIO 1
EDITION 2	DATE OF ISSUE 22-Nov-2021

SEARCH DATE : 26-May-2023

SEARCH TIME : 10.30 AM

DESCRIPTION OF LAND

Parish of ARGYLE Land District of BUCKINGHAM

Lot 1 on Plan 170358

Derivation : Part of Lot 6656 Gtd. to J.F. Walker & Others

Prior CT 160954/1

SCHEDULE 1

M919878 TRANSFER to JOY ELIZABETH MARONITIS-DALLEY and ANDREW
ROBERT DALLEY Registered 22-Nov-2021 at 12.01 PM

SCHEDULE 2

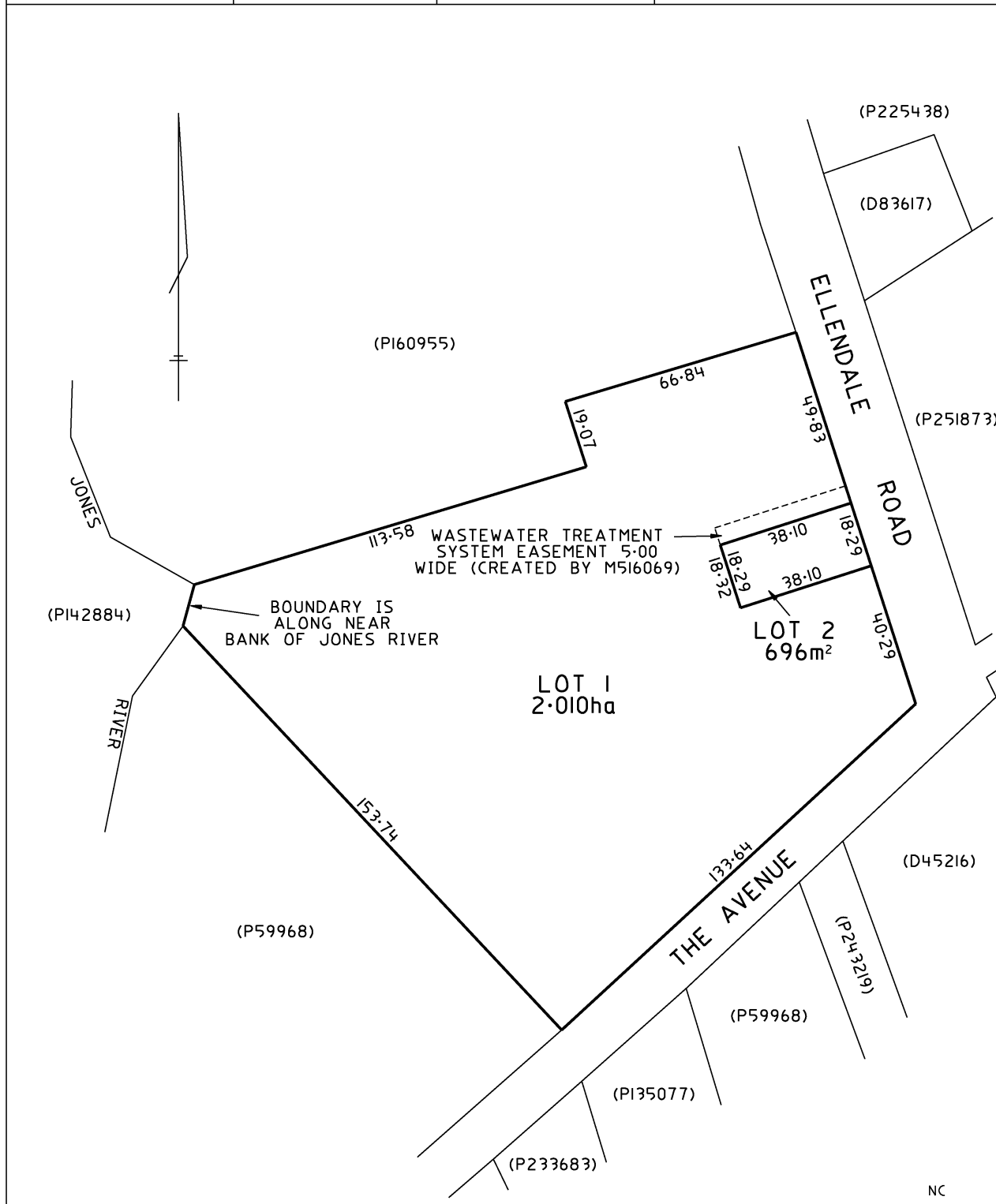
Reservations and conditions in the Crown Grant if any

M516069 BURDENING EASEMENT: a wastewater treatment system
easement (appurtenant to Lot 2 on Plan 170358) over
the land marked Wastewater Treatment System Easement
5.00 Wide on Plan 170358 Registered 19-Oct-2015 at
noon

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER FOLIO REFERENCE CT.160954/1 CT.227404/1 GRANTEE PART OF LOT 6656 (488 ACRES) GTD TO JOHN FLETCHER WALKER, ALEXANDER RIDDOCH & MORTON ALLPORT		PLAN OF TITLE LOCATION BUCKINGHAM - ARGYLE FIRST SURVEY PLAN No. BUC 15/1 L0 COMPILED BY LDRB SCALE 1: 1000 LENGTHS IN METRES		Registered Number P.170358 APPROVED 9 OCT 2015 <i>Alice Kawa</i> Recorder of Titles
MAPSHEET MUNICIPAL CODE No. 105 (4628)	LAST UPI No	LAST PLAN No. SPI60954, P227404	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	





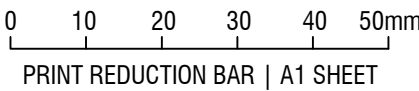
DRIVEWAY PLAN

SCALE 1:500

1. SURVEY DRAWING BY "SURVEY PLUS" DATED 05-10-2022
2. LEVEL DATUM IS AHD (SEE LAND SURVEY DRAWING)
3. EXISTING SURFACE CONTOUR INTERVAL IS 0.2 METRES
4. REFER TO LAND SURVEY DRAWINGS FOR EXTRA NOTES
5. LAND SURVEYOR SHALL BE ENGAGED TO SETOUT PROJECT FROM THE CAD FILE OF THIS DESIGN.

CLIENT:

ANDREW AND JOY DALLEY



No.	AMENDMENT DESCRIPTION	DATE
A	CONCEPT ISSUE FOR COMMENT AND REVIEW	20-01-2023
B	UPDATED AND ISSUED FOR APPROVALS	26-05-2023
C	LOT ADDED. STORMWATER LINE REDIRECTED	28-07-2023

PROPOSED SUBDIVISION OF LAND			
937 ELLENDALE ROAD, ELLENDALE 7140, TASMANIA			
OVERALL SITE CONCEPT PLAN			
SCALE	ALLAN WISE	DRAWING No. 21031-C01	REVISION (C)
DRAWN	1:500		
DATE	JAN 2023		