

PUBLIC NOTICE DETAILS

PLANNING APPLICATION DETAILS

Application Number:	DA 2025/66
Application Type:	Discretionary Development Application
Property Location:	Marlborough Road, Miena (CT 243894/1)
Proposal:	Dwelling
Advertising Commencement Date:	16 February 2026
Representation Period Closing Date:	02 March 2026
Responsible Officer:	Louisa Brown, Senior Planning Officer

The relevant documents may be viewed at Council's website www.centralhighlands.tas.gov.au or at Council's Offices 19 Alexander Street, Bothwell & 6 Tarleton Street, Hamilton during normal business hours.

Enquiries regarding this Application can be made by contacting Central Highlands Council on (03) 6259 5503 or by emailing development@centralhighlands.tas.gov.au. Please quote the "Application Number" when making your enquiry.

Representations on this application may be made to the General Manager in writing either by:

Post: 19 Alexander Street, Bothwell TAS 7030
Email: development@centralhighlands.tas.gov.au

All representations must include the authors full name, contact number and postal address and be received by 5.00pm on the representation period closing date.

P I N N A C L E

PINNACLE



'Stone Hut & Split Rock' - Lot 1 Marlborough Rd, Miena 7030

Owner(s) or Clients	James & Jessica Downie	Title Reference	243894/1
Building Classification	1a	Zoning	Rural Resource
Designer	Jason Nickerson CC6073Y	Land Size	344.6ha
Total Floor Area	183.38m ²	Design Wind Speed	N3
Alpine Area	Approximate AHD is 1060m and is located within the Great Lake Area (Tas.) Map Identifier 28	Soil Classification	P
Other Hazards	Bushfire Prone Areas	Climate Zone	8
<small>(e.g., High wind, earthquake, flooding, landslip, dispersive soils, sand dunes, mine subsidence, landfill, snow & ice, or other relevant factors)</small>		Corrosion Environment	Moderate
		Bushfire Attack Level (BAL)	19

ID	Sheet Name	Issue
A.01	Location Plan	DA - 01
A.02	Partial Site Plan	DA - 01
A.03	Floor Plan	DA - 01
A.04	Elevations	DA - 01
A.05	Elevations	DA - 01
A.06	Roof Plan	DA - 01
A.07	Electrical Plan	DA - 01

Important Note

Plans are to be read in conjunction with planning permit DA2021/112

Important Note

Siting of building is to comply with Clause 3.10.4.4 of the NCC 2019 Vol II and minimum setbacks as outlined in the Bushfire Report completed by Integral Design & Drafting Services dated February 2022.

Important Note

Vehicle passing areas 6 metres wide (total) x 20 metres long every 200 metres, or as otherwise required by an approved Bushfire Plan.



Location Plan

1:10000

Clear spaces around buildings

As per NCC 2019 Vol II 3.10.4.4. a building must be constructed so that-

- (a) for any external walls more than 3.6 m above the natural ground level, the distance of that part of the building from the allotment boundary (other than a road alignment) must be not less than 2.5 m plus an additional 100 mm for each 300 mm or part by which that part of the external wall exceeds a height of 3.6 m; and
- (b) if an external doorway discharges into a court between wings of a building and that area may be used for vehicle access to the building, the clear distance between wings must be not less than 4 m; and
- (c) where an external doorway discharges opposite a feature that could trap snow or an embankment that is more than 900 mm above the threshold of that doorway, a minimum clear distance of not less than 4 m must be provided between the door and the feature.



Notes from MCA Architects

Access through gate at Marlborough Highway intersection along fire trail road (break) left hand side of stock fence heading NorthEast at top of hill wind between rocks outcrops to house location on a new gravel farm road

Site Areas

Site Area 344.6ha
Building Footprint 229.56 m²

NOT FOR CONSTRUCTION

	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au	Location Plan	Scale: @A3	Proposal: New Dwelling Client: James & Jessica Downie Address: 'Stone Hut & Split Rock' - Lot 1 Marlborough Rd, Miena 7030	Date: 14/11/2024 Drawn by: CJ Job No: 103-2022 Engineer: JMG Engineer Building Surveyor: TBA	Issue Date Description		These drawings are the property of Pinnacle Drafting & Design Pty Ltd. reproduction in whole or part is strictly forbidden without written consent. © 2023. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any CLG and/or permit documentation. DO NOT SCALE FROM DRAWINGS; All Contractors are to verify dimensions on site before commencing any orders, works or requesting/producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PINNACLE DRAFTING & DESIGN PTY LTD.	
	Revision: DA - 01 Approved by: SJH/JRD	Pg. No: A.01	Date: 14/11/2024 Drawn by: CJ Job No: 103-2022 Engineer: JMG Engineer Building Surveyor: TBA	Issue Date Description		These drawings are the property of Pinnacle Drafting & Design Pty Ltd. reproduction in whole or part is strictly forbidden without written consent. © 2023. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any CLG and/or permit documentation. DO NOT SCALE FROM DRAWINGS; All Contractors are to verify dimensions on site before commencing any orders, works or requesting/producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PINNACLE DRAFTING & DESIGN PTY LTD.			

Important Note

Refer to bushfire report completed by Integral Design & Drafting Services dated April 2022 for details on Bushfire rating & management.

Ground to fall away from building in all directions in compliance with AS2870 & N.C.C 3.1.3.3

Important Note

Plans are to be read in conjunction with planning permit DA2021/112

Important Note

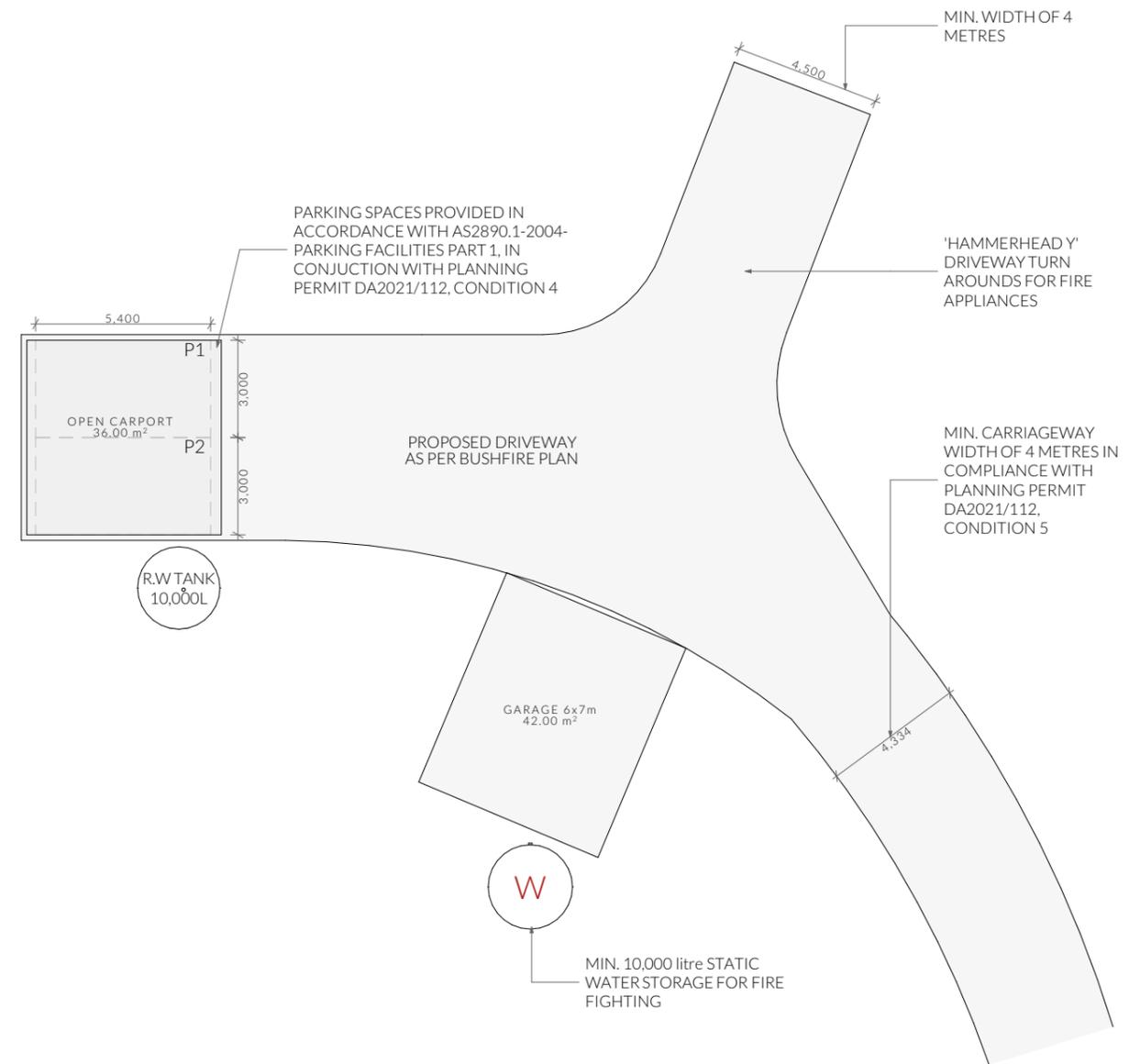
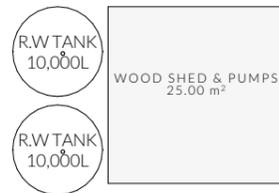
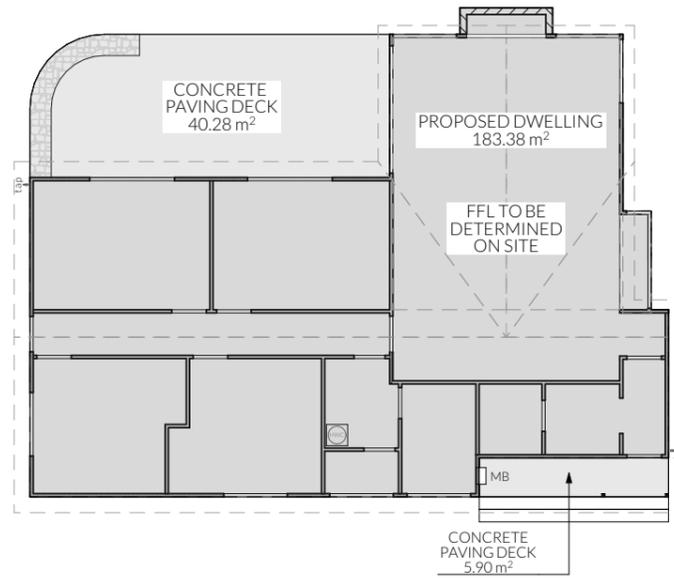
Siting of building is to comply with Clause 3.10.4.4 of the NCC 2019 Vol II and minimum setbacks as outlined in the Bushfire Report completed by Integral Design & Drafting Services dated February 2022.

Important Note

Civil, Hydraulic, Engineering drawings and soil report to be advised by JMG Engineers.

Heating/ solar design details to be advised and arranged by MCA Architects

1
344.6ha
CT:243894/1



Clear spaces around buildings

As per NCC 2019 Vol II 3.10.4.4, a building must be constructed so that-

(a) for any external walls more than 3.6 m above the natural ground level, the distance of that part of the building from the allotment boundary (other than a road alignment) must be not less than 2.5 m plus an additional 100 mm for each 300 mm or part by which that part of the external wall exceeds a height of 3.6 m; and

(b) if an external doorway discharges into a court between wings of a building and that area may be used for vehicle access to the building, the clear distance between wings must be not less than 4 m; and

(c) where an external doorway discharges opposite a feature that could trap snow or an embankment that is more than 900 mm above the threshold of that doorway, a minimum clear distance of not less than 4 m must be provided between the door and the feature.

Site Areas

Site Area 344.6ha
Building Footprint 229.56 m²

NOT FOR CONSTRUCTION

	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacle drafting.com.au www.pinnacle drafting.com.au	Partial Site Plan Revision: DA - 01 Approved by: SJH/JRD	Scale: 1:200 @ A3 Pg. No: A.02	Proposal: New Dwelling Client: James & Jessica Downie Address: 'Stone Hut & Split Rock' - Lot 1 Marlborough Rd, Miena 7030	Date: 14/11/2024 Drawn by: CJ Job No: 103-2022 Engineer: JMG Engineer Building Surveyor: TBA	Issue Date Description		These drawings are the property of Pinnacle Drafting & Design Pty Ltd. reproduction in whole or part is strictly forbidden without written consent. © 2023. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any CLC and/or permit documentation. DO NOT SCALE FROM DRAWINGS; All Contractors are to verify dimensions on site before commencing any orders, works or requesting/producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PINNACLE DRAFTING & DESIGN PTY LTD.	
	PINNACLE								



Access Panel



Articulation Joint



Smoke Alarm

Construction of sanitary compartments 10.4.2 of NCC 2022

The door to a fully enclosed sanitary compartment must -
- open outwards; or
- slide; or
- be readily removable from the outside of the compartment.

unless there is a clear space of at least 1.2 m, measured in accordance with Figure 10.4.2 of NCC 2022 Vol II, between the closet pan within the sanitary compartment and the doorway.

Note: Safe Movement & Egress

Openable windows greater than 4m above the surface below are to be fitted with a device to limit opening or a suitable screen so a 125mm sphere cannot pass through. Except for Bedrooms, where the requirement is for heights above 2m. Refer to clauses 11.3.7 and 11.3.8 of NCC 2022 for further information on suitable protective devices.

Note: Paved Areas

All paths and patios to fall away from dwelling - min 1:125 fall.

Note: Stair Construction

All stairs to be constructed in accordance with NCC Vol II 2022 Part 11.2.2:

Riser: Min 115mm - Max 190mm

Going: Min 240mm - Max 355mm

Slope (2R+G): Max 550 - Min 700

For stairways serving non-habitable room used infrequently, refer to table 11.2.2(b).

Landings to comply with Clause 11.2.5 and be a minimum of 750mm deep measured 500mm from the inside edge of the landing.

Slip resistance of treads, nosings and ramps to comply with Clause 11.2.4.

Heights of rooms & other spaces

10.3.1 of NCC 2022

Heights of rooms and other spaces must not be less than;

(a) in a habitable room excluding a kitchen - 2.7 m; and
(b) in a kitchen - 2.7 m; and

(c) in a corridor, passageway or the like - 2.7 m; and
(d) in a bathroom, shower room, laundry, sanitary compartment, airlock, pantry, storeroom, garage, car parking area or the like - 2.7 m; and

(e) in a room or space with a sloping ceiling or projections below the ceiling line within- See NCC directly for these items

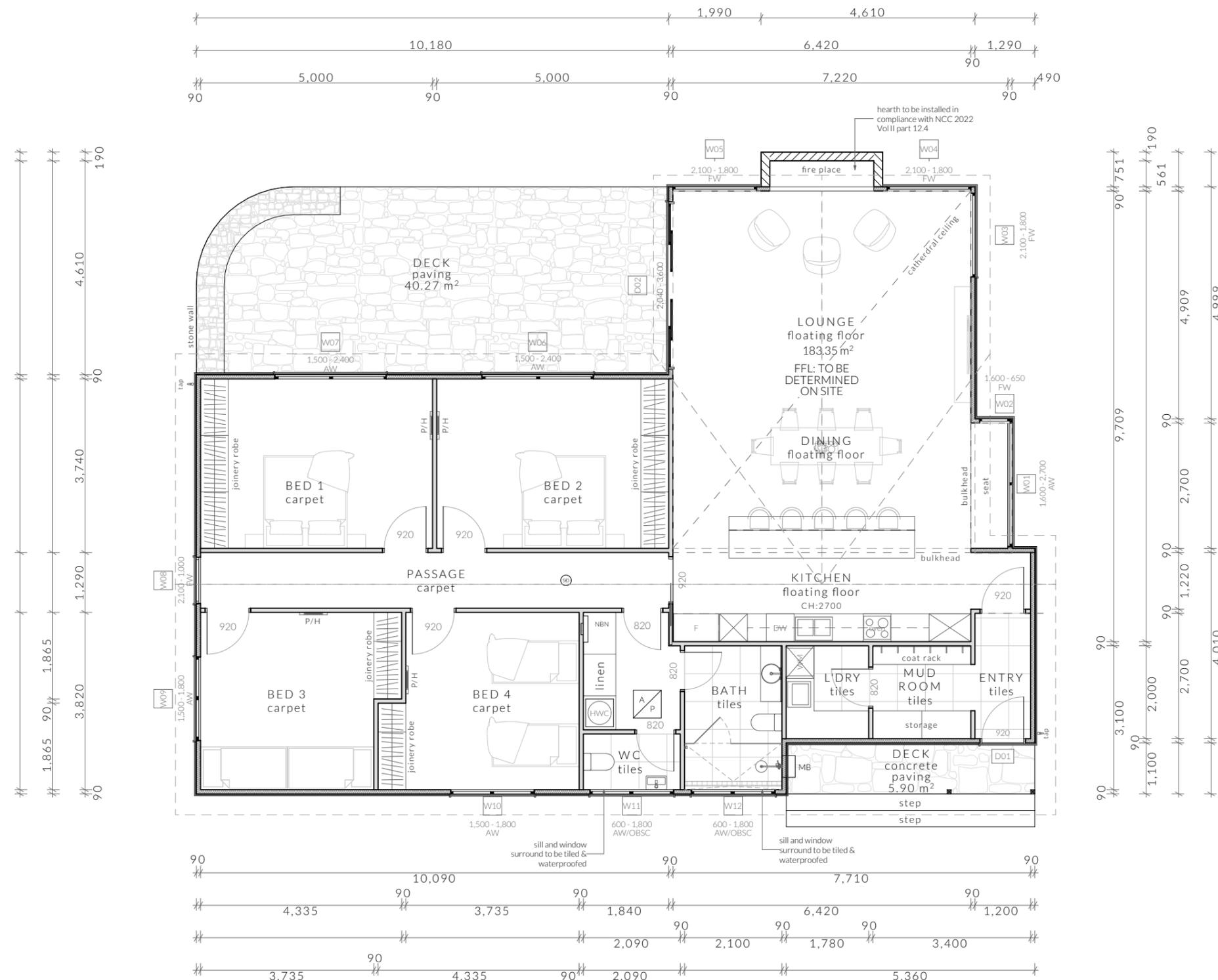
(f) in a stairway, ramp, landing, or the like - 2.0 m measured vertically above the nosing line of stairway treads or the floor surface of a ramp, landing or the like.

If required onsite, the builder may work within the tolerances of the above as specified within the NCC 2022 Vol II. Builder to contact Pinnacle before undertaking works.

If required onsite, the builder may work within the tolerances of the above as specified within the NCC 2022 Vol II. Builder to contact Pinnacle before undertaking works.

Floor Areas

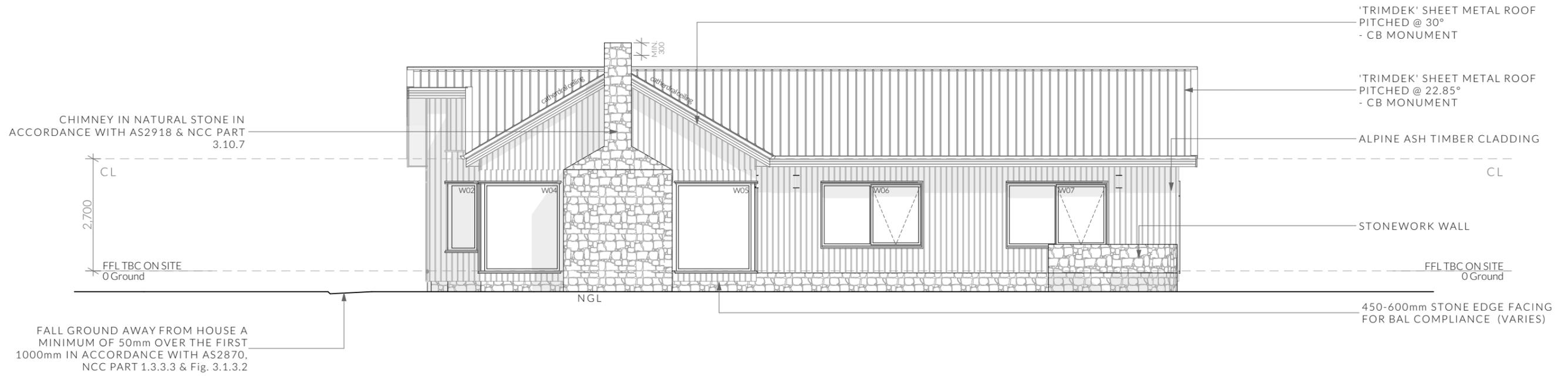
Total Floor Area 183.38m²
Deck 46.18m²



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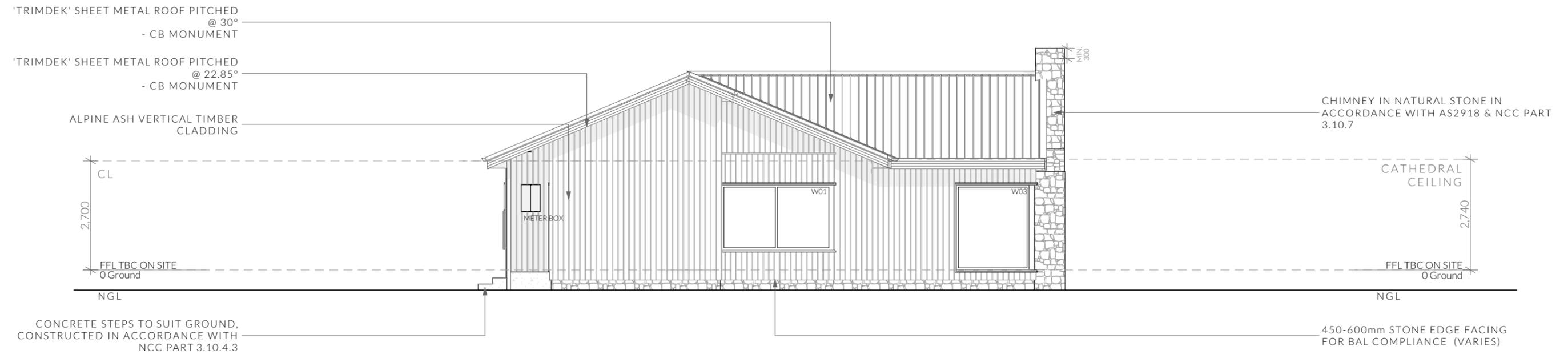
	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au	Floor Plan Revision: DA - 01 Approved by: SJH/JRD	Scale: 1:100 @A3 Pg. No: A.03	Proposal: New Dwelling Client: James & Jessica Downie Address: 'Stone Hut & Split Rock' - Lot 1 Marlborough Rd, Miena 7030	Date: 14/11/2024 Drawn by: CJ Job No: 103-2022 Engineer: JMG Engineer Building Surveyor: TBA	<table border="1"> <thead> <tr> <th>Issue Date</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Issue Date	Description				<p>These drawings are the property of Pinnacle Drafting & Design Pty Ltd. reproduction in whole or part is strictly forbidden without written consent. © 2023. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any CLC and/or permit documentation. DO NOT SCALE FROM DRAWINGS; All Contractors are to verify dimensions on site before commencing any orders, works or requesting/producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PINNACLE DRAFTING & DESIGN PTY LTD.</p>	
	Issue Date	Description											

Important Note
 All external metal building surfaces must be clad in non-reflective pre-coated metal sheeting or painted to the satisfaction of the Council's Manager of Development & Environmental Services.



North Elevation

1:100



East Elevation

1:100

NOTE
 Clearances between cladding and ground shall comply with Clause 7.5.7 of the NCC 2022 and shall be a minimum clearance of:
 100mm in low rainfall intensity areas or sandy, well-drained areas; or 50mm above impermeable areas that slope away from the building; or 150mm in any other case.

Wall cladding must extend a minimum of 50 mm below the bearer or lowest horizontal part of the suspended floor framing.
 U.N.O in builders specifications or located in saline environments or if using a glazed finish brick, brickwork is to be installed in stretcher bond pattern with raked joints.

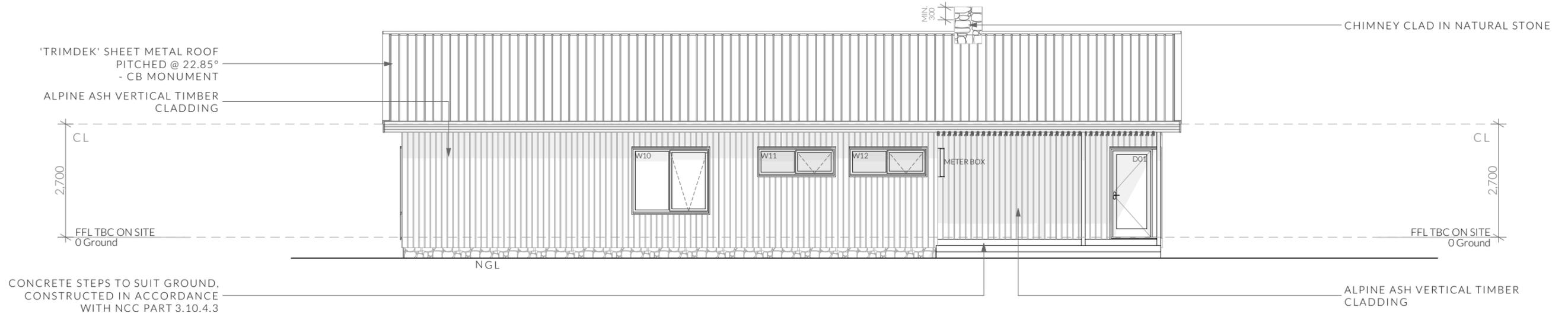
As per NCC parts 11.3.7 and 11.3.8,
 Openable windows greater than 4m above ground level are to be fitted with a device to limit the opening or a suitable screen so a 125mm sphere cannot pass through, and withstand a force of 250N. Except for bedrooms, where the requirement is for heights above 2m.

All stairs to be constructed in accordance with NCC 2022 Vol II Part 11.2.2
 Riser: Min 115mm - Max 190mm Going: Min 240mm - Max 355mm Slope (2R+G): Max 550 - Min 700

NOT FOR CONSTRUCTION

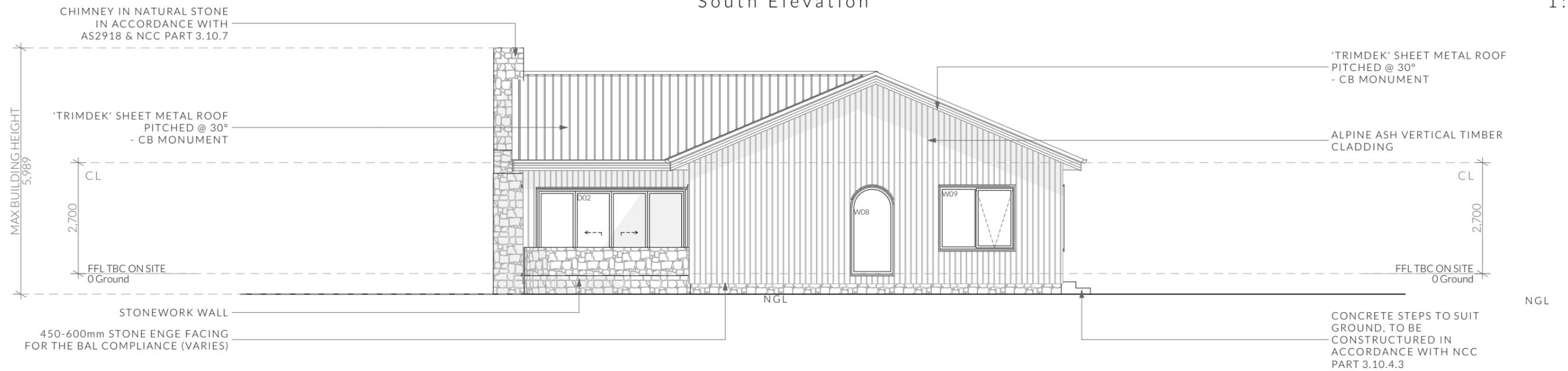
	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au	Elevations Revision: DA - 01 Approved by: SJH/JRD	Scale: 1:100 @A3 Pg. No: A.04	Proposal: New Dwelling Client: James & Jessica Downie Address: 'Stone Hut & Split Rock' - Lot 1 Marlborough Rd, Miena 7030	Date: 14/11/2024 Drawn by: CJ Job No: 103-2022 Engineer: JMG Engineer Building Surveyor: TBA	Issue Date Description	These drawings are the property of Pinnacle Drafting & Design Pty Ltd. reproduction in whole or part is strictly forbidden without written consent. © 2023. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any CLC and/or permit documentation. DO NOT SCALE FROM DRAWINGS; All Contractors are to verify dimensions on site before commencing any orders, works or requesting/producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PINNACLE DRAFTING & DESIGN PTY LTD.	

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South Elevation

1:100



West Elevation

1:100

NOTE
 Clearances between cladding and ground shall comply with Clause 7.5.7 of the NCC 2022 and shall be a minimum clearance of:
 100mm in low rainfall intensity areas or sandy, well-drained areas; or 50mm above impermeable areas that slope away from the building; or 150mm in any other case.

Wall cladding must extend a minimum of 50 mm below the bearer or lowest horizontal part of the suspended floor framing.

U.N.O in builders specifications or located in saline environments or if using a glazed finish brick, brickwork is to be installed in stretcher bond pattern with raked joints.

As per NCC parts 11.3.7 and 11.3.8,
 Openable windows greater than 4m above ground level are to be fitted with a device to limit the opening or a suitable screen so a 125mm sphere cannot pass through, and withstand a force of 250N. Except for bedrooms, where the requirement is for heights above 2m.

All stairs to be constructed in accordance with NCC 2022 Vol II Part 11.2.2
 Riser: Min 115mm - Max 190mm Going: Min 240mm - Max 355mm Slope (2R+G): Max 550 - Min 700

NOT FOR CONSTRUCTION

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Ventilation of roof spaces NCC 2022

Part 10.8.3

A roof must have a roof space that-

- (a) is located-
 - (i) immediately above the primary insulation layer; or
 - (ii) immediately above sarking with a vapour permeance of not less than 1.14 µg/N.s, which is immediately above the primary insulation layer; or
 - (iii) immediately above ceiling insulation; and
- (b) has a height of not less than 20 mm; and
- (c) is either-
 - (i) ventilated to outdoor air through evenly distributed openings in accordance with Table 10.8.3; or
 - (ii) located immediately underneath the roof tiles of an unsarked tiled roof.

Stormwater Notes

All gutters, downpipes and rain heads to be designed and installed in compliance with AS3500.3 & NCC 2022 Volume II Part 7.4.

Roofing Cladding

Roof cladding, flashings, cappings, roof sheeting and fixings are to be installed in accordance with NCC 2022 Volume II Part 7.2 for sheet roofing and Part 7.3 for tiled and shingle roofing.

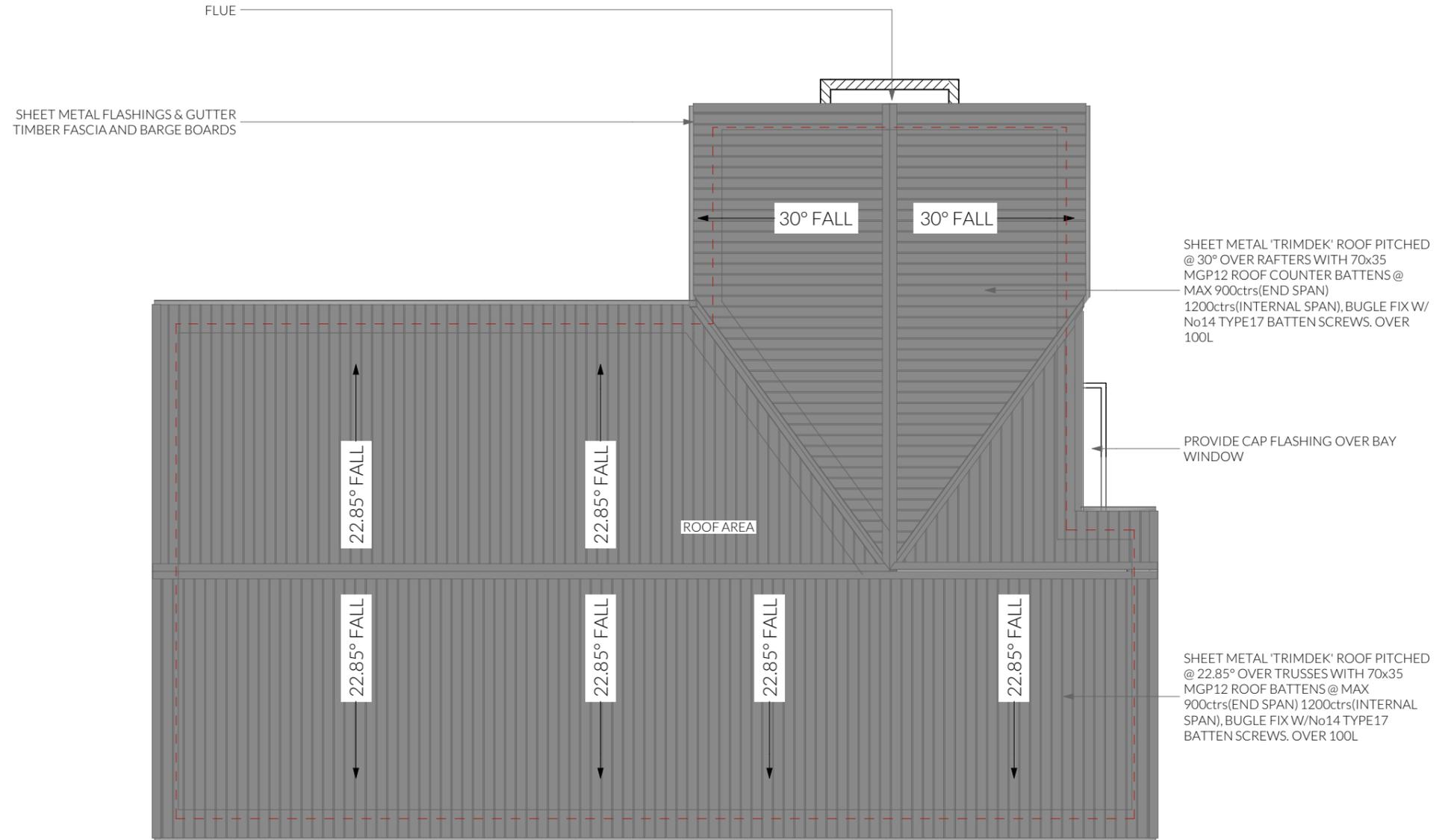
Eaves & Soffit Linings

To comply with NCC 2022 Vol II Part 7.5.5 and where provided, external fibre-cement sheets and linings used as eaves and soffit linings must-

- (a) comply with AS/NZS 2908.2 or ISO 8336; and
- (b) be fixed in accordance with Table 7.5.5 and Figure 7.5.5 using-
 - (i) 2.8 x 30 mm fibre-cement nails; or
 - (ii) No. 8 wafer head screws (for 4.5 mm and 6 mm sheets only); or
 - (iii) No. 8 self embedding head screws (for 6 mm sheets only).

Refer to table 7.5.5 for trimmer and fastener spacings.

ROOF PITCH	VENTILATION OF OPENINGS (TABLE 10.8.3)
>15° AND <75°	7,000 mm ² /m provided at the eaves and 5,000 mm ² /m at high level, plus an additional 18,000 mm ² /m at the eaves if the roof has a cathedral ceiling
(1) Ventilation openings are specified as a minimum free open area per metre length of the longest horizontal dimension of the roof. (2) For the purposes of this Table, high level openings are openings provided at the ridge or not more than 900 mm below the ridge or highest point of the roof space, measured vertically.	



Important Note

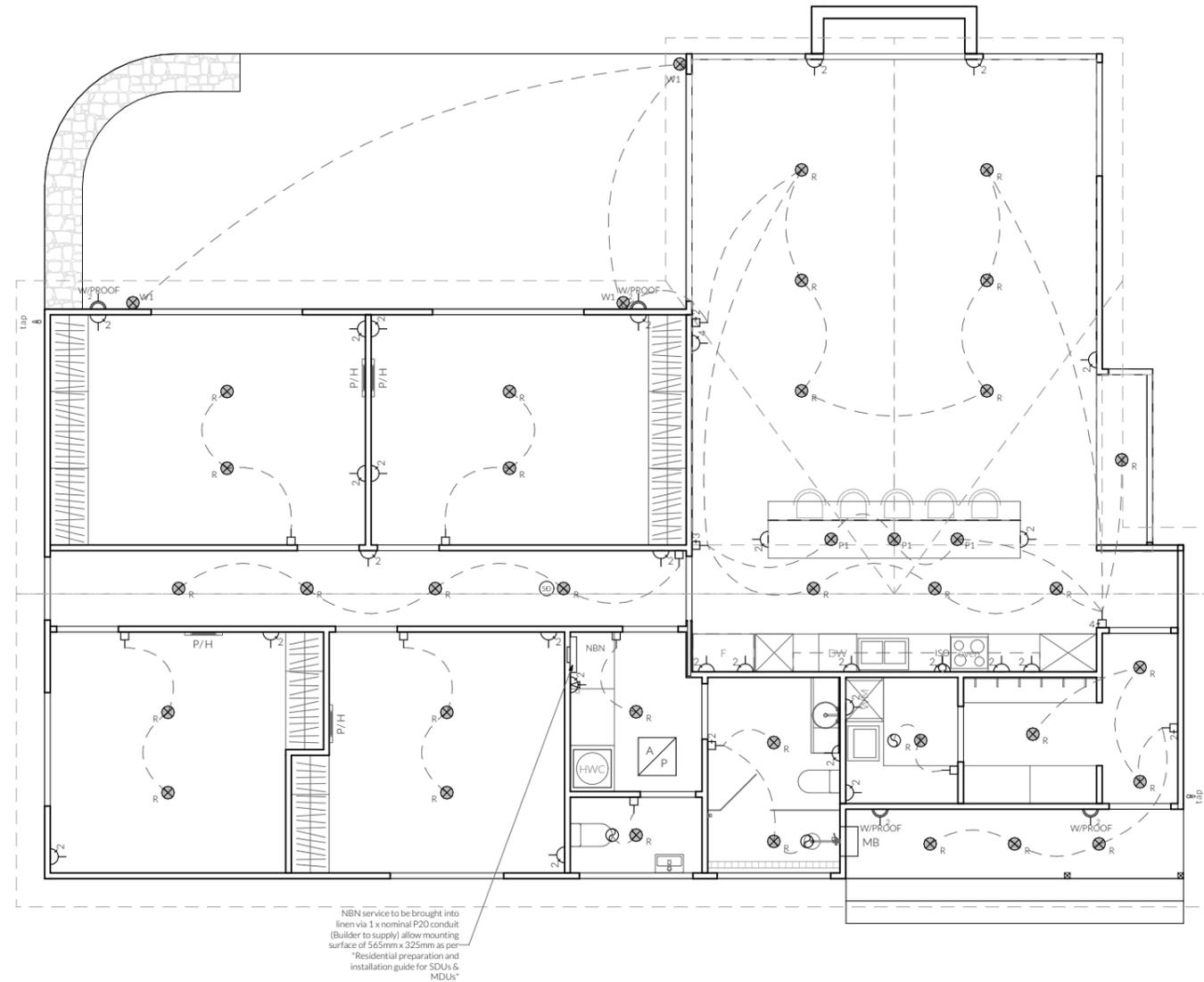
For more information on roof, gutter and downpipes refer to engineer's hydraulic drawings

NOT FOR CONSTRUCTION

	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacle drafting.com.au www.pinnacle drafting.com.au	Roof Plan	Scale: 1:100 @A3 Pg. No: A.06	Proposal: New Dwelling Client: James & Jessica Downie Address: 'Stone Hut & Split Rock' - Lot 1 Marlborough Rd, Miena 7030	Date: 14/11/2024 Drawn by: CJ Job No: 103-2022 Engineer: JMG Engineer Building Surveyor: TBA	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Issue Date</th> <th style="width: 50%;">Description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Issue Date	Description				These drawings are the property of Pinnacle Drafting & Design Pty Ltd. reproduction in whole or part is strictly forbidden without written consent. © 2023. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any CLC and/or permit documentation. DO NOT SCALE FROM DRAWINGS; All Contractors are to verify dimensions on site before commencing any orders, works or requesting/producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PINNACLE DRAFTING & DESIGN PTY LTD.	
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Revision: DA - 01 Approved by: SJH/JRD													

ELECTRICAL LEGEND - Lower Floor

Symbol	Description	Allowance	Quantity
▽ ^D	DATA - CAT 6 (RJ45) - 1 GANG		1
⊙	FAN - CEILING - EXHAUST		3
2	GPO - (2) DOUBLE		27
ISO	GPO - (2) DOUBLE (WITH COOKTOP ISOLATOR SWITCH)		1
W/PROOF	GPO - WEATHER PROOF DOUBLE		4
⊗ _R	LIGHT - CEILING - DOWNLIGHT RECESSED	10W	33
⊗ _{P1}	LIGHT - CEILING - PENDANT - TYPE 1	10W	3
⊗ _{W1}	LIGHT - WALL MOUNTED - TYPE 1	10W	3
⊥	SWITCH - LIGHT 1 GANG		10
2 ⊥	SWITCH - LIGHT 2 GANG		1
3 ⊥	SWITCH - LIGHT 3 GANG		2



Electrical Plan - Lower

Smoke Alarms Part 9.5 of NCC 2022

- Smoke alarms must-
- (a) be located in-
 - (i) a Class 1a building in accordance with 9.5.2 and 9.5.4; and
 - (ii) a Class 1b building in accordance with 9.5.3 and 9.5.4; and
 - (b) comply with AS 3786, except that in a Class 10a private garage where the use of the area is likely to result in smoke alarms causing spurious signals, any other alarm deemed suitable in accordance with AS 1670.1 may be installed provided that smoke alarms complying with AS 3786 are installed elsewhere in the Class 1 building; and
 - (c) be powered from the consumer mains source where a consumer mains source is supplied to the building; and be interconnected where there is more than one alarm.

- In a Class 1a building, smoke alarms must be located in-
- (a) any storey containing bedrooms, every corridor or hallway associated with a bedroom, or if there is no corridor or hallway, in an area between the bedrooms and the remainder of the building; and
 - (b) each other storey not containing bedrooms.

- Smoke alarms required by 9.5.2 and 9.5.3 must be installed on or near the ceiling, in accordance with the following:
- (a) Where a smoke alarm is located on the ceiling it must be-
 - (i) a minimum of 300 mm away from the corner junction of the wall and ceiling; and
 - (ii) between 500 mm and 1500 mm away from the high point and apexes of the ceiling, if the room has a sloping ceiling.
 - (b) Where (a) is not possible, the smoke alarm may be installed on the wall, and located a minimum of 300 mm and a maximum of 500 mm off the ceiling at the junction with the wall.

Note: Exhaust Fans

- Exhaust fans to comply with NCC 2022 Vol 2 Part 10.8.2 and have:
- An exhaust system installed in a kitchen, bathroom, sanitary compartment or laundry must have a minimum flow rate of-
 - (a) 25 L/s for a bathroom or sanitary compartment; and
 - (b) 40 L/s for a kitchen or laundry.
 - Exhaust from a kitchen, kitchen range hood, bathroom, sanitary compartment or laundry must discharge directly or via a shaft or duct to outdoor air.
 - Where a venting clothes dryer is installed, it must discharge directly or via a shaft or duct to outdoor air.
 - An exhaust system that is not run continuously and is serving a bathroom or sanitary compartment that is not ventilated in accordance with 10.6.2(a) must-
 - (a) be interlocked with the room's light switch; and
 - (b) include a run-on timer so that the exhaust system continues to operate for 10 minutes after the light switch is turned off.

Note: Lighting

- Lighting layout may change, owner to confirm with builder prior to purchase/installation of exact quantity and location of electrical services provided that installation is compliant with AS3000 and artificial lighting allowances do not exceed:
- 5W/m² in class 1a dwellings
 - 4W/m² to veranda, balcony or the like
 - 3W/m² in a class 10a dwelling associated with the class 1a dwelling
- U.N.O - All downlights are to be Insulation Contact (IC) rated.

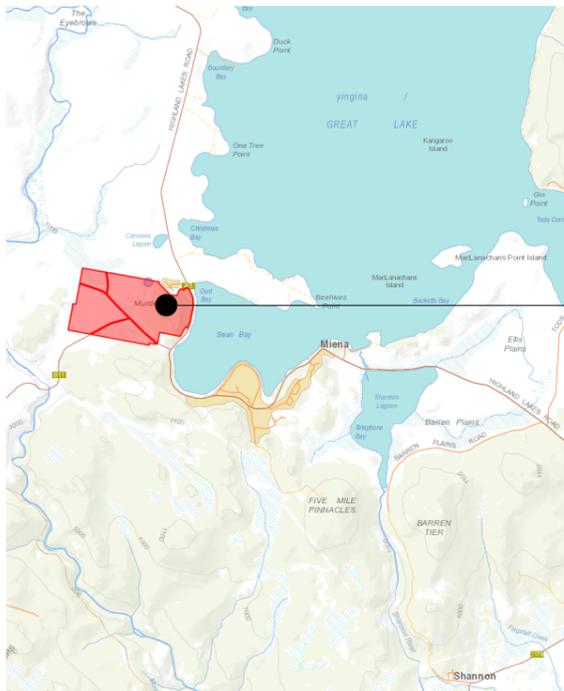
Preparation for future Solar Installation:

- Should the solar design be required for future installation, 2/25mm solarflex (or similar) conduits marked "solar" are to be installed from the meter box to the roof space.

Notes

- U.N.O ceilings are to be plasterboard.
- ▷---▷ Dimmable Circuit
- ┘---┘ Timer Circuit(as fan note)
- PB - Plasterboard
- CS - Cement Sheet Eaves
- PW - Plywood Ceiling
- TB - Timber Batten Ceiling



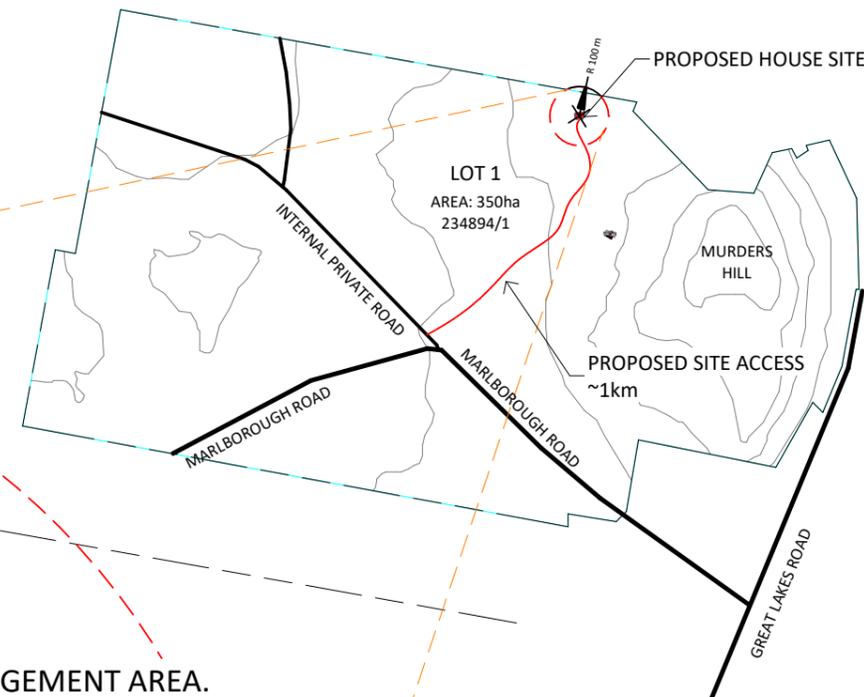


LOCALITY GUIDE
NTS
 (SOURCE: THE LIST)

STONE HUT,
MARLBOROUGH RD,
MIENA.
TITLE REF: 234894/1

01 LOT PLAN

1 : 24000



BUILDING CONSTRUCTION

BUILDINGS TO BE BUILT IN TO A BAL 19 CONSTRUCTION STANDARD IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA AND AS3959:2018 PART 3 & 6.

WATER SUPPLY

PROVIDE MIN 10KL STATIC WATER SUPPLY COMPLIANT W/ DIRECTOR OF BUILDING CONTROL DETERMINATION: REQUIREMENTS FOR BUILDING IN BUSHFIRE-PRONE AREAS V2.2, MARCH 16, 2020, PART 4.3: WATER SUPPLY, TABLE 4.2B: REQUIREMENTS FOR STATIC WATER SUPPLY FOR FIREFIGHTING, PARTS A-E. REFER BUSHFIRE HAZARD MANAGEMENT PLAN FOR LOCATION.

ACCESS

FORM NEW DRIVEWAY AND PROPERTY ACCESS TO COMPLY W/ DIRECTOR OF BUILDING CONTROL DETERMINATION: REQUIREMENTS FOR BUILDING IN BUSHFIRE-PRONE AREAS V2.2, MARCH 16, 2020, PART 4.2: PROPERTY ACCESS, TABLE 4.2C

HAZARD MANAGEMENT AREA

BAL 19 HAZARD MANAGEMENT AREA SHOWN HATCHED TO BE MANAGED AND MAINTAINED IN A MINIMUM FUEL STATE AT ALL TIMES. REFER MAINTENANCE SCHEDULE BELOW.

MAINTENANCE SCHEDULE

- REMOVAL OF FALLEN LIMBS, LEAF & BARK LITTER.
- CUT LAWNS SHORT (LESS THAN 100MM) AND MAINTAIN.
- REMOVE PINE BARK AND OTHER FLAMMABLE GARDEN MULCH.
- COMPLETE UNDER-BRUSHING AND THIN OUT THE UNDERSTOREY.
- PRUNE LOW HANGING TREES TO ENSURE SEPARATION FROM GROUND LITTER.
- PRUNE LARGER TREES TO ESTABLISH AND MAINTAIN HORIZONTAL AND VERTICAL CANOPY SEPARATION.
- MINIMISE STORAGE OF PETROLEUM FUELS.
- REMOVE FALLEN LIMBS, LEAF & BARK LITTER FROM ROOFS, GUTTERS AND AROUND THE BUILDING.

BUSHFIRE PROTECTION MEASURES

TO REDUCE THE RISK OF BUSHFIRE ATTACK, CONTINUAL MAINTENANCE OF BUSHFIRE PROTECTION MEASURES INCLUDING BUILDING MAINTENANCE, DESIGNATED BUSHFIRE HAZARD MANAGEMENT AREAS, WATER SUPPLY AND ACCESS MAINTENANCE, ARE TO BE UNDERTAKEN BY SUCCESSIVE OWNERS IN PERPETUITY.

NOTE:

MEASURES CONTAINED IN THIS BUSHFIRE HAZARD MANAGEMENT PLAN CANNOT GUARANTEE THAT A BUILDING WILL SURVIVE A BUSHFIRE EVENT DUE TO THE DEGREE OF VEGETATION MANAGEMENT, THE UNPREDICTABLE NATURE AND BEHAVIOUR OF FIRE, AND EXTREME WEATHER CONDITIONS.

TITLE BOUNDARY

G-22: TUSOCK GRASSLAND



BAL 19 HAZARD MANAGEMENT AREA.
 MAINTAIN IN LOW FUEL STATE AT ALL TIMES

PROPOSED HOUSE
 AREA: 183m²

G-22: TUSOCK GRASSLAND



B-05 WOODLAND

B-05 WOODLAND



LOT 1
AREA: 350ha
234894/1

01 SITE PLAN

1 : 1000

G-22: TUSOCK GRASSLAND

G-22: TUSOCK GRASSLAND



G-22: TUSOCK GRASSLAND

MIN 6x20m PASSING BAYS EVERY 200m

DRAWINGS TO BE PRINTED & READ IN FULL COLOUR

No.	Description	Date
	INITIAL BAL 29	08/04/22
A	BAL 19	11/04/22
B	AMD DWELLING SIZE	18/11/25

MICHAEL KINSELLA
INTEGRAL DESIGN & DRAFTING SERVICES
 ACCREDITED BUILDING PRACTITIONER
 ACCREDITATION: CC5699V
 ACCREDITED BUSHFIRE PRACTITIONER
 ACCREDITATION: BFP-133



JAMES & JESSICA DOWNIE
PROPOSED NEW DWELLING
STONE HUT, MARLBOROUGH RD, MIENA, TAS, 7030.

BUSHFIRE HAZARD MANAGEMENT PLAN

Project number	BRYA-L-01B
Date	11/02/22
Designed by	Michael Kinsella
Drawn by	MK

BHMP-01

Scale As indicated @ A3

DOWN-J-01B

BUSHFIRE HAZARD MANAGEMENT REPORT

Proposed New House
Stone Hut & Split Rock,
Marlborough Rd Miena, TAS 7030.

IDDS VERSION CONTROL			TFS ENDORSEMENT		
Revision	Date	Prepared by	Date	Approved by	Signature
INITIAL	01/04/22	Michael Kinsella			
A	11/04/22	MK – BAL 19			
B	18/11/25	AMD F55 & BHMP			

Michael Kinsella

Building Designer Accreditation: CC5699V

Bushfire Assessor Accreditation: BFP-133

Integral Design & Drafting Services

ABN: 26 166 056 599

mk@ids.com.au,

West Hobart, TAS, 7000.

(0403)390-602



Stone Hut, Marlborough Rd, Miena.

01 SUMMARY

SUBJECT SITE: Stone Hut & Split Rock, Marlborough RD, Miena,
TITLE REFERENCE: 243894/1
BAL ASSESSMENT: Undertaken March 13, 2022.

BAL: 19

- The subject lot is a vacant 350ha rural lot accessed off Marlborough Rd which runs through the southern portion of the lot.
- The lot is zoned 26.0 'Rural Resource' under Scheme Code 126, Central Highlands Interim Planning Scheme, 2015 (CHIPS'15).
- The lot was not provided with a BAL at the time of subdivision.
- The site is within 100m of an area greater than 1ha of bushfire-prone vegetation and is subject to a grass fire risk.
- The proposed development meets the requirements of the *Director of Building Control Determination: Requirements for Building in Bushfire-Prone Areas V2.2, March 16, 2020, (Bushfire Determination)* as per *Part 4.0: Deemed to Satisfy Requirements*, with the construction of the proposed house to a BAL 19 standard consistent with *AS3959:2018, Sections 3 and 6*, the ongoing maintenance of the designated Hazard Management Area and the provision and maintenance of recommended water & access assets. Refer Appendix 1: Bushfire Hazard Management Plan.

02 TABLE OF CONTENTS

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03 SITE DESCRIPTION

The subject lot is a 350ha rural lot zoned 26.0 'Rural Resource' under Scheme Code 126, *Central Highlands Interim Planning Scheme, 2015* (CHIPS'15) and not subject to any overlays. The building site itself is located remotely 65m south of the northern boundary in the eastern third of the lot.

Roughly rectangular in shape and oriented on an east-west longitudinal axis, the lot is bordered to the north, south and west by similar sized vacant rural lots. To the east, the lot is bordered by the Highland Lakes Road road reserve with Swan Bay of Great Lake opposite. The nor'west corner of the lot is bordered by a subdivision of 38 residential lots each with a single dwelling and semi-managed gardens. This is a community of highland fishing shacks.

The lot is accessed from the south off Marlborough Rd, a dirt & gravel all-weather public roadway which cuts through the southern third of the lot passing the building site approximately 1km to the south. An all-weather dirt & gravel driveway is proposed extending 970m from the property access point to the proposed building site.

The property is not connected to TasWater mains reticulation and there are currently no compliant facilities to store water on site.

The terrain slopes reasonably evenly up from west to east at a gentle grade of 3°, though is reasonably level with grassy wetland plains in the central and southern portions of the lot. The eastern third of the property is dominated by Murderers Hill which rises 80m from the wetland plains. The building site itself is located in a shallow saddle of native grass and woodland vegetation 700m nor'west of Murderers Hill.

Vegetation across the property is typically highland native tussock grasses and heathland interspersed with isolated stands of dead and senescing Eucalypt woodland.

The building site itself is vegetated with native Poa Grasses, classified as 'G-22 Tussock Grassland' under *AS3959:2018, Part 2.2.3, Table 2.3* and 'GPH: Highland Poa Grassland' under *TASVEG 4.0*.

To the east and west of the building on either rise of the saddle, are stands of dead and senescing Eucalypt woodland classified as B-05 under *AS3959:2018, Part 2.2.3, Table 2.3* and 'DCO: Eucalyptus Coccifera Forest & Woodland' under *TASVEG 4.0*.

There are currently no structures on the property and a BAL rating has not been previously applied.

Stone Hut, Marlborough Rd, Miena.



PIC 1: LOCATION OF PROPOSED HOUSE SITE



PIC 2: PROPERTY ACCESS OFF MARLBOROUGH RD, MIENA

Stone Hut, Marlborough Rd, Miena.



PIC 3: MARLBOROUGH RD & PROPERTY ACCESS JUNCTION



**PIC 4: EXISTING FIRE TRAIL LEADING TO PROPOSED BUILDING SITE.
FIRE TRAIL TO BE FORMED INTO COMPLIANT ALL-WEATHER SITE ACCESS**

04 SURROUNDING AREA

1 CONTEXT PLAN

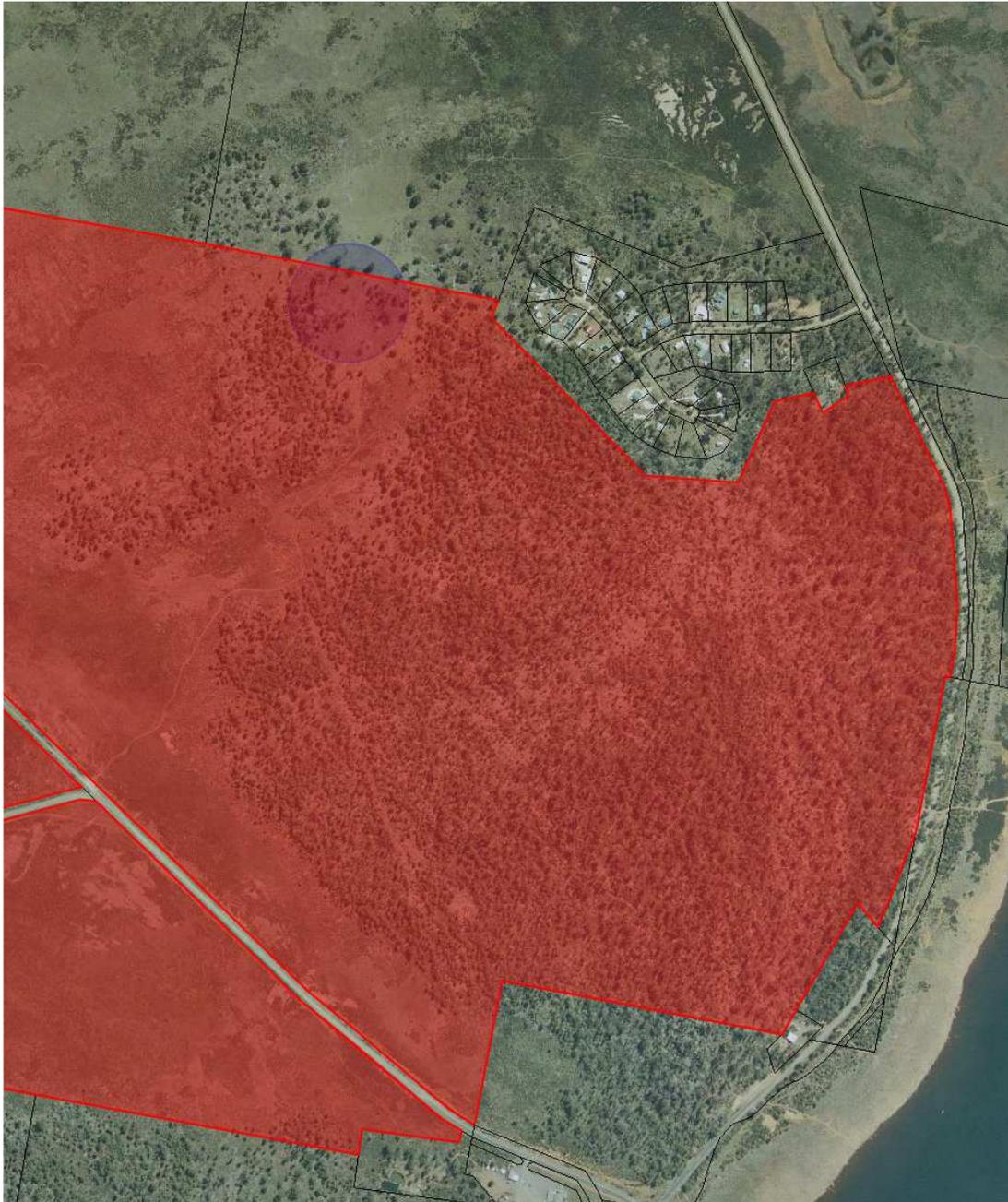


FIG 1: CONTEXT PLAN
(SOURCE: THE LIST)

NOTES:

- Subject lot shown red.
- 100m radius shaded purple

2 LOCALITY PLAN

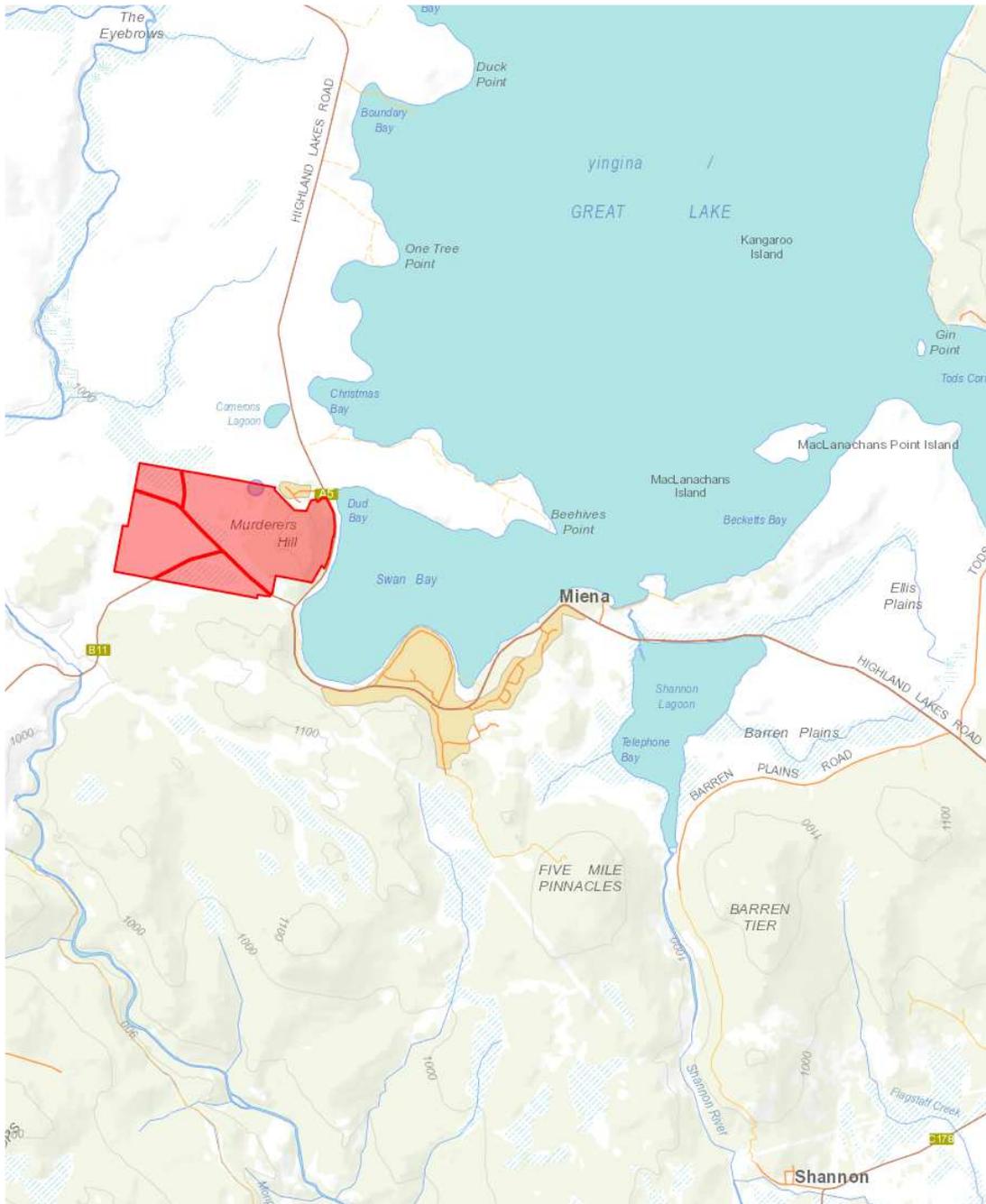


FIG 2: LOCALITY MAP
(SOURCE: THE LIST)

NOTES:

- Subject lot shown red.
- 100m radius shown shaded.

Stone Hut, Marlborough Rd, Miena.

05 BUSHFIRE ATTACK LEVEL SITE ASSESSMENT

1 360 DEGREE BUSHFIRE ATTACK LEVEL ASSESSMENT

FIRE DANGER INDEX: 50 (1090K)

1.1 NORTH

Adjoining Site:	Vacant Rural Lot	
Vegetation:	Low Threat Vegetation	0-10m
	G-22 Tussock Grassland	11-100m+
Exclusions:	AS3959-2018 Part 2.2.3.2 Exclusion (f)	0-10m
Distance	11m	
Effective Slope:	Downslope -4.0°	
Resulting BAL:	29	

1.2 EAST

Adjoining Site:	Highland Lakes Rd Road Reserve	
Vegetation:	Low Threat Vegetation	0-10m
	G-22 Tussock Grassland	11-60m
	B-05 Woodland	61-100m+
Exclusions:	AS3959-2018 Part 2.2.3.2 Exclusion (f)	0-10m
Distance	11m	
Effective slope:	Upslope +1.0° (Level)	
Resulting BAL:	19	

1.3 SOUTH

Adjoining Site:	Vacant Rural Lot	
Vegetation:	Low Threat Vegetation	0-10m
	G-22 Tussock Grassland	11-100m+
Exclusions:	AS3959-2018 Part 2.2.3.2 Exclusion (f)	0-10m
Distance	11m	
Effective Slope:	Upslope +3.9°	
Resulting BAL:	19	

1.4 WEST

Adjoining Site:	Vacant Rural Lot	
Vegetation:	Low Threat Vegetation	0-10m
	G-22 Tussock Grassland	11-30m
	B-05 Woodland	31-100m+
Exclusions:	AS3959-2018 Part 2.2.3.2 Exclusion (f)	0-10m
Distance	11m	
Effective Slope:	Upslope +2.7°	
Resulting BAL:	19	

NOTE: Proposed house to have a 10m perimeter managed buffer of low threat vegetation

06 ANALYSIS

The subject site attracts a raw BAL 29 rating, as per *AS3959:2018 Table 2.6*, due to the proximity of native tussock grasses surrounding the proposed dwelling site in all directions. This vegetation is classified 'G-22: Tussock Grassland' under *AS3959:2018, Part 2.2.3, Table 2.3*. Between the proposed house and the hazard vegetation, an area of low threat vegetation and non-vegetated areas is proposed as buffer to the hazard vegetation, extending for 10m in all directions. This vegetation is excluded under *AS3959:2018 Part 2.2.3.2 (e) & (f)*.

Given the size of the Lot and the setback from the nearest boundary, there is ample scope to reduce the BAL to BAL 19 by increasing the Hazard Management Area (HMA). As per *AS3959:2018, Table 2.6*, to achieve a BAL 19 HMA, a minimum 5° downslope distance of 11m is the required separation from the surrounding native grasses. As this is the worst-case slope associated with the building site, and the proposed dwelling is to have a 10m buffer on all sides, a BAL 19 HMA can be applied wholly within the boundaries of the subject lot and is legally able to be managed and maintained in a low fuel state by the title holder. As such, the requirements of the *Bushfire Determination Part 4.4: Hazard Management Areas, Table 4.4: Requirements for Hazard Management Areas, Part B (a)&(b)* are met with the implementation of a BAL 19 HMA. Refer Appendix 1: Bushfire Hazard Management Plan.

Either side of the site saddle, upslope to the east and west, 61m and 31m respectively, separate and isolated stands of dead and senescing Eucalypt Woodland, classified as B-05 under *AS3959:2018, Part 2.2.3, Table 2.3* and 'DCO: Eucalyptus Coccifera Forest & Woodland under *TASVEG 4.0*, also present a potential bushfire threat. However, these are outside the proposed HMA and B-05 upslope separation distances are exceeded by 21m. As such, the proximity of the native grasses pose the greater threat and is the determining factor when calculating the extents of the HMA.

The proposed house will not be connected to TasWater mains reticulation but will be provided with potable water storage in 2 steel tanks alongside the house. Being within 6m of the dwelling to be defended, these tanks are not considered compliant water sources for firefighting.

An additional steel 10kl water tank, reserved exclusively for firefighting purposes, is to be located alongside the driveway more than 6m from the house to be defended and a 90m hose lay will be able to reach all points of the building. This static water storage for firefighting is to be located within 3m of the driveway, which will serve as a designated hardstand for firefighting equipment. The water storage tank is to have compliant water offtakes and signage identifying the static water storage. As such, the proposed firefighting water supply complies with the *Bushfire Determination, Part 4.3: Water Supply for Firefighting, Table 4.3B: Requirements for Static Water Supply for Fire Fighting*. Refer Appendix 1: Bushfire Hazard Management Plan.

The proposed house is to be accessed from Marlborough Rd via a proposed 1km all-weather gravel driveway. The proposed driveway will comply with the requirements of the *Bushfire Determination, Part 4.2: Property Access, Table 4.2: Requirements for Property Access, Part C*. Refer Appendix 1: Bushfire Hazard Management Plan.

With regard to the potential grass and bushfire hazard, given the principal fire wind is from the nor'west, a fire entering vegetation in that direction, would present as a direct approach grass fire running uphill from the nor'west towards the house. The proposed HMA provides sufficient separation between the house and hazard vegetation to mount an adequate defence of the house from flame attack and, given the proposed water resources and access, the threat could be sufficiently managed, and the proposed house protected, from within a BAL 19 HMA.

Given the extent of the HMA and surrounding terrain, in a destructive fire event, the property is likely to experience a moderate ember shower. To mitigate this risk the proposed building will need to be constructed to meet the BAL 19 construction standards of *AS3959:2018 Parts 3 & 6*.

As the primary use of the proposed house is a Class 1a dwelling, this development is not considered to contribute to, or intensify any potential bushfire.

Stone Hut, Marlborough Rd, Miena.

07 CONCLUSION

The dwelling proposed for Stone Hut, Marlborough Rd, Miena, is subject to a grass fire threat from grassland surrounding the proposed house site. Should a fire enter this vegetation under typical bushfire conditions, a grassfire could potentially burn up to the proposed house.

The size of the lot allows an effective HMA to be implemented consistent with BAL 19 construction, meeting the requirements of the *Bushfire Determination Part 4.4: Hazard Management Areas, Table 4.4B*.

The bushfire risk is sufficiently moderated with the provision of access for firefighting equipment, and a static water supply compliant with the requirements the Bushfire Determination, as proposed.

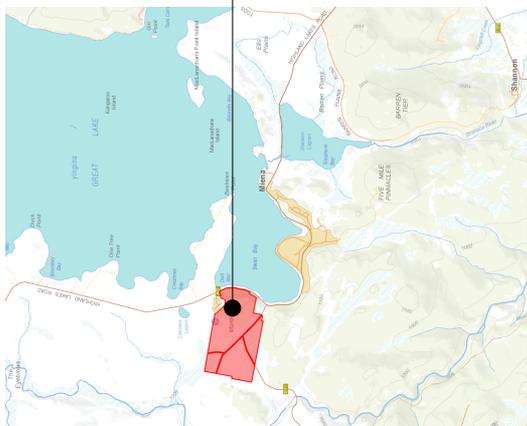
All factors considered, the requirements of the *Director of Building Control Determination: Requirements for Building in Bushfire-Prone Areas V2.2, March 16, 2020, Part 4: Deemed to Satisfy Requirements*, are satisfied with the construction of the dwelling to a BAL 19 standard compliant with *AS3959:2018, Part 3&6*, the provision & maintenance of recommended water & access assets, and the ongoing maintenance of the designated Hazard Management Area in a low fuel state. Refer Appendix 1: Bushfire Hazard Management Plan.

08 RECOMMENDATIONS

- The proposed dwelling be constructed to a BAL 19 standard consistent with the requirements of *AS3959:2018 Parts 3 & 6*.
- The implementation of the designated Hazard Management Area. Refer Appendix 1: Bushfire Hazard Management Plan.
- The provision of a minimum 10,000l of water storage exclusively for firefighting purposes compliant with the *Bushfire Determination, Part 4.3: Water Supply for Firefighting, Table 4.3B: Requirements for Static Water Supply for Fire Fighting* within 30m of the property entrance and no more than 90m from the most distant part of the dwelling.
- The provision of all-weather vehicular access for firefighting equipment from Marlborough Rd to the proposed building site compliant with the *Bushfire Determination, Part 4.2: Property Access, Table 4.2: Requirements for Property Access, Part C*.

LOCALITY GUIDE
NTS
(SOURCE: THE LIST)

STONE HUT,
MARLBOROUGH RD,
MIENA.
TITLE REF: 234894/1



BUILDING CONSTRUCTION
BUILDINGS TO BE BUILT IN TO A BAL 19 CONSTRUCTION STANDARD IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OF AUSTRALIA AND AS3959:2018 PART 3 & 6.

WATER SUPPLY
PROVIDE MIN 10KL STATIC WATER SUPPLY COMPLIANT W/ DIRECTOR OF BUILDING CONTROL DETERMINATION: REQUIREMENTS FOR BUILDING IN BUSHFIRE-PRONE AREAS V2.2, MARCH 16, 2020, PART 4.3: WATER SUPPLY, TABLE 4.2B: REQUIREMENTS FOR STATIC WATER SUPPLY FOR FIREFIGHTING, PARTS A-E. REFER BUSHFIRE HAZARD MANAGEMENT PLAN FOR LOCATION.

ACCESS
FORM NEW DRIVEWAY AND PROPERTY ACCESS TO COMPLY W/ DIRECTOR OF BUILDING CONTROL DETERMINATION: REQUIREMENTS FOR BUILDING IN BUSHFIRE-PRONE AREAS V2.2, MARCH 16, 2020, PART 4.2: PROPERTY ACCESS, TABLE 4.2C

HAZARD MANAGEMENT AREA
BAL 19 HAZARD MANAGEMENT AREA SHOWN HATCHED TO BE MANAGED AND MAINTAINED IN A MINIMUM FUEL STATE AT ALL TIMES. REFER MAINTENANCE SCHEDULE BELOW.

- MAINTENANCE SCHEDULE**
- REMOVAL OF FALLEN LIMBS, LEAF & BARK LITTER.
 - CUT LAWNS SHORT (LESS THAN 100MM) AND MAINTAIN.
 - REMOVE PINE BARK AND OTHER FLAMMABLE GARDEN MULCH.
 - COMPLETE UNDER-BRUSHING AND THIN OUT THE UNDERSTOREY.
 - PRUNE LOW HANGING TREES TO ENSURE SEPARATION FROM GROUND LITTER.
 - PRUNE LARGER TREES TO ESTABLISH AND MAINTAIN HORIZONTAL AND VERTICAL CANOPY SEPARATION.
 - MINIMISE STORAGE OF PETROLEUM FUELS.
 - REMOVE FALLEN LIMBS, LEAF & BARK LITTER FROM ROOFS, GUTTERS AND AROUND THE BUILDING.

BUSHFIRE PROTECTION MEASURES
TO REDUCE THE RISK OF BUSHFIRE ATTACK, CONTINUAL MAINTENANCE OF BUSHFIRE PROTECTION MEASURES INCLUDING BUILDING MAINTENANCE, DESIGNATED BUSHFIRE HAZARD MANAGEMENT AREAS, WATER SUPPLY AND ACCESS MAINTENANCE, ARE TO BE UNDERTAKEN BY SUCCESSIVE OWNERS IN PERPETUITY.

NOTE:
MEASURES CONTAINED IN THIS BUSHFIRE HAZARD MANAGEMENT PLAN CANNOT GUARANTEE THAT A BUILDING WILL SURVIVE A BUSHFIRE EVENT DUE TO THE DEGREE OF VEGETATION MANAGEMENT, THE UNPREDICTABLE NATURE AND BEHAVIOUR OF FIRE, AND EXTREME WEATHER CONDITIONS.

No.	Description	Date
A	INITIAL BAL 29	08/04/22
B	BAL 19	11/04/22
	AMD DWELLING SIZE	18/11/25

MICHAEL KINSELLA
INTEGRAL DESIGN & DRAFTING SERVICES
ACCREDITED BUILDING PRACTITIONER
ACCREDITATION: CC5699V



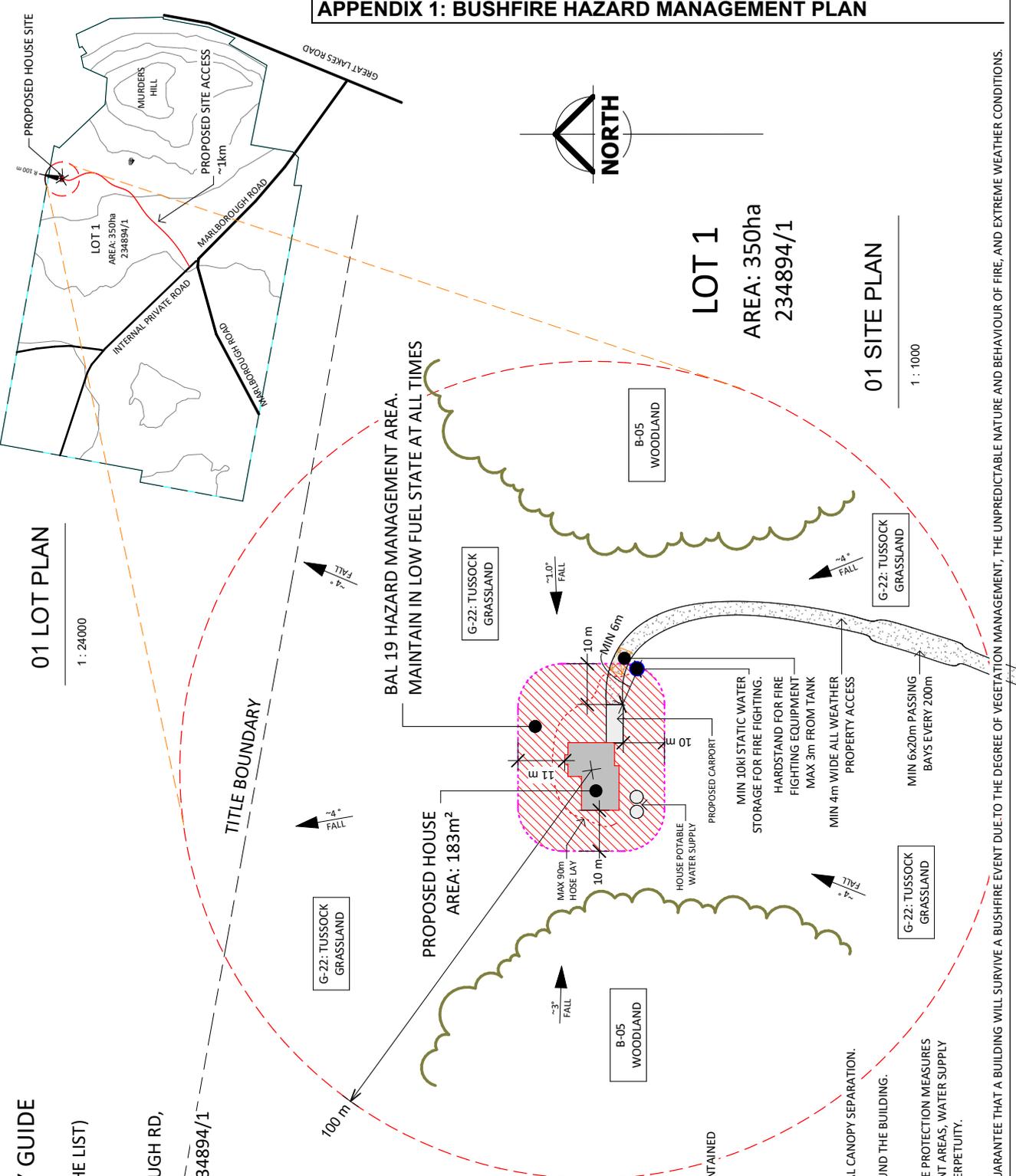
JAMES & JESSICA DOWNIE

PROPOSED NEW DWELLING
STONE HUT, MARLBOROUGH RD, MIENA, TAS, 7030.

BUSHFIRE HAZARD MANAGEMENT PLAN

Project number	BRYA-L-01B
Date	11/02/22
Designed by	Michael Kinsella
Drawn by	MK
Scale	As indicated @ A3

APPENDIX 1: BUSHFIRE HAZARD MANAGEMENT PLAN



01 LOT PLAN
1 : 24000

LOT 1
AREA: 350ha
234894/1

01 SITE PLAN
1 : 1000

DRAWINGS TO BE PRINTED & READ IN FULL COLOUR

Stone Hut, Marlborough Rd, Miena.

APPENDIX 2: SITE & SURROUNDS PHOTOGRAPHS



PIC 5: VIEW TO THE NORTH



PIC 6: VIEW TO THE EAST

Stone Hut, Marlborough Rd, Miena.



PIC 7: VIEW TO THE SOUTH



PIC 8: VIEW TO THE WEST

Stone Hut, Marlborough Rd, Miena.



PIC 9: DISTRICT VIEW TO THE NOR'EAST SHOWING TYPICAL GRASSLAND VEGETATION



PIC 10: DISTRICT VIEW TO THE SOU'WEST SHOWING TYPICAL GRASSLAND & WOODLAND VEGETATION ON THE RISES.

Stone Hut, Marlborough Rd, Miena.

APPENDIX 3: CERTIFICATION

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Owner /Agent
 Address
 Suburb/postcode

Qualified person details:

Qualified person:
 Address: Phone No:
 Fax No:
 Licence No: Email address:

Qualifications and Insurance details: (description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Speciality area of expertise: (description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of work:

Address: Lot No:
 Certificate of title No:

The assessable item related to this certificate: (description of the assessable item being certified)
 Assessable item includes –
 - a material;
 - a design
 - a form of construction
 - a document
 - testing of a component, building system or plumbing system
 - an inspection, or assessment, performed

Stone Hut, Marlborough Rd, Miena.

Certificate details:

Certificate type:

BUSHFIRE HAZARD

(description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work:

or

a building, temporary structure or plumbing installation:

In issuing this certificate the following matters are relevant –

Documents:

DOWN-J-01B BUSHFIRE HAZARD MANAGEMENT REPORT
DOWN-J-01B BUSHFIRE HAZARD MANAGEMENT PLAN

Relevant calculations:

BUSHFIRE ATTACK LEVEL AS PER AS3959:2018

References:

- BUILDING ACT 2014, 2016 & BUILDING REGULATIONS 2014, 2016.
- DIRECTOR'S DETERMINATION: REQUIREMENTS FOR BUILDING IN BUSHFIRE-PRONE AREAS, V2.2, March 16, 2020.
- AS3959:2018 – CONSTRUCTION IN BUSHFIRE PRONE AREAS

Substance of Certificate: (what it is that is being certified)

THAT THE CLASS 1A DWELLING PROPOSED FOR 'STONE HUT', MARLBOROUGH RD, MIENA COMPLIES WITH THE REQUIREMENTS OF THE 'DIRECTOR OF BUILDING CONTROL DETERMINATION: REQUIREMENTS FOR BUILDING IN BUSHFIRE-PRONE AREAS V2.2, MARCH 16, 2020, PART 4: DEEMED TO SATISFY REQUIREMENTS', WITH THE CONSTRUCTION OF THE PROPOSED HOUSE, TO A **BAL 19** STANDARD COMPLIANT WITH AS3959:2018, PARTS 3 & 6, THE MAINTENANCE OF THE DESIGNATED HAZARD MANAGEMENT AREA IN A LOW FUEL STATE AND THE PROVISION & MAINTENANCE OF RECOMMENDED WATER AND ACCESS ASSETS.
REFER BUSHFIRE HAZARD MANAGEMENT REPORT DOWN-J-01B.

Scope and/or Limitations

ASSESSMENT TO AS 3959:2018 & RELEVANT GUIDANCE FROM TASMANIAN FIRE SERVICE & CHIEF OFFICER.
EXCLUSIONS: ALL WORKS NOT DOCUMENTED UNDER THE UNDER BUSHFIRE HAZARD MANAGEMENT REPORT DOWN-J-01B.

I certify the matters described in this certificate.

	<i>Signed:</i>	<i>Certificate No:</i>	<i>Date:</i>
Qualified person:	 Michael Kinsella – BFP-133	DOWN-J-01B	18/11/25

Stone Hut, Marlborough Rd, Miena.

APPENDIX 4: SITE NOTES

BUSHFIRE ATTACK LEVEL ASSESSMENT REPORT

Property Details

Applicant's Name: PETER DOWNIE

Contact Phone Number (H): (M):

Municipality: CENTRAL HIGHLANDS IPS 15 26 RURAL RESOURCE

Lot: 243894/1

Address: STONE HUT + SPLIT ROCK MARLBOROUGH RD, MIENA, TAS, 7030

Type of building work

- New Class 1 building [checked]
New Class 10a building []
New Class 2 building []
New Class 3 building []

Alteration/Additions to an existing building

Description of building work: e.g. single dwelling with attached garage

NEW DWELLING

Note:

- Class 1a - a single dwelling being...
Class 1b - a boarding house, guest house, hostel or the like...
Class 10a - a non-habitable building being a private garage, carport, shed, or the like.
Class 2: a building containing 2 or more sole-occupancy units each being a separate dwelling.
Class 3: a residential building, other than a building of Class 1 or 2, which is a common place of long term or transient living...

BUSHFIRE HAZARD MANAGEMENT REPORT
Stone Hut, Marlborough Rd, Miena.

Bush Fire Attack Level (BAL)

Step 1: Relevant fire danger index: (see clause 2.2.2) FDI 50

Step 2: Assess the vegetation within 100m in all directions (tick relevant group)

Note 1: Refer to Table 2.3 and Figures 2.3 & 2.4 for description and classification of vegetation.

Note 2: If there is no classified vegetation within 100 m of the site then the BAL is LOW for that part of the site.

Vegetation classification (see Table 2.3)	North <input checked="" type="checkbox"/>	South <input checked="" type="checkbox"/>	East <input checked="" type="checkbox"/>	West <input checked="" type="checkbox"/>
	North-East <input type="checkbox"/>	South-West <input type="checkbox"/>	South-East <input type="checkbox"/>	North-West <input type="checkbox"/>
Group A Forest	LTV	LTV	LTV	LTV
Group B Woodland	0-10	0-10	0-10	0-10
Group C Shrub-land	G-22	G-22	G-22	G-22
Group D Scrub	11-100+	11-100+	11-60	11-30
Group E Mallee/Mulga			B-05	B-05
Group F Rainforest			G-100+	31-100+
Group G (FDI 50) Grassland				
Exclusions (where applicable)	Circle relevant paragraph descriptor from clause 2.2.3.2.			
	(b) (c) (d) (e) (f)	(b) (c) (d) (e) (f)	(b) (c) (d) (e) (f)	(b) (c) (d) (e) (f)

Step 3: Distance of the site from classified vegetation (see clause 2.2.4)

Distance to classified vegetation	Show distances in metres			
		10	10	10

Step 4: Determine the effective slope of land under the classified vegetation

Effective slope	Upslope			
	Upslope/0° <input type="checkbox"/>	Upslope/0° <input checked="" type="checkbox"/>	Upslope/0° <input checked="" type="checkbox"/>	Upslope/0° <input checked="" type="checkbox"/>
Slope under the classified vegetation	-4.0°	+3.9°	Downslope +1.0°	+2.7°
	>0 to 5 <input checked="" type="checkbox"/>	>0 to 5 <input type="checkbox"/>	>0 to 5 <input type="checkbox"/>	>0 to 5 <input type="checkbox"/>
	>5 to 10 <input type="checkbox"/>	>5 to 10 <input type="checkbox"/>	>5 to 10 <input type="checkbox"/>	>5 to 10 <input type="checkbox"/>
	>10 to 15 <input type="checkbox"/>	>10 to 15 <input type="checkbox"/>	>10 to 15 <input type="checkbox"/>	>10 to 15 <input type="checkbox"/>
	>15 to 20 <input type="checkbox"/>	>15 to 20 <input type="checkbox"/>	>15 to 20 <input type="checkbox"/>	>15 to 20 <input type="checkbox"/>

BAL value for each side of the site	29	19	19	19
-------------------------------------	----	----	----	----

NOTE: ASSUMED 10m LTV AROUND BUILDING SITE

LTV: LOW THREAT VEGETATION.

B-05: WOODLAND - PRELIM EUC. COCCIFERA

G-22: TUSsock GRASSLAND - POAs & MIXED 2 NATIVES GRASSES.

Stone Hut, Marlborough Rd, Miena.

Step 5—Determination of Bushfire Attack Level (BAL)

Refer to Table 2.4.4 for FDI 50 (applicable to Tasmania)

Using the relevant table determine the Bushfire Attack Level (BAL) for each of the vegetation classifications determined at Step 2, the distance from the site determined at Step 3 and the effective slope determined at Step 4.

Select the highest Bushfire Attack Level (BAL) obtained above.

The BAL for this site is: BAL 29.....

Date of assessment: 13/3/22.....

Assessors name: MICHAEL WINSSELLA.....

Assessors contact number:

Work: Mob: (0403) 390 602.....

Statement:

I have taken all reasonable steps to ensure that the information provided in this assessment is accurate and reflects the conditions on and around the site and allotment on the date of this assessment.

Signed: 

Date: 13/3/22.....

ATTACHMENTS:

Site plan: (Attachment 1)

Photographs: (Attachment 2)

Notes

TITLE: 243894/1
SCHEME: 126 CHIPS '15
ZONE: 26.0 RURAL RESOURCE
OVERLAYS: NIL

ACCESS: Via 100m proposed dirt & gravel driveway from S off Marlborough Rd, dirt all weather public roadway.

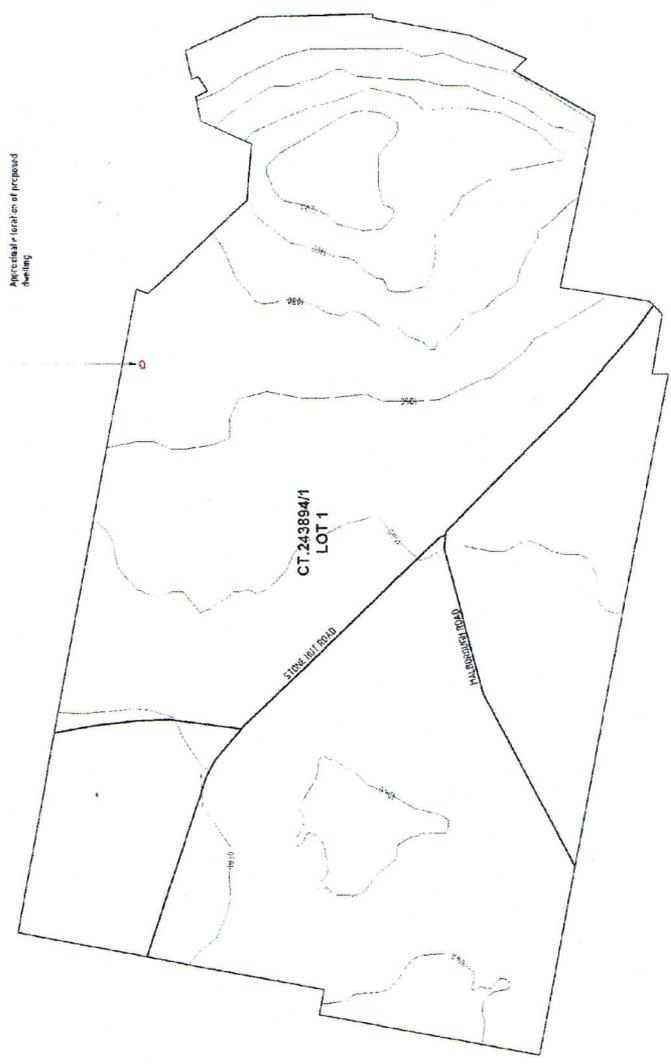
WATER: Nil Water available / present within 100m.

TERRAIN: Site sits in a level low saddle between rocky outcrops E & W. Saddle falls evenly S-N @ -4°

VEGETATION: Generally open Tussock Grassland in all directions. E & W on rocky outcrops are stands of dead & senescing Euc. Woodland of predom Euc. Coccoloba.

LEGEND

	ROAD
	20m CONTOUR



Approximate location of proposed dwelling

SITE PLAN 1: 10000
CONTOUR INTERVAL: 20 ft.



PLANNING APPROVAL

This document is one of the documents relevant to the permit issued for development as identified by Permit no.

DA 2021/112

Dated: 13 January 2022

Signed: 
Authorised Officer

REVISIONS	
No.	Date

GENERAL NOTES

- ALL DEVELOPMENT IS SUBJECT TO THE REQUIREMENTS OF THE DEVELOPMENT CONTROL ACT 1973 AND THE LOCAL GOVERNMENT'S DEVELOPMENT CONTROL REGULATIONS 1973.
- THE PROPOSED DEVELOPMENT IS SUBJECT TO THE REQUIREMENTS OF THE DEVELOPMENT CONTROL ACT 1973 AND THE LOCAL GOVERNMENT'S DEVELOPMENT CONTROL REGULATIONS 1973.
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SHEET No. 2 OF 6

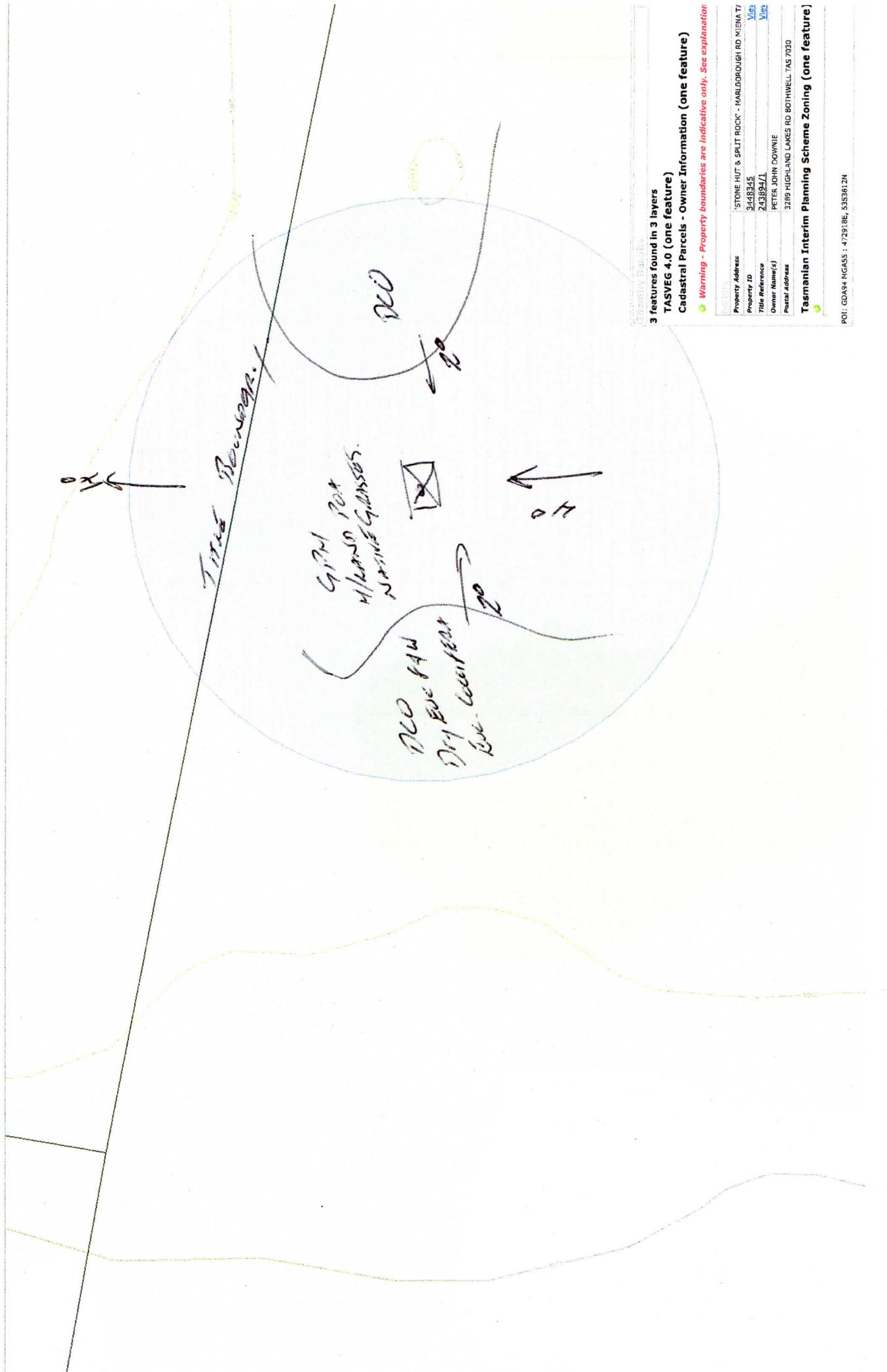


DEVELOPMENT CONTROL ACT 1973
LOCAL GOVERNMENT'S DEVELOPMENT CONTROL REGULATIONS 1973
THE PROPOSED DEVELOPMENT IS SUBJECT TO THE REQUIREMENTS OF THE DEVELOPMENT CONTROL ACT 1973 AND THE LOCAL GOVERNMENT'S DEVELOPMENT CONTROL REGULATIONS 1973.

PROPOSED DEVELOPMENT
STONE HUT
for MR & MRS DOWME

DEVELOPMENT APPLICATION

SCALE	1:10000	DATE	22/11/2022
PROJECT NO.	A	PROJECT NAME	A02
PROJECT NO.	21025	PROJECT NAME	A02



PROPERTY DETAILS

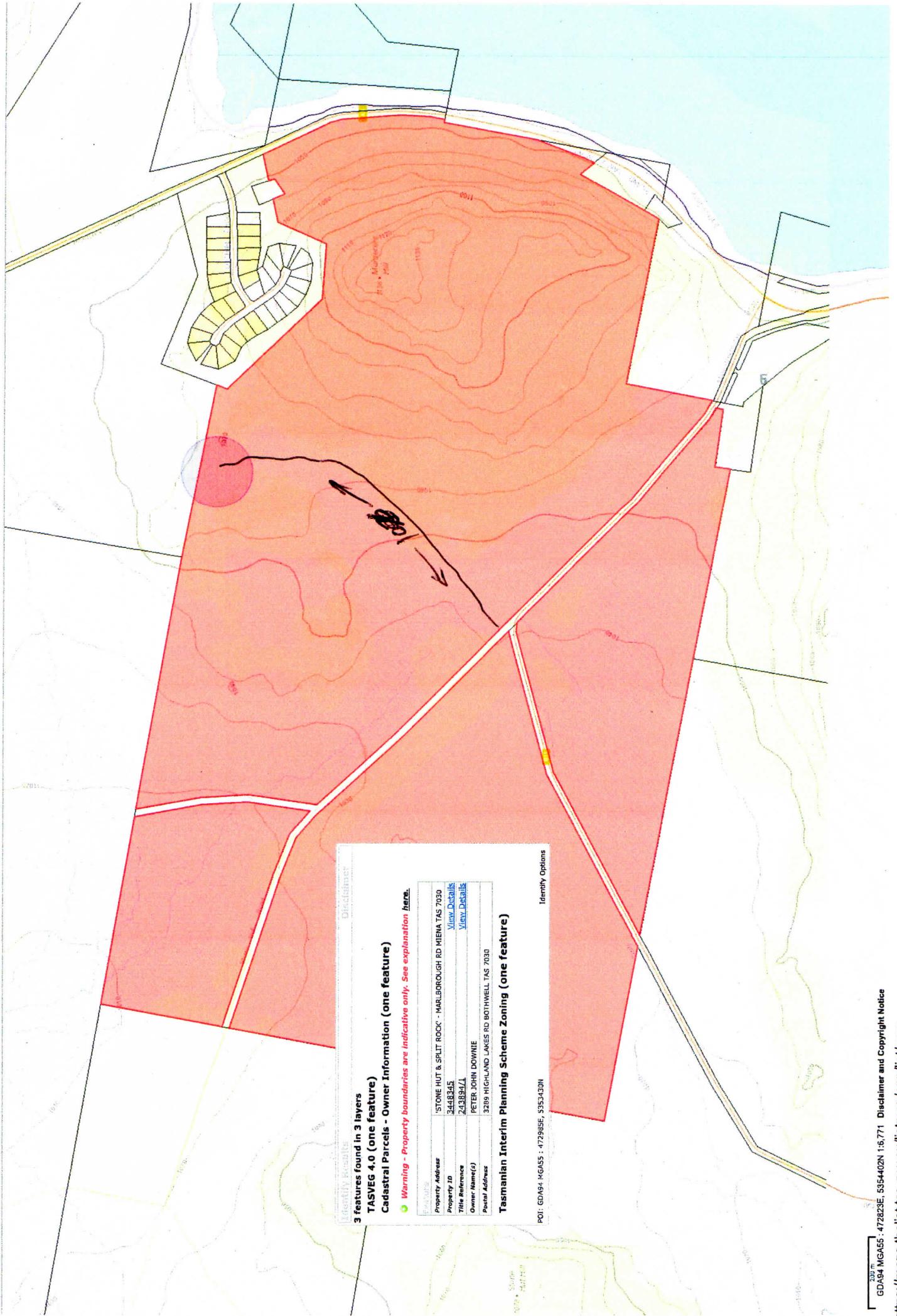
3 features found in 3 layers
TASVEG 4.0 (one feature)
Cadastral Parcels - Owner Information (one feature)

Warning - Property boundaries are indicative only. See explanation

Property Address	'STONE HUT & SPLIT ROCK' - MARLBOROUGH RD NIENA T1
Property ID	3448345
Title Reference	243894/L
Owner Name(s)	PETER JOHN DOWNIE
Postal Address	3289 HIGHLAND LAKES RD BOTHWELL TAS 7030

Tasmanian Interim Planning Scheme Zoning (one feature)

POI: GDA94 MGA55 : 472918E, 5353812N



3 features found in 3 layers
TASVEG 4.0 (one feature)
Cadastral Parcels - Owner Information (one feature)

Warning - Property boundaries are indicative only. See explanation [here](#).

Property Address	'STONE HUT & SPLIT ROCK' - MARLBOROUGH RD MIENA TAS 7030
Property ID	3448345
Title Reference	243894/A
Owner Name(s)	PETER JOHN DOWNIE
Postal Address	3209 HIGHLAND LAKES RD BOTHWELL TAS 7030

Tasmanian Interim Planning Scheme Zoning (one feature)

POI: GDAB4 MGA55 : 472985E, 5353430N



3 features found in 3 layers
Cadastral Parcels - Owner Information (one feature)

Warning - Property boundaries are indicative only. See explanation

Property Address	STONE HUT & SPLIT ROCK - MARLBOROUGH RD NIENATI
Property ID	3448345 View
Title Reference	243894/1 View
Owner Name(s)	PETER JOHN DOWNIE
Postal Address	3289 HIGHLAND LAKES RD BOTHWELL TAS 7030

Tasmanian Interim Planning Scheme Zoning (one feature)

Zone Name	26
Zone Number	26
POL: GDAS4 NGA55	: 47291BE, 5353812N

STONE HUT DWELLING - DOWNIE
NATURAL ASSETS CODE ASSESSMENT

Van Diemen Consulting Pty Ltd

PO Box 171
Brighton, Tasmania

T: 0438 588 695 E: rwbarnes73@gmail.com

This document has been prepared in accordance with the scope of services agreed upon between Van Diemen Consulting (VDC) and the Client.

To the best of VDC's knowledge, the report presented herein represents the Client's intentions at the time of completing the document. However, the passage of time, manifestation of latent conditions or impacts of future events may result in changes to matters that are otherwise described in this document. In preparing this document VDC has relied upon data, surveys, analysis, designs, plans and other information provided by the client, and other individuals and organisations referenced herein. Except as otherwise stated in this document, VDC has not verified the accuracy or completeness of such data, surveys, analysis, designs, plans and other information.

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Document Status

Revision	Author	Review	Date
1	R Barnes C McCoull	R Barnes and C McCoull, VDC	19-1-2026
1	R Barnes C McCoull		
2	R Barnes C McCoull		
2	R Barnes C McCoull		
3	R Barnes C McCoull		
3	R Barnes C McCoull		
4	R Barnes C McCoull		
4	R Barnes C McCoull		

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EXECUTIVE SUMMARY

The construction and use of a dwelling and access road, with the establishment and maintenance of a bushfire hazard management area (BHMA) is proposed on the property Stone Hut in the Central Highlands. The Study Area includes the dwelling, access road, and the associated bushfire hazard management area.

The Study Area intersects the priority vegetation overlay mapped in the Tasmanian Planning Scheme – Central Highlands. Hence, an assessment against the Acceptable Standard/Performance Criteria of Clause C7.6.2 in the Natural Assets Code is required.

The following natural values as summarised from the findings of the desktop assessment and field survey of existing information of the Study Area. A statement about compliance with Clause 7.6.2 is also provided.

Threatened native vegetation communities	
Threatened Ecological Communities (EPBC Act)	None are present in the Study Area.
Threatened Native Vegetation Communities (NCA)	None are present in the Study Area.
Threatened Flora Species	
No species listed on the <i>Threatened Species Protection Act 1995</i> or the <i>Environment Protection and Biodiversity Conservation Act 1999</i> were observed in the Study Area.	
Threatened Fauna Species	
No fauna species listed on the <i>Threatened Species Protection Act 1995</i> or <i>Environment Protection and Biodiversity Conservation Act 1999</i> were observed in the Study Area during the survey.	
No significant habitat for threatened fauna species is present in the Study Area.	
Natural Assets Code – priority vegetation overlay (Tasmanian Planning Scheme – Central Highlands)	
<p>The Study Area intersects the priority vegetation overlay (the ‘Overlay’) mapped in the Tasmanian Planning Scheme – Central Highlands. Hence, an assessment against the Acceptable Standard/Performance Criteria of Clause C7.6.2 is required. The outcomes of the assessment are provided below -</p> <ul style="list-style-type: none"> • Complies with P1.1 – meets (e) in that the clearance of native vegetation is for a building and works associated with the construction of a single dwelling. • Complies with P1.2 – The native vegetation to be cleared for the single dwelling development is not priority vegetation within the meaning of the Scheme (see section D.3). Therefore, while the clearance is within a <i>priority vegetation area</i> there is no adverse impact on <i>priority vegetation</i>. <p>The Development complies with the Natural Assets Code requirements.</p>	

DEFINITIONS	
Declared Weed	means a plant species listed on the <i>Biosecurity Act 2019</i>
(the) Development	means the construction of a house and access road, with the establishment and maintenance of a bushfire hazard management zone, as per Figures 1 and 2 .
Natural Values	The Natural and Cultural Heritage Division (2015) Guidelines define this as 'biological and geodiversity values of conservation significance, being those species, vegetation communities and other values that have significance and/or statutory protection under the Tasmanian <i>Threatened Species Protection Act 1995</i> (TSPA), <i>Nature Conservation Act 2002</i> (NCA) and other relevant policies and regulations.
(the) Planning Scheme	Tasmanian Planning Scheme – Central Highlands
Report	means this report
Study Area	means the area identified as 'Study Area' in Figures 1 and 2 .
Threatened fauna	means species of fauna listed on the – <ul style="list-style-type: none"> • Tasmanian <i>Threatened Species Protection Act 1995</i>, or the • Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>.
Threatened flora	means species of flora listed on the – <ul style="list-style-type: none"> • Tasmanian <i>Threatened Species Protection Act 1995</i>, or the • Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>.
Threatened Ecological Communities	means ecological communities listed under s 181 of the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
Threatened Native Vegetation Communities	means native vegetation communities listed under Schedule 3A of the Tasmanian <i>Nature Conservation Act 2002</i> .

ACRONYMS	
BHMA	bushfire hazard management area
DPIPWE (now NRE Tas)	Department of Primary Industries, Parks, Water and Environment

(the) EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
NRE Tas (was DPIPWE)	Department of Natural Resources and Environment Tasmania
NVA	Natural Values Atlas (natural values database maintained by NRE Tas)
(the) TSP Act	<i>Threatened Species Protection Act 1995</i>

PART A – BACKGROUND

A.1 THE DEVELOPMENT

The Development is the construction and use of a dwelling and access road, with the establishment and maintenance of a bushfire hazard management area (BHMA) on the property Stone Hut in the Central Highlands (Figure 1).

A.2 STUDY AREA

The Study Area includes the dwelling, access road, and the associated bushfire hazard management area identified in Figure 2.

Figure 1. Location of the proposed dwelling



- (b) Targeted searches for Threatened Flora Species; and
 - (c) Significant fauna habitat assessment per the requirements of the Natural Assets Code.
4. Document the findings of the field-based surveys and relevant aspects of other biodiversity related background reports for the Study Area, including an assessment against the relevant provisions of the Natural Assets Code in the Planning Scheme.

PART B – SURVEY METHODS AND ASSESSMENT TOOLS

This section provides details of the survey techniques applied for the studies conducted in the Study Area, and the assessment tools/documents used to identify the Natural Values, if any, of significance.

B.1 QUALIFICATIONS OF PERSONNEL

The Natural and Cultural Heritage Division (2015¹) note that -

‘The proponent or their representative must ensure that the personnel undertaking surveys and preparing reports have appropriate skills, qualifications and experience in identification and documentation of all natural values of interest, including a knowledge of Tasmanian species, their habitat and other ecological requirements, and vegetation communities.’

In this case, the surveyors of the natural values each hold a PhD in a relevant field of science – zoology and botany – and over 60 years of combined field expertise in Natural Values assessment, identification, mapping, reporting and ecological impact assessment/mitigation.

B.2 VEGETATION CLASSIFICATION

Vegetation communities were identified according to Tasmanian Vegetation Mapping Units (Kitchener and Harris 2013, 2nd Edition and with revisions in April 2019). All vegetation types in the Study Area were assessed and the variation within each explored.

B.3 THREATENED FLORA AND FAUNA SPECIES SURVEYS

A Natural Values Atlas Report (NVA, **Attachment 1**) was generated to identify previously recorded locations of conservation significant species (flora and fauna) and range boundaries for significant and/or threatened fauna species.

Flora species

Flora species of particular focus were those listed in the Natural Values Atlas report as having known records, or potential habitat, within and near the Study Area.

¹ Natural and Cultural Heritage Division (2015). Guidelines for Natural Values Surveys - Terrestrial Development Proposals. Department of Primary Industries, Parks, Water and Environment. Version 1.1 – 13th August 2019 (minor updates to links in document).

Fauna species – habitat assessment

Fauna species with potential or known habitat in the Study Area were considered in the context of habitat ranges/descriptions provided in **Table 1** (FPA 2022).

Table 1. Threatened fauna species range boundary type and associated description

Range type	Description
Core Range	Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.
Potential Range	Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.
Known Range	is the area within which the species is most likely to occur, being the area of land within a minimum convex polygon of all known localities of the species. This term is synonymous with 'extent of occurrence' as referred to in the <i>Guidelines for Eligibility for Listing under the Threatened Species Protection Act 1995</i> (DPIW 2009).
Potential habitat	is all habitat types within the potential range of a species that are likely to support that species in the short and/or long term. It may not include habitats known to be occupied intermittently (e.g. occasional foraging habitat only). Potential habitat is determined from published and unpublished scientific literature and/or expert opinion, and is agreed by the Threatened Species Section (DPIPWE) in consultation with species' specialists.
Significant habitat	is habitat within the known or core range of a species that (1) is known to be of high priority for the maintenance of breeding populations throughout the species' range and/or (2) conversion of which to non-native vegetation is considered to result in a long-term negative impact on breeding populations of the species. It may include areas that do not currently support breeding populations of the species but that need to be maintained to ensure the long-term future of the species. Significant habitat is determined from published and unpublished scientific literature and/or expert opinion, and is agreed by the Threatened Species Section (DPIPWE) in consultation

The Scheme in the Natural Assets Code includes a definition of **significant habitat**:

'means the habitat within the known or core range of a threatened fauna species, where any of the following applies:

- (a) is known to be of high priority for the maintenance of breeding populations throughout the species' range; or
- (b) the conversion of it to non-priority vegetation is considered to result in a long-term negative impact on breeding populations of the threatened fauna species.'

The Scheme definition is directly comparable to the definition used and applied by the FPA (2022).

B.4 LIMITATIONS

Flora

The survey was done in January 2026. Short lived annuals, orchids and lilies that may be present in the Study Area may have been missed (very unlikely) because they were not able to be identified (they were not flowering) or they were not evident at this time of year (e.g., annual species that had died back or had not emerged at the time of survey). Overall, it is unlikely that species of conservation significance were not appropriately considered in the survey/assessment because the survey was conducted during the peak flowering and growing season for threatened flora species.

Fauna

The fauna assessment (except for direct searches of nests and dens etc as outlined above) was limited to a habitat assessment for fauna species, including the ground truthing of potential habitats for significant fauna species that were identified in database searches.

Micro Flora and Fauna

The flora and fauna surveys excluded micro-flora and micro-invertebrates such as algae, zooplankton, and cave-dwelling fauna.

PART C – SURVEY FINDINGS

C.1 VEGETATION COMMUNITY IDENTIFICATION, DESCRIPTION AND CONSERVATION STATUS

One native vegetation type was observed in the Study Area in addition to the disturbed area of the existing access road. A description of the vegetation community is provided below.

Eucalyptus pauciflora forest and woodland on dolerite (DPO)

Eucalyptus pauciflora forests and woodlands on dolerite are dominated by a canopy of *E. pauciflora* trees and is distinguished from other *E. pauciflora* dominated vegetation by the substrate (dolerite) and its tendency to occur above 800 m. *E. pauciflora* forest occurs extensively on dolerite on the eastern Central Plateau with localised patches in the southern Midlands (e.g. Mount Seymour and Mount Cartwright) and the Eastern Tiers.

As altitude increases on the Central Plateau, the community mostly occupies the margins of frost hollows and broad flats or on rocky outcrops exposed to prevailing winds and snow. The understorey is typically dominated by grasses; particularly *Poa* species, *Rytidosperma* species, *Deyeuxia* species and *Agrostis* species. Shrubs include *Leptecophylla* species and *Leucopogon* species.

The woodland present in the Study Area is in a very poor condition, owing to the prevalence of dieback (**Plate 1**). The vegetation type is not listed as threatened on Schedule 3A of the *Nature Conservation Act 2002*.

C.2 THREATENED FLORA SPECIES

There are only 3 threatened flora species recorded within 500 and 5,000m of the Study Area based on data contained within the Natural Values Atlas (**Attachment 1**). None have been previously recorded within the Study Area.

No threatened flora species were observed in the Study Area.

C.3 THREATENED FAUNA SPECIES

There are several threatened fauna species recorded within 500 and 5,000m of the Study Area based on data contained within the Natural Values Atlas (**Attachment 1**). No threatened fauna species were directly observed during the survey in the Study Area.

Table 2 provides a list of the State listed threatened flora species recorded near the Study Area.

Table 2. Threatened fauna species considered in the assessment based on the NVA Report

Group	Species Name	Common name	TSPA/EPBC	Range Class	Comments	Significant habitat Present?
Invertebrates	<i>Benthodorbis pawpela</i>	Great Lake glaciatorbid snail	r/-	Potential	No waterbodies or riparian vegetation present.	No
	<i>Oreixenica ptunarra</i>	ptunarra brown butterfly	e/EN	Potential and Known	<i>Poa</i> coverage is less than 20%.	No
	<i>Beddomeia tumida</i>	hydrobiid snail (great lake)	e/-	Potential and Known	No waterbodies or riparian vegetation present.	No
	<i>Onchotelson spatulatus</i>	isopod (great lake)	e/-	Potential and Known	No waterbodies or riparian vegetation present.	No
	<i>Onchotelson brevicaudatus</i>	isopod (great lake & shannon lagoon)	r/-	Potential and Known	No waterbodies or riparian vegetation present.	No
	<i>Mesacanthotelson setosus</i>	isopod (great lake)	r/-	Potential and Known	No waterbodies or riparian vegetation present.	No
	<i>Castiarina insculpta</i>	miena jewel beetle	e/-	Potential and Known	Potential habitat is absent.	No
	<i>Mesacanthotelson tasmaniae</i>	isopod (great lake)	r/-	Potential and Known	No waterbodies or riparian vegetation present.	No
	<i>Tasniphargus tyleri</i>	amphipod (great lake)	r/-	Potential and Known	No waterbodies or riparian vegetation present.	No
	<i>Uramphisopus pearsoni</i>	isopod (great lake)	e/EN	Potential and Known	No waterbodies or riparian vegetation present.	No

Mammals	<i>Sarcophilus harrisi</i>	Tasmanian devil	e/EN	NA	Potential foraging habitat present, no dens.	No
	<i>Dasyurus maculatus</i> subsp. <i>maculatus</i>	spotted-tailed quoll	r/VU	NA	Potential foraging habitat present, no dens.	No
	<i>Dasyurus viverrinus</i>	eastern quoll	-/EN	Potential and Core	Potential foraging habitat present, no dens.	No
Fish	<i>Paragalaxias dissimilis</i>	shannon galaxias	v/VU	Potential	No waterbodies or riparian vegetation present.	No
	<i>Paragalaxias eleotroides</i>	great lake galaxias	v/VU	Potential	No waterbodies or riparian vegetation present.	No
Birds	<i>Aquila audax</i> subsp. <i>fleayi</i>	wedge-tailed eagle	e/EN	Potential	No nesting habitat or nests are present. Foraging opportunities exist at the site.	No
	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	v/-	Potential	No nesting habitat or nests are present. Foraging opportunities exist at the site.	No
	<i>Neophema chrysostoma</i>	blue wing parrot	-/VU	Potential	Most eucalypts are dead or dying, and none have hollows suitable for nesting.	No
	<i>Tyto novaehollandiae</i> subsp. <i>castanops</i>	masked owl	e/VU	Potential and Core	Eucalypts present but none have hollows suitable for nesting/roosting.	No
	<i>Accipiter novaehollandiae</i>	grey goshawk	e/-	Potential and Core	No habitat for nesting or foraging present.	No

PART D – NATURAL ASSETS CODE ASSESSMENT

D.1 BACKGROUND

The Study Area intersects the priority vegetation overlay (the ‘Overlay’) mapped in the Tasmanian Planning Scheme – Central Highlands. Hence, an assessment against the Acceptable Standard/Performance Criteria was used to assess compliance against the provisions of Clause C7.6.2 is required. This assessment is provided below.

D.2 CODE OBJECTIVES

The purpose of the Natural Assets Code is:

C7.1.1	To minimise impacts on water quality, natural assets including native riparian vegetation, river condition and the natural ecological function of watercourses, wetlands and lakes.
C7.1.2	To minimise impacts on coastal and foreshore assets, native littoral vegetation, natural coastal processes and the natural ecological function of the coast.
C7.1.3	To protect vulnerable coastal areas to enable natural processes to continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes and other sensitive coastal habitats due to sea-level rise.
C7.1.4	To minimise impacts on identified priority vegetation.
C7.1.5	To manage impacts on threatened fauna species by minimising clearance of significant habitat.

The Natural Assets Code defines ‘priority vegetation as the below:

‘means native vegetation where any of the following apply:

- (a) it forms an integral part of a threatened native vegetation community as prescribed under Schedule 3A of the *Nature Conservation Act 2002*;
- (b) is a threatened flora species;
- (c) it forms a significant habitat for a threatened fauna species; or
- (d) it has been identified as native vegetation of local importance.’

Native vegetation in the Tasmanian Planning Scheme means *plants that are indigenous to Tasmania including trees, shrubs, herbs and grasses that have not been planted for domestic or commercial purposes.*

D.3 TERMINOLOGY

The following terms are used in this section (extracted from Clause C7.3.1 in the Code).

natural assets	means biodiversity, environmental flows, natural streambank and streambed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values.
significant habitat	means the habitat within the known or core range of a threatened fauna species, where any of the following applies: (a) is known to be of high priority for the maintenance of breeding populations throughout the species' range; or (b) the conversion of it to non-priority vegetation is considered to result in a long-term negative impact on breeding populations of the threatened fauna species.
threatened fauna species	means listed under the <i>Threatened Species Protection Act 1995</i> or listed as threatened or migratory under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
threatened flora species	means listed under the <i>Threatened Species Protection Act 1995</i> or as threatened under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .

D.3 ASSESSMENT OF THE DEVELOPMENT PER CLAUSE 7.6.2

The contents of this report assisted with the assessment of the requirements prescribed in Clause C7.6.2.

Each performance criterion within Clause C7.6.2 is described below relative to the Study Area and characteristics of the Development where it would intersect the Overlay in the Study Area.

Information summarising each of the components of *priority vegetation* is provided below.

Native Vegetation Communities

No native vegetation communities listed on Schedule 3A of the *Nature Conservation Act 2002* are present in the Study Area.

Threatened flora species

No threatened flora species were observed in the Study Area.

Significant habitat for a threatened fauna species

No fauna species were found to have significant habitat in the priority vegetation in the Study Area (**Table 2**).

Native vegetation of local importance

We interpret *local importance* to be anything other than the matters already prescribed at (a) to (c).

None of the native vegetation is considered by us to be of 'local importance'. Specifically, none of the native vegetation is at the edge of its natural range, nor is it an outlier or of a particular phenotypic form to identify it as something unique.

C7.6.2 Clearance within a priority vegetation area

Objective	<p>That clearance of native vegetation within a priority vegetation area:</p> <ul style="list-style-type: none"> a) does not result in unreasonable loss of priority vegetation; b) is appropriately managed to adequately protect identified priority vegetation; and c) minimises and appropriately manages impacts from construction and development activities. 	
	Performance Criterion (P)	Comments with reference to the Development
P1.1		
Clearance of native vegetation within a priority vegetation area must be for:	<p>Complies with (b).</p> <p>The clearance of native vegetation is for a building and works associated with the construction of a single dwelling.</p>	
(a) an existing use on the site, provided any clearance is contained within the minimum area necessary to be cleared to provide adequate bushfire protection, as recommended by the Tasmania Fire Service or an accredited person;		
(b) buildings and works associated with the construction of a single dwelling or an associated outbuilding;		
(c) subdivision in the General Residential Zone or Low Density Residential Zone;		
(d) use or development that will result in significant long term social and economic benefits and there is no feasible alternative location or design;		
(e) clearance of native vegetation where it is demonstrated that on-going pre-existing management cannot ensure the survival of the priority vegetation and there is little potential for long-term persistence; or		

<p>(f) the clearance of native vegetation that is of limited scale relative to the extent of priority vegetation on the site.</p>	
<p>P1.2 Clearance of native vegetation within a priority vegetation area must minimise adverse impacts on priority vegetation, having regard to:</p>	
<p>(a) the design and location of buildings and works and any constraints such as topography or land hazards;</p>	<p>Complies. The native vegetation to be cleared for the single dwelling development is not priority vegetation within the meaning of the Scheme (see section D.3). Therefore, while the clearance is within a <i>priority vegetation area</i> there is no adverse impact on <i>priority vegetation</i>.</p>
<p>(b) any particular requirements for the buildings and works;</p>	
<p>(c) minimising impacts resulting from bushfire hazard management measures through siting and fire-resistant design of habitable buildings;</p>	
<p>(d) any mitigation measures implemented to minimise the residual impacts on priority vegetation</p>	
<p>(e) any on-site biodiversity offsets; and</p>	
<p>(f) any existing cleared areas on the site.</p>	

PART E – SUMMARY

E.1 VEGETATION

No threatened vegetation communities listed on Schedule 3A of the *Nature Conservation Act 2002* exist on the Study Area.

E.2 THREATENED FLORA SPECIES

No flora species listed on the *Threatened Species Protection Act 1995* or the *Environment Protection and Biodiversity Conservation Act 1999* were observed in the Study Area.

E.3 THREATENED FAUNA SPECIES

No fauna species listed on the *Threatened Species Protection Act 1995* or *Environment Protection and Biodiversity Conservation Act 1999* were observed in the Study Area during the survey.

E.4 ASSESSMENT OF THE DEVELOPMENT PER CLAUSE 7.6.2

The Study Area intersects the priority vegetation overlay (the 'Overlay') mapped in the Tasmanian Planning Scheme – Central Highlands. Hence, an assessment against the Acceptable Standard/Performance Criteria of Clause C7.6.2 is required. The outcomes of the assessment are provided below -

- Complies with P1.1 – meets (e) in that the clearance of native vegetation is for a building and works associated with the construction of a single dwelling.
- Complies with P1.2 – The native vegetation to be cleared for the single dwelling development is not priority vegetation within the meaning of the Scheme (see section D.3). Therefore, while the clearance is within a *priority vegetation area* there is no adverse impact on *priority vegetation*.

The Development complies with the Natural Assets Code requirements.

PART F – REFERENCES

FPA (Forest Practices Authority) (2022). Summary of threatened fauna species range boundaries and habitat descriptions. Forest Practices Authority, Hobart.

ATTACHMENTS

ATTACHMENT 1. NATURAL VALUES ATLAS (NVA) REPORT

Natural Values Atlas Report

Authoritative, comprehensive information on Tasmania's natural values.

Reference:

Requested For: Downie Stone Hut

Report Type: Summary Report

Timestamp: 07:41:19 AM Tuesday 20 January 2026

Threatened Flora: buffers Min: 500m Max: 1000m

Threatened Fauna: buffers Min: 500m Max: 1000m

Raptors: buffers Min: 500m Max: 1000m

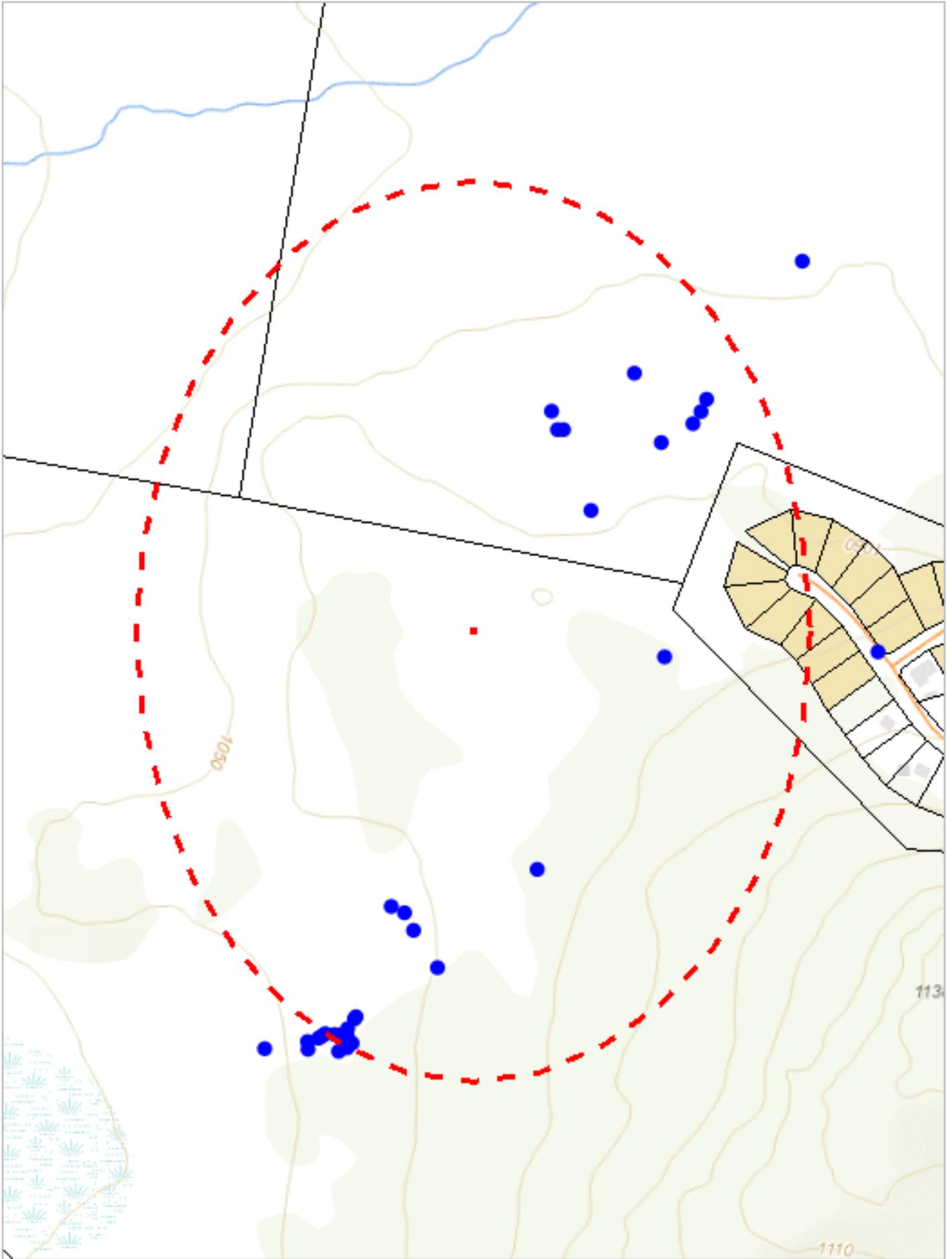


The centroid for this query GDA94: 472950.0, 5353771.0 falls within:

Property: 9680138

Threatened flora within 500 metres

473474, 5354472



472425, 5353069

Please note that some layers may not display at all requested map scales

Threatened flora within 500 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

▭ Polygon Verified

▭ Polygon Unverified

Legend: Cadastral Parcels



Threatened flora within 500 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
<i>Eucalyptus gunnii</i> subsp. <i>divaricata</i>	miena cider gum	e	EN	e	31	04-Oct-2017

Unverified Records

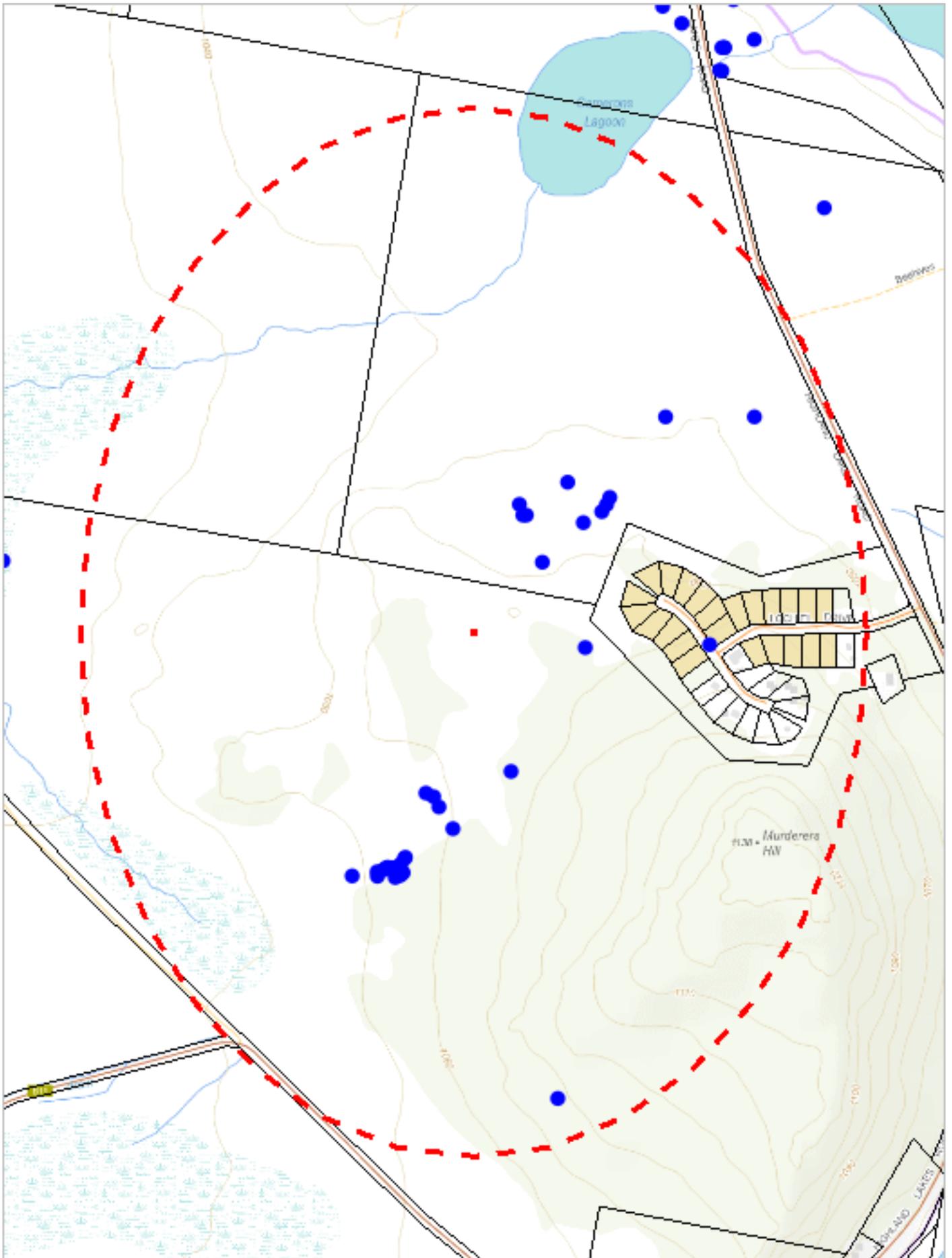
No unverified records were found!

For more information about threatened species, please contact Threatened Species Enquiries.

Telephone: 1300 368 550

Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000



472050, 5352568

Please note that some layers may not display at all requested map scales

Threatened flora within 1000 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

▭ Polygon Verified

▭ Polygon Unverified

Legend: Cadastral Parcels



Threatened flora within 1000 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
<i>Eucalyptus gunnii</i> subsp. <i>divaricata</i>	miena cider gum	e	EN	e	33	04-Oct-2017
<i>Hovea montana</i>	mountain purplepea	r		n	1	24-Nov-1978
<i>Pterostylis pratensis</i>	liawenee greenhood	v	VU	e	5	27-Dec-2010

Unverified Records

No unverified records were found!

For more information about threatened species, please contact Threatened Species Enquiries.

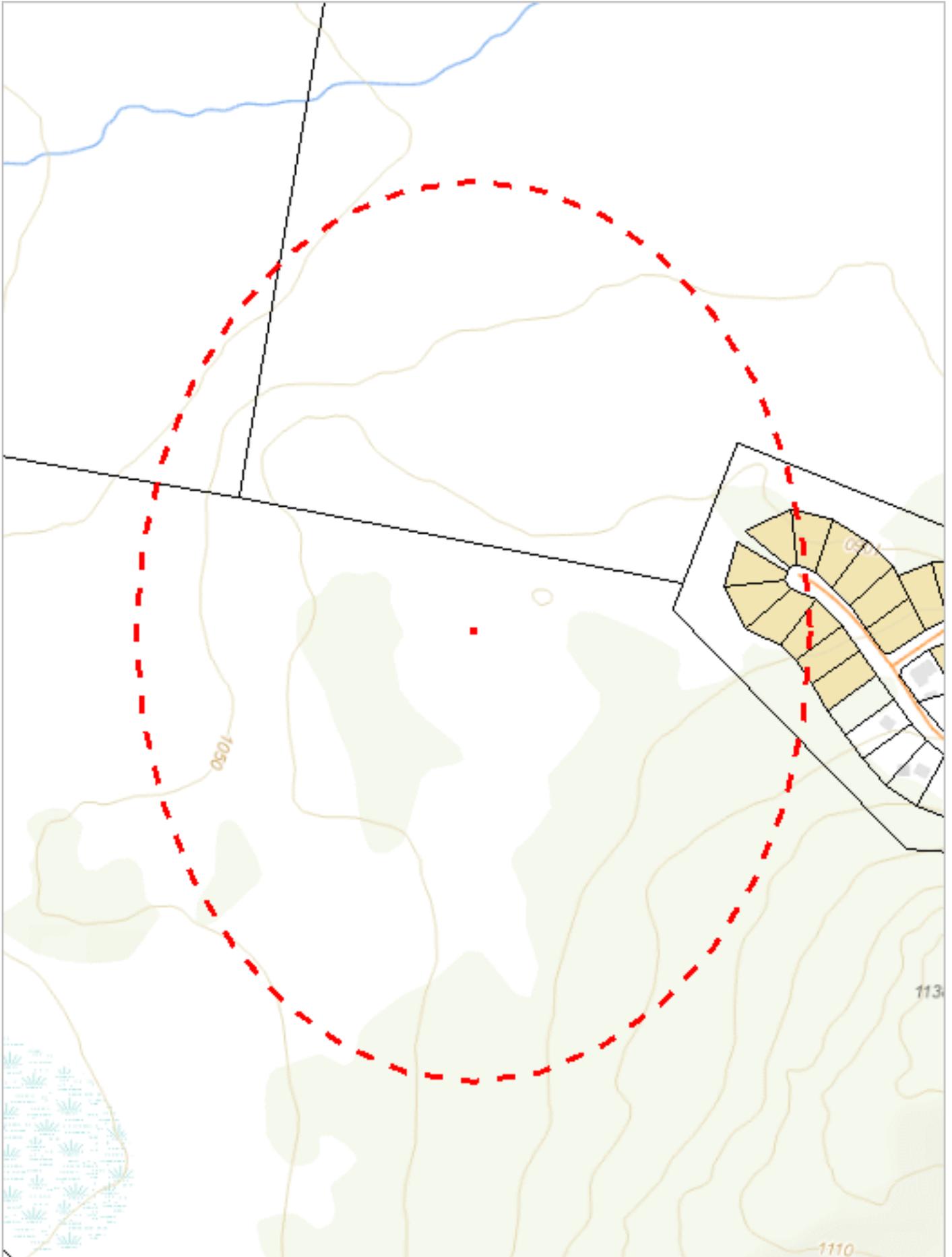
Telephone: 1300 368 550

Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened fauna within 500 metres

473474, 5354472



472425, 5353069

Please note that some layers may not display at all requested map scales

Threatened fauna within 500 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

□ Polygon Verified

□ Polygon Unverified

Legend: Cadastral Parcels



Threatened fauna within 500 metres

Threatened fauna within 500 metres (based on Range Boundaries)

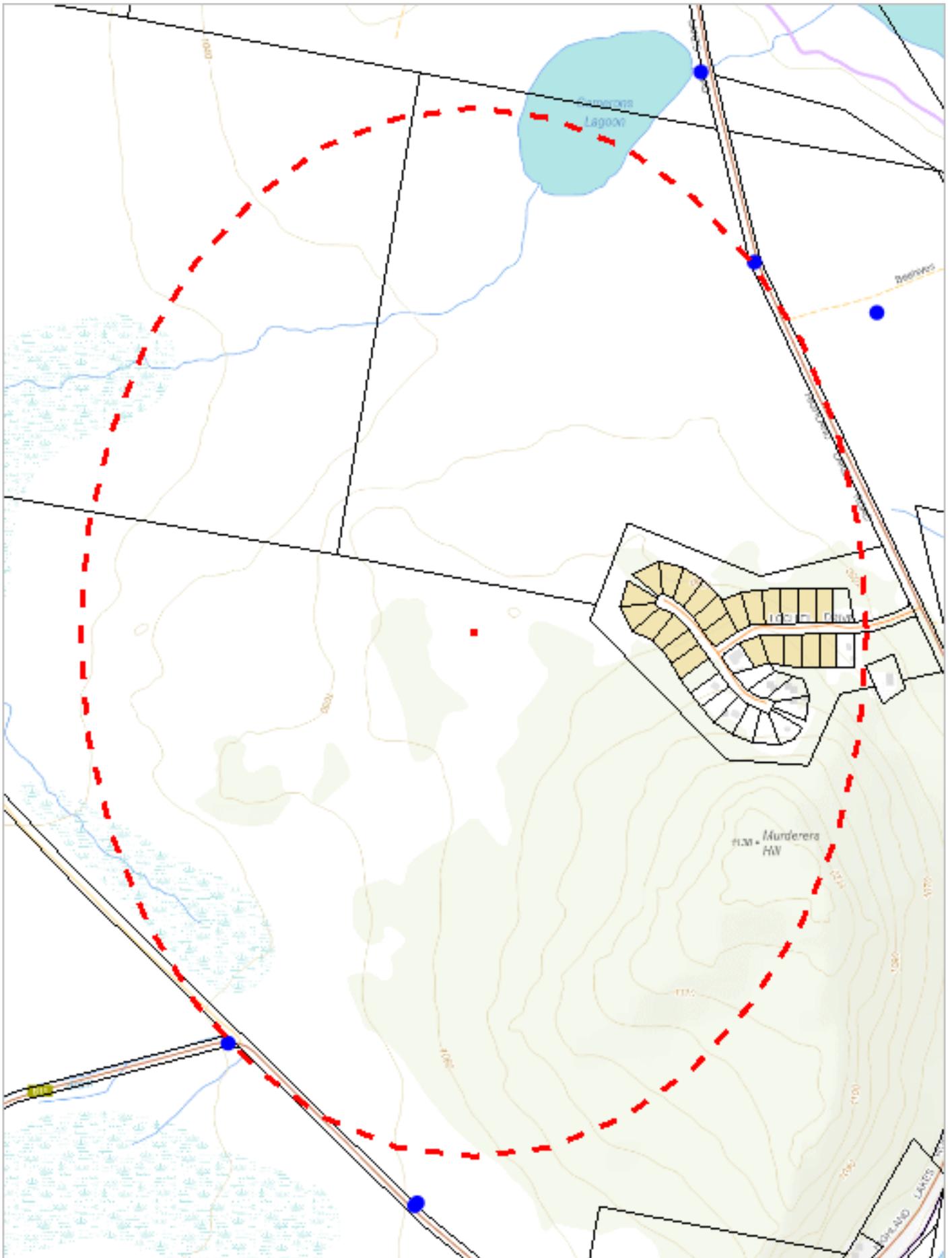
Species	Common Name	SS	NS	BO	Potential	Known	Core
<i>Mesacanthotelson tasmaniae</i>	isopod (great lake)	r		e	1	0	0
<i>Paragalaxias dissimilis</i>	shannon galaxias	v	VU	eH	1	1	0
<i>Uramphisopus pearsoni</i>	isopod (great lake)	r		e	1	0	0
<i>Tasniphargus tyleri</i>	amphipod (great lake)	r			1	0	0
<i>Mesacanthotelson setosus</i>	isopod (great lake)	r		e	1	0	0
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	v		n	2	0	0
<i>Castiarina insculpta</i>	miena jewel beetle	e		e	1	1	0
<i>Tyto novaehollandiae</i> subsp. <i>castanops</i>	Tasmanian masked owl	e	VU	e	1	0	0
<i>Onchotelson brevicaudatus</i>	isopod (great lake & shannon lagoon)	r		eH	1	0	0
<i>Dasyurus maculatus</i> subsp. <i>maculatus</i>	spotted-tailed quoll	r	VU	n	1	0	0
<i>Beddomeia tumida</i>	hydrobiid snail (great lake)	e		eH	1	0	0
<i>Onchotelson spatulatus</i>	isopod (great lake)	e		eH	1	0	0
<i>Paragalaxias electroides</i>	great lake galaxias	v	VU	eH	1	0	0
<i>Accipiter novaehollandiae</i>	grey goshawk	e		n	1	0	0
<i>Sarcophilus harrisi</i>	tasmanian devil	e	EN	e	1	0	0
<i>Benthodorbis pawpela</i>	Great Lake glaciatorbid snail	r		eH	1	0	0
<i>Oreixenica ptunarra</i>	ptunarra brown butterfly	e	EN	e	1	2	0
<i>Aquila audax</i> subsp. <i>fleayi</i>	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
<i>Dasyurus viverrinus</i>	eastern quoll		EN	n	0	0	1

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Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000



472050, 5352568

Please note that some layers may not display at all requested map scales

Threatened fauna within 1000 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

▭ Polygon Verified

▭ Polygon Unverified

Legend: Cadastral Parcels



Threatened fauna within 1000 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
<i>Castiarina inculpta</i>	miena jewel beetle	e		e	1	02-Feb-2014
<i>Oreixenica ptunarra</i> subsp. <i>ptunarra</i>	ptunarra brown butterfly	pv	PEN	e	1	01-Jan-1992
<i>Sarcophilus harrisii</i>	tasmanian devil	e	EN	e	1	01-Mar-2014

Unverified Records

No unverified records were found!

Threatened fauna within 1000 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
<i>Mesacanthotelson tasmaniae</i>	isopod (great lake)	r		e	1	1	0
<i>Paragalaxias dissimilis</i>	shannon galaxias	v	VU	eH	1	1	0
<i>Uramphisopus pearsoni</i>	isopod (great lake)	r		e	1	1	0
<i>Tasniphargus tyleri</i>	amphipod (great lake)	r			1	1	0
<i>Mesacanthotelson setosus</i>	isopod (great lake)	r		e	1	1	0
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	v		n	2	0	0
<i>Castiarina inculpta</i>	miena jewel beetle	e		e	1	1	0
<i>Tyto novaehollandiae</i> subsp. <i>castanops</i>	Tasmanian masked owl	e	VU	e	1	0	0
<i>Onchotelson brevicaudatus</i>	isopod (great lake & shannon lagoon)	r		eH	1	1	0
<i>Dasyurus maculatus</i> subsp. <i>maculatus</i>	spotted-tailed quoll	r	VU	n	1	0	0
<i>Beddomeia tumida</i>	hydrobiid snail (great lake)	e		eH	1	1	0
<i>Onchotelson spatulatus</i>	isopod (great lake)	e		eH	1	1	0
<i>Paragalaxias eleotroides</i>	great lake galaxias	v	VU	eH	1	0	0
<i>Accipiter novaehollandiae</i>	grey goshawk	e		n	1	0	0
<i>Sarcophilus harrisii</i>	tasmanian devil	e	EN	e	1	0	0
<i>Benthodorbis pawpela</i>	Great Lake glacidorbid snail	r		eH	1	0	0
<i>Glacidorbis pawpela</i>	hydrobiid snail (great lake)	pr			0	1	0
<i>Oreixenica ptunarra</i>	ptunarra brown butterfly	e	EN	e	1	2	0
<i>Aquila audax</i> subsp. <i>fleayi</i>	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
<i>Dasyurus viverrinus</i>	eastern quoll		EN	n	0	0	1

For more information about threatened species, please contact Threatened Species Enquiries.

Telephone: 1300 368 550

Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

*** No Raptor nests or sightings found within 500 metres. ***

*** No Raptor nests or sightings found within 1000 metres. ***



Site Classification to AS2870-2011 - Residential Slabs and Footings

1. Introduction

Strata Geoscience and Environmental Pty Ltd was commissioned to perform a limited scope geotechnical investigation and Site Classification to AS2870-2011 for:

Site Details and Key Investigation Outcomes	
Site Address	"Stone Hut" Marlborough Highway Miena
Property Owner/Client	MCA Architects
Development	Proposed new dwelling
Date of Investigation	3/11/2022
Key Geotechnical Limitations to Site Development	Rocky soil profiles, reactive soils, potential excavation difficulties, trees within zone of influence of future foundations.
Key Recommendations	Take all foundations to natural undisturbed stiff Silty CLAYS (CL/CH)/bedrock
Site Classification to AS2870-2011*	Class P- Alert to trees proximal to future foundations requiring design consideration.
Subsidiary Site Classification	Class M
Site Classification to AS4055- 2012	N3

2. Scope

It is the scope of this investigation to consider geotechnical factors affecting the current development plan (if available). Namely;

- Geotechnical Drilling of minimum 2 Bore (s) to 1.8 m or refusal (whichever first) with logging, sampling and in-situ testing as required
- Site Classification to AS2870-2011 Residential Slabs and Footings.

The above scope has been determined in consultation with the Client and is subject to time and budgetary considerations. Geotechnical investigations are informative processes and further works may be required depending upon the findings of the results of this investigation.

3. Site Investigation

Please refer to Appendices for the results of field/laboratory investigation (where relevant) including site photographs, bore logs, bearing capacity and other relevant data.

4. Interpretation

Geotechnical Parameter	Results
General Comments	Slightly sloping site, rock outcroppings evident, possible excavation difficulties. Proposed location of dwelling not ground truthed.
Development Plans Supplied (Yes/No)	Yes
Site Geology (MRT Tas 1:25000)	Jurassic Dolerite.
Geotechnical Risks:	
<i>Slope Instability</i>	Not mapped - Low Hazard Band (DPAC 2022 accessed via LISTMAP).
<i>Soft/Collapsing Soil</i>	Recommend maximum 100kPa working bearing taken to natural UNDISTURBED stiff Silty CLAYS (CL/CH)/Bedrock
<i>Groundsurface Movement</i>	Moderate
<i>Erosion Potential</i>	Moderate – dispersive soil phases possible
<i>Surface Water</i>	Not Encountered
<i>Shallow Groundwater/Perched Water</i>	Soils may become waterlogged in winter – recommend adequate drainage installation around all foundations.
<i>Uncontrolled Fill/Disturbed Soils</i>	Not encountered
<i>Impacting Vegetation (Onsite or on adjacent sites)</i>	Trees onsite possibly within zone of influence of future foundations requiring design consideration.
<i>Proposed or recent removal of building/structures</i>	Unknown
<i>Proposed or recent removal of trees</i>	Unknown
<i>Excavation Difficulties</i>	Colluvial rock and bedrock outcroppings evident. Excavations likely in residual soil and hard rock, possibly requiring specialised techniques.
<i>Bulk Earthworks (Completed/partially completed/not proposed)</i>	NA

5. Recommended Foundation Design Parameters

	Recommended Footing Designs		
	Slab	Pad/Strip	Pier/Pile Footings
Founding material ^{*1}	NATURAL UNDISTURBED SILTY CLAYS/COMPETENT BEDROCK (NOT UNCONTROLLED FILL)	NATURAL UNDISTURBED SILTY CLAYS/COMPETENT BEDROCK (NOT UNCONTROLLED FILL)	COMPETENT BEDROCK
Recommended Minimum Founding Depth (mm or m)	(variable depths)	(variable depths)	(variable depths)
Max Allowable Bearing Pressure (kPa)	100	100	100
Indicative Soil Ys (mm)	20-40mm	20-40mm	20-40mm

*1 Where depth to bedrock is given it is a guide only and will vary over the proposed development area(s). Refusal in geotechnical bores may be different than that of larger construction machinery and this may need to be factored into foundation design and contractor quotations.

It must be emphasised that in classifying the site, Strata Geoscience and Environmental P/L did not place sole reliance on the soil bore logs as a means of being an absolute representation of all subsurface features and conditions over the site. Any persons relying upon this document must not assume that subsurface conditions across the entire site will be identical to that represented in the bore logs.

Relevant information and guidance used in classifying the site includes several or all of the following:

1. Publications from Standards Australia, CSIRO, Foundation and Footings Society, Australian Geomechanics Society.
2. Well established and relevant knowledge of the behaviour of local soils and processes affecting soil behaviour (eg ephemeral springs, perched water tables, unstable slopes, collapsing soils, vegetation, etc).
3. The broad experience of the site classifier.
4. Specific investigations from nearby areas.
5. Past Performance of existing structures and foundations (where relevant and known)
6. Engineering Assessment of likely characteristic ground surface movement (ys) based upon estimated Ipt values and/or laboratory derived Iss values where relevant.

6. Construction Recommendations

6.1 Pre Construction

- Results of this investigation **MUST** be confirmed when specific development plans are finalised.
- Design depth to refusal for bored pier/driven pile designs may show variability over the site and may need to be considered in any contractor quotation. Construction machinery will show different depths to refusal that what is indicated in this investigation.
- Test pitting/piling with construction machinery is recommended before construction commences to determine excavatability of refusing substrate (if found).
- This investigation did not determine rock strength parameters of the refusing substrate (if found) and therefore no comment is made about the excavatability of rock at depth. Hard rock may be encountered which may be difficult to excavate and would therefore increase the costs associated with bulk earthworks.
- Rocks may be liberated from bulk earthworks or vertical boring. Where large rocks are liberated this may impact upon the ability to cost effectively build on the site and further advice should be sort from Strata. Such profiles may also significantly increase earthworks costs and or materials cost in foundations.
- Abnormal moisture conditions as defined in AS2870-2011 Clause 1.3.3 (a-d) **MUST** be considered in the design of competent footings. Without such consideration distresses of foundations may occur and result in non acceptable performance as defined in AS2870-2011 Clause 1.3.1.
- The recommendations of CSIRO Building Technology File 18 be adopted.
- An apron of paving around the building perimeter sloping away from foundations with a minimum fall of 1:60 be considered for Class M, H-1, H-2, E and P sites.

6.2 During Construction

Throughout construction it is highly recommended that:

- Inspection of the natural soil surface after footings excavation but prior to construction is recommended by Strata Geoscience and Environmental in accordance with Appendix D of AS 2870-2011. The site classification may be changed at this time depending upon the nature of the founding surface which is dependant in part on foundation design. Failure to ensure this will void all recommendations and classifications contained in this report.
- Site cutting should be avoided if possible and if it occurs below 500mmbgs occurs then reclassification **MUST** be commissioned.
- Fill **MUST NOT** be used as a founding substrate.
- All earthworks onsite must follow the recommendations of AS 3798-2007.
- Consideration should be given to drainage and sediment control on site during and after construction. Specifically upslope interceptor drainage must be placed around footings areas and downpipes must be directed away from discharging into founding areas.

- All colluvial rocks and boulders in founding zones should be removed
- All large trees near the building envelope must be removed. If construction takes place in summer or autumn then moisture conditions should be stabilised by soaking of dry areas around the former tree.
- Shrinkage cracking is almost inevitable in concrete slabs and is associated with the drying process. Therefore care must be taken where brittle or sensitive floor coverings are proposed, or where a polished slab is planned. The risk of damage can be reduced by not installing floor coverings until after shrinkage has occurred, which can take in excess of 3 months, or by using flexible mortars and appropriate sheeting material.
- Vertical barriers to prevent root incursions around founding zones should be considered in areas where gardens are to be established near foundations.

6.3 Post Construction

After construction there are certain practices that the owner/occupier should be aware of to prevent excessive foundation movements. The owner will be responsible for any damage or loss associated with disregard for the recommendations contained in CSIRO Building Technology Files 18 "Foundation Maintenance and Footings Performances: A Homeowners Guide" available through CSIRO.

It is furthermore recommended that:

- Gardens or large shrubs or trees must not be established immediately adjacent to foundations
- Garden beds or lawn near foundations must not be excessively watered.
- Leaking underground services and downpipes or gutters must be fixed immediately.



S Nielsen MEngSc CPSS
 Director
 Strata Geoscience and Environmental Pty Ltd
 E: sven@strataconsulting.com.au



Appendix 1 Site Photos





Appendix 2 SPT/DCP/Bore Logs

		Bore Log										BH01																
Client:												Coords																
Project:												Bearing: Dip:																
Drill Type:												R.L.: SEE WS																
Drilling Met:												Logged by:																
Fluid:												Date:																
RL	Depth (mm)	Graphic Log	Material Description	Soil			Rock			Weathering			Frac. Spacing (n)			Sampling and Insitu Testing												
				V Soft/V Loose	Soft/Loose	Firm/MDense	Stiff/Dense	V Stiff/V Dense	EX Low	Very Low	Low	Medium	High	Very High	Extremely High	EW	MW	SW	FS	FR	0.01	0.05	0.1	0.5	1	TYPE	ROD%	Test Results and Comments
			REDDISH BROWN CLAYEY SILT (ML):																									
	500		TRENDING REDDISH BROWN SILTY CLAY (CL/CH)																									
			SUDDEN REFUSAL																									
	1000																											
	1500																											
	2000																											
	2500																											
	3000																											
	3500																											
	4000																											
	4500																											
	5000																											
	5500																											
			BORE TERMINATED AT 1.3M																									
	6000																											



strata
geoscience and environmental

Bore Log

BH02

Client:		Coords	
Project:		Bearing:	Dip:
Drill Type:		R.L.: SEE WS	
Drilling Met/ Fluid		Logged by:	
		Date:	

RL	Depth (mm)	Graphic Log	Material Description	Soil			Rock			Weathering			Frac. Spacing (m)			Sampling and Insitu Testing												
				V Soft/V Loose	Soft/Loose	Firm/M Dense	Stiff/Dense	V Stiff/V Dense	Ext Low	Very Low	Low	Medium	High	Very High	Extremely High	EW	FW	MW	SW	FS	FR	0.01	0.05	0.1	0.5	1	TYPE	RCOD%
			INFERRED UNCONTROLLED FILL/DISTURBED																									
	500		REDDISH BROWN CLAYEY SILT (ML) SUDDEN REFUSAL																									
	1000																											
	1500																											
	2000																											
	2500																											
	3000																											
	3500																											
	4000																											
	4500																											
	5000																											
	5500																											
	6000																											

BORE TERMINATED AT 0.5M

Geotechnical Terms and Symbols

Soil Colour: Is described in the moist condition using black, white, grey, red, brown, orange, yellow, green or blue. Borderline cases can be described as a combination of two colours, with the weaker followed by the stronger. Modifiers such as pale, dark or mottled, can be used as necessary. Where colour consists of a primary colour with secondary mottling, it should be described as follows:

(Primary) mottled (Secondary). Refer to AS 1726-1993, A2.4 and A3.3.

Soil Moisture Condition: Is based on the appearance and feel of soil. Refer to AS 1726-1993, A2.5.

Term	Description
Dry	Cohesive soils; hard and friable or powdery, well dry of plastic limit. Granular soils; cohesionless and free-running.
Moist	Soil feels cool, darkened in colour. Cohesive soils can be moulded. Granular soils tend to cohere.
Wet	Soil feels cool, darkened in colour. Cohesive soils usually weakened and free water forms on hands when handling. Granular soils tend to cohere and free water forms on hands when handling.

Consistency of Cohesive Soils: May be estimated using simple field tests, or described in terms of a strength scale. In the field, the undrained shear strength (s_u) can be assessed using a simple field tool appropriate for cohesive soils, in conjunction with the relevant calibration. Refer to AS 1726-1993, Table A4.

Consistency - Essentially Cohesive Soils						Soil Particle Sizes	
Term	Field Guide	Symbol	SPT "N" Value	Undrained Shear Strength s_u (kPa)	Unconfined Compressive Strength q_u (kPa)	Term	Size Range
Very soft	Oozes between fingers when squeezed in hand.	VS	0-2	<12	<25	BOULDERS	>200 mm
Soft	Easily moulded with fingers.	S	2-4	12-25	25-50	COBBLES	63-200 mm
Firm	Can be moulded by strong pressure of fingers.	F	4-8	25-50	50-100	Coarse GRAVEL	20-63 mm
Stiff	Not possible to mould with fingers.	St	8-15	50-100	100-200	Medium GRAVEL	6-20 mm
Very stiff		VSt	15-30	100-200	200-400	Fine GRAVEL	2.36-6 mm
Hard	Can be indented with difficulty by thumb nail.	H	>30	>200	>400	Coarse SAND	0.6-2.36 mm
						Medium SAND	0.2-0.6 mm
						Fine SAND	0.075-0.2 mm
						SILT	0.002-0.075 mm
						CLAY	<0.002 mm

Note: SPT - N to q_u correlation from Terzaghi and Peck, 1967. (General guide only).

Consistency of Non-Cohesive Soils: Is described in terms of the density index, as defined in AS 1289.0-2000. This can be assessed using a field tool appropriate for non-cohesive soils, in conjunction with the relevant calibration. Refer to AS 1726-1993, Table A5; BS5930-1999, p117.

Consistency - Essentially Non-Cohesive Soils				
Term	Symbol	SPT N Value	Field Guide	Density Index (%)
Very loose	VL	0-4	Foot imprints readily	0-15
Loose	L	4-10	Shovels Easily	15-35
Medium dense	MD	10-30	Shovelling difficult	35-65
Dense	D	30-50	Pick required	65-85
Very dense	VD	>50	Picking difficult	85-100

Standard Penetration Test (SPT): Refer to AS 1289.6.3.1-2004. Example report formats for SPT results are shown below:

Test Report	Penetration Resistance (N)	Explanation / Comment
4, 7, 11	N=18	Full penetration; N is reported on engineering borehole log
18, 27, 32	N=59	Full penetration; N is reported on engineering borehole log
4, 18, 30/15 mm	N is not reported	30 blows causes less than 100 mm penetration (3 rd interval) – test discontinued
30/80 mm	N is not reported	30 blows causes less than 100 mm penetration (1 st interval) – test discontinued
rw	N<1	Rod weight only causes full penetration
hw	N<1	Hammer and rod weight only causes full penetration
hb	N is not reported	Hammer bouncing for 5 consecutive blows with no measurable penetration – test discontinued

Rock Descriptions

Refer to AS 1726-1993 (Appendix A3.3) for the description and classification of rock material composition, including:

- (a) Rock type (Table A6, (a) and (b))
- (b) Grain size
- (c) Texture and fabric
- (d) Colour (describe as per soil).

The condition of a rock material refers to its weathering characteristics, strength characteristics and rock mass properties. Refer to AS 1726-1993 (Appendix A3 Tables A8, A9 and A10).

Weathering Condition (Degree of Weathering):

The degree of weathering is a continuum from fresh rock to soil. Boundaries between weathering grades may be abrupt or gradational.

Rock Material Weathering Classification		
Weathering Grade	Symbol	Definition
Residual Soil	RS	Soil-like material developed on extremely weathered rock; the mass structure and substance fabric are no longer evident; there is a large change in volume but the material has not been significantly transported.
Extremely Weathered Rock	XW	Rock is weathered to such an extent that it has 'soil' properties, i.e. it either disintegrates or can be remoulded in water, but substance fabric and rock structure still recognisable.
Highly Weathered Rock	HW	Strong discolouration is evident throughout the rock mass, often with significant change in the constituent minerals. The intact rock strength is generally much weaker than that of the fresh rock.
Moderately Weathered Rock	MW	Modest discolouration is evident throughout the rock fabric, often with some change in the constituent minerals. The intact rock strength is usually noticeably weaker than that of the fresh rock.
Slightly Weathered Rock	SW	Rock is slightly discoloured but shows little or no change of strength from fresh rock.
Fresh Rock	FR	Rock shows no sign of decomposition or staining.

Notes:

- Minor variations within broader weathering grade zones will be noted on the engineering borehole logs.
- Extremely weathered rock is described in terms of soil engineering properties.
- Weathering may be pervasive throughout the rock mass, or may penetrate inwards from discontinuities to some extent.
- The 'Distinctly Weathered (DW)' class as defined in AS 1726-1993 is divided to incorporate HW and MW in the above table. The symbol DW should not be used.

Strength Condition (Intact Rock Strength):

Strength of Rock Material			
(Based on Point Load Strength Index, corrected to 50 mm diameter – $i_{p(50)}$. Field guide used if no tests available. Refer to AS 4133.4.1-2007.			
Term	Symbol	Point Load Index (MPa) $i_{p(50)}$	Field Guide to Strength
Extremely Low	EL	≤ 0.03	Easily remoulded by hand to a material with soil properties.
Very Low	VL	> 0.03 ≤ 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 3 cm thick can be broken by finger pressure.
Low	L	> 0.1 ≤ 0.3	Easily scored with a knife; indentations 1 mm to 3 mm show in the specimen with firm blows of the pick point; has dull sound under hammer. A piece of core 150 mm long by 50 mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
Medium	M	> 0.3 ≤ 1.0	Readily scored with a knife; a piece of core 150 mm long by 50 mm diameter can be broken by hand with difficulty.
High	H	> 1 ≤ 3	A piece of core 150 mm long by 50 mm diameter cannot be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer.
Very High	VH	> 3 ≤ 10	Hand specimen breaks with pick after more than one blow; rock rings under hammer.
Extremely High	EH	> 10	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.

Notes:

- These terms refer to the strength of the rock material and not to the strength of the rock mass which may be considerably weaker due to the effect of rock defects.
- Anisotropy of rock material samples may affect the field assessment of strength.

Geotechnical Terms and Symbols

Discontinuity Description: Refer to AS 1726-1993, Table A10.

Anisotropic Fabric		Roughness (e.g. Planar, Smooth is abbreviated FI / Sm) Class				Other		
BED	Bedding	Stepped (Stp)	Rough or Irregular (Ro)		I		Cl	Clay
FOL	Foliation		Smooth (Sm)		II		Fe	Iron
LIN	Mineral Lineation		Slickensided (Sl)		III		Co	Coal
Defect Type		Undulating (Un)	Rough (Ro)		IV		Carb	Carbonaceous
LP	Lamination Parting		Smooth (Sm)		V		Slmf	Soil Infill Zone
BP	Bedding Parting		Slickensided (Sl)		VI		Qz	Quartz
FP	Cleavage / Foliation Parting	Planar (Pl)	Rough (Ro)		VII		CA	Calcite
J, Js	Joint, Joints		Smooth (Sm)		VIII		Chl	Chlorite
SZ	Sheared Zone		Slickensided (Sl)		IX		Py	Pyrite
CZ	Crushed Zone	Aperture		Infilling		Int	Intersecting	
BZ	Broken Zone	Closed	CD	No visible coating or infill		Clean	Cn	
HFZ	Highly Fractured Zone	Open	OP	Surfaces discoloured by mineral/s		Stain	St	
AZ	Alteration Zone	Filled	FL	Visible mineral or soil infill <1mm		Veneer	Vr	
VN	Vein	Tight	TI	Visible mineral or soil infill >1mm		Coating	Ct	
						Inc	Incipient	
						DI	Drilling Induced	
						H	Horizontal	
						V	Vertical	

Note: Describe 'Zones' and 'Coatings' in terms of composition and thickness (mm).

Discontinuity Spacing: On the geotechnical borehole log, a graphical representation of defect spacing vs depth is shown. This representation takes into account all the natural rock defects occurring within a given depth interval, excluding breaks induced by the drilling / handling of core. Refer to AS 1726-1993, B85930-1999.

Defect Spacing			Bedding Thickness (Sedimentary Rock Stratification)		Defect Spacing in 3D	
Spacing/Width (mm)	Descriptor	Symbol	Descriptor	Spacing/Width (mm)	Term	Description
			Thinly Laminated	< 6	Blocky	Equidimensional
<20	Extremely Close	EC	Thickly Laminated	6 – 20	Tabular	Thickness much less than length or width
20 – 60	Very Close	VC	Very Thinly Bedded	20 – 60	Columnar	Height much greater than cross section
60 – 200	Close	C	Thinly Bedded	60 – 200		
200 – 600	Medium	M	Medium Bedded	200 – 600		
600 – 2000	Wide	W	Thickly Bedded	600 – 2000		
2000 – 6000	Very Wide	VW	Very Thickly Bedded	> 2000		
>6000	Extremely Wide	EW				

Defect Persistence (areal extent)	
Trace length of defect given in metres	

Symbols

The list below provides an explanation of terms and symbols used on the geotechnical borehole, test pit and penetrometer logs.

Test Results				Test Symbols	
PI	Plasticity Index	c'	Effective Cohesion	DCP	Dynamic Cone Penetrometer
LL	Liquid Limit	c_u	Undrained Cohesion	SPT	Standard Penetration Test
LI	Liquidity Index	c'_k	Residual Cohesion	CPTu	Cone Penetrometer (Piezocone) Test
DD	Dry Density	ϕ'	Effective Angle of Internal Friction	PANDA	Variable Energy DCP
WD	Wet Density	ϕ_u	Undrained Angle of Internal Friction	PP	Pocket Penetrometer Test
LS	Linear Shrinkage	ϕ'_k	Residual Angle of Internal Friction	U50	Undisturbed Sample 50 mm (nominal diameter)
MC	Moisture Content	c_c	Coefficient of Consolidation	U100	Undisturbed Sample 100mm (nominal diameter)
OC	Organic Content	m_v	Coefficient of Volume Compressibility	UCS	Uniaxial Compressive Strength
WPI	Weighted Plasticity Index	c_{sw}	Coefficient of Secondary Compression	Pm	Pressuremeter

Geotechnical Terms and Symbols

Test Results				Test Symbols	
WLS	Weighted Linear Shrinkage	e	Voids Ratio	FSV	Field Shear Vane
DoS	Degree of Saturation	ψ_w	Constant Volume Friction Angle	DST	Direct Shear Test
APD	Apparent Particle Density	q_t / q_c	Piezocene Tip Resistance (corrected / uncorrected)	PR	Penetration Rate
s_u	Undrained Shear Strength	q_u	PANDA Cone Resistance	A	Point Load Test (axial)
q_u	Unconfined Compressive Strength	$I_{p(20)}$	Point Load Strength Index	D	Point Load Test (diametral)
R	Total Core Recovery	RQD	Rock Quality Designation	L	Point Load Test (irregular lump)

 28/11/13	Groundwater level on the date shown		Water Inflow		Water Outflow
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Appendix 3 Terms and Conditions

Scope of Work

These Terms and Conditions apply to any services provided to you ("the Client") by Strata Geoscience and Environmental Pty Ltd ("Strata"). By continuing to instruct Strata to act after receiving the Terms and Conditions or by using this report and its findings for design and/or permit application processes and not objecting to any of the Terms and Conditions the Client agrees to be bound by these Terms and Conditions, and any other terms and conditions supplied by Strata from time to time at Strata's sole and absolute discretion. The scope of the services provided to the Client by Strata is limited to the services and specified purpose agreed between Strata and the Client and set out in the correspondence to which this document is enclosed or annexed ("the Services"). Strata does not purport to advise beyond the Services.

Third Parties

The Services are supplied to the Client for the sole benefit of the Client and must not be relied upon by any person or entity other than the Client. Strata is not responsible or liable to any third party. All parties other than the Client are advised to seek their own advice before proceeding with any course of action.

Provision of Information

The Client is responsible for the provision of all legal, survey and other particulars concerning the site on which Strata is providing the Services, including particulars of existing structures and services and features for the site and for adjoining sites and structures. The Client is also responsible for the provision of specialised services not provided by Strata. If Strata obtains these particulars or specialised services on the instruction of the Client, Strata does so as agent of the Client and at the Client's expense. Strata is not obliged to confirm the accuracy and completeness of information supplied by the Client or any third party service provider. The Client is responsible for the accuracy and completeness of all particulars or services provided by the Client or obtained on the Client's behalf. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever suffered by the Client or any other person or entity resulting from the failure of the Client or third party to provide accurate and complete information. In the event additional information becomes available to the Client, the Client must inform Strata in writing of that information as soon as possible. Further advice will be provided at the Client's cost. Any report is prepared on the assumption that the instructions and information supplied to Strata has been provided in good faith and is all of the information relevant to the provision of the Services by Strata. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever if Strata has been supplied with insufficient, incorrect, incomplete, false or misleading information.

Integrity

Any report provided by Strata presents the findings of the site assessment. While all reasonable care is taken when conducting site investigations and reporting to the Client, Strata does not warrant that the information contained in any report is free from errors or omissions. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from errors in a report. Any report should be read in its entirety, inclusive of any summary and annexures. Strata does not accept any responsibility where part of any report is relied upon without reference to the full report.

Project Specific Criteria

Any report provided by Strata will be prepared on the basis of unique project development plans which apply only to the site that is being investigated. Reports provided by Strata do not apply to any project other than that originally specified by the Client to Strata. The Report must not be used or relied upon if any changes to the project are made. The Client should engage Strata to further advise on the effect of any change to the project. Further advice will be provided at the Client's cost. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever where any change to the project is made without obtaining a further written report from Strata. Changes to the project may include, but are not limited to, changes to the investigated site or neighbouring sites, for instance, variation of the location of proposed building envelopes/footprints, changes to building design which may impact upon building settlement or slope stability, or changes to earthworks, including removal (site cutting) or deposition of sediments or rock from the site.

Classification to AS2870-2011

It must be emphasised that the site classification to AS2870-2011 and recommendations referred to in this report are based solely on the observed soil profile at the time of the investigation for this report and account has been taken of Clause 2.1.1 of AS2870 - 2011. Other abnormal moisture conditions as defined in AS2870 - 2011 Clause 1.3.3 (a) (b) (c) and (d) may need to be considered in the design of the structure. Without designing for the possibility of all abnormal moisture conditions as defined in Clause 1.3.3, distresses will occur and may result in non "acceptable probabilities of serviceability and safety of the building during its design life", as defined in AS2870 - 2011, Clause 1.3.1. Furthermore the classification is preliminary in nature and needs verification at the founding surface inspection phase. The classification may be changed at this time based upon the nature of the founding surface over the entire footprint of the project area. Any costs associated with a change in the site classification are to be incurred by the client. Furthermore any costs associated with delayed works associated with a founding surface inspection or a change in classification are to be borne by the client. Where founding surface inspections are not commissioned the classifications contained within this report are void. Classification is based upon a range of expected ground surface movement as indicated in AS2870-2011. Where the range of movement exceeds the stipulations for the nominated classification Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever suffered by the Client or any other person.

Slope Instability Risks

Where comment, modelling or treatment options are suggested to limit the risk of slope instability Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from actual slope instability or mass movement over the site at any point over the design life of any structures or neighbouring structures.

Subsurface Variations with Time

Any report provided by Strata is based upon subsurface conditions encountered at the time of the investigation. Conditions can and do change significantly and unexpectedly over a short period of time. For example groundwater levels may fluctuate over time, affecting latent soil bearing capacity and ex-situ/insitu fill sediments may be placed/removed from the site. Changes to the subsurface conditions that were encountered at the time of the investigation void all recommendations made by Strata in any report. Strata is not liable, and

accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from any change to the subsurface conditions that were encountered at the time of the investigation. In the event of a delay in the commencement of a project or if additional information becomes available to the Client about a change in conditions becomes available to the Client, the Client should engage Strata to make a further investigation to ensure that the conditions initially encountered still exist. Further advice will be provided at the Client's cost. Without limiting the generality of the above statement, Strata does not accept liability where any report is relied upon after three months from the date of the report, (unless otherwise provided in the report or required by the Australian Standard which the report purports to comply with), or the date when the Client becomes aware of any change in condition. Any report should be reviewed regularly to ensure that it continues to be accurate and further advice requested from Strata where applicable.

Interpretation

Site investigation identifies subsurface conditions only at the discrete points of geotechnical drilling, and at the time of drilling. All data received from the geotechnical drilling is interpreted to report to the Client about overall site conditions as well as their anticipated impact upon the specific project. Actual site conditions may vary from those inferred to exist as it is virtually impossible to provide a definitive subsurface profile which accounts for all the possible variability inherent in earth materials. Soil depths and composition can vary due to natural and anthropogenic processes. This is particularly pertinent to some weathered sedimentary geologies or colluvial/alluvial clast deposits which may show significant variability in depth to refusal over a development area. Furthermore where rocky profiles are encountered no comment is made about the potential size of liberated rocks from bulk earthworks or vertical boring. Where large rocks are liberated this may impact upon the ability to cost effectively build on the site and further advice should be sought from Strata. Such profiles may also significantly increase earthworks costs and or materials cost in foundations. Rock incongruities such as joints, dips or faults may also result in subsurface variability. Variability may lead to differences between the design depth of bored/driven piers compared with the actual depth of individual piers constructed onsite. It may also affect the founding depth of conventional strip, pier and beam or slab footings, which may result in increased costs associated with excavation (particularly of rock) or materials costs of foundations. Founding surface inspections should be commissioned by the Client prior to foundation construction to verify the results of initial site characterisation and failure to insure this will void the classifications and recommendations contained within this report. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from any variation from the site conditions inferred to exist.

Strata is not responsible for the interpretation of site data or report findings by other parties, including parties involved in the design and construction process. The Client must seek advice from Strata about the interpretation of the site data or report.

Report Recommendations

Any report recommendations provided by Strata are only preliminary. A report is based upon the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until earthworks and/or foundation construction is almost complete. Where variations in conditions are encountered, Strata should be engaged to provide further advice. Further advice will be provided at the Client's cost. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever if the results of selective point sampling are not indicative of actual conditions throughout an area or if the Client becomes aware of variations in conditions and does not engage Strata for further advice.

Geo-environmental Considerations

Where onsite wastewater site investigation and land application system designs are provided by Strata, reasonable effort will be made to minimise environmental and public health risks associated with the disposal of effluent within site boundaries with respect to relevant Australian guidelines and industry best practise at the time of investigation. Strata is not liable, and accepts no responsibility, for any claim, demand, charge, loss, damage, injury or expense whatsoever resulting from:

- (i) changes to either the project or site conditions that affect the onsite wastewater land application system's ability to safely dispose of modelled wastewater flows; or
- (ii) seepage, pollution or contamination or the cost of removing, nullifying or clearing up seepage, polluting or contaminating substances; or
- (iii) poor system performance where septic tanks have not been de-sludged at maximum intervals of 3 years or AWTs systems have not been serviced in compliance with the manufacturers recommendations; or
- (iv) failure of the client to commission both interim and final inspections by the designer throughout the system construction; or
- (v) the selection of inappropriate plants for irrigation areas; or
- (vi) damage to any infrastructure including but not limited to foundations, walls, driveways and pavements; or
- (vii) land instability, soil erosion or dispersion; or
- (viii) design changes requested by the Permit Authority.

Furthermore Strata does not guarantee septic trench and bed design life beyond 5 years from installation, given the influence various household chemicals have on soil structural decline and premature trench failure in some soil types

Strata does not consider site contamination, unless the Client specifically instructs Strata to consider the site contamination in writing. If a request is made by the Client to consider site contamination, Strata will provide additional terms and conditions that will apply to the engagement.

Copyright and Use of Documents

Copyright in all drawings, reports, specifications, calculations and other documents provided by Strata or its employees in connection with the Services remain vested in Strata. The Client has a licence to use the documents for the purpose of completing the project. However, the Client must not otherwise use the documents, make copies of the documents or amend the documents unless express approval in writing is given in advance by Strata. The Client must not publish or allow to be published, in whole or in part, any document provided by Strata or the name or professional affiliations of Strata, without first obtaining the written consent of Strata as to the form and context in which it is to appear.

If, during the course of providing the Services, Strata develops, discovers or first reduces to practice a concept, product or process which is capable of being patented then such concept, product or process is and remains the property of Strata and:

- (i) the Client must not use, infringe or otherwise appropriate the same other than for the purpose of the project without first obtaining the written consent of Strata; and
- (ii) the Client is entitled to a royalty free licence to use the same during the life of the works comprising the project.

Digital Copies of Report

If any report is provided to the Client in an electronic copy except directly from Strata, the Client should verify the report contents with Strata to ensure they have not been altered in any way from the original provide by Strata.

SEARCH OF TORRENS TITLE

VOLUME 243894	FOLIO 1
EDITION 9	DATE OF ISSUE 14-Sep-2021

SEARCH DATE : 22-Nov-2021

SEARCH TIME : 09.36 AM

DESCRIPTION OF LAND

Parish of FENWICK, Land District of CUMBERLAND
 Lot 1 on Plan 243894
 Derivation : Part of Lot 23253 Gtd. to E.N. Cameron
 Prior CT 4093/11

SCHEDULE 1

C976088 TRANSFER to PETER JOHN DOWNIE Registered
 27-Jul-2012 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

E45365 LEASE to VODAFONE NETWORK PTY LTD of a leasehold estate for the term of 10 years from 22-Feb-2017 (of that part of the said land within described as 1 104m2 on Annexure A on the plan attached to the said lease) Registered 14-Feb-2018 at noon

E45366 LEASE to VODAFONE NETWORK PTY LTD of a leasehold estate for the term of 10 years from 22-Feb-2027 (of that part of the said land within described as 1 104m2 on Annexure A on the plan attached to the said lease) Registered 14-Feb-2018 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OS-D 435

ANNEXURE TO **CERTIFICATE OF TITLE**
FOLIO OF REGISTER

VOL. 4093 FOL. 11



REGISTERED NUMBER

243894

Recorder of Titles

Lot 1 of this plan consists of all the land comprised in the above-mentioned cancelled folio of the Register.

