

Development Applications

Notice is hereby given under Section 57(3) of the *Land Use Planning & Approvals Act 1993* that an application has been made to the Break O' Day Council for a permit for the use or development of land as follows:

DA Number	DA 2025 / 00229
Applicant	Woolcott Land Services Pty Ltd
Proposal	Subdivision - 3 Lot Subdivision
Location	21921 Tasman Highway, Four Mile Creek (CT 128063/500) Shared Access and Existing ROW benefitting 21985 Tasman Highway, Four Mile Creek (CT 153014/1) to remain and Access to the subject site achieved via Acquired Road (CT 25384/102 and partially via CT 25384/101).

Plans and documents can be inspected at the Council Office by appointment, 32 – 34 Georges Bay Esplanade, St Helens during normal office hours or online at www.bodc.tas.gov.au.

Representations must be submitted in writing to the General Manager, Break O'Day Council, 32 -34 Georges Bay Esplanade, St Helens 7216 or emailed to admin@bodc.tas.gov.au, and referenced with the Application Number in accordance with section 57(5) of the abovementioned Act during the fourteen (14) day advertised period commencing on Saturday 14th February 2026 **until 5pm Monday 2nd March 2026.**

John Brown
GENERAL MANAGER



December 2025

PLANNING REPORT

Subdivision of the land - 3 lots

21921 Tasman Highway FOUR MILE CREEK



Prepared by
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Rev.no	Description	Date
1	Draft	18 September 2025
2	Draft	21 November 2025
3	Final	2 December 2025

References

Roads and Maritime Services NSW. 2013. *Updated Traffic Surveys*. NSW State Government.

Annexures

- Annexure 1 - Copy of title plan and folio text
- Annexure 2 - Subdivision proposal plan
- Annexure 3 - Bushfire Hazard Package
- Annexure 4 - Natural Values Assessment
- Annexure 5 - Onsite wastewater Assessment

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1. Introduction

This report has been prepared in support of a planning permit application under Section 57 of the *Land Use Planning and Approvals Act 1993*.

Proposed development
Subdivision of the land - 1 lot to 3 lots

This application is to be read in conjunction with the following supporting documentation:

Document	Consultant
Proposal Plan	Woolcott Land Services
Bushfire Hazard Assessment	Woolcott Land Services
Natural Values Assessment	ECOtas
Preliminary On-site Wastewater and Stormwater Disposal Site Evaluation	Geoton Pty Ltd

2. Subject site and proposal

2.1 Site details

Address	21921 TASMAN HWY FOUR MILE CREEK TAS 7215 <i>21985 TASMAN HWY FOUR MILE CREEK TAS 7215 (right of way)</i>
Property ID	1963407 <i>2838704</i>
Title	128063/500 <i>153014/1</i>
Land area	81.06ha
Planning Authority	Break O' Day Council
Planning Scheme	Tasmanian Planning Scheme - Break O' Day
Scheduled on title	Right of way Section 71 Agreement - fire buffer zone Section 102 & 34 - Conservation covenant
Application status	Discretionary application
Existing Access	3 x single access from Tasman Highway

	(1 with ROW)
Zone	Landscape Conservation
General Overlay	None
Overlays	Priority vegetation area Bushfire-prone areas Scenic road corridor - Tasman Highway - Great Eastern Drive Waterway and coastal protection area (Wetland & Buffer area) Low landslip hazard band Coastal inundation investigation area
Existing development	Single dwelling with outbuildings
Existing services and infrastructure	
Water	No service
Sewer	No service
Stormwater	No service

2.2 Proposal

The proposal is for a subdivision of the land to 3 lots. Lot 2 will contain the existing single dwelling and outbuildings. Lot 1 will retain the existing right of way easement in favour of CT.153014/1. Lots 1 and 3 will be vacant lots. Lot 3 will contain the covenanted area shown by CPR 6222 in entirety.

All access points are existing - no new access points are required.

Lot	Area	Frontage +-	Access
1	32.91ha	154.43m	From Tasman Highway - joint vehicle crossing with 21985 Tasman Highway
2	24.2ha	377.17m	Existing from Tasman Highway
3	20.6ha	450.26m	Existing from Tasman Highway

All lots as proposed will have onsite servicing.

The proposal includes building envelopes nominated on Lots 1 and 3. The envelopes have been selected based on the natural and considered landscape values of the site. The covenanted area of Lot 3 has also been taken into account together with potential opportunities for overlooking between lots and vegetation buffering from each lot and the road.

2.3 Images



Figure 1 Aerial view of the subject site according to current title (Source: LIST)

3. Zone and overlays

3.1 Zoning

The site is zoned Landscape Conservation under the Tasmanian Planning Scheme – Break O’ Day.

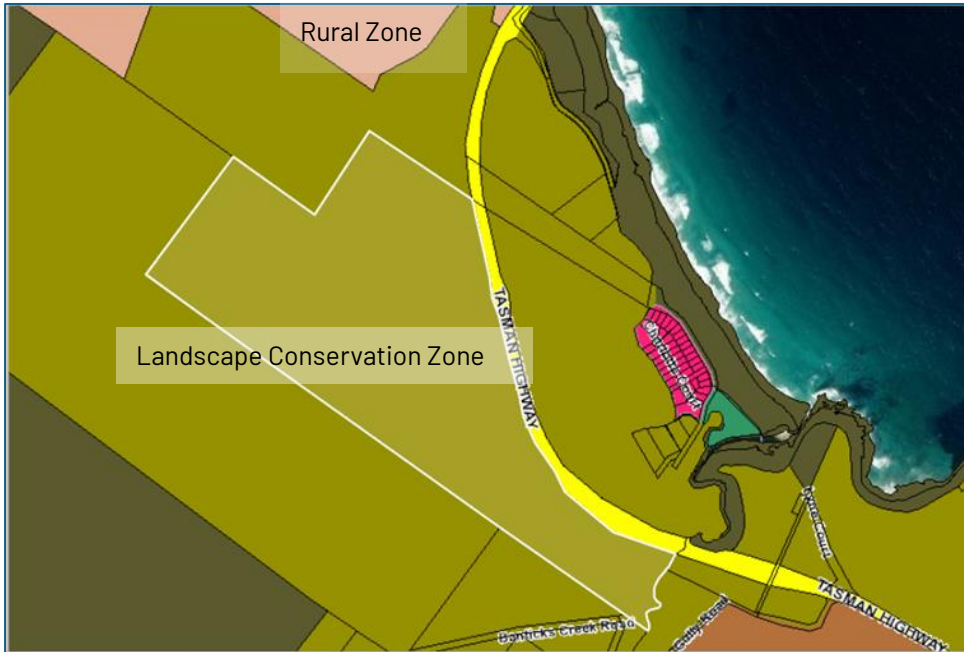


Figure 2 Zoning of the subject site and surrounds (Source: LIST)

3.2 Overlays

The entire site is affected by the Bushfire prone areas overlay (not shown for clarity). The Priority vegetation area, Waterway and coastal protection area, and Scenic tourist road corridor overlays are also in effect along with Landslip hazard band and Coastal inundation investigation area.

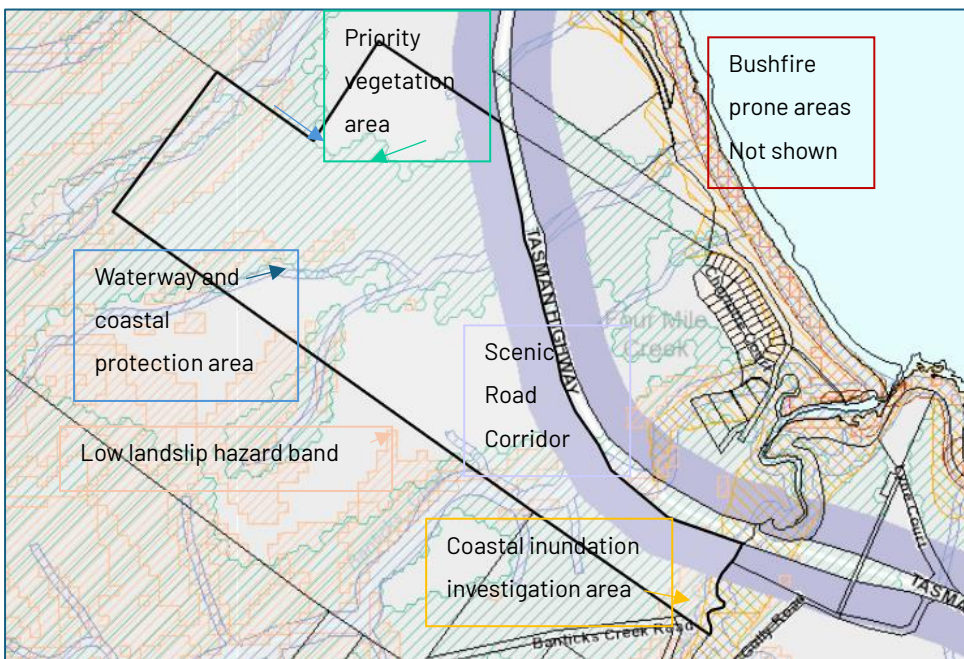


Figure 3 Overlays affecting the subject site (Source: LIST)

4. Planning Scheme Assessment

4.1 Zone assessment

22.0 Landscape Conservation Zone

22.1 Zone Purpose

- | | |
|--------|---|
| 22.1.1 | To provide for the protection, conservation and management of landscape values. |
| 22.1.2 | To provide for compatible use or development that does not adversely impact on the protection, conservation and management of the landscape values. |

Response

The proposed subdivision will not include works that create an impact to landscape values and will allow for compatible use and development in line with the provisions of the zone. Building envelopes and any future access requirements have been considered for natural and landscape values including buffering between lots and the road.

7.10 Development not Required to be Categorised into a Use Class

- 7.10.1 An application for development that is not required to be categorised into one of the Use Classes under subclause 6.2.6 of this planning scheme and to which 6.8.2 applies, excluding adjustment of a boundary under subclause 7.3.1, may be approved at the discretion of the planning authority.
- 6.2.6 Notwithstanding subclause 6.2.1 of this planning scheme, development which is for subdivision, a sign, land filling, retaining walls or coastal protection works does not need to be categorised into one of the Use Classes.

Response

The application for subdivision is not subject to the Use provisions of the Scheme.

22.5 Development Standards for Subdivision

22.5.1 Lot design

Objective	
That each lot: <ul style="list-style-type: none">a) has an area and dimensions appropriate for use and development in the zone;b) contain areas which are suitable for development, located to protect and conserve landscape values; andc) is provided with appropriate access to a road.	
Acceptable Solutions	Performance Criteria
A1 Each lot, or a proposed lot in a plan of subdivision, must: <ul style="list-style-type: none">a) have an area of not less than 50ha and:<ul style="list-style-type: none">i. be able to contain a minimum area of	P1 Each lot, or a proposed lot in a plan of subdivision, must have sufficient useable area and dimensions suitable for its intended use, having regard to: <ul style="list-style-type: none">a) the relevant Acceptable Solutions for

<p>25m x 25m, where native vegetation cover has been removed, with a gradient not steeper than 1 in 5, clear of:</p> <ul style="list-style-type: none"> a. all setbacks required by clause 22.4.2 A2, A3 and A4; and b. easements or other title restrictions that limit or restrict development; and <p>ii. existing buildings are consistent with the setback required by clause 22.4.2 A2, A3 and A4;</p> <ul style="list-style-type: none"> b) be required for public use by the Crown, a council or a State authority; c) be required for the provision of Utilities; or d) be for the consolidation of a lot with another lot provided each lot is within the same zone. 	<p>development of buildings on the lots;</p> <ul style="list-style-type: none"> b) existing buildings and the location of intended buildings on the lot; c) the ability to retain vegetation and protect landscape values on each lot; d) the topography of the site; and e) the pattern of development existing on established properties in the area, <p>and must have an area not less than 20ha.</p>
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Response

P1 The performance criteria are addressed as the proposed lots are less than 50ha in area.

- a. Lot 2 has existing development which will be contained the site. No further development is required for this lot.

A minimum area of 25m x 25m can be contained to each lot, and within the nominated building envelopes. Building envelopes have been allocated to Lots 1 and 3 that are compliant with the building standards of the zone. The building envelopes are selected based on minimal impact to priority vegetation, determined upon site visit and selection. There are variations in vegetation across the site so vegetation may or may not need to be removed within the envelopes, however, they are located where there are no significant natural values and landscape values will have least impact.

The existing dwelling will have a setback of 22m from the new boundary to the south east. The proposed building envelopes can account for all easements, setbacks and covenants.

- b. The existing building will be suitably accommodated on the lot. The location for any future buildings is included to the plan as a building envelope. The building envelope for Lot 3 is placed to allow buffering from Lot 2 by way of vegetation and topography while still taking into account the existing access, natural values and the ability to provide a vegetation buffer to the road. The building envelope do not encroach on to the conservation covenant or any areas of higher natural significance and avoids the Landslip hazard band. The building envelope for Lot 3 is located in an already cleared area.
- c. The building envelopes included to the plan are selected based on minimal impact to vegetation and landscape values and determined upon site visit and selection. There are variations in vegetation across the site so vegetation may or may not need to be removed within the envelopes, however, they are located where there are no significant natural values. The site has been assessed for both and a supplementary report is provided.

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- d. The site can be described as undulating but generally slopes down towards the east. Although not particularly challenging, the building envelopes take topography into account.
 - e. The surrounding lots are generally same zone as the subject site and predominantly include residential development. The following images plots identified development (presumed to be residential) in the zone in the surrounding area. Lot sizes differ greatly but the anticipated location of dwellings (shown on the subject site) to the proposed lots generally fits with the scatter pattern of dwellings in the area at a lower density.



Figure 4 Indication of dwellings development in the area and proposed envelope locations.

All proposed lots meet the minimum lot size of 20ha.

<p>A2 Each lot, or a proposed lot in a plan of subdivision, excluding those for public open space, a riparian or littoral reserve or Utilities must have a frontage of not less than 40m.</p>	<p>P2 Each lot, or a proposed lot in a plan of subdivision, must be provided with a frontage, or legal connection to a road by a right of carriageway that is sufficient for the intended use, having regard to:</p> <p>a) the number of other lots which have the land</p>
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	<p>subject to the right of carriageway as their sole or principal means of access;</p> <p>b) the topography of the site;</p> <p>c) the functionality and useability of the frontage;</p> <p>d) the anticipated nature of vehicles likely to access the site;</p> <p>e) the ability to manoeuvre vehicles on the site;</p> <p>f) the ability for emergency services to access the site; and</p> <p>g) the pattern of development existing on established properties in the area, and is not less than 3.6m wide.</p>
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Response

A2 Acceptable solution achieved. Each lot is provided with a frontage of at least 40m.

A3 Each lot, or a lot proposed in a plan of subdivision, must be provided with a vehicular access from the boundary of the lot to a road in accordance with the requirements of the road authority.	P3 Each lot, or a lot proposed in a plan of subdivision, must be provided with reasonable vehicular access to a boundary of a lot, if any, having regard to: <ul style="list-style-type: none"> a) the topography of the site; b) the length of the access; c) the distance between the lot or building area and the carriageway; d) the nature of the road and the traffic; and e) the anticipated nature of vehicles likely to access the site.
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Response

A3 The acceptable solution is achieved. All lots have an existing access point.

A4 No Acceptable Solution.	P4 Each lot, or a lot proposed in a plan of subdivision, must be capable of accommodating an on-site wastewater management system adequate for the intended use and development of the land, which minimises any environmental impacts.
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Response

P4 The performance criteria are addressed. The lots have a size of 20+ha each. The onsite wastewater infrastructure for the existing dwelling is contained to the new lot. Lots 2 and 3 are large enough that the provision of onsite wastewater infrastructure can be achieved. Please refer to Annexure 5.

4.2 Code Assessment

C2.0 Parking and Sustainable Transport Code

C2.5 Use Standards

C2.5.1 Car parking numbers

Response

A1 The acceptable solution is achieved.

It is submitted that the proposed lots each have sufficient car parking area for future uses given the size of the lots. Lot 2 will retain car parking as existing. Access from Tasman Highway is existing. Lot 3 will have an existing driveway. Lot 1 will use the part existing driveway. Future development will be subject to a separate application.

C2.6 Development Standards for Buildings and Works

No development for car parking or access is proposed.

C3.0 Road and Railway Assets Code

C3.5 Use Standards

C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction

Response

A1.1 The road is not a Category 1 road or limited access road. The road is Class 4 according to the State Road Hierarchy (Infrastructure Tasmania n.d.).

A1.2 No new vehicle crossing is proposed.

A1.3 Not applicable.

A1.4 The increase to foreseeable traffic will be within the accepted increase amount based on a single dwelling per lot.

A1.5 Vehicular traffic will be able to enter and leave in a forward direction to the major road.

C3.7 Development Standards for Subdivision

C3.7.1 Subdivision for sensitive uses within a road or railway attenuation area

Response

A1 The acceptable solution is achieved. The section of road (Tasman Highway) is Category 4, and not considered a major road according to Table C3.3.1.

C7.0 Natural Assets Code

Please refer to the assessment provided at Annexure 4.

C8.0 Scenic Protection Code

C8.6 Development Standards for Buildings and Works

C8.6.2 Development within a scenic road corridor

Response

A1 For the purpose of subdivision, no works are proposed, however, the building envelope for Lot 3 is within the Scenic road corridor, and addressed.

The building envelope is determined from site visit and is within an area of topography that will allow suitable buffering to the road by vegetation and variation in topography. Tree removal and future buildings are not anticipated to be visible from the road based on the location.

C11.0 Coastal Inundation Hazard Code

C11.7 Development Standards for Subdivision

C11.7.1 Subdivision within a coastal inundation hazard area

A1 The acceptable solution (a) is achieved. A building area, access and services potential is wholly located outside of the Coastal Inundation investigation area.

C12.0 Flood-Prone Areas Hazard Code

C12.7 Development Standards for Subdivision

C12.7.1 Subdivision within a flood-prone hazard area

A1 The acceptable solution is achieved. The site does not include the Flood prone areas overlay. Break O'Day localised mapping shows limited areas of flood potential commensurate with waterways on the site. The proposal plan shows that building areas and access can be wholly located outside of any risk areas.

C13.0 Bushfire-Prone Areas Code

Please refer to Annexure 5 for a response to this code.

5. Conclusion

The proposed subdivision in the Landscape Conservation Zone separates an existing dwelling and creates two vacant lots. Building envelopes are proposed to the vacant lots and are selected areas based on natural and landscape values, privacy between lots, avoidance of natural hazards and existing vehicle access provision.

The proposal is appropriate to the zone, and compliant with the overlays affecting the land. Approval for the subdivision is sought from Council.

**NATURAL VALUES ASSESSMENT OF 21921 TASMAN HIGHWAY
(PID 1963407; C.T. 128063/500; LPI FLW30), FOUR MILE
CREEK, TASMANIA**



**Environmental Consulting Options Tasmania (ECOtas) for
Dustin Hollick**

31 August 2025

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AUTHORSHIP

Field assessment: Brian French

Report production: Brian French & Mark Wapstra

Habitat and vegetation mapping: Brian French

Base data for mapping: LISTmap

Digital and aerial photography: Brian French, LISTmap, ESRI World Imagery

ACKNOWLEDGEMENTS

Michelle Schleiger (Woolcott Land Services) and Dustin Hollick (owner) provided information on the proposed land use.

QUALIFICATIONS

Except where otherwise stated, the opinions and interpretations of legislation and policy expressed in this report are made by the authors and do not necessarily reflect those of the relevant agency. The client should confirm management prescriptions with the relevant agency before acting on the content of this report. This report and associated documents do not constitute legal advice.

Note that any reference to the Department of Primary Industries, Parks, Water & Environment (DPIPWE) now refers to the Department of Natural Resources and Environment Tasmania.

COVER ILLUSTRATION

Wet forest and waterholes along Banticks Creek, which dissects the south of the subject title.

Please note: the blank pages in this document are deliberate to facilitate double-sided printing.

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SUMMARY

General

Dustin Hollick (owner) engaged Environmental Consulting Options Tasmania (ECOtas) to undertake a natural values assessment of 21921 Tasman Highway (PID 1963407; C.T. 128063/500; LPI FLW30), Four Mile Creek, Tasmania, primarily to that the requirements of the identified natural values are appropriately considered for the proposed subdivision under local, State and Commonwealth government approval protocols.

Site assessment

A natural values assessment of the study area was undertaken by Brian French (ECOtas) on 21 August 2025.

Summary of key findings

Threatened flora

- No plant species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) are known from database information, or were detected as a consequence of site assessment, from the study area.
- No plant species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) were recorded as a consequence of field assessment from the study area but two are known from database information, as follows:
 - *Desmodium gunnii* (southern ticktrefoil): species not detected at previously recorded location (original site well outside any area proposed for any form of development); and
 - *Glycine microphylla* (small leaf glycine): species not detected at previously recorded location (original site well outside any area proposed for any form of development).
- The absence of threatened flora species from the title means the site cannot be interpreted as "priority vegetation" (in relation to this value) pursuant to C7.3.1(b) of the *State Planning Provisions*.

Threatened fauna

- No fauna species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) are known from database information from the study area.
- One fauna species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) was detected from the study area, as follows:
 - *Tasmanipatus barretti* (giant velvet worm): three individuals were detected along drainage features (well outside any area proposed for any form of development).
- The study area supports potential habitat of several species (to different degrees), as follows:
 - *Sarcophilus harrisii* (Tasmanian devil);

- *Dasyurus maculatus* subsp. *maculatus* (spotted-tailed quoll);
 - *Dasyurus viverrinus* (eastern quoll);
 - *Perameles gunnii* subsp. *gunnii* (eastern barred bandicoot);
 - *Myiagra cyanoleuca* (satin flycatcher);
 - *Lathamus discolor* (swift parrot);
 - *Neophema chrysostoma* (blue-winged parrot);
 - *Aquila audax* subsp. *fleayi* (wedge-tailed eagle);
 - *Haliaeetus* [syn. *Ichthyophaga*] *leucogaster* (white-bellied sea-eagle);
 - *Tyto novaehollandiae* subsp. *castanops* (masked owl);
 - *Antipodia chaostola* tax. *leucophaea* (chaostola skipper); and
 - *Tasmanipatus barretti* (giant velvet worm).
- The parts of the title proposed for subdivision and dwelling sites do not support “significant habitat for a threatened fauna species”, at any reasonable scale or interpretation of the concept, such that these should not be construed as “priority vegetation” (in relation to this value) pursuant to C7.3.1(c) of the *State Planning Provisions*.

Vegetation types

- The study area supports the following TASVEG mapping units:
 - *Eucalyptus globulus* wet forest (TASVEG code: WGL);
 - *Eucalyptus amygdalina* coastal forest and woodland (TASVEG code: DAC);
 - *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL);
 - *Eucalyptus sieberi* forest and woodland on granite (TASVEG code: DSG);
 - *Bursaria-Acacia* woodland and scrub (TASVEG code: NBA);
 - regenerating cleared land (TASVEG code: FRG);
 - extra-urban miscellaneous (TASVEG code: FUM);
 - weed infestation (TASVEG code: FWU);
 - water, sea (TASVEG code: OAQ); and
 - lichen lithosere (TASVEG code: ORO).
- Occurrences of WGL, DAC, DSG, & NBA do not equate to native vegetation communities listed as threatened on Schedule 3A of the *Tasmanian Nature Conservation Act 2002*.
- Occurrences of *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL) equate to a native vegetation community (with the same name) listed as threatened on Schedule 3A of the *Tasmanian Nature Conservation Act 2002*.
- Occurrences of WGL, DAC, DGL, DSG, & NBA do not equate to threatened ecological communities listed under the Commonwealth *Environment Protection and Biodiversity Protection Act 1999*.
- The presence of “native vegetation...[that]...forms an integral part of a threatened native vegetation community as prescribed under Schedule 3A of the *Nature Conservation Act 2002*” (viz. *Eucalyptus globulus* dry forest and woodland) means that some parts of the site can be “priority vegetation” (in relation to this value) pursuant to C7.3.1(a) of the *State Planning Provisions* (but noting that the proposed building envelopes and accesses have been designed to avoid this vegetation community).

Weeds

- Several declared weed species listed on the Tasmanian *Biosecurity Act 2019 (Biosecurity Regulations 2022)* were detected from the study area, as follows:
 - *Digitalis purpurea* (foxglove);
 - *Erica lusitanica* (spanish heath);
 - *Leycesteria formosa* (himalayan honeysuckle); and
 - *Rubus leucostachys* (blackberry).
- Several potentially invasive environmental weed species were detected from the study area, as follows:
 - *Arum italicum* (italian arum);
 - *Cordyline australis* (cabbage palm);
 - *Delairea odorata* (cape ivy);
 - *Pittosporum undulatum* (sweet pittosporum);
 - *Vinca major* (blue periwinkle); and
 - *Zantedeschia aethiopica* (arum lily).

Plant disease

- No evidence of *Phytophthora cinnamomi* (PC, rootrot) was recorded within the study area
- No evidence of myrtle wilt was recorded within the study area.
- No evidence of myrtle rust was recorded within the study area.

Animal disease (chytrid)

- The study area does support habitats conducive to frog chytrid disease; however, these are wholly avoided by the current proposal.

Recommendations

The recommendations provided below are a summary of those provided in relation to each of the natural values described in the main report. The main text of the report provides the relevant context for the recommendations.

Vegetation types

In general terms, minimising the extent of “clearance and conversion” and/or “disturbance” to native vegetation is recommended, within the context of future residential dwellings being an acceptable use and acknowledging this will include access, establishment of a hazard management area (and associated elements) and in the longer-term possibly infrastructure such as boundary fences (if required).

It is noted that the location of future building envelopes (to satisfy minimum BAL-19 hazard management requirements) and associated access have been positioned to effectively avoid all higher priority native vegetation communities (specifically the areas mapped as *Eucalyptus globulus* dry forest and woodland).

With respect to possible future boundary fences, the following is suggested:

- it is recommended that at least 50% of each boundary or internal fence be constructed in a manner that allows free movement of ground-dwelling fauna (e.g. a simple post-and-wire fence rather than a 'gridlock' wire fence or solid paling or metal fencing that inhibits animal passage);
- it is recommended that the existing 'gridlock' wire fence be maintained along Tasman Highway to minimise roadkill incidents;
- barbed or electrified wire should be avoided (with the existing barbed top wire along the Tasman Highway boundary removed); and
- where fencing is required through threatened native vegetation (i.e. *Eucalyptus globulus* dry forest and woodland, TASVEG code: DGL), clearing should be minimised (e.g. no more than 1-2 m each side) and restricted to understorey clearing only, such that the integrity, composition and condition of the overall communities will be maintained (and free movement of vertebrate fauna also maintained).

Threatened flora

None detected – no special management should be required, noting that previously recorded locations of such species could not be confirmed and are well outside any area proposed for future development.

Threatened fauna

Apart from the generic recommendation to minimise the extent of "clearance and conversion" and/or "disturbance" to native vegetation (with acknowledged constraints), the following is also recommended (see also notes on fencing under Vegetation types):

- avoid, wherever practical, removal of hollow-bearing trees associated with boundary fencing/clearing; and
- avoid, wherever practical, removal of any individuals of *Eucalyptus globulus* (the mapped areas of DGL).

It is noted that potential habitat of other species (including the giant velvet worm) is effectively avoided by the placement of future building envelopes (to satisfy minimum BAL-19 hazard management requirements) and associated accesses in lower priority and previously modified vegetation types.

Weed and disease management

Eventual owner occupation is considered the most appropriate (and realistic) means of achieving control of any declared species, where vigilance and immediate control are practical. Regarding the distribution of declared and environmental weed species within the formally reserved conservation covenant area in the south, longer-term special management (e.g. a complex weed management plan) is possibly warranted. The specific requirements within the 'Terms of Covenant' that binds the current and future owners to specific management actions will need to be reviewed and considered in the context of the proposed southern title.

Legislative and policy implications

A permit under Section 51 of the Tasmanian *Threatened Species Protection Act 1995* (TSPA) should not be required as no specimens of listed flora or fauna will be “knowingly taken” as a consequence of subdivision and eventual occupation.

A formal referral to the relevant Commonwealth agency under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) is not considered required.

Development will require a planning permit pursuant to the provisions of the applicable planning scheme but P1.1 & P1.2 of C7.7.1 & C7.7.2 of the Natural Assets Code of the *Tasmanian Planning Scheme – Break O’Day* are considered satisfied (but see recommendations above).

INTRODUCTION

Purpose

Dustin Hollick (owner) engaged Environmental Consulting Options Tasmania (ECOtas) to undertake a natural values assessment of 21921 Tasman Highway (PID 1963407; C.T. 128063/500; LPI FLW30), Four Mile Creek, Tasmania, primarily to that the requirements of the identified natural values are appropriately considered for the proposed subdivision under local, State and Commonwealth government approval protocols.

Scope

This report relates to:

- flora and fauna species of conservation significance, including a discussion of listed threatened species (under the Tasmanian *Threatened Species Protection Act 1995* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*) potentially present, and other species of conservation significance/interest;
- vegetation types (forest and non-forest, native and exotic) present, including a discussion of the distribution, condition, extent, composition and conservation significance of each community;
- plant and animal disease management issues;
- weed management issues; and
- a discussion of some of the policy and legislative implications of the identified natural values.

This report follows the government-produced *Guidelines for Natural Values Surveys – Terrestrial Development Proposals* (DPIPWE 2015) in anticipation that the report (or extracts of it) may be required as part of various approval processes.

The report format should also be applicable to other assessment protocols as required by the relevant Commonwealth agency (for any referral/approval that may be required under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*), which is unlikely to be required in this case.

More specifically, this assessment and report have been prepared to address specific provisions of the *Tasmanian Planning Scheme – Break O’Day Local Provisions Schedule*, with particular reference to the provisions within the Natural Assets Code and Landscape Conservation zone.

Limitations

The natural values assessment was undertaken on 21 Aug. 2025. Many plant species have ephemeral or seasonal growth or flowering habits, or patchy distributions (at varying scales), and it is possible that some species were not recorded for this reason. However, every effort was made to sample the range of habitats present in the survey area to maximise the opportunity of recording most species present (particularly those of conservation significance). Late spring and into summer are usually regarded as the most suitable period to undertake most botanical assessments. While some species have more restricted flowering periods, a discussion of the potential for the site to support these is presented.

The survey was also limited to vascular species: species of mosses, lichens and liverworts were not recorded. However, a consideration is made of threatened species (vascular and non-vascular) likely to be present (based on habitat information and database records) and reasons presented for their apparent absence.

Surveys for threatened fauna were largely limited to an examination of "potential habitat" (i.e. comparison of on-site habitat features to habitat descriptions for threatened fauna), and detection of tracks, scats and other signs, except as indicated in **FINDINGS Threatened fauna**.

Permit

Any plant material was collected under DNRET permit TFL 24238 (under the names of Mark Wapstra & Brian French) Relevant data will be entered into DNRET's *Natural Values Atlas* database by the authors (records of environmental and declared weeds). Some plant material may be lodged at the Tasmanian Herbarium by the authors.

No vertebrate or invertebrate material was collected. Surveys were largely limited to opportunistic examination of potential habitat.

STUDY AREA

Land use proposal

The proposal is for a subdivision of the title into three lots. Lot 2 will contain the existing single dwelling, outbuildings and access. Lots 1 & 3 both have proposed access points directly off Tasman Highway to the respective nominated building areas.

At the time of assessment, indicative locations of the above elements were provided such that targeted surveys of these sites was undertaken. However, the balance of the title was assessed to provide context to all findings.

Overview – cadastral details

The study area comprises of a single title at 21921 Tasman Highway, Four Mile Creek, with the following cadastral details (Figures 1-3):

- PID: 1963407;
- C.T.: 128063/500; and
- LPI: FLW30.

[computed area: 786,826.926m²; measured area: 810,600m² i.e. ca. 81.06 ha]

Current land tenure and other categorisations of the study area are as follows:

- private freehold title;
- Break O'Day municipality, zoned as Landscape Conservation pursuant to the *Tasmanian Planning Scheme – Break O'Day Local Provisions Schedule* (Figure 4), and partly subject to the Priority Vegetation Area and Waterway and Coastal Protection Area overlays (Figure 5)
 - other overlays are present but are not subject to assessment under the present report.

The east of the title is subject to a ca. 11.8 ha formal Conservation Covenant (Plan Reference CPR6222) under the Tasmanian *Nature Conservation Act 2002* (Figure 6).

The subject title is bound on the eastern, southern and western sides by other private freehold titles, and the Tasman Highway on the northern boundary (Figures 1-3).

Other site features

The study area occurs on the foothills of the prominent east coast hinterland range (Figure 1). The title has a sloping generally easterly aspect that is dissected by the east-flowing tributaries of Lumera Creek in the north, Four Mile Creek and Banticks Creeks in the south and unnamed ephemeral drainage depressions in the centre-north (Figures 2 & 3). Elevation varies from effectively sea level associated with Four Mile Creek in the south to ca. 95 m on the prominent ridge in the northwest.

Apart from a small part of the title with an existing residential dwelling and associated elements, the balance of the site is essentially all native vegetation comprising mainly dry sclerophyll forest and woodland including regrowth woodland and scrub (see **FINDINGS Vegetation types** for more details). Historical imagery suggests that the regrowth areas of the title were cleared prior to 1949 associated with sheep grazing and orchards (Dustin Hollick pers. comm.) (Figure 7).

LISTmap's Fire History layer indicates that the entire title and surrounds was burnt in the large Lowrys Road bushfire (10 Dec. 2006) with a ca. 9.8 ha area in the north more recently burnt in an undetermined fire event (14 Dec. 2013) (Figure 8). This was confirmed by the survey with evidence of fire noted such as fire scars on *Eucalyptus* species and the regrowth form and structure of the vegetation. Furthermore, the relatively low species diversity is likely attributed to the high fire frequency and the former use of the title for agriculture.

The geology of the study area is mapped at a 1:250,000 scale (Figure 9) dominantly as Devonian-period "felsic pyroclastic rocks (St. Marys Porphyrite, volcanic equivalent of I-type granodiorite)" (geocode: Dp) with a small area in the south of Quaternary-period "coastal sand and gravel" (geocode: Qps) associated with the estuary of Four Mile Creek. The geology is mentioned because it has a strong influence on the classification of vegetation and the potential occurrence of threatened flora (and to a lesser extent, threatened fauna). The geology was confirmed informally by reference to the upper soil horizon exposed at several locations. In this case, the geology (and associated soils) is important in the classification of forests dominated by *Eucalyptus sieberi* (see **FINDINGS Vegetation types** for more details).

METHODS

Nomenclature

All grid references in this report are in GDA94, except where otherwise stated.

Vascular species nomenclature follows de Salas & Baker (2025) for scientific names and Wapstra et al. (2005+) for common names. Fauna species scientific and common names follow the listings in the cited *Natural Values Atlas* report (DNRET 2025a).

Vegetation classification follows TASVEG 4.0, as described in *From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation* (Kitchener & Harris 2013+).

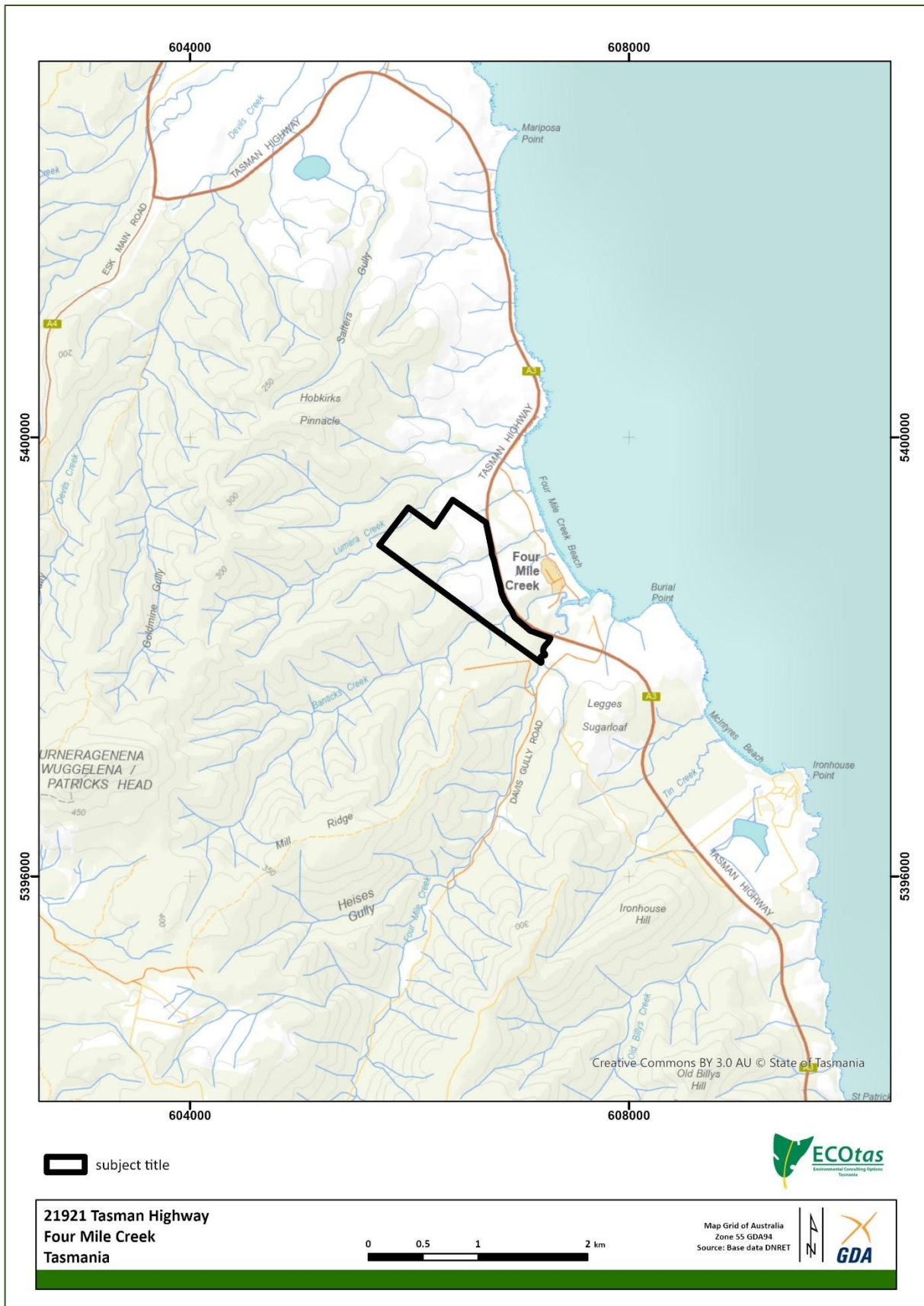


Figure 1. General location of study area

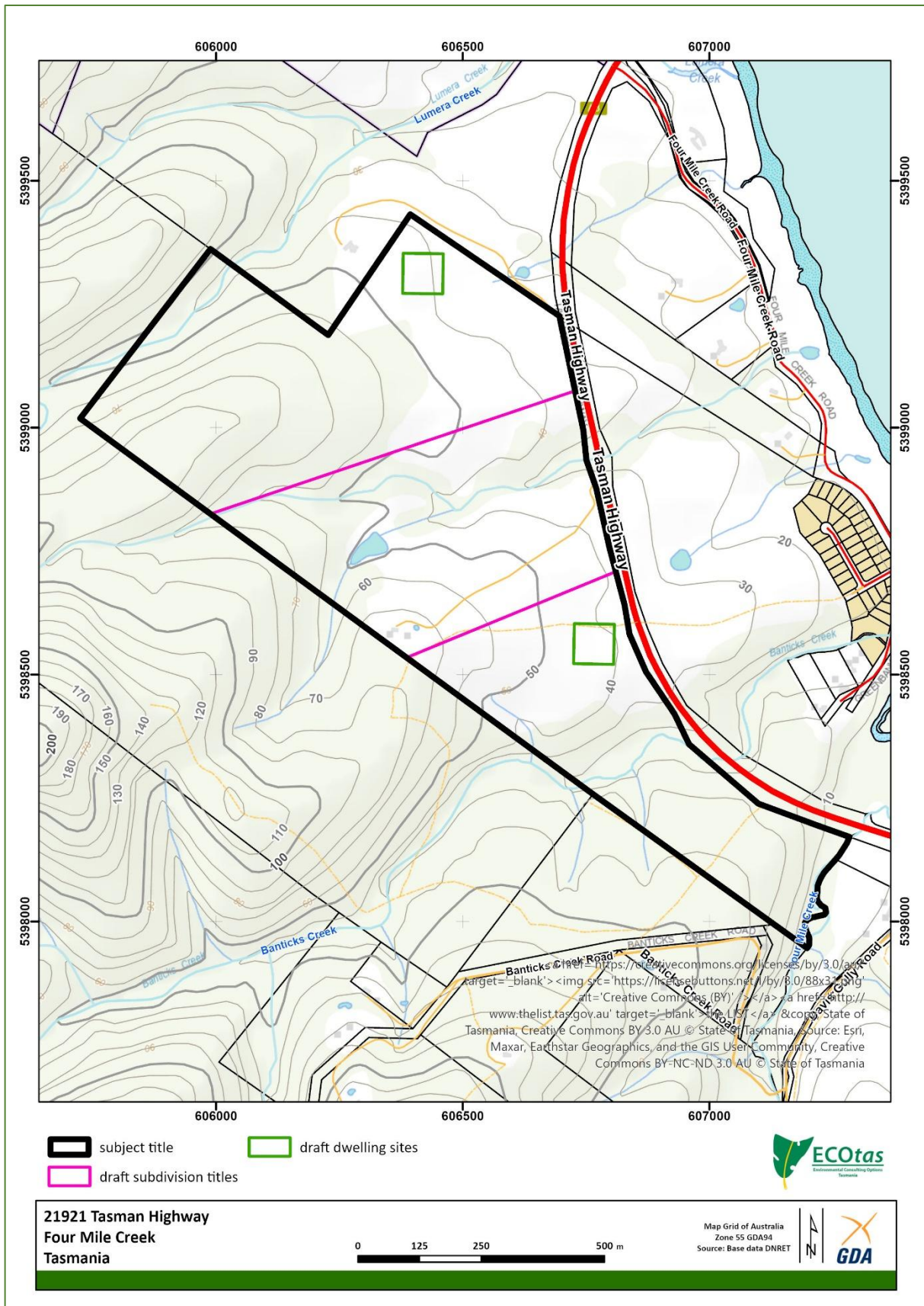


Figure 2. Detailed location of study area showing general topographic and cadastral features

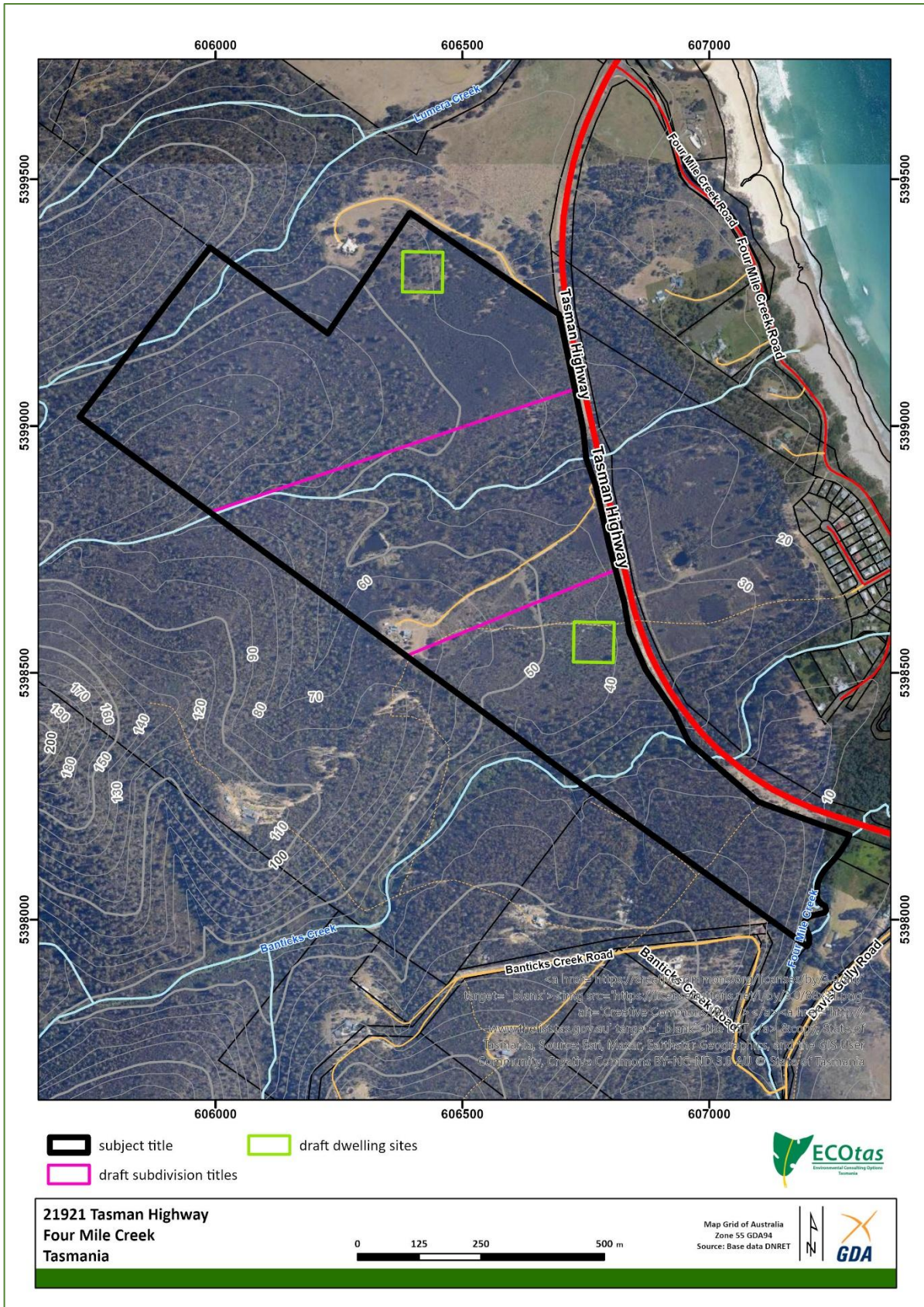


Figure 3. Detailed location of study area showing recent aerial imagery, cadastral boundaries, contours, watercourses and roads/tracks

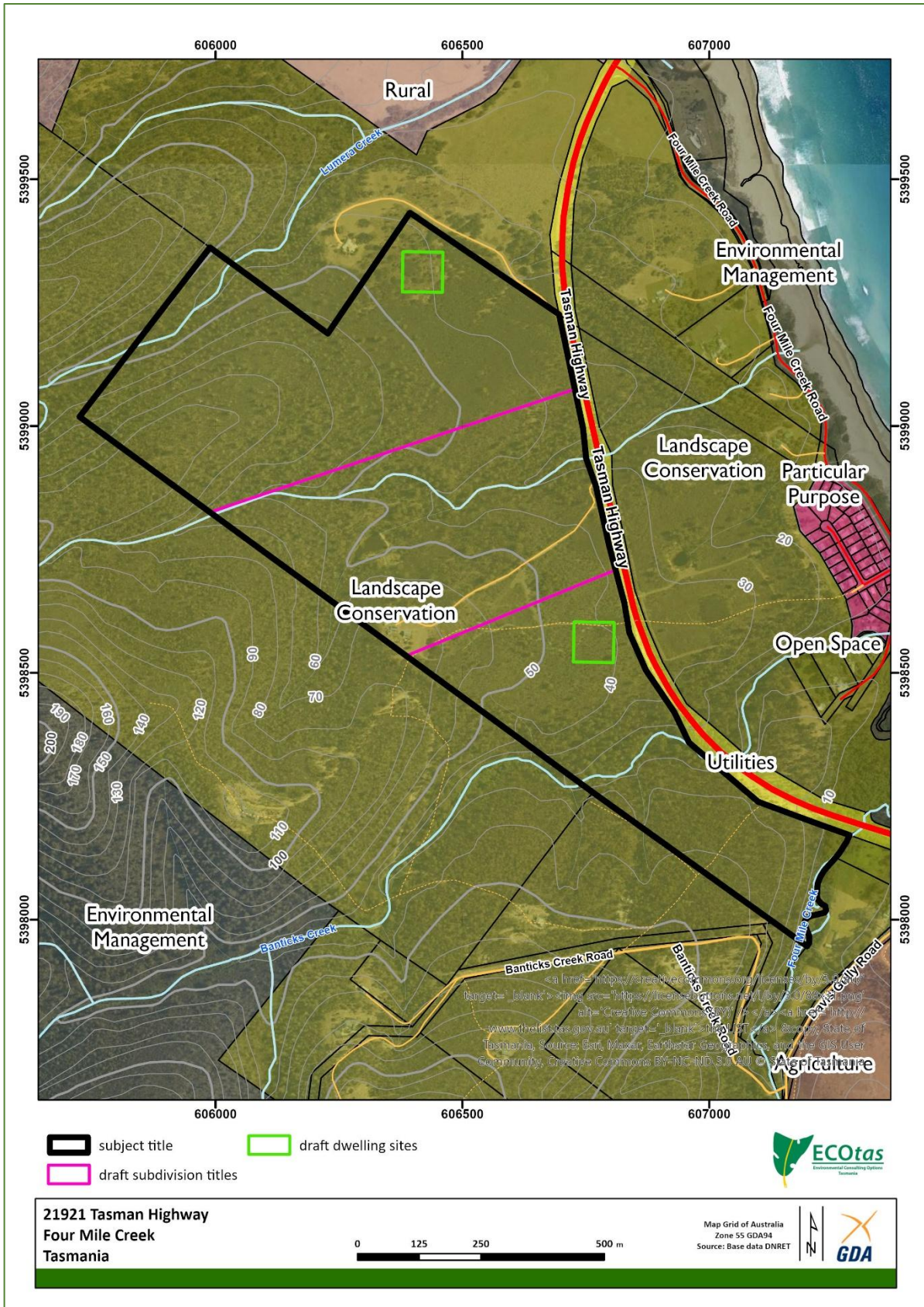


Figure 4. Zoning of study area and surrounds pursuant to the *Tasmanian Planning Scheme – Break O’Day Local Provisions Schedule*

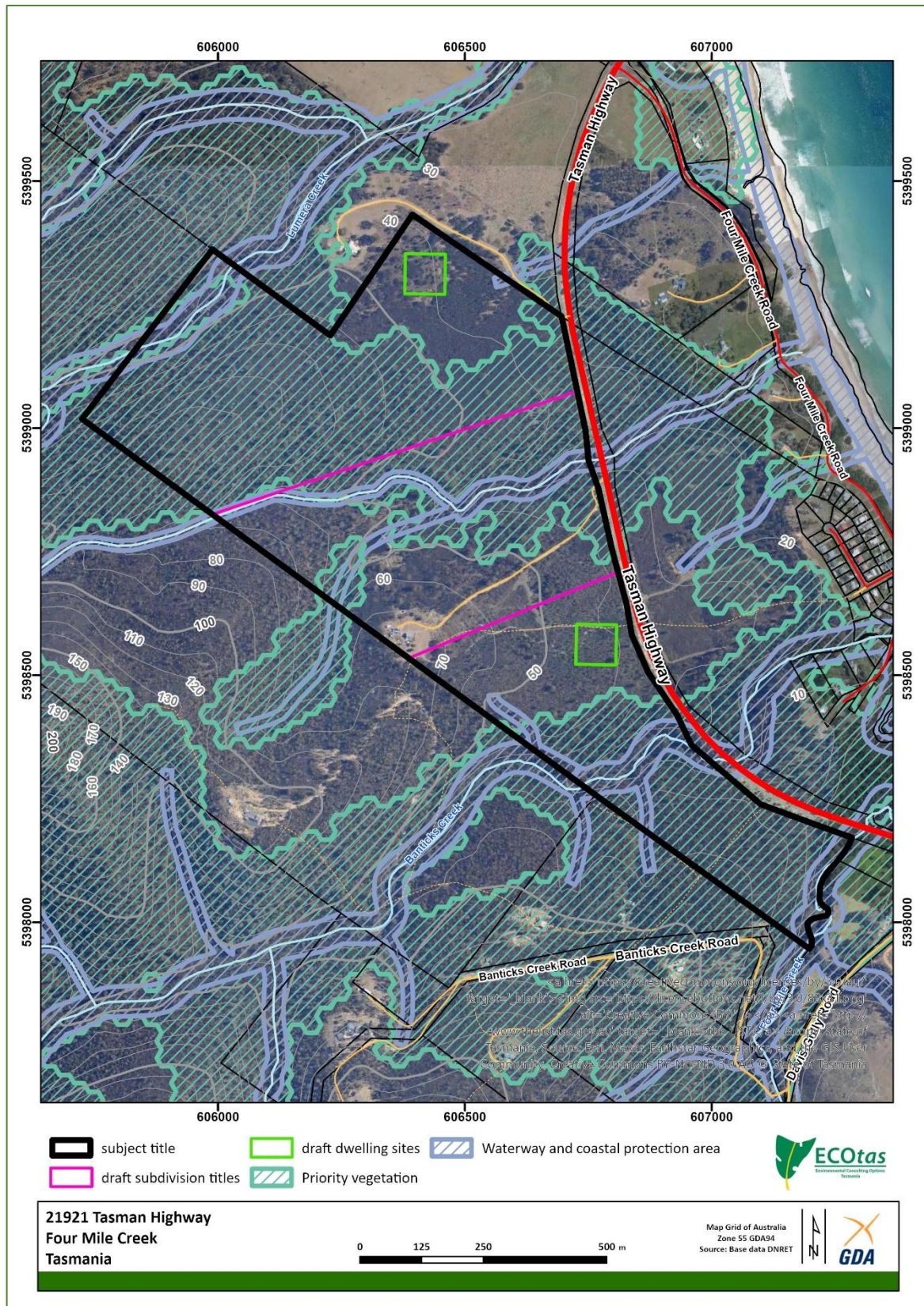


Figure 5. Extent of Priority Vegetation Area and Waterway and Coastal Protection Area overlays within and adjacent to study area pursuant to the *Tasmanian Planning Scheme – Break O’Day Local Provisions Schedule*

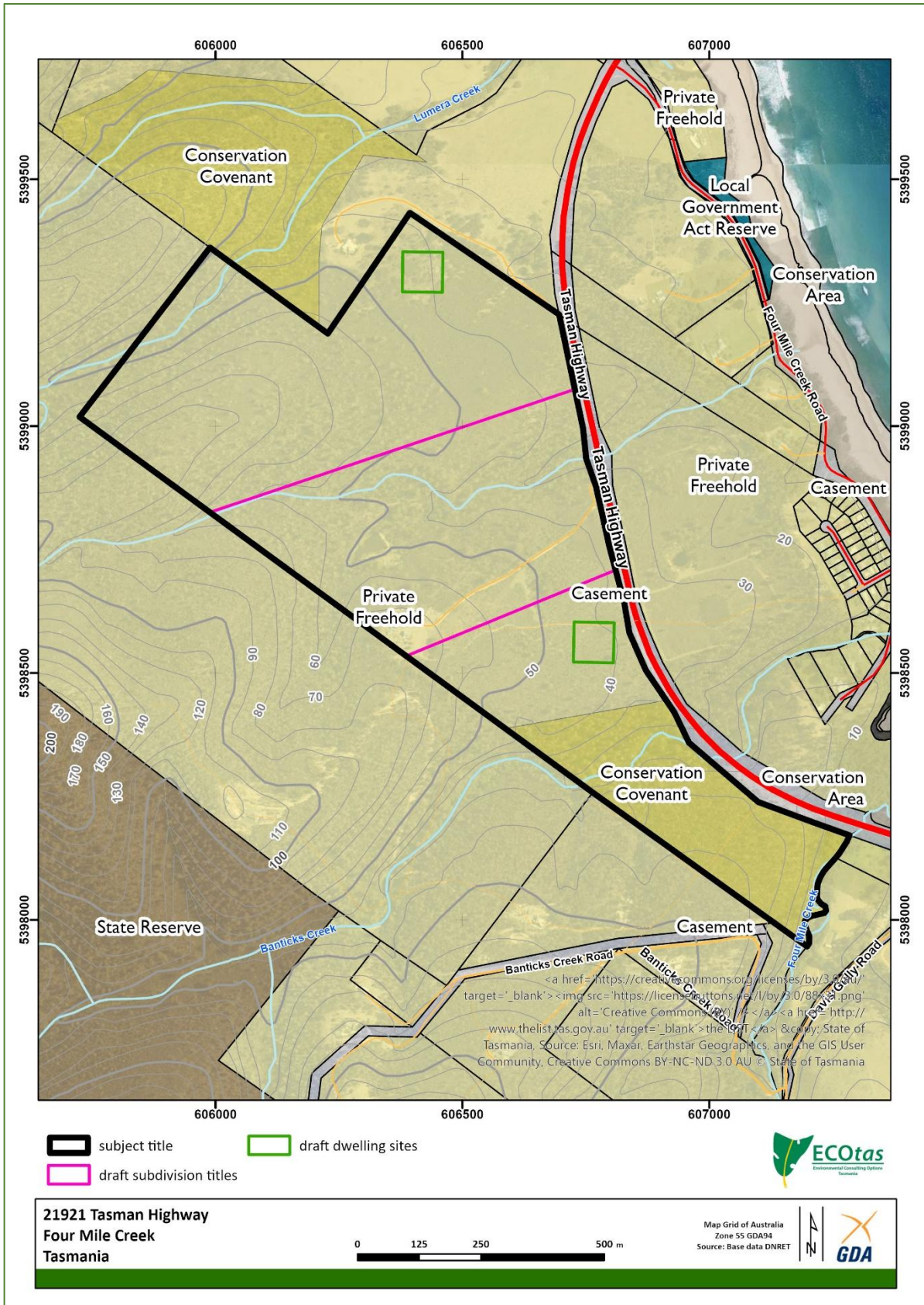


Figure 6. Land tenure of the title and surrounds with extent of the Conservation Covenant in the east of the title indicated

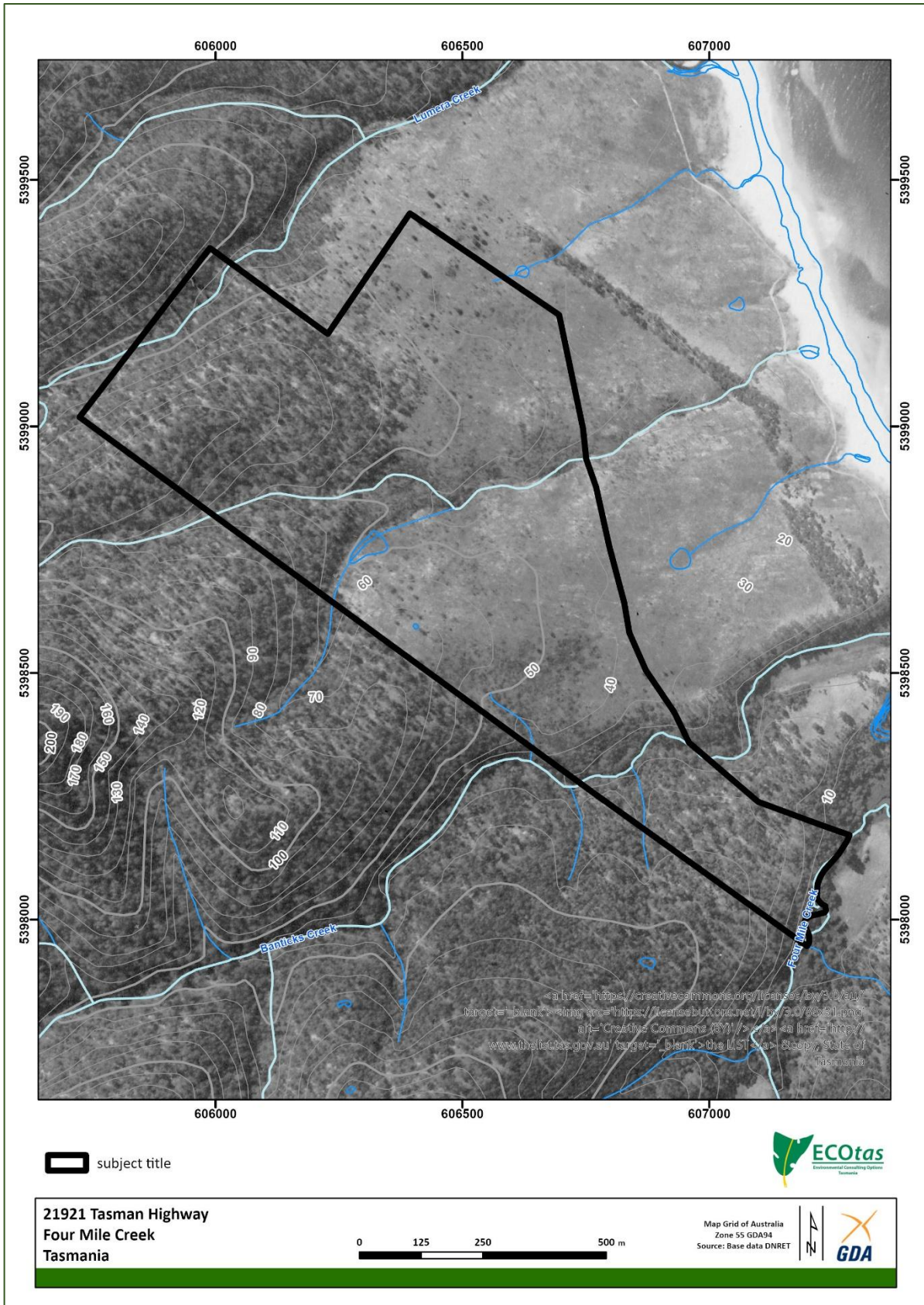


Figure 7. Historical aerial imagery of study area from 18 Mar. 1949 indicating the historical extent of cleared portion of title for sheep (wool) grazing

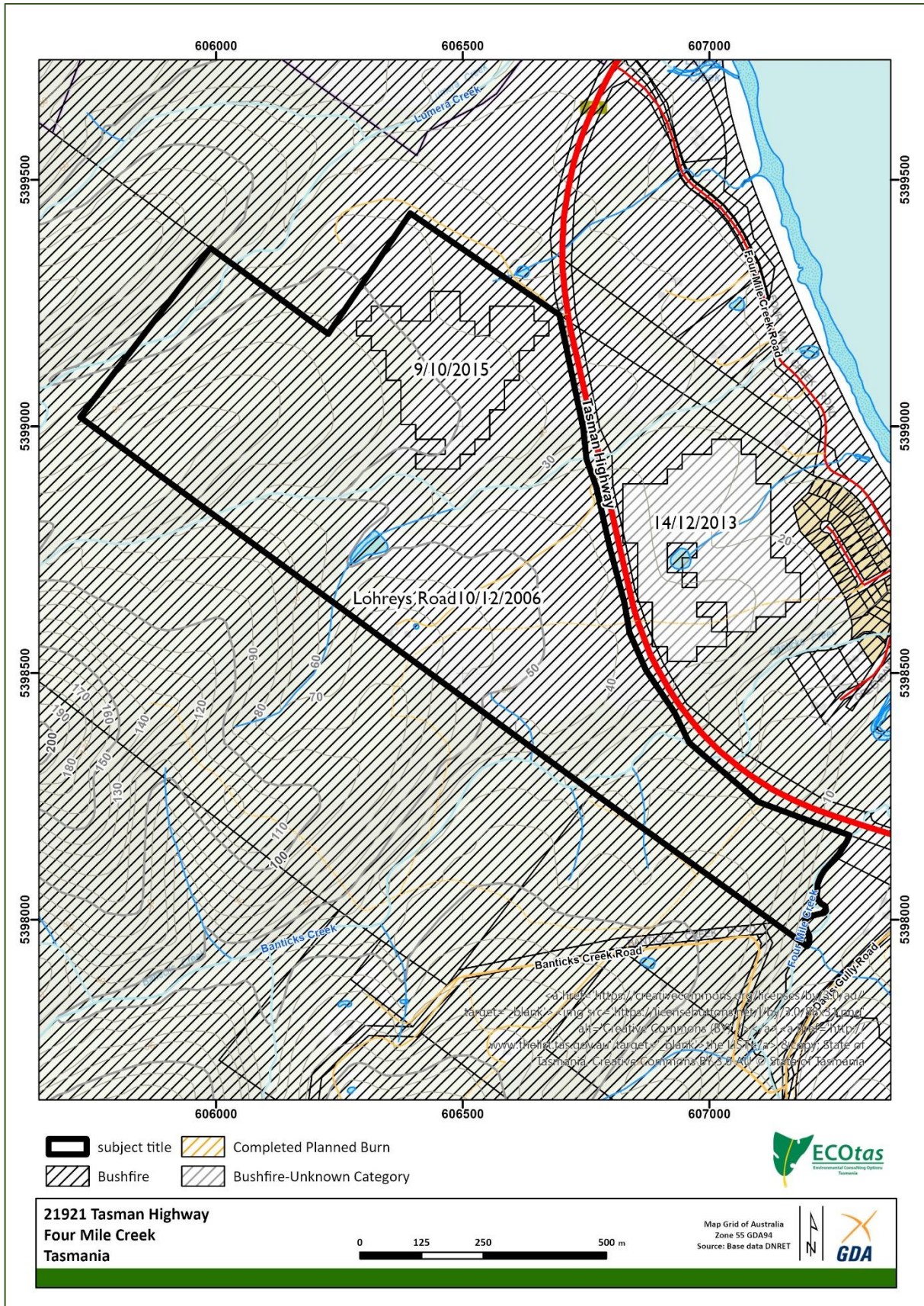


Figure 8. Recent fire history of study area and surrounds

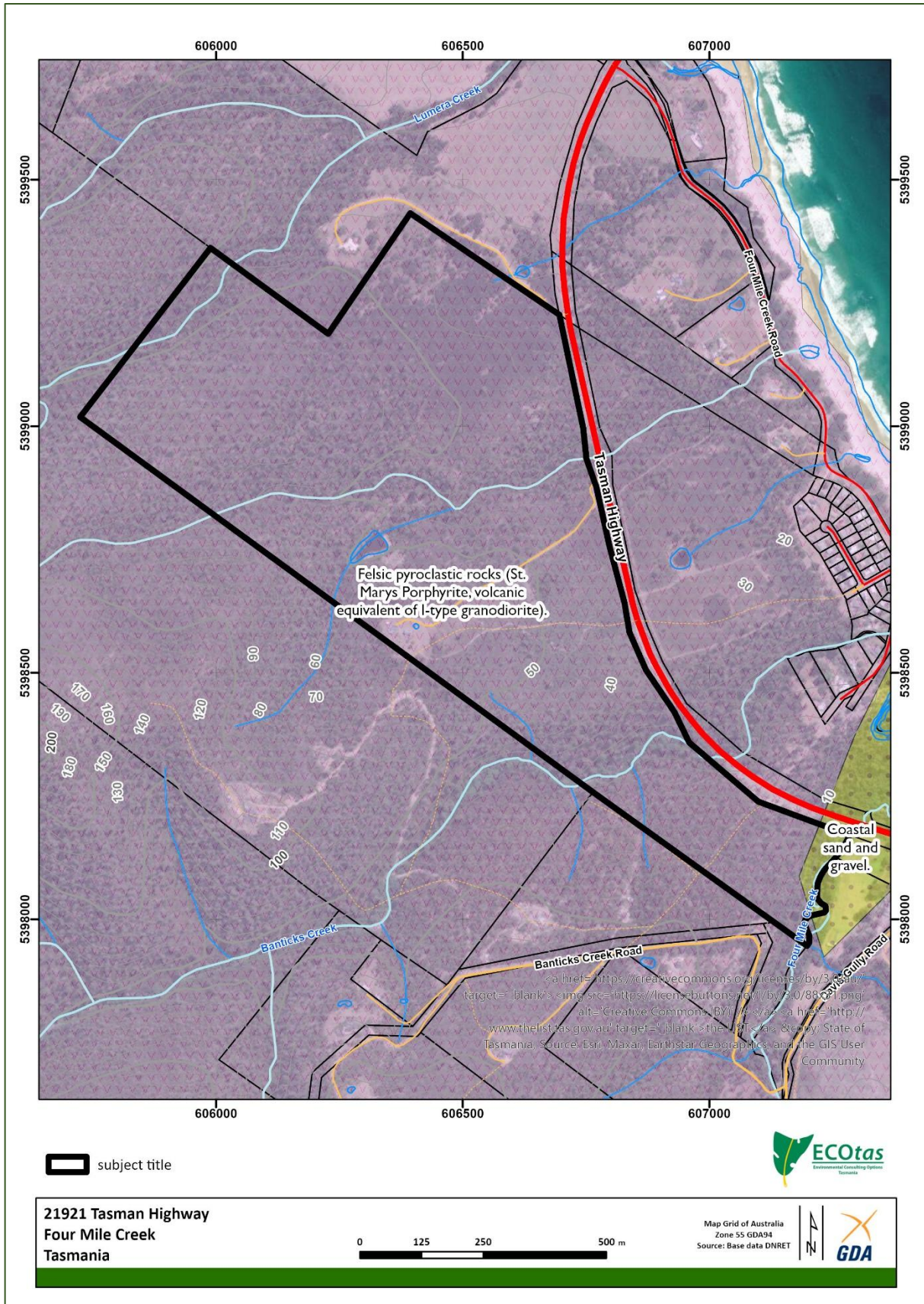


Figure 9. Geology (1:250,000 scale) of study area and surrounds

METHODS continued...

Preliminary investigation

Available sources of previous reports, threatened flora records, vegetation mapping and other potential environmental values were interrogated. These sources include:

- Tasmanian Department of Natural Resources & Environment Tasmania's *Natural Values Atlas* records for threatened flora and fauna (GIS coverage maintained by the authors current as at date of report);
- Tasmanian Department of Natural Resources & Environment Tasmania's *Natural Values Atlas* report ECOTas_21921_TasmanHwy_FourMileCk for a polygon defining the study area (centred on 606468mE 5398807mN), buffered by 5 km, dated 6 Aug. 2025 (DNRET 2025a) – Appendix E;
- Forest Practices Authority's *Biodiversity Values Database* report, specifically the species' information for grid reference centroid 606468mE 5398807mN (i.e. a point defining the approximate centre of the study area), buffered by 5 km and 2 km for threatened fauna and flora records, respectively, hyperlinked species' profiles and predicted range boundary maps, dated 6 Aug. 2025 (FPA 2025) – Appendix F;
- Commonwealth *Protected Matters Report* for a polygon defining the study area, buffered by 5 km, dated 6 Aug. 2025 (CofA 2025) – Appendix G;
- TASVEG vegetation coverages (as available through GIS coverage and via LISTmap);
- Google Earth, LISTmap orthoimagery and ESRI World Imagery; and
- other sources listed in tables and text as indicated.

Field assessment

The assessment was undertaken by Brian French (ECOtas) on 21 Aug. 2025. Cadastral data uploaded to the iGIS application guided the in-field assessment (boundaries only partially indicated by fences or other obvious survey markers). Hand-held GPS was used to waypoint natural values features for future mapping purposes.

The survey was not limited by access due to the relatively simple configuration of the study area with existing access and easily-traversed vegetation.

Vegetation classification

Vegetation was classified by waypointing vegetation transitions for later comparison to aerial imagery. The structure and composition of the vegetation types was described using a nominal 30 m radius plot at a representative site within the vegetation types, and compiling a "running" species list for the balance of the title.

Threatened (and priority) flora

With reference to the threatened flora, the survey included consideration of the most likely habitats for such species. The previously reported point locations of threatened flora from the title were navigated to using hand-held GPS: these locations were then searched.

Threatened fauna

Surveys for threatened fauna were largely limited to an examination of “potential habitat” (i.e. comparison of on-site habitat features to habitat descriptions for threatened fauna), and detection of tracks, scats and other signs, signs.

Refer to **FINDINGS Threatened fauna** for more details on methods associated with various species.

Weed and hygiene issues

The study area was assessed with respect to plant species classified as declared weeds under the Tasmanian *Biosecurity Act 2019 (Biosecurity Regulations 2022)*, Weeds of National Significance (WoNS) or “environmental weeds” (author opinion and as included in *A Guide to Environmental and Agricultural Weeds of Southern Tasmania*, NRM South 2017).

The study area was assessed with respect to potential impacts of plant and animal pathogens, by reference to habitat types and field symptoms.

FINDINGS

Vegetation types

Comments on TASVEG mapping

This section, which comments on the existing TASVEG mapping for the study area, is included to highlight the differences between existing mapping and the more recent mapping from the present study to ensure that any parties assessing land use proposals (via this report) do not rely on existing mapping. Note that TASVEG mapping, which was mainly a desktop mapping exercise based on aerial photography, is often substantially different to ground-truthed vegetation mapping, especially at a local scale. An examination of existing vegetation mapping is usually a useful pre-assessment exercise to gain an understanding of the range of habitat types likely to be present and the level of previous botanical surveys.

In this case, it is useful to examine TASVEG 3.0, 4.0 & Live mapping because while the latter two should be the most up-to-date, the former has been used to inform the *Tasmanian Planning Scheme* and specifically the Regional Ecosystem Model’s mapping of the Priority Vegetation Area overlay developed as part of the *Tasmanian Planning Scheme*.

In this case, all versions of TASVEG are identical. However, all TASVEG versions are incorrect for most of the title area and immediate surrounds highlighting the challenges of relying on existing vegetation mapping to inform land use planning without ground-truthing.

TASVEG maps the title as follows (Figure 10):

- *Eucalyptus amygdalina* coastal forest and woodland (TASVEG code: DAC)

DAC is mapped in the north of the title as a narrow band to the north of Lumera Creek. DAC is absent at this site and is replaced by DGL. DAC is present at other sites on the title.

- *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL)
DGL is mapped as associated with drainage features. DGL is the dominant forest community replacing DSG in the west and areas of FRG.
- *Eucalyptus sieberi* forest and woodland on granite (TASVEG code: DSG)
DSG is mapped as the dominant forest community on insolated ridges in the north and in the vicinity of Four Mile Creek in the south. DSG is entirely absent in the north and is not as widespread in the south being replaced by DGL and WGL.
- *Acacia dealbata* forest (TASVEG code: NAD)
NAD is mapped along Lumera Creek in the north. This community is entirely absent from within and adjacent to the title.
- *Bursaria-Acacia* woodland and scrub (TASVEG code: NBA)
NBA is mapped associated with the areas of former pasture that are now regenerating to native vegetation communities. NBA is more widespread, entirely replacing the mapped area of FPF in the north and portions of FRG in the centre.
- *Pteridium esculentum* fernland (TASVEG code: FPF)
FPF is mapped in the north associated with the former pasture area. This community is entirely absent from within and adjacent to the title and is replaced by NBA.
- regenerating cleared land (TASVEG code: FRG)
FRG is mapped as a broad swathe of vegetation from the southern boundary associated with the existing dwelling, extending to the east. FRG is present in previously disturbed areas; however, is not as widespread as TASVEG mapping indicates.

Vegetation types recorded as part of the present study

Vegetation types have been classified according to TASVEG 4.0, as described in *From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation* (Kitchener & Harris 2013+). Table 1 provides information on the mapping units identified from the study area. Refer to Figure 11 that indicates the revised mapping for the study area. Refer to Appendix A for more detailed descriptions of the native vegetation mapping units identified from the study area.

Table 1. Vegetation mapping units present in study area

[conservation status: NCA – as per Schedule 3A of the Tasmanian *Nature Conservation Act 2002*, using units described by Kitchener & Harris (2013+), relating to TASVEG mapping units (DNRET 2025b); table headings are as per modules in Kitchener & Harris (2013+); EPBCA – as per the listing of ecological communities on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, relating to communities as described under that Act, but with equivalencies to TASVEG units]

TASVEG equivalent (Kitchener & Harris 2013+)	Conservation priority TASVEG EPBCA	Comments
Modified land		
extra-urban miscellaneous (FUM)	not threatened <i>not threatened</i>	FUM is used to describe modified environments across the title including the existing residence and associated surrounding modified area, clearings around the dam, firebreaks and vehicle tracks/roads. Any

TASVEG equivalent (Kitchener & Harris 2013+)	Conservation priority TASVEG EPBCA	Comments
		vegetation present generally consists of opportunistic native and introduced grasses and herbs.
regenerating cleared land (FRG)	not threatened <i>not threatened</i>	FRG occurs in areas previously cleared areas surrounding the existing residence where a mix of native and introduced grass, shrub and sedge species are 'invading' these sites. Historically, these areas would have been classified as FUM (see below); however, these sites are reverting to a form of a native vegetation community.
weed infestation (FWU)	not threatened <i>not threatened</i>	FWU describes areas that have been 'invaded' by weed species. Within the title area, this mapping unit is confined to a small area associated with the Four Mile Creek flood terraces where several declared and environmental weed species dominate. This is discussed further in Findings Other natural values <u>Weed species</u> .
Other natural environments		
water, sea (OAQ)	not threatened <i>not threatened</i>	OAQ is the mapping unit used to describe generally unvegetated waterbodies including dams, lakes, sea. Within the title area, OAQ is used to map the small dam to the north of the existing residence.
lichen lithosere (ORO)	not threatened <i>not threatened</i>	ORO describes generally unvegetated areas of exposed rock. The Four Mile Creek stream channel is characterised by a broad fluvial deposition terrace consisting of small to medium sized water worn boulders. Any vegetation present consists of opportunistic species that are generally eliminated by flood events.
Non-eucalypt forest and woodland		
<i>Bursaria-Acacia</i> woodland and scrub (NBA)	not threatened not threatened	NBA occurs as a disturbance-induced community that dominates broad areas of previously cleared agricultural land, generally occurring as a gradational community between former pasture/cleared areas and DAC & DGL forest communities. NBA is characterised by the dominance of tall shrubs/trees of <i>Acacia mearnsii</i> with scattered <i>A. dealbata</i> and <i>Bursaria spinosa</i> over a sedge understory entirely dominated by <i>Gahnia radula</i> that forms a dense layer between 80-100% cover. Small openings within the sedge layer have a mixed dominance of introduced and native grass and herb species. Vascular plant diversity is very low potentially due to historical disturbance and intense fire events in recent decades. Historically, it is likely that these areas were DGL or DAC woodland that has been cleared for pasture and subsequently reinvaded by <i>Acacia mearnsii</i> . NBA is gradational with DGL and DAC. Most of the NBA is in reasonable ecological condition with only scattered opportunistic weeds noted. No symptoms of plant disease were observed.
Dry eucalypt forest and woodland		
<i>Eucalyptus amygdalina</i> coastal forest and woodland (DAC)	not threatened <i>not threatened</i>	DAC occurs as a regrowth community associated with insolated steep and rocky slopes on the north-facing aspect of ridge lines. DAC has a mainly low open woodland structure with a multiple aged canopy due to past fire events, dominated by regrowth-form <i>Eucalyptus amygdalina</i> with scattered <i>E. viminalis</i> and <i>E. globulus</i> over a shrubby understory of <i>Exocarpos cupressiformis</i> , <i>Pomaderris elliptica</i> and <i>Acacia dealbata</i> . The understory is dominated by the graminoid species <i>Gahnia radula</i> and <i>Lomandra longifolia</i> with scattered <i>Lepidosperma</i> species. Rock cover is high. DAC is gradational with DGL as sites become relatively moist and sheltered and with NBA in the centre-south. DAC is in good ecological condition with no weeds or symptoms of plant disease observed.

TASVEG equivalent (Kitchener & Harris 2013+)	Conservation priority TASVEG EPBCA	Comments
<i>Eucalyptus globulus</i> dry forest and woodland (DGL)	threatened <i>not threatened</i>	<p>DGL is the dominant vegetation community across the title, occurring on the lower slopes and relatively fertile sites with well-formed soils.</p> <p>DGL is characterised by the dominance of <i>Eucalyptus globulus</i> that forms a multi-aged canopy structure with <i>E. amygdalina</i> and <i>E. viminalis</i> common subdominants in the north and <i>E. sieberi</i> in the south. The tree/tall shrub layer is variable depending on disturbance history with <i>Acacia mearnsii</i> generally dominating. Areas of relatively mature form DGL are present in areas not historically cleared on ridges and along drainage features. These areas have a relatively high structural diversity and floristic composition. The old pasture areas are generally depauperate with scattered regenerating <i>E. globulus</i> and <i>A. mearnsii</i> over a very dense graminoid layer of <i>Gahnia radula</i> and <i>Lomandra longifolia</i>.</p> <p>DGL is gradational with DAC on insolated and rocky north-facing sites, NBA in the disturbed old pasture areas, WGL along the moist and fertile creeks and drainage features, and DSG on the broad and dry ridge in the south between Four Mile and Banticks creeks.</p> <p>DGL is generally in good condition with few weeds recorded. The declared weed <i>Erica lusitanica</i> (spanish heath) was noted in the vicinity of Banticks Creek. No symptoms of plant disease were observed.</p>
<i>Eucalyptus sieberi</i> dry forest and woodland on granite (DSG)	not threatened <i>not threatened</i>	<p>DSG has been mapped in the south of the title on the broad ridge between Four Mile and Banticks creeks. DSG is structurally and compositionally quite similar to DGL albeit somewhat more dense regrowth of dominant canopy species (typical for ironbark-dominated forests).</p> <p>The mapped area of DSG has been dissected by a telecommunication easement; however, overall DSG is in excellent ecological condition with no significant weeds or symptoms of plant disease observed.</p>
Wet eucalypt forest and woodland		
<i>Eucalyptus globulus</i> wet forest (WGL)	not threatened <i>not threatened</i>	<p>WGL occurs along all drainage features that dissect the title as a riparian community associated with fertile and moist river terraces and southerly slopes. Floristic composition within WGL varies depending on a number of factors such as creek size, soil development, rock exposure and fire history.</p> <p>WGL is characterised by a dominant tree layer of <i>Eucalyptus globulus</i> with a secondary canopy of <i>Acacia melanoxylon</i>. <i>Eucalyptus viminalis</i> occurs as a codominant or subdominant species along the fertile and moist larger creeks in the south. A dense tall shrub layer is present dominated by <i>Pomaderris apetala</i> with <i>Beyeria viscosa</i> present as a subdominant. Ferns are present at all sites with <i>Dicksonia antarctica</i> occurring on river terraces and a diversity of ferns occurring on the stream margins. A variably dense sedge layer dominated by <i>Lepidosperma</i> species is present at all sites.</p> <p>WGL is gradational with DGL as sites become more insolated generally on south-facing slopes with DGL dominating the exposed, steep and rocky northerly slopes.</p> <p>WGL is mostly in good condition with few to no weeds recorded in the northern drainage features. The declared weed <i>Erica lusitanica</i> (spanish heath) was noted along Banticks Creek. The mapped area of WGL along Four Mile Creek is in poor condition with several declared and environmental weed species dominating the understorey. This is discussed further in Findings Other natural values <u>Weed species</u>. No symptoms of plant disease were observed.</p>

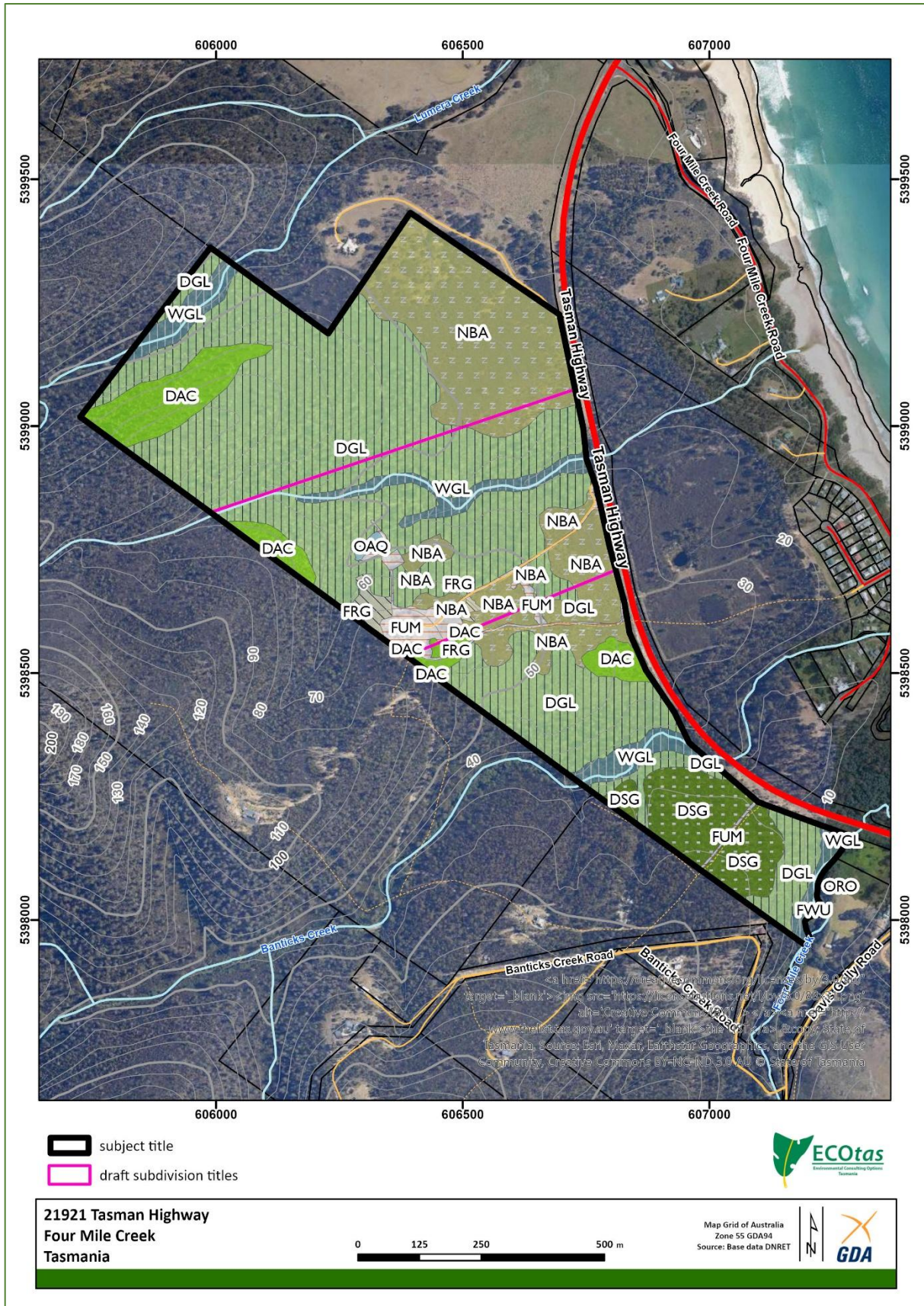


Figure 11a. Revised vegetation mapping for study area (see text for codes)

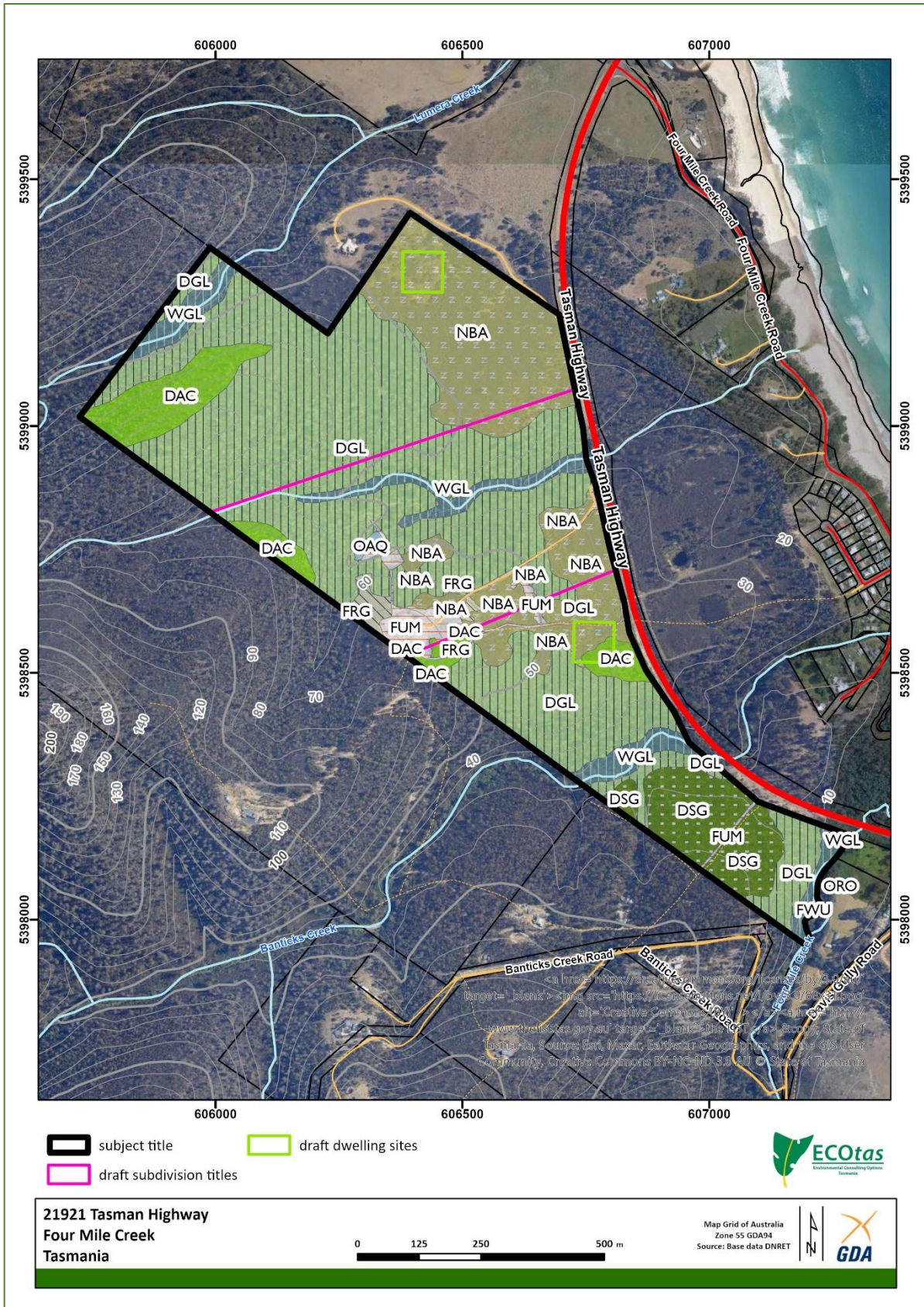


Figure 11b. Revised vegetation mapping for study area (see text for codes) showing proposed lot layout and building envelopes

Conservation significance of identified vegetation types

Occurrences of WGL, DAC, DSG, & NBA do not equate to native vegetation communities listed as threatened on Schedule 3A of the *Tasmanian Nature Conservation Act 2002*.

Occurrences of *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL) equate to a native vegetation community (with the same name) listed as threatened on Schedule 3A of the *Tasmanian Nature Conservation Act 2002*.

Occurrences of WGL, DAC, DGL, DSG, & NBA do not equate to threatened ecological communities listed under the Commonwealth *Environment Protection and Biodiversity Protection Act 1999*.

The presence of "native vegetation...[that]...forms an integral part of a threatened native vegetation community as prescribed under Schedule 3A of the *Nature Conservation Act 2002*" means that some parts of the site can be construed as "priority vegetation" (in relation to this value) pursuant to C7.3.1(a) of the *State Planning Provisions*, which is defined as follows:

C7.3 Definition of Terms

C7.3.1 In this code, unless the contrary intention appears:

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.

That is, C7.3.1(a) has application to the parts of the title mapped as DGL. Refer to **DISCUSSION Legislative and policy implications** for a more detailed analysis of this concept.

Plant species

General information

A total of 149 vascular plant species were recorded from the study area (Appendix B), comprising 89 dicotyledons (including 2 endemic and 25 naturalised species), 48 monocotyledons (including 11 naturalised species) and 12 pteridophytes (all native).

Additional surveys at different times of the year may detect additional short-lived herbs and grasses but a follow-up survey is not considered warranted because of the relatively low likelihood of species with a high priority for conservation management being present. See also Appendix C for a consideration of threatened flora species.

Threatened flora

Figure 12 indicates threatened flora species near the study area and Table C1 (Appendix C) provides a listing of threatened flora from within 5,000 m of the study area (nominal buffer width usually used to discuss the potential of a particular study area to support various species listed in databases), with comments on whether potential habitat is present for the species, and possible reasons why a species was not recorded.

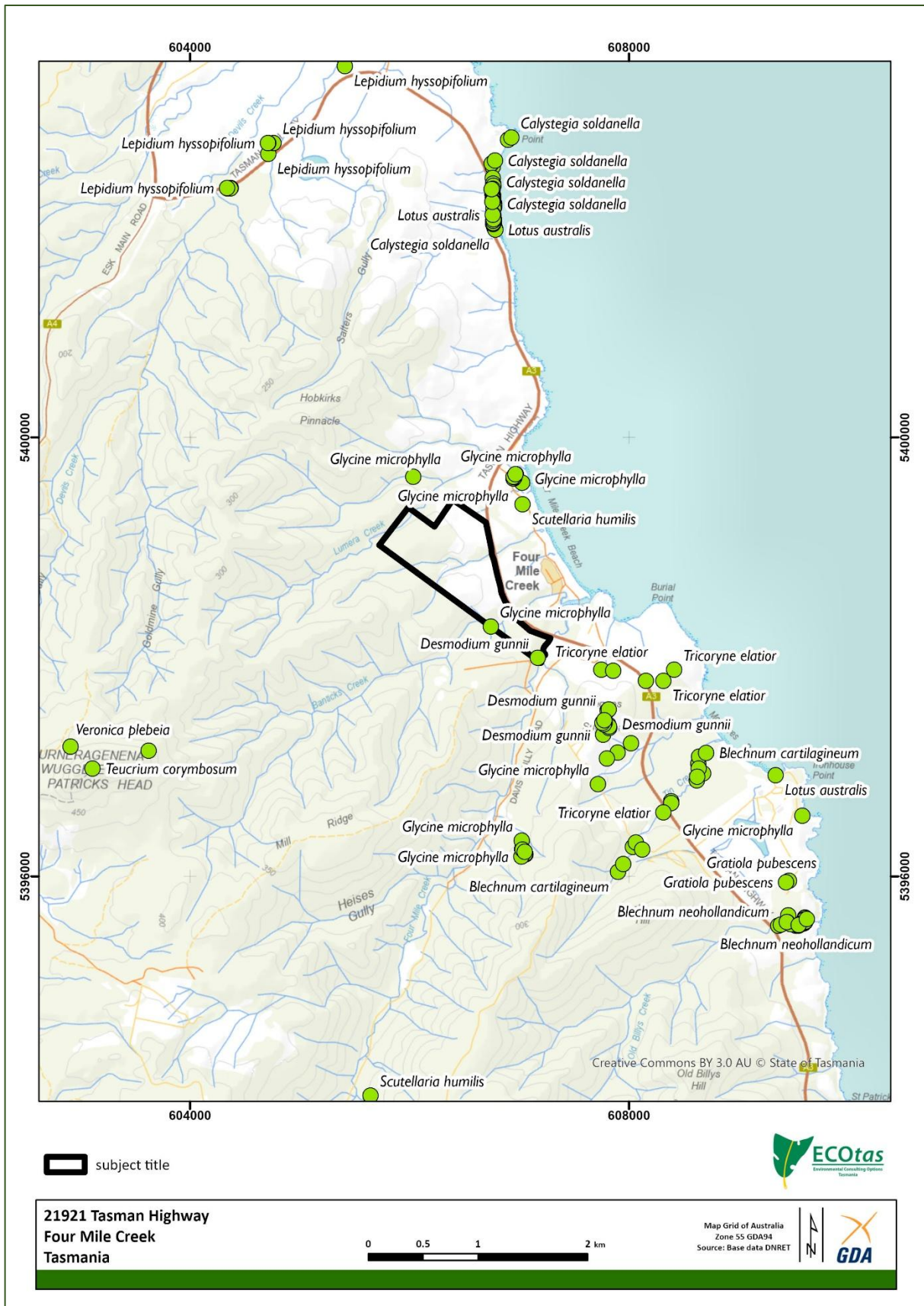


Figure 12a. Distribution of threatened flora close to study area (overview)

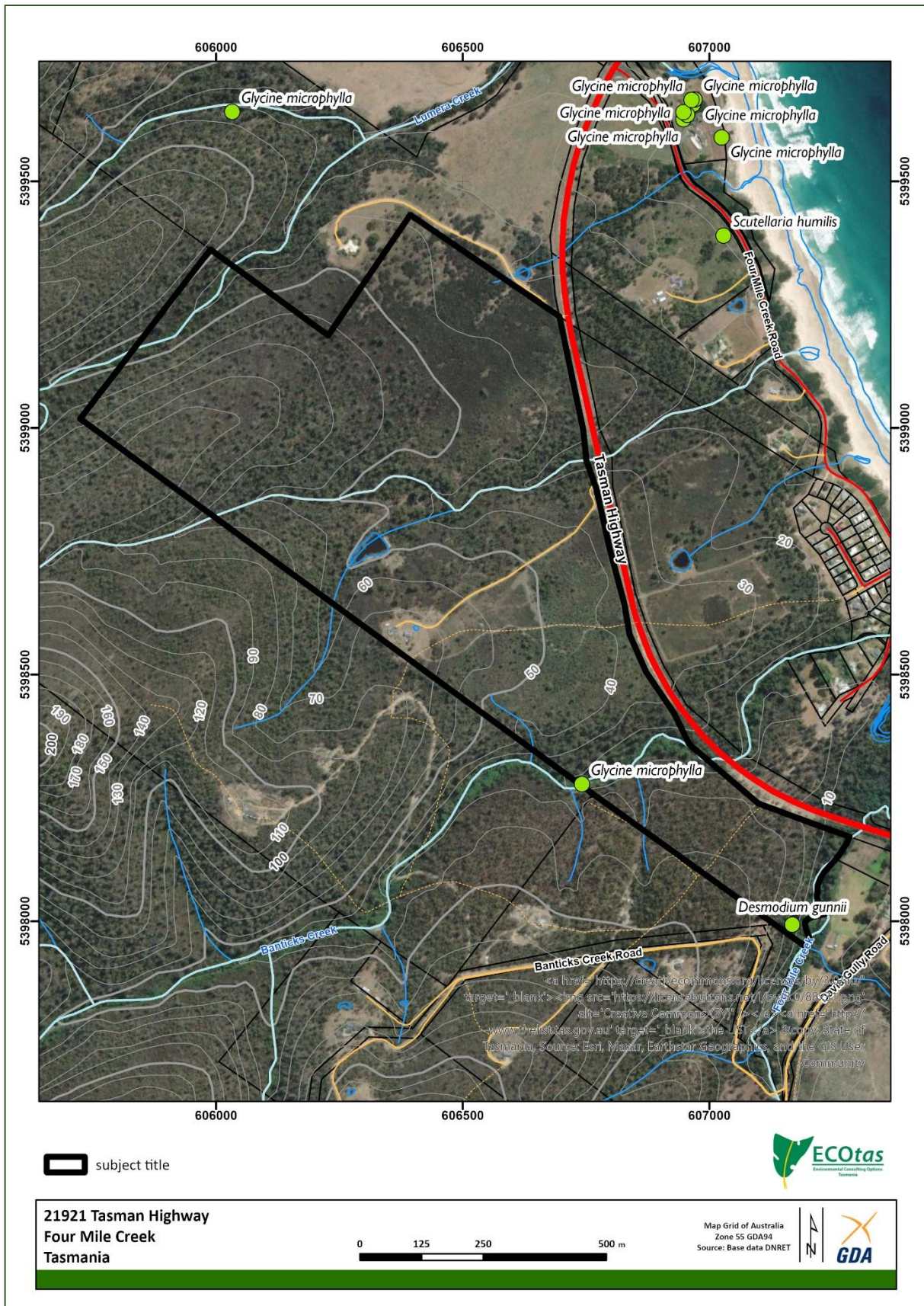


Figure 12b. Distribution of threatened flora within and near study area (detail)

FINDINGS *Plant species* Threatened flora continued...

Database information indicates that the subject title does not support known populations of flora listed as threatened on the Commonwealth *Environment Protection and Biodiversity Protection Act 1999* (Figure 12).

Database information indicates that the subject title has two previously reported sites of species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (Figure 12). There are point locations of *Desmodium gunnii* (southern ticktrefoil) and *Glycine microphylla* (small-leaf glycine), both listed as vulnerable (Schedule 5), from the eastern part of the title. These sites were searched with both species not detected. However, if present, both species occur with the formally reserved conservation covenant area in the east, which is entirely excluded from any future proposals.

The survey did not result in the detection of any threatened flora species from any part of the title, specifically the indicative building areas and associated BAL-19 hazard management areas with indicative access routes.

The absence of threatened flora from the title means that no part of the site is "a threatened flora species" [sic] such that it cannot be interpreted as "priority vegetation" (in relation to this value) pursuant to C7.3.1(b) of the *State Planning Provisions* (see previous citation of definition of "priority vegetation" at **FINDINGS *Vegetation types*** Conservation significance of identified vegetation types). While there are point locations of threatened flora species, the exclusion of these sites and now apparent absence would mean that C7.3.1(b) should not have application.

Threatened fauna

Figure 13 indicates threatened fauna species near the study area and Table D1 (Appendix D) provides a listing of threatened fauna from within 5,000 m of the study area (nominal buffer width usually used to discuss the potential of a particular study area to support various species listed in databases), with comments on whether potential habitat is present for the species, and possible reasons why a species was not recorded.

Database information indicates that the subject title does not support known populations of fauna listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) and/or the Commonwealth *Environment Protection and Biodiversity Protection Act 1999* (EPBCA) (Figure 13).

Site assessment indicated that the study area supports ubiquitous potential habitat for a suite of threatened fauna species. This includes ubiquitous potential habitat of species such as *Sarcophilus harrisii* (Tasmanian devil), *Dasyurus maculatus* subsp. *maculatus* (spotted-tailed quoll), *Dasyurus viverrinus* (eastern quoll), and *Perameles gunnii* subsp. *gunnii* (eastern barred bandicoot). Small-scale development is not anticipated to have a significant impact on these species.

The site supports potential habitat for *Lathamus discolor* (swift parrot) in the form of widespread foraging habitat in all mapped areas of *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL, Figure 11) and potential nesting habitat was noted within relatively more mature forests along the drainage features. The title is within the Swift Parrot Important Breeding Area (SPIBA) – St Marys. The proposed dwelling sites have been situated to avoid any impacts on potential foraging and nesting habitat. The subdivision and subsequent occupation should not require further consideration. These statements also apply to potential nesting habitat of *Neophema chrysostoma* (blue-winged parrot). No hollows large enough for *Tyto novaehollandiae* (masked owl) occupation were observed within the title.

In relation to *Tasmanipatus barretti* (giant velvet worm), potential habitat (decaying logs) was limited to scattered logs in dry forest and along creeks and drainage lines. Potential habitat was

assessed by breaking open small portions of the log to detect species (logs “reconstructed” after survey). Three adult individuals were recorded (Figure 13b, Plates 1 to 5). These sites are both within *Eucalyptus globulus* wet forest (TASVEG code: WGL, Figure 11), which will not be affected or impacted by subdivision and subsequent occupation. No potential habitat (logs) are present within the potential dwelling zones such that the species should not require further consideration.



Plates 1 & 2. (LHS) Decayed log habitat of giant velvet worm along Lumera Creek in the north and (RHS) habitat along Banticks Creek in the south



Plate 3. Individual giant velvet worm detected from Lumera Creek in north of title



Plate 4. Individual giant velvet worm detected from Banticks Creek in south of title



Plate 5. Individual giant velvet worm detected from Banticks Creek in south of title - detail

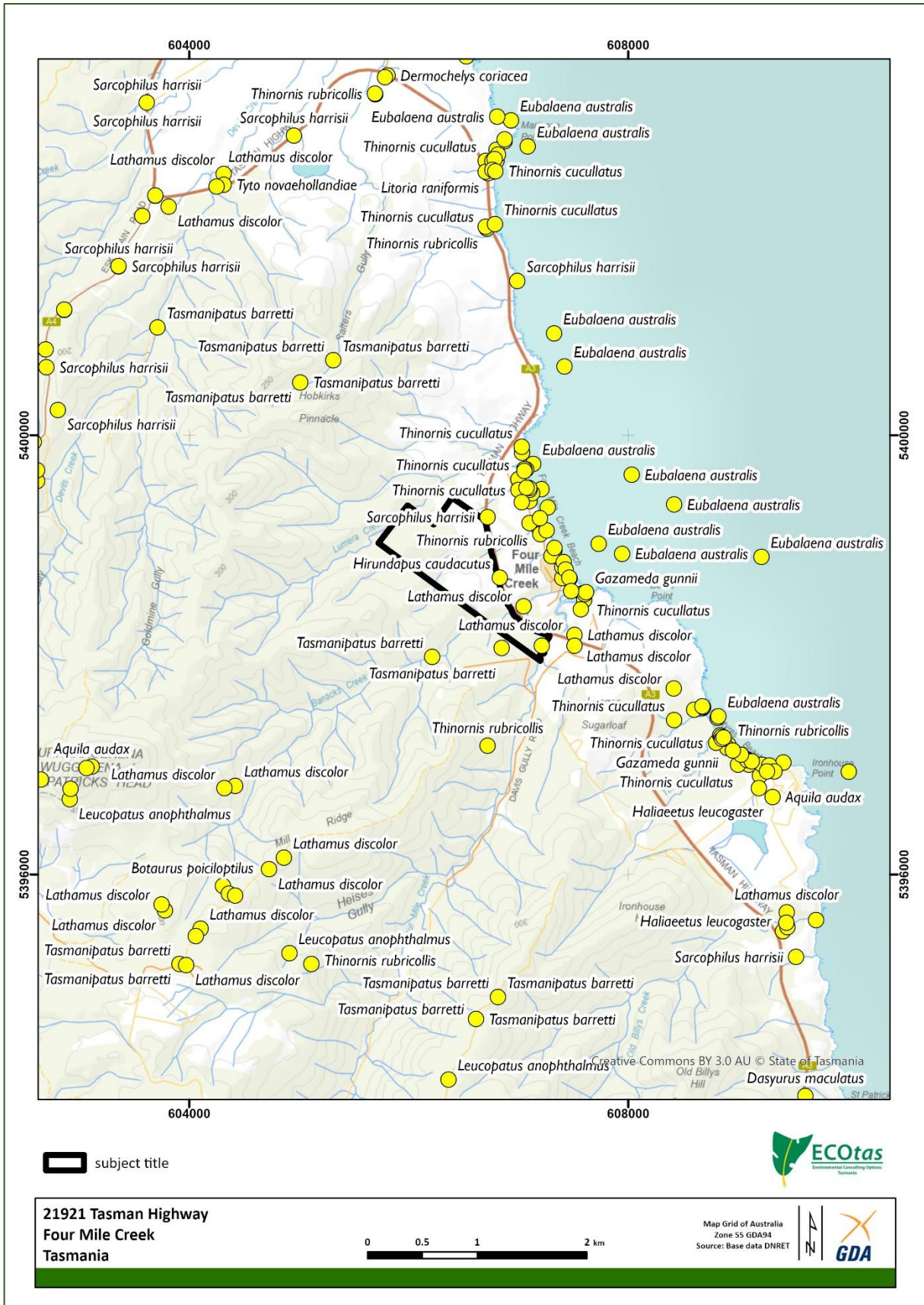


Figure 13a. Distribution of threatened fauna close to study area (overview)

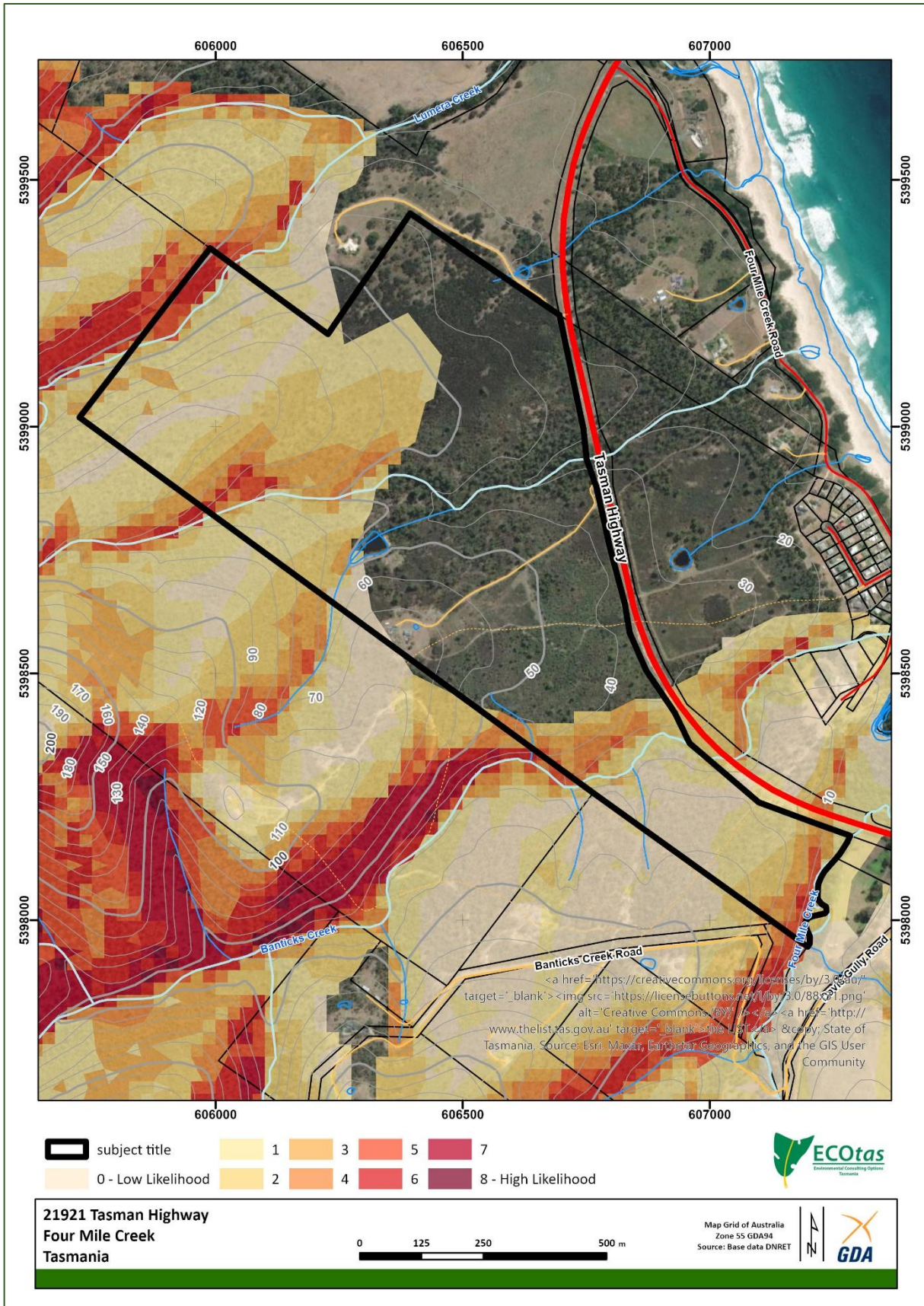


Figure 14. Modelled eagle nesting habitat relative to study area

FINDINGS Threatened fauna continued...

Potential nesting habitat for *Aquila audax* subsp. *fleayi* (Tasmanian wedge-tailed eagle) and *Haliaeetus* [syn. *Ichthyophaga*] *leucogaster* (white-bellied sea-eagle) is modelled as being present, mostly along drainage features (Figure 14). The survey found that the modelling was largely correct. No nests of either species were detected within the title area. Both species are likely to use the title opportunistically for foraging. The current proposal is unlikely to have an impact on these species.

Under the *Tasmanian Planning Scheme*, priority vegetation can include the concept of “it forms a significant habitat for a threatened fauna species” (see previous citation of definition of “priority vegetation” at **FINDINGS Vegetation types Conservation significance of identified vegetation types**), where “significant habitat” is defined under the *Scheme* as follows:

“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”.

Problematically, the *Scheme* does not define the terms “known” or “core” range, which means this could rely on those used by other agencies such as the Forest Practices Authority and/or the Department of Natural Resources and Environment Tasmania, which are effectively presented in the relevant database reports (DNRET 2025a; FPA 2025). While the subject site is within the so-called “known or core range” of some listed fauna species, it is challenging to assign any part of the site as being of “high priority for the maintenance of breeding populations throughout the species’ range” at any reasonable scale (see Appendix D for a more detailed analysis of this) or be in any way construed as meeting the intent of a scenario in which “the conversion of it [i.e. “significant habitat”] to non-priority vegetation [could be] considered to result in a long-term negative impact on breeding populations of the threatened fauna species” for most such species. (see also Appendix D for a more detailed analysis of this). The areas of DGL & WGL (i.e. blue gum-dominated) forest can be reasonably assigned as “significant habitat” for the swift parrot; and the riparian wet forest as “significant habitat” for the giant velvet worm. Notwithstanding that parts of the title could be assigned as “significant habitat”, it is noted that no part of this is proposed for development to a scale that would result in the thresholds under (a) and (b) above being reached, such that the parts of the title proposed for development are not considered to be “significant habitat for a threatened fauna species” at any reasonable scale or interpretation of the concept, such that these parts of the site should not be construed as “priority vegetation” (in relation to this value) pursuant to C7.3.1(c) of the *State Planning Provisions*.

Other natural values

Weed species

The area along the margin of Four Mile Creek is in poor condition due to weed invasion that is likely to have occurred due to residential plantings/garden waste dumping from adjacent titles to the south (Figure 15, Plates 6 & 7). Elsewhere on the title, weed species are localised. Four plant species classified as declared weeds within the meaning of the Tasmanian *Biosecurity Act 2019* (*Biosecurity Regulations 2022*) were detected from the title area, as follows (Figure 15):

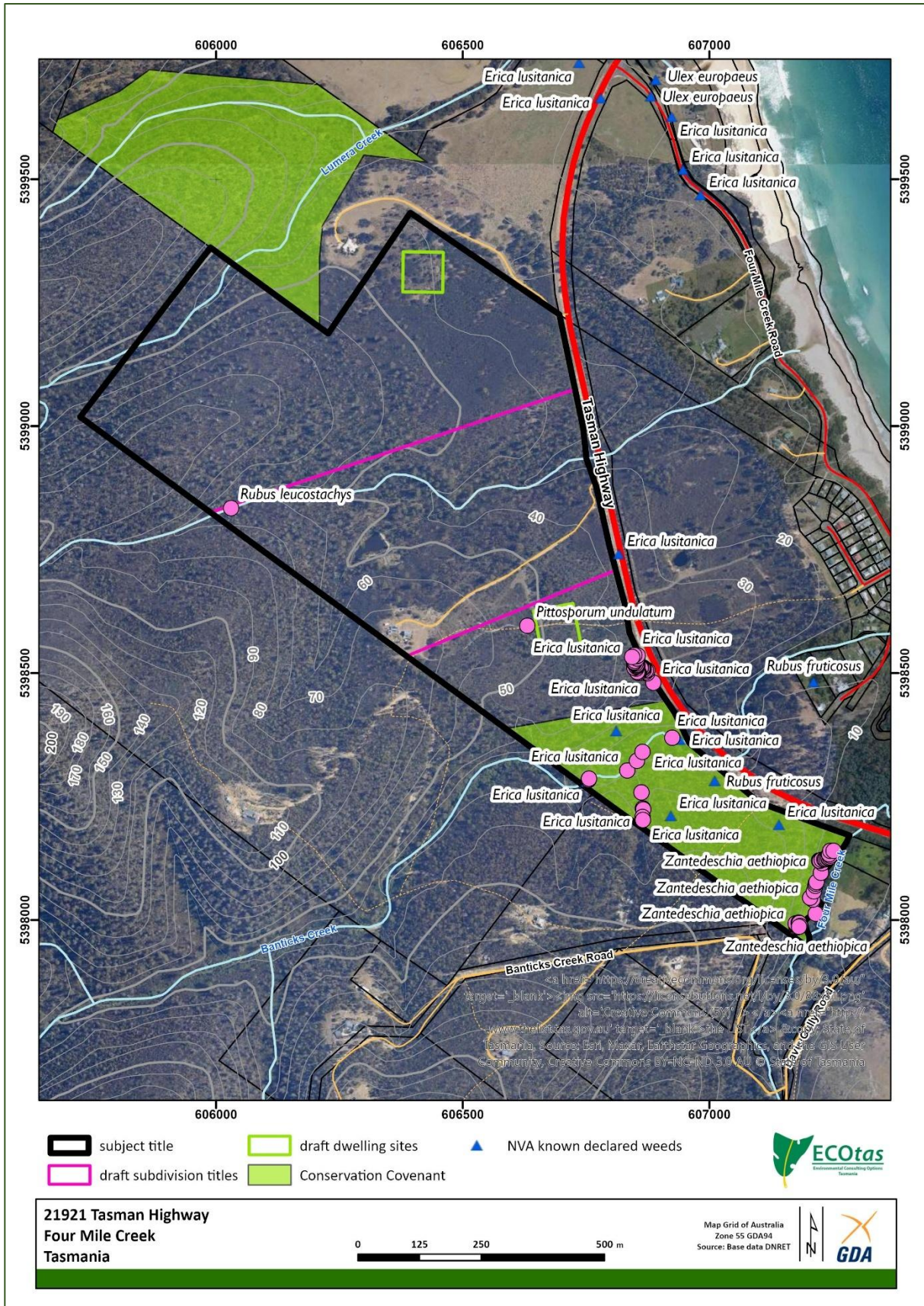


Figure 15a. Distribution of weed species within and surrounding study area

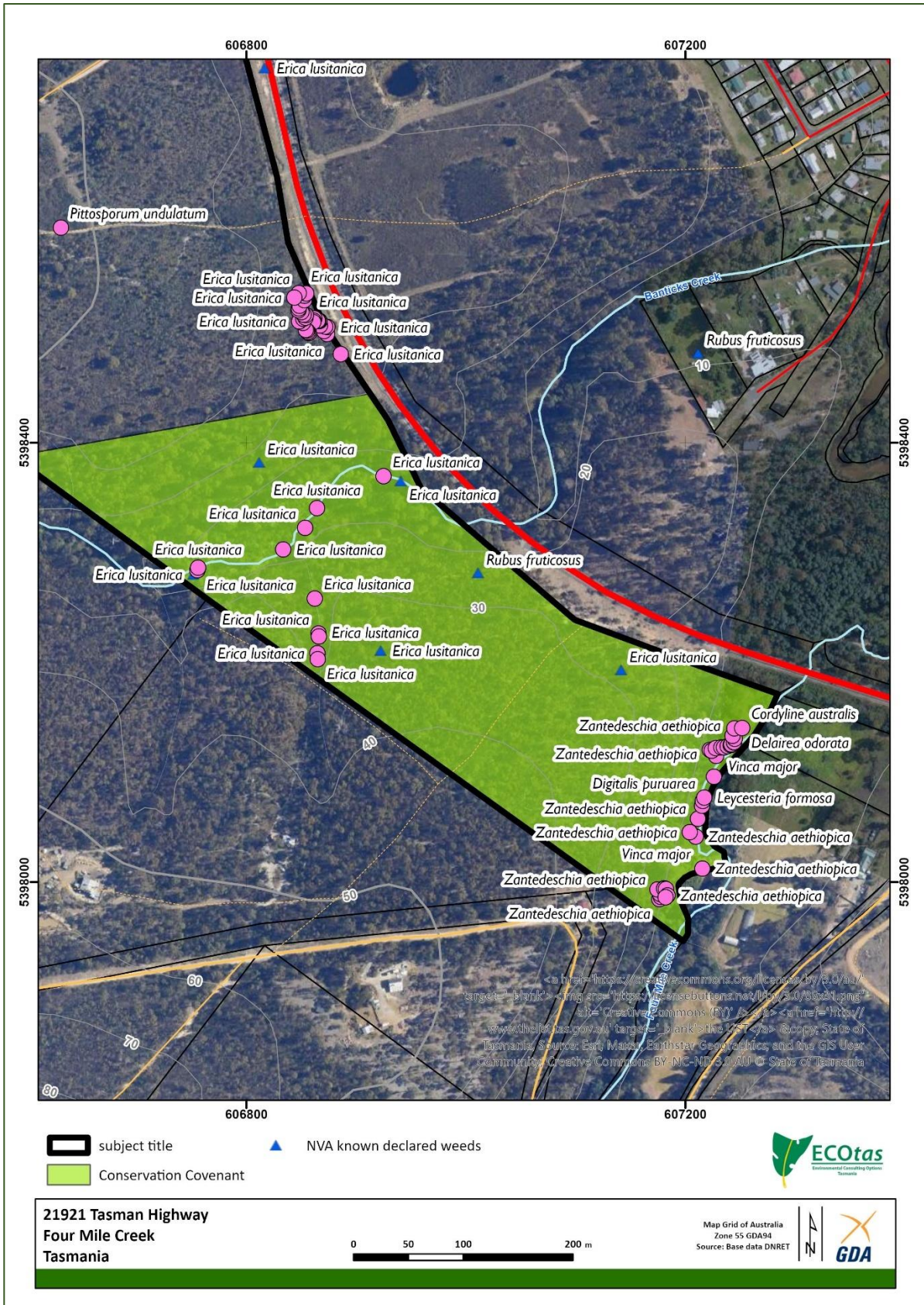


Figure 15b. Detail of the distribution of weed species within and surrounding study area within the Conservation Covenant in east



Plates 6 & 7. Dense infestation of blue periwinkle, cape ivy and arum lily along Four Mile Creek

Other natural values Weed species continued...

- *Digitalis purpurea* (foxglove) – common along Four Mile Creek;
- *Erica lusitanica* (spanish heath) – common in the east of the title including along drainage features including Banticks Creek with a large population noted on the property boundary near Tasman Highway (the distribution is likely to extend to adjacent properties to the west);
- *Leycesteria formosa* (himalayan honeysuckle) – local on the western margin of Four Mile Creek; and
- *Rubus leucostachys* (blackberry) – isolated to a single plant along a drainage feature in the north.

Four species of potentially invasive environmental weed species were detected within the title, as follows (Figure 15):

- *Arum italicum* (italian arum) – species localised to a single plant on the margin of Four Mile Creek;
- *Cordyline australis* (cabbage palm) – localised to a 'clump' on the western margin of Four Mile Creek;
- *Delairea odorata* (cape ivy) – widespread and abundant along Four Mile Creek, forming a dense ground cover and climbing trees (this species will be difficult to eradicate);
- *Pittosporum undulatum* (sweet pittosporum) – detected as a single small plant near the existing residence;
- *Vinca major* (blue periwinkle) – widespread and abundant along Four Mile Creek, forming a dense ground cover and is actively expanding to the north, upslope from the creek (this species will be difficult to eradicate); and
- *Zantedeschia aethiopica* (arum lily) – widespread and abundant along Four Mile Creek, and is actively expanding to the north, upslope from the creek (this species will be difficult to eradicate).

In this case, owner-occupation is considered the most appropriate means of achieving effective longer-term weed management where vigilance and immediate control of any detected species should be practical. Essentially, there were no weed management issues detected in the north of the title within and surrounding the proposed dwelling sites. The main distribution of declared and environmental weed species is mostly within the formal conservation covenant reserve area in the south. It is assumed that the formally reserved covenant area has weed management objectives to protect the natural values with specific requirements within the 'Terms of Covenant' that binds the current and future owners to specific management actions. In the shorter-term, treatment of the localised weeds by the current owner is considered prudent to contain further distribution of the invasive species identified. In the longer-term, it is recommended that weed management actions focus on containing weed species to the very 'weedy' zone along Four Mile Creek to inhibit invasion to the formal reserve area to the north (and other areas within and surrounding the title). It is likely that a coordinated approach with adjacent landowners will be required due to the widespread and abundant distribution of these species on adjacent titles (especially to the south of Four Mile Creek).

Several planning manuals provide further guidance on appropriate management actions, which can be referred to develop site-specific prescriptions for any proposed works in the title area. These manuals include:

- Allan, K. & Gartenstein, S. (2010). *Keeping It Clean: A Tasmanian Field Hygiene Manual to Prevent the Spread of Freshwater Pests and Pathogens*. NRM South, Hobart;

- Rudman, T. (2005). *Interim Phytophthora cinnamomi Management Guidelines*. Nature Conservation Report 05/7, Biodiversity Conservation Branch, Department of Primary Industries, Water & Environment, Hobart;
- Rudman, T., Tucker, D. & French, D. (2004). *Washdown Procedures for Weed and Disease Control*. Edition 1. Department of Primary Industries, Water & Environment, Hobart; and
- DPIPWE (2015). *Weed and Disease Planning and Hygiene Guidelines – Preventing the Spread of Weeds and Diseases in Tasmania*. Department of Primary Industries, Parks, Water & Environment, Hobart.

Myrtle wilt

Myrtle wilt, caused by a wind-borne fungus (*Davidsoniella* syn. *Chalara australis*), occurs naturally in rainforest where myrtle beech (*Nothofagus cunninghamii*) is present. The fungus enters wounds in the tree, usually caused by damage from wood-boring insects, wind damage and forest clearing. The incidence of myrtle wilt often increases forest clearing events such as windthrow and wildfire.

The study area does not support *Nothofagus cunninghamii*. No special management is required.

Myrtle rust

Myrtle rust is a disease limited to plants in the Myrtaceae family. This plant disease is a member of the guava rust complex caused by *Austropuccinia psidii*, a known significant pathogen of Myrtaceae plants outside Australia. Infestations are currently limited to NSW, Victoria, Queensland and Tasmania (Biosecurity Tasmania 2021).

No evidence of myrtle rust was noted (possible indicator species present). The longer-term management issue for the site is to ensure that any ornamental plantings source plants from a reputable nursery free from the pathogen (such businesses are already subject to strict biosecurity conditions).

Rootrot pathogen, *Phytophthora cinnamomi*

Phytophthora cinnamomi (PC) is widespread in lowland areas of Tasmania, across all land tenures. However, disease tends not to develop when soils are too cold or too dry. For these reasons, PC is not usually considered a threat to susceptible plant species that grow at elevations higher than about 700 m or where annual rainfall is less than about 600 mm (e.g. Midlands and Derwent Valley). Furthermore, disease is less likely to develop beneath a dense canopy of vegetation because shading cools the soils to below the optimum temperature for the pathogen. A continuous canopy of vegetation taller than about 2 m is usually sufficient to suppress disease. Hence PC is not usually considered a threat to susceptible plant species growing in wet sclerophyll forests, rainforests (except disturbed rainforests on infertile soils) and scrub e.g. teatree scrub (Rudman 2005; FPA 2022).

The vegetation types identified from the study area are susceptible to PC, most notably DAC & DSG; however, there are limited plant species present that are highly susceptible to PC. No evidence of PC was observed, with all potentially susceptible plant species appearing very healthy. It is best to assume that the study area is free of the pathogen and that management should be aimed at minimising the risk of introducing it. Refer to the section above (Weed species) for a list of planning manuals that provide appropriate guidelines for managing risks associated with PC.

Chytrid fungus and other freshwater pathogens

Native freshwater species and habitat are under threat from freshwater pests and pathogens including *Batrachochytrium dendrobatidis* (chytrid frog disease), *Mucor amphibiorum* (platypus mucor disease) and the freshwater algal pest *Didymosphenia geminata* (didymo) (Allan & Gartenstein 2010). Freshwater pests and pathogens are spread to new areas when contaminated water, mud, gravel, soil and plant material or infected animals are moved between sites. Contaminated materials and animals are commonly transported on boots, equipment, vehicles tyres and during road construction and maintenance activities. Once a pest pathogen is present in a water system it is usually impossible to eradicate. The manual *Keeping it Clean: A Tasmanian Field Hygiene Manual to Prevent the Spread of Freshwater Pests and Pathogens* (Allan & Gartenstein 2010) provides information on how to prevent the spread of freshwater pests and pathogens in Tasmanian waterways wetlands, swamps and boggy areas.

The title has several semi-permanent freshwater features with Lumera Creek, Banticks Creek and Four Mile Creek within or adjacent to the title area and a permanent dam feature associated with the existing residence. These water features are well outside any part of the title proposed for any form of development. Special management should not be required.

Additional "Matters of National Environmental Significance" – Threatened Ecological Communities

CofA (2025) indicates that the following threatened ecological communities listed on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) may, or are likely to, occur within the area:

- Alpine Sphagnum Bogs and Associated Fens [Endangered];
- Giant Kelp Marine Forests of South East Australia [Endangered];
- Lowland Native Grasslands of Tasmania [Critically Endangered];
- Tasmanian Forests and Woodlands dominated by Black Gum or Brookers Gum (*Eucalyptus ovata* / *E. brookeriana*) [Critically Endangered]; and
- Tasmanian White Gum (*Eucalyptus viminalis*) Wet Forest [Critically Endangered].

Revised vegetation mapping (Figure 11) indicates that the above ecological communities are absent from within the title area i.e. there are no implications under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* in relation to threatened ecological communities.

DISCUSSION

Summary of key findings

Threatened flora

- No plant species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) are known from database information, or were detected as a consequence of site assessment, from the study area.
- No plant species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) were recorded as a consequence of field assessment from the study area but two are known from database information, as follows:

- *Desmodium gunnii* (southern ticktrefoil): species not detected at previously recorded location (original site well outside any area proposed for any form of development); and
- *Glycine microphylla* (small leaf glycine): species not detected at previously recorded location (original site well outside any area proposed for any form of development).
- The absence of threatened flora species from the title means the site cannot be interpreted as “priority vegetation” (in relation to this value) pursuant to C7.3.1(b) of the *State Planning Provisions*.

Threatened fauna

- No fauna species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) are known from database information from the study area.
- One fauna species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) was detected from the study area, as follows:
 - *Tasmanipatus barretti* (giant velvet worm): three individuals were detected along drainage features (well outside any area proposed for any form of development).
- The study area supports potential habitat of several species (to different degrees), as follows:
 - *Sarcophilus harrisii* (Tasmanian devil);
 - *Dasyurus maculatus* subsp. *maculatus* (spotted-tailed quoll);
 - *Dasyurus viverrinus* (eastern quoll);
 - *Perameles gunnii* subsp. *gunnii* (eastern barred bandicoot);
 - *Myiagra cyanoleuca* (satin flycatcher);
 - *Lathamus discolor* (swift parrot);
 - *Neophema chrysostoma* (blue-winged parrot);
 - *Aquila audax* subsp. *fleayi* (wedge-tailed eagle);
 - *Haliaeetus* [syn. *Ichthyophaga*] *leucogaster* (white-bellied sea-eagle);
 - *Tyto novaehollandiae* subsp. *castanops* (masked owl);
 - *Antipodia chaostola* tax. *leucophaea* (chaostola skipper); and
 - *Tasmanipatus barretti* (giant velvet worm).
- The parts of the title proposed for subdivision and dwelling sites do not support “significant habitat for a threatened fauna species”, at any reasonable scale or interpretation of the concept, such that these should not be construed as “priority vegetation” (in relation to this value) pursuant to C7.3.1(c) of the *State Planning Provisions*.

Vegetation types

- The study area supports the following TASVEG mapping units:
 - *Eucalyptus globulus* wet forest (TASVEG code: WGL);
 - *Eucalyptus amygdalina* coastal forest and woodland (TASVEG code: DAC);
 - *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL);
 - *Eucalyptus sieberi* forest and woodland on granite (TASVEG code: DSG);
 - *Bursaria-Acacia* woodland and scrub (TASVEG code: NBA);

- regenerating cleared land (TASVEG code: FRG);
- extra-urban miscellaneous (TASVEG code: FUM);
- weed infestation (TASVEG code: FWU);
- water, sea (TASVEG code: OAQ); and
- lichen lithosere (TASVEG code: ORO).
- Occurrences of WGL, DAC, DSG, & NBA do not equate to native vegetation communities listed as threatened on Schedule 3A of the Tasmanian *Nature Conservation Act 2002*.
- Occurrences of *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL) equate to a native vegetation community (with the same name) listed as threatened on Schedule 3A of the Tasmanian *Nature Conservation Act 2002*.
- Occurrences of WGL, DAC, DGL, DSG, & NBA do not equate to threatened ecological communities listed under the Commonwealth *Environment Protection and Biodiversity Protection Act 1999*.
- The presence of “native vegetation...[that]...forms an integral part of a threatened native vegetation community as prescribed under Schedule 3A of the *Nature Conservation Act 2002*” (viz. *Eucalyptus globulus* dry forest and woodland) means that some parts of the site can be “priority vegetation” (in relation to this value) pursuant to C7.3.1(a) of the *State Planning Provisions* (but noting that the proposed building envelopes and accesses have been designed to avoid this vegetation community).

Weeds

- Several declared weed species listed on the Tasmanian *Biosecurity Act 2019 (Biosecurity Regulations 2022)* were detected from the study area, as follows:
 - *Digitalis purpurea* (foxglove);
 - *Erica lusitanica* (spanish heath);
 - *Leycesteria formosa* (himalayan honeysuckle); and
 - *Rubus leucostachys* (blackberry).
- Several potentially invasive environmental weed species were detected from the study area, as follows:
 - *Arum italicum* (italian arum);
 - *Cordyline australis* (cabbage palm);
 - *Delairea odorata* (cape ivy);
 - *Pittosporum undulatum* (sweet pittosporum);
 - *Vinca major* (blue periwinkle); and
 - *Zantedeschia aethiopica* (arum lily).

Plant disease

- No evidence of *Phytophthora cinnamomi* (PC, rootrot) was recorded within the study area
- No evidence of myrtle wilt was recorded within the study area.
- No evidence of myrtle rust was recorded within the study area.

Animal disease (chytrid)

- The study area does support habitats conducive to frog chytrid disease; however, these are wholly avoided by the current proposal.

Legislative and policy implications

Some commentary is provided below with respect to the key threatened species, vegetation management and other relevant legislation. Note that there may be other relevant policy instruments in addition to those discussed. The following information does not constitute legal advice and it is recommended that independent advice is sought from the relevant agency/authority.

Tasmanian Threatened Species Protection Act 1995

Threatened flora and fauna on this Act are managed under Section 51, as follows:

51. Offences relating to listed taxa

- (1) Subject to subsections (2) and (3), a person must not knowingly, without a permit –
 - (a) take, keep, trade in or process any specimen of a listed taxon of flora or fauna; or
 - (b) disturb any specimen of a listed taxon of flora or fauna found on land subject to an interim protection order; or
 - (c) disturb any specimen of a listed taxon of flora or fauna contrary to a land management agreement; or
 - (d) disturb any specimen of a listed taxon of flora or fauna that is subject to a conservation covenant entered into under Part 5 of the *Nature Conservation Act 2002*; or
 - (e) abandon or release any specimen of a listed taxon of flora or fauna into the wild.
- (2) A person may take, keep or process, without a permit, a specimen of a listed taxon of flora in a domestic garden.
- (3) A person acting in accordance with a certified forest practices plan or a public authority management agreement may take, without a permit, a specimen of a listed taxon of flora or fauna, unless the Secretary, by notice in writing, requires the person to obtain a permit.
- (4) A person undertaking dam works in accordance with a Division 3 permit issued under the *Water Management Act 1999* may take, without a permit, a specimen of a listed taxon of flora or fauna.

The simplest interpretation of this is that any activity that results in a specimen (i.e. individual) of listed flora or fauna being “knowingly taken” would require a permit to be issued through Conservation Assessments (Department of Natural Resources and Environment Tasmania), through a formal application process. Note that the Act does not make reference to “potential habitat” such that activities that result in loss of/disturbance to potential habitat (but not known sites) – which mainly refers to threatened fauna – would not require a permit.

Database information indicates that the subject title has previously reported sites of flora and fauna species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (Figures 12 & 13). There are point locations of *Desmodium gunnii* (southern ticktrefoil) and *Glycine microphylla* (small-leaf glycine), both listed as vulnerable (Schedule 5), from the eastern part of the title. These sites were searched; however, neither species was detected. Both these areas are within the formal Conservation Covenant area that is entirely excluded from any proposal such that a permit to “take” should not be required.

The site assessment found three individuals of *Tasmanipatus barretti* (giant velvet worm), listed as rare on the Act. While the general principle of management in relation to threatened species should be to avoid (or at least minimise) impacts, there are cases where this is not practical. In this particular case, the sites of *Tasmanipatus barretti* are easily avoided due to the location of the species well away from any potential development (within well-defined creeklines), such that an application for a permit to take any individuals should not be required.

Commonwealth Environment Protection and Biodiversity Conservation Act 1999

Under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* an action will require approval from the minister if the action has, will have, or is likely to have, a significant impact on a matter of national environmental significance.

Matters of national environmental significance considered under the EPBCA include:

- listed threatened species and communities
- listed migratory species;
- Ramsar wetlands of international importance;
- Commonwealth marine environment;
- world heritage properties;
- national heritage places;
- the Great Barrier Reef Marine Park;
- nuclear actions; and
- a water resource, in relation to coal seam gas development and large coal mining development.

The relevant Commonwealth agency provides a policy statement titled *Matters of National Environmental Significance: Significant Impact Guidelines 1.1* (CofA 2013, herein the *Guidelines*), which provides overarching guidance on determining whether an action is likely to have a significant impact on a matter protected under the EPBCA.

The *Guidelines* define a **significant impact** as:

"...an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts"

and note that:

"...all of these factors [need to be considered] when determining whether an action is likely to have a significant impact on matters of national environmental significance".

The *Guidelines* provide advice on when a significant impact may be likely:

"To be 'likely', it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility.

If there is scientific uncertainty about the impacts of your action and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on the environment".

The *Guidelines* provide a set of Significant Impact Criteria (CofA 2013), which are "intended to assist...in determining whether the impacts of [the] proposed action on any matter of national environmental significance are likely to be significant impacts". It is noted that the criteria are "intended to provide general guidance on the types of actions that will require approval and the types of actions that will not require approval...[and]...not intended to be exhaustive or definitive".

When considering whether or not an action is likely to have a significant impact on a matter of national environmental significance it is relevant to consider all adverse impacts which result from the action, including indirect and offsite impacts. Indirect and offsite impacts include:

- a. 'downstream' or 'downwind' impacts, such as impacts on wetlands or ocean reefs from sediment, fertilisers or chemicals which are washed or discharged into river systems;

- b. 'upstream impacts' such as impacts associated with the extraction of raw materials and other inputs which are used to undertake the action; and
- c. 'facilitated impacts' which result from further actions (including actions by third parties) which are made possible or facilitated by the action.

For example, the construction of a dam for irrigation water facilitates the use of that water by irrigators with associated impacts. Likewise, the construction of basic infrastructure in a previously undeveloped area may, in certain circumstances, facilitate the urban or commercial development of that area.

Consideration should be given to all adverse impacts that could reasonably be predicted to follow from the action, whether these impacts are within the control of the person proposing to take the action or not. Indirect impacts will be relevant where they are sufficiently close to the proposed action to be said to be a consequence of the action, and they can reasonably be imputed to be within the contemplation of the person proposing to take the action.

Listed ecological communities

The study area does not support any such ecological communities.

Threatened flora

The study area does not support any such species, nor significant potential habitat of such species, with site survey not detecting any such species.

Threatened fauna

The study area may support populations of threatened fauna listed on the Act, most notably the Tasmanian devil, spotted-tailed quoll, eastern quoll, and eastern barred bandicoot although no specific evidence such as scats, diggings, dens, shelters or nesting hollows were noted. Note that the study area is within the range of several other species listed on the Act but it is unlikely that any proposal will result in a significant impact on these species (this includes widely-distributed species such as the wedge-tailed eagle and masked owl) – refer to Appendix D for a more detailed consideration of these.

The relevant Commonwealth agency provides a *Significant Impact Guidelines* policy statement (CofA 2013) to determine if referral to the department is required. The *Guidelines* consider a "significant impact" to comprise loss that is likely to lead to a long-term decrease in the size of an important population of a species (unlikely to be the case); reduce the area of occupancy of an important population (also unlikely at any reasonable scale); fragment an existing important population into two or more populations (minor habitat loss will occur but not such that fragmentation will result); adversely affect habitat critical to the survival of a species ("critical habitat" has not been defined per se); disrupt the breeding cycle of an important population (unlikely); modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline (this seems unlikely – see previous commentary); result in invasive species that are harmful to a threatened species becoming established in the threatened species' habitat (unlikely); introduce disease that may cause the species to decline (unlikely to introduce and/or exacerbate Devil Facial Tumour Disease); or interfere substantially with the recovery of the species (unlikely at any reasonable scale).

It is highly unusual for a development at the scale indicated (i.e. two small building envelopes with associated BAL-19 hazard management areas and an access in already modified vegetation), even within the range of the aforementioned species where potential habitat has been identified, to trigger a formal referral to the relevant Commonwealth agency.

Tasmanian Forest Practices Act 1985 and associated Forest Practices Regulations 2017

The *Regulations* provide the following relevant circumstances in which a Forest Practices Plan is not required.

4. Circumstances in which forest practices plan, &c., not required

For the purpose of section 17(6) of the Act, the following circumstances are prescribed:

- (a) the harvesting of timber or the clearing of trees, with the consent of the owner of the land, if the land is not vulnerable land and –
 - (i) the volume of timber harvested or trees cleared is less than 100 tonnes for each area of applicable land per year; or
 - (ii) the total area of land on which the harvesting or clearing occurs is less than one hectare for each area of applicable land per year –
whichever is the lesser;
- (j) the harvesting of timber or the clearing of trees on any land, or the clearance and conversion of a threatened native vegetation community on any land, for the purpose of enabling –
 - (i) the construction of a building within the meaning of the *Land Use Planning and Approvals Act 1993* or of a group of such buildings; or
 - (ii) the carrying out of any associated development –
if the construction of the buildings or carrying out of the associated development is authorised by a permit issued under that Act.

On this basis, a proposal subject to a planning permit issued pursuant to the Tasmanian *Land Use Planning and Approvals Act 1993* (i.e. under the relevant planning scheme) should not require a Forest Practices Plan.

Tasmanian Nature Conservation Act 2002

Schedule 3A of the Act lists vegetation types classified as threatened within Tasmania. The subject title supports *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL), which equates to a listed community (with the same name). The administrative/regulatory mechanism managing threatened communities is through either the Tasmanian *Forest Practices Act 1985* (and associated *Forest Practices Regulations 2017*) or the local planning scheme, depending on the zone and code provisions.

Tasmanian Biosecurity Act 1999 (Biosecurity Regulations 2022)

Four plant species, namely *Digitalis purpurea* (foxglove), *Erica lusitanica* (spanish heath), *Leycesteria formosa* (himalayan honeysuckle) and *Rubus leucostachys* (blackberry), classified as declared weeds within the meaning of the Tasmanian *Biosecurity Act 1999 (Biosecurity Regulations 2022)* were detected from the title area, such that the Act has application.

Regarding *Digitalis purpurea* (foxglove), the entire title area is within the class A designated areas: require actions to eradicate foxglove (DNRET 2025). Break O'Day municipality is classified as a Zone B municipality (widespread infestations) for the other declared species (see Statutory Weed Management Plans: www.nre.tas.gov.au for information on these species). Containment is the most appropriate management objective for Zone B municipalities that have problematic

infestations but no plan and/or resources to undertake control actions at a level required for eradication. The management outcome for Zone B municipalities is ongoing prevention of the spread from existing infestations to areas free or in the process of becoming free of these species.

In this case, owner-occupation is considered the most appropriate means of achieving effective longer-term weed management where vigilance and immediate control of any detected species should be practical. Essentially, there are no weed management issues in the north of the title however, ironically, the main distribution of declared and environmental weed species is mostly within the formal conservation covenant reserve area. In the shorter-term, treatment of the localised weeds by the current owner is considered prudent to contain the further distribution of the invasive species detected in the south. In the longer-term, it is recommended that weed management actions focus on containing weed species to the very 'weedy' zone along Four Mile Creek to inhibit invasion to the formal reserve area to the north. It is likely that a coordinated approach with adjacent landowners will be required due to the widespread and abundant distribution of these species on adjacent titles (especially to the south of Four Mile Creek).

Tasmanian Land Use Planning and Approvals Act 1993

The applicable planning scheme for the study area is the *Tasmanian Planning Scheme – Break O'Day*. Note that the following is our interpretation of the provisions of the *Scheme* and may not necessarily represent the views Break O'Day Council. The following does not constitute legal advice. It is recommended that formal advice be sought from the relevant agency prior to acting on any aspect of this statement.

The subject title is zoned as Landscape Conservation (Figure 4) and is partly subject to the Priority Vegetation Area overlay (Figure 5).

Below the various relevant provisions of the *State Planning Provisions* that relate to the management of values considered in the preceding report are addressed, with the emphasis on addressing the intent and specifics of the Landscape Conservation Zone and Natural Assets Code.

LANDSCAPE CONSERVATION ZONE

The purpose of the Landscape Conservation Zone is stated below:

22.1 Zone Purpose

The purpose of the Landscape Conservation Zone is:

22.1.1 To provide for the protection, conservation and management of landscape values.

22.1.2 To provide for compatible use or development that does not adversely impact on the protection, conservation and management of the landscape values.

In our opinion, a subdivision as proposed (2 lots and balance) should not compromise 22.1.1 (because most of the title will remain "as is" with only limited development within each proposed lot) or 22.1.2 (because design can take appropriate account of the identified natural values – see **DISCUSSION Recommendations** for details), noting that the present report has addressed only "natural values" and not "landscape values" (which the zone purpose statements make direct reference to). It is noted that a substantial portion of the title is already subject to a formal conservation covenant and this will remain the case for the relevant created title.

The relevant sections of the use table are stated below:

22.2 Use Table

Use Class	Qualification
-----------	---------------

Permitted

Residential	If for a:
-------------	-----------

(a) home-based business; or

(b) single dwelling located within a building area, if shown on a sealed plan.

Discretionary

Residential	If for a single dwelling.
-------------	---------------------------

By our interpretation, a proposed subdivision for lots where the future purpose is for single residential dwellings on each lot will satisfy the discretionary use class, with future residential use permitted (provided the qualification is satisfied), noting that other uses are also indicated as no permit required (only natural and cultural values management), permitted (the other indicated use is utilities if for minor utilities) and discretionary (several other uses indicated).

The Use Standards for discretionary use are stated below:

22.3.3 Discretionary use

Objective:

That the location, scale and extent of a use listed as Discretionary is compatible with landscape values.

Acceptable Solutions

A1

No Acceptable Solution.

Performance Criteria

P1

(a) the nature, scale and extent of the use;

(b) the characteristics and type of the use;

(c) the landscape values of the site;

(d) the landscape value of the surrounding area; and

(e) measures to minimise or mitigate impacts.

Noting again that the objective statement and performance criteria both refer only to "landscape values" and that the present assessment has addressed only "natural values" but working to the assumption that the intention of 22.3.3 is to refer to all "landscape conservation values" as per the zone's title, in our opinion, a subdivision as proposed (2 lots and balance lot) should satisfy 22.3.3 P1 (because most of the title will remain "as is" with only limited development within each proposed lot) or 22.1.2 (because design can take appropriate account of the identified natural values – see **DISCUSSION Recommendations** for details). It is noted that a substantial portion of the title is already subject to a formal conservation covenant and this will remain the case for the relevant created title.

The objectives of the development standards for subdivision are stated below:

22.5 Development Standards for Subdivision

22.5.1 Lot design

Objective:

That each lot:

- (a) has an area and dimensions appropriate for use and development in the zone;
- (b) contain areas which are suitable for development, located to protect and conserve landscape values; and
- (c) is provided with appropriate access to a road.

In our opinion, the intent of the objective statement will be satisfied by the subdivision as proposed (2 lots and balance lot), provided that the recommendations indicated at **DISCUSSION Recommendations** are implemented, again noting that the present report has addressed only "natural values" and not "landscape values" (which the objective statement makes direct reference to). The intent of the objective statement is further "tested" through the Acceptable Solutions and Performance Criteria, reviewed below.

22.5.1 Lot design

Acceptable Solutions A1

Each lot, or a proposed lot in a plan of subdivision, must:

- (a) have an area of not less than 50 ha and:
 - (i) be able to contain a minimum area of 25 m x 25 m, where native vegetation cover has been removed, with a gradient not steeper than 1 in 5, clear of:
 - a. all setbacks required by clause 22.4.2 A2, A3 and A4; and
 - b. easements or other title restrictions that limit or restrict development; and
 - (ii) existing buildings are consistent with the setback required by clause 22.4.2 A2, A3 and A4;
- (b) be required for public use by the Crown, a council or a State authority;
- (c) be required for the provision of Utilities; or
- (d) be for the consolidation of a lot with another lot provided each lot is within the same zone.

By our interpretation A1(b), A1(c) and A1(d) are not relevant to the proposal. A subdivision that results in 3 lots of ca. 15 to 22 ha each cannot satisfy A1(a).

22.5.1 Lot design

Performance Criteria P1

Each lot, or a proposed lot in a plan of subdivision, must have sufficient useable area and dimensions suitable for its intended use, having regard to:

- (a) the relevant Acceptable Solutions for development of buildings on the lots;
- (b) existing buildings and the location of intended buildings on the lot;
- (c) the ability to retain vegetation and protect landscape values on each lot;
- (d) the topography of the site; and
- (e) the pattern of development existing on established properties in the area, and must have an area not less than 20 ha.

The key threshold of 20 ha will be satisfied (proposed lots sizes 32.9, 24.1 & 20.6 ha). With respect to P1(a), refer to further review below of key elements of 22.4 Development Standards for Buildings and Works. With respect to P1(b), the subdivision design takes into consideration the location of the existing buildings such that the "location of intended buildings" is considered satisfied under

P1(b). With respect to P1(c), refer to **DISCUSSION Recommendations** that demonstrate the ability to retain extensive vegetation and protect key "natural values" such as threatened vegetation and fauna sites/habitat, noting that P1(c) refers only to "landscape values". With respect to P1(d), in our interpretation, this most logically refers to matters such as drainage features, which will be practically excluded. With respect to P1(e), in our opinion, 3 lots of ca. 21-33 ha would be in accordance with the "pattern of development existing on established properties in the area" as the existing lots within the landscape conservation zone to the south are mostly less than 20 ha. In summary, in our opinion, P1 can be satisfied.

Cl. 22.5.1 P1 requires that regard is made with respect to the relevant Acceptable Solutions for development of buildings on the lots. Below we address the key elements of 22.4 Development Standards for Buildings and Works that make reference to "natural values" (again noting any such reference is oblique through the use of the term "landscape values" only).

22.4.1 Site coverage

Objective:

That the site coverage is compatible with the protection, conservation and management of the landscape values of the site and surrounding area.

Acceptable Solutions

A1

Site coverage must be not more than 400 m².

Performance Criteria

P1

Site coverage must be compatible with the landscape values of the site and surrounding area, having regard to:

- (a) the topography of the site;
- (b) the capacity of the site to absorb run-off;
- (c) the size and shape of the site;
- (d) the existing buildings and any constraints imposed by existing development;
- (e) the need to remove vegetation;
- (f) the location of development in relation to cleared areas; and
- (g) the location of development in relation to natural hazards.

On the assumption that site coverage within each lot may exceed 400 m² (due to bushfire hazard management requirements), in our opinion, development of a single residential dwelling and associated residential elements including a BAL-19 hazard management area should be "compatible with the landscape values of the site and surrounding area", noting that "having regard to" the various sub-clauses does not raise any matters that cannot be addressed through the recommendations that have been made in relation to "natural values" (refer to **DISCUSSION Recommendations**).

22.4.4 Landscape protection

Objective:

That the landscape values of the site and surrounding area are protected or managed to minimise adverse impacts.

Acceptable Solutions

A1

Building and works must be located within a building area, if shown on a sealed plan.

Performance Criteria

Building and works must be located to minimise native vegetation removal and the impact on landscape values, having regard to:

- (a) the extent of the area from which vegetation has been removed;
- (b) the extent of native vegetation to be removed;
- (c) any remedial or mitigation measures or revegetation requirements;
- (d) provision for native habitat for native fauna;
- (e) the management and treatment of the balance of the site or native vegetation areas;
- (f) the type, size, and design of development; and
- (g) the landscape values of the site and surrounding area.

If the administrative act of subdivision creates building areas shown on a sealed plan, it is presumed that the intent of A1 will be satisfied. However, if the building area does not include sufficient area to accommodate a BAL-19 hazard management area (and/or access), P1 may need to be addressed. Refer to response under 22.4.1. In this case, P1 makes direct reference to "natural values" covered by the present assessment, viz, "native vegetation" and "native habitat for fauna". In our opinion, the creation of 3 ca. 21-33 ha lots that allow for a single residential dwelling and associated hazard management area will ensure most of the native vegetation within each lot will be retained, which will also retain "native habitat for native fauna". It is unlikely that the retained vegetation will require complex consideration of "the management and treatment of the balance of the site or native vegetation areas". With further reference to the very broad concept of "provision for native habitat for native fauna" (which is entirely subjective and no guidance is provided on its interpretation), in this case, future lot occupation may see it desirable by owners to construct boundary and/or internal fences. This has the potential to fragment habitat for some ground-dwelling fauna if fences are constructed in a manner that would prevent their passing.

It is recommended that at least 50% of each boundary or internal fence be constructed in a manner that allows free movement of ground-dwelling fauna (e.g. a simple post-and-wire fence rather than a 'gridlock' wire fence or solid paling or metal fencing that inhibits animal passage). It is recommended that the existing 'gridlock' wire fence be maintained along Tasman Highway to minimise roadkill incidents.

It is further recommended that where such fencing passes through the mapped *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL), that only a post-and-wire fence be provisioned (noting that the only existing boundary fence noted occurs along the Tasman Highway boundary).

NATURAL ASSETS CODE

The purpose of the Natural Assets Code is stated below:

C7.1 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 above purpose statements are essentially addressed through the relevant development standards. However, as a general statement, we do not believe that that small-scale subdivision and eventual occupation of lots will compromise the intent of the purpose statements.

Of the purpose statements, C7.1.1 would only be relevant to the watercourses and drainage features and therefore activities such as fencing. At this stage of planning, further commentary on the relevant provisions is not made but reference is made to the recommendations provided under the Landscape Conservation Zone for fencing through these features.

We do not believe that C7.1.2 or C7.1.3 are relevant.

C7.1.4 will be relevant to the area of *Eucalyptus globulus* dry forest and woodland (TASVEG code: DGL) and *Eucalyptus globulus* wet forest (TASVEG code: WGL), both as potential foraging habitat for the swift parrot, and the latter also capturing the "prime" potential/confirmed habitat for the giant velvet worm – see comments under Landscape Conservation Zone (e.g. in terms of fencing through the mapped areas of DGL).

We do not believe that C7.1.5 is relevant at any reasonable scale (see previous consideration of the concept of "significant habitat") relative to the proposed location of building envelopes. This is because the position of these has been adjusted to take into account the required setbacks, minimising encroachment into the Scenic Road Corridor overlay, and more importantly from a natural values perspective, deliberately avoiding the extent of threatened vegetation and potential habitat of the swift parrot.

The application of the Natural Assets Code is stated below:

C7.2 Application of this Code:

C7.2.1 This code applies to development on land within the following areas:

- (c) a priority vegetation area only if within the following zone:
 - (iii) Landscape Conservation Zone

C7.2.2 This code does not apply to use.

The proposed development area is zoned as Landscape Conservation and wholly subject to the Priority Vegetation Area overlay under the *Scheme* such that C7.2.1(c)(iii) has application. However, as presently conceptualised, the building envelope for both new lots are wholly outside the extent of the Priority Vegetation Area overlay. That is, unless the overlay is altered, the development will not be within the overlay such that the Code will have limited application.

At this point, however, it is worth discussing the classification of the site with respect to the intention of the *Scheme's* definition of "priority vegetation", which is:

C7.3 Definition of Terms

C7.3.1 In this code, unless the contrary intention appears:

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.

Under the Code, a “priority vegetation area” is defined to mean:

land shown on an overlay map in the relevant Local Provisions Schedule, as within a priority vegetation area.

As present, only part of the title is subject to the overlay, this coinciding approximately with the green areas on older topographic maps, which in turn are reflected in the TASVEG 3.0 vegetation mapping used to create the overlay through the Regional Ecosystem Model. That mapping included three F-coded TASVEG mapping units (viz, FAG, FRG & FPF) that were excluded from the overlay. All other native vegetation was included (viz. DGL DAC, DSG, NAD & NBA), even though only DGL would have properly equated to “priority vegetation”.

Site assessment indicates that quite extensive parts of the title support a native vegetation community listed as threatened (viz. *Eucalyptus globulus* dry forest and woodland) under Schedule 3A of the Tasmanian *Nature Conservation Act 2002*, such that C7.3.1(a) is applicable to these parts of the title, which are not intended to be developed (by revised placement of the building envelopes).

The site does not support threatened flora (excluding the historical database locations, which could not be re-found), which means that no part of the site is “a threatened flora species” [sic] such that it cannot be construed as “priority vegetation” (in relation to this value) pursuant to C7.3.1(b).

The title does support “significant habitat for threatened fauna” such that C7.3.1(c) is considered applicable (see previous discussion of the concept of “significant habitat”, especially in relation to potential habitat of the swift parrot and giant velvet worm). However, revised placement of the building envelopes practically excludes any such habitat from future development.

We are not aware that any part of the site has been “identified as native vegetation of local importance”, noting that this cannot simply refer to a site subject to the overlay as that would be circular argument based on false logic (given that the basis for the overlay through the Regional Ecosystem Model acknowledges the need to ground-truth all modelling). It is acknowledged that the Tasmanian Planning Commission produced Information Sheet 2-2024 that clarifies assessment of this component of “priority vegetation”. The vegetation within the title does not meet any of the criteria listed in that sheet, except as already classified under C7.3.1(a), (b) and (c), such that C7.3.1(d) is not considered applicable.

On the basis of the above review, the parts of the title proposed for actual development (i.e. access, house sites, hazard management areas) do not support “priority vegetation”. Refer to Plates 8-11 and 12-15 for images of the indicative building areas of the proposed new lots.

The Development Standards for Subdivision (C7.7) have two sub-clauses, one relevant to watercourses being C7.7.1 Subdivision within a waterway and coastal protection area (not considered further herein at this stage – see previous commentary), and the one relevant to areas subject to the Priority Vegetation Area overlay being C7.7.2 Subdivision within a priority vegetation area.

The objective of C7.7.2 is stated as:

That:

- (a) works associated with subdivision will not have an unnecessary or unacceptable impact on priority vegetation; and
- (b) future development likely to be facilitated by subdivision is unlikely to lead to an unnecessary or unacceptable impact on priority vegetation.

The above objective statements are essentially addressed through the relevant acceptable solutions or performance criteria. However, as a general statement, development as indicated should not compromise the intent of the objective statements. Unfortunately, a definition of the concepts of “unnecessary or unacceptable” is not provided so it falls to professional opinion and a reasonable consideration of the concept to address the objective. In our opinion, given that there will be no anticipated impact to “priority vegetation” (see previous discussion of this), it follows that there should be no “unnecessary or unacceptable impact” to such.



Plates 8-11. Views from approximate centre of proposed building area for the northern lot: clockwise from top left – looking north, east, south and west

The Acceptable Solution of C7.7.2 is stated as:

A1

Each lot, or a lot proposed in a plan of subdivision, within a priority vegetation area must:

- (a) be for the purposes of creating separate lots for existing buildings;
- (b) be required for public use by the Crown, a council, or a State authority;
- (c) be required for the provision of Utilities;
- (d) be for the consolidation of a lot; or
- (e) not include any works (excluding boundary fencing), building area, bushfire hazard management area, services or vehicular access within a priority vegetation area.

Given that only part of the title is subject to the Priority Vegetation Area, satisfaction of A1 is possible. The actual future works (viz. access route, building area and associated hazard management area) will not be within the extent of the current Priority Vegetation Area overlay, and have now also been located to avoid any impact to vegetation that could be construed as "priority vegetation". Note that A1(e) excludes considering boundary fencing within a Priority Vegetation Area.



Plates 12-15. Views from approximate centre of proposed building area for the southern lot: clockwise from top left – looking north, east, south and west

The Performance Criteria of C7.7.2 are stated as:

P1.1 Each lot, or a lot proposed in a plan of subdivision, within a priority vegetation area must be for:

- (a) subdivision for an existing use on the site, provided any clearance is contained within the minimum area necessary to be cleared to provide adequate bushfire protection, as recommended by the Tasmanian Fire Service or an accredited person;
- (b) subdivision for the construction of a single dwelling or an associated outbuilding;
- (c) subdivision in the General Residential Zone or Low Density Residential Zone;
- (d) use or development that will result in significant long term social and economic benefits and there is no feasible alternative location or design;

- (e) subdivision involving clearance of native vegetation where it is demonstrated that on-going pre-existing management cannot ensure the survival of the priority vegetation and there is little potential for long-term persistence; or
- (f) subdivision involving clearance of native vegetation that is of limited scale relative to the extent of priority vegetation on the site.

The application of P1.1 in relation to the findings means that the relevant provision is considered to be P1.1(b) in that the proposed lots would all be for single dwellings or and associated outbuilding. Given that the sub-clauses of P1.1 are linked by the disjunctive "or", only one needs to be satisfied to satisfy P1.1. However, in this case, P1.1(f) is also probably satisfied, although it is reiterated that there would be no "clearance of native vegetation that is of limited scale relative to the extent of priority vegetation on the site", presuming that this can only logically refer to "priority vegetation" rather than just "native vegetation". Otherwise, the balance of the clause loses logical integrity (i.e. it must be one area of priority vegetation relative to the balance of priority vegetation). Again, it is noted that the actual future works (viz. access route, building area and associated hazard management area) will not be within the extent of the current Priority Vegetation Area overlay, and have now also been located to avoid any impact to vegetation that could be construed as "priority vegetation".

The Performance Criteria of C7.7.2 is stated as:

P1.2

Works association [sic] with subdivision within a priority vegetation area must minimise adverse impacts on priority vegetation, having regard to:

- (a) the design and location of any works, future development likely to be facilitated by the subdivision, and any constraints such as topography or land hazards;
- (b) any particular requirements for the works and future development likely to be facilitated by the subdivision;
- (c) the need to minimise impacts resulting from bushfire hazard management measures through siting and fire-resistant design of any future habitable buildings;
- (d) any mitigation measures implemented to minimise the residual impacts on priority vegetation;
- (e) any on-site biodiversity offsets; and
- (f) any existing cleared areas on the site.

There are two critical phrases in C7.7.2 P1., viz. "...must minimise adverse impacts..." and "...having regard to...".

The use of the term "minimises" contemplates some level of impact being acceptable, although the *State Planning Provisions* do not provide guidance on the concept of what may constitute an "adverse" impact such that this falls to professional opinion. In this case, it is reiterated that the administrative act of subdivision will not in itself result in impact to "priority vegetation" because (a) any future works are outside the overlay itself; and (b) the building envelopes have been located to avoid any vegetation that could be construed as "priority vegetation". That is, the overarching part of P1.2 is somewhat moot i.e. it is impossible to minimise adverse impacts to priority vegetation if no such vegetation is present.

With respect to the phrase "...having regard to...", this is considered in the manner referred to in *S and S McElwaine and A Hamilton v West Tamar Council and Growth Developments Pty Ltd [2021] TASCAT 4 (17 November 2021)*, where TASCAT stated: "The requirement to 'have regard to' does not elevate P2.1(a) to (f) to mandatory requirements that the Proposal must satisfy. The Tribunal need only consider those subparagraphs in ascertaining whether the Proposal complies with Clause E8.6.1 P2.1". In this case, it is already clear that the subdivision design has "had regard to" various natural values in that the building areas utilise the historically most disturbed parts of the title and

avoid impacts to key features such as watercourses, threatened vegetation and potential/confirmed habitat of threatened fauna.

That said, the sub-criteria of P1.2 are further addressed in turn below.

- (a) the design and location of any works, future development likely to be facilitated by the subdivision, and any constraints such as topography or land hazards;

In our opinion, this has been addressed by avoiding the parts of the title such as the watercourses, threatened vegetation and potential/confirmed habitat of threatened fauna (including potential foraging habitat of the swift parrot and sites supporting the giant velvet worm) and restricting development to the previously cleared portions of the title.

- (b) any particular requirements for the works and future development likely to be facilitated by the subdivision;

Uncertain application in relation to the identified natural values, except perhaps to indicate machinery and vehicle hygiene protocols in relation to weed and hygiene management to minimise the risk of further introducing weeds and disease to the site (but even these should not be critical given access will be from the fully-formed, sealed and well-maintained Tasman Highway, such that the risk of construction machinery and vehicles introducing weeds and disease to the subject title is considered low).

- (c) the need to minimise impacts resulting from bushfire hazard management measures through siting and fire-resistant design of any future habitable buildings;

With respect to subsection P1.2(c), we would usually accept a certified bushfire hazard management plan as meeting the intent of the provision. In this case, the final BAL rating is not considered of particular relevance to the management of natural values given the non-threatened status of the vegetation types where the buildings will be. In fact, fire management will almost certainly enhance the diversity of native herbs and grasses on the site given the dominance of *Gahnia radula* (thatch sawsedge) and very low species diversity at the sites. It has been assumed that a BAL-19 rating is required.

- (d) any mitigation measures implemented to minimise the residual impacts on priority vegetation;

There will be no “residual impact on priority vegetation” because no priority vegetation has been identified from the areas proposed for development and the sites positioned to avoid priority vegetation. With respect to future potential fencing, which may pass through a threatened vegetation community (viz. DGL) and potential habitat of threatened fauna, hence actual priority vegetation, refer to recommendations under Landscape Conservation Zone that provides guidelines to minimise adverse impacts such that the residual impact would be effectively negated.

- (e) any on-site biodiversity offsets; and

No such offsets have been identified as necessary, noting that a substantial portion of the title is already subject to a formal conservation covenant and that this will remain the case after subdivision.

- (f) any existing cleared areas on the site.

Both dwelling sites are sited deliberately within areas of former agricultural land with existing access tracks directly off Tasman Highway.

On the basis of the above review, in our opinion, the relevant performance criteria of C7.7.2 are satisfied without the need for specific permit conditions, although note recommendations in relation to possible future boundary fencing. Satisfaction of C7.7.2 also means that future satisfaction of C7.7.1 will also be achieved (phrased very similarly).

Recommendations

The recommendations provided below are a summary of those provided in relation to each of the natural values described in the main report. The main text of the report provides the relevant context for the recommendations.

Vegetation types

In general terms, minimising the extent of “clearance and conversion” and/or “disturbance” to native vegetation is recommended, within the context of future residential dwellings being an acceptable use and acknowledging this will include access, establishment of a hazard management area (and associated elements) and in the longer-term possibly infrastructure such as boundary fences (if required).

It is noted that the location of future building envelopes (to satisfy minimum BAL-19 hazard management requirements) and associated access have been positioned to effectively avoid all higher priority native vegetation communities (specifically the areas mapped as *Eucalyptus globulus* dry forest and woodland).

With respect to possible future boundary fences, the following is suggested:

- it is recommended that at least 50% of each boundary or internal fence be constructed in a manner that allows free movement of ground-dwelling fauna (e.g. a simple post-and-wire fence rather than a ‘gridlock’ wire fence or solid paling or metal fencing that inhibits animal passage);
- it is recommended that the existing ‘gridlock’ wire fence be maintained along Tasman Highway to minimise roadkill incidents;
- barbed or electrified wire should be avoided (with the existing barbed top wire along the Tasman Highway boundary removed); and
- where fencing is required through threatened native vegetation (i.e. *Eucalyptus globulus* dry forest and woodland, TASVEG code: DGL), clearing should be minimised (e.g. no more than 1-2 m each side) and restricted to understorey clearing only, such that the integrity, composition and condition of the overall communities will be maintained (and free movement of vertebrate fauna also maintained).

Threatened flora

None detected – no special management should be required, noting that previously recorded locations of such species could not be confirmed and are well outside any area proposed for future development.

Threatened fauna

Apart from the generic recommendation to minimise the extent of “clearance and conversion” and/or “disturbance” to native vegetation (with acknowledged constraints), the following is also recommended (see also notes on fencing under Vegetation types):

- avoid, wherever practical, removal of hollow-bearing trees associated with boundary fencing/clearing; and
- avoid, wherever practical, removal of any individuals of *Eucalyptus globulus* (the mapped areas of DGL).

It is noted that potential habitat of other species (including the giant velvet worm) is effectively avoided by the placement of future building envelopes (to satisfy minimum BAL-19 hazard management requirements) and associated accesses in lower priority and previously modified vegetation types.

Weed and disease management

Eventual owner occupation is considered the most appropriate (and realistic) means of achieving control of any declared species, where vigilance and immediate control are practical. Regarding the distribution of declared and environmental weed species within the formally reserved conservation covenant area in the south, longer-term special management (e.g. a complex weed management plan) is possibly warranted. The specific requirements within the 'Terms of Covenant' that binds the current and future owners to specific management actions will need to be reviewed and considered in the context of the proposed southern title.

Legislative and policy implications

A permit under Section 51 of the Tasmanian *Threatened Species Protection Act 1995* (TSPA) should not be required as no specimens of listed flora or fauna will be "knowingly taken" as a consequence of subdivision and eventual occupation.

A formal referral to the relevant Commonwealth agency under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) is not considered required.

Development will require a planning permit pursuant to the provisions of the applicable planning scheme but P1.1 & P1.2 of C7.7.1 & C7.7.2 of the Natural Assets Code of the *Tasmanian Planning Scheme – Break O'Day* are considered satisfied (but see recommendations above).

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APPENDIX A. Vegetation community structure and composition

The tables below provide information on the structure and composition of the native vegetation mapping units identified from the study area.

<i>Bursaria-Acacia</i> woodland (TASVEG code: NBA)		
<p>NBA occurs as a disturbance-induced community that dominates broad areas of previously cleared agricultural land, generally occurring as a gradational community between former pasture/cleared areas and DAC & DGL forest communities.</p> <p>NBA is characterised by the dominance of tall shrubs/trees of <i>Acacia mearnsii</i> with scattered <i>A. dealbata</i> and <i>Bursaria spinosa</i> over a sedgy understorey entirely dominated by <i>Gahnia radula</i> that forms a dense layer between 80-100% cover. Small openings within the sedge layer have a mixed dominance of introduced and native grass and herb species. Vascular plant diversity is very low potentially due to historical disturbance and intense fire events in recent decades. Historically, it is likely that these areas were DGL or DAC woodland that has been cleared for pasture and subsequently reinvaded by <i>Acacia mearnsii</i>.</p> <p>NBA is gradational with DGL and DAC.</p> <p>Most of the NBA is in reasonable ecological condition with only scattered opportunistic weeds noted. No symptoms of plant disease were observed.</p>		
<div style="display: flex; justify-content: space-around;">   </div>		
<p>NBA 'invading' old pasture areas in north of title (LHS) and NBA with very low species diversity with dense sedge layer of <i>Gahnia radula</i> (thatch sawsedge) (RHS)</p>		

Stratum	Height (m) Cover (%)	Species (<u>underline</u> = dominant, parentheses = sparse or occasional)
Tall shrubs	6-8 m 10-25%	<u><i>Acacia mearnsii</i></u> , (<i>Bursaria spinosa</i>), (<i>A. dealbata</i>), (<i>Allocasuarina littoralis</i>), (<i>Eucalyptus globulus</i> and <i>E. amygdalina</i>) present as regrowth on the margins), <i>Exocarpos cupressiformis</i>
Shrubs	<4 m <10%	<i>A. mearnsii</i> , (<i>Bursaria spinosa</i>), (<i>Acacia verticillata</i>), <i>Exocarpos cupressiformis</i>
Grasses	<0.5 m <5-70%	<i>Microlaena stipoides</i> , <i>Agrostis capillaris</i> , <i>Themeda triandra</i> , <i>Rytidosperma</i> spp., <i>Tetrarrhena distichophylla</i> , <i>Anthoxanthum odoratum</i>
Graminoids	<1 m 40 to 100%	<u><i>Gahnia radula</i></u> , (<i>Lomandra longifolia</i>)
Herbs	+ 20%	<i>Dichondra repens</i> , <i>Hypochaeris radicata</i> , <i>Centaureum erythraea</i> , <i>Acaena echinata</i> , <i>Gonocarpus tetragynus</i> , <i>Oxalis perennans</i>

***Eucalyptus amygdalina* coastal forest and woodland (TASVEG code: DAC)**

DAC occurs as a regrowth community associated with insulated steep and rocky slopes on the north-facing aspect of ridge lines. DAC has a mainly low open woodland structure with a multiple aged canopy due to past fire events, dominated by regrowth-form *Eucalyptus amygdalina* with scattered *E. viminalis* and *E. globulus* over a shrubby understorey of *Exocarpos cupressiformis*, *Pomaderris elliptica* and *Acacia dealbata*. The understorey is dominated by the graminoid species *Gahnia radula* and *Lomandra longifolia* with scattered *Lepidosperma* species. Rock cover is high.

DAC is gradational with DGL as sites become relatively moist and sheltered and with NBA in the centre-south.

DAC is in good ecological condition with no weeds or symptoms of plant disease observed.



(LHS) DAC on insulated slopes in north with a generally sparser sedge layer and higher rock exposure

(RHS) DAC on gentle slopes near western boundary with a dominant sedge layer of *Gahnia radula*

Stratum	Height (m) Cover (%)	Species (underline = dominant, parentheses = sparse; + = present)
Trees	14-18 m 15%	<u><i>Eucalyptus amygdalina</i></u> , (<i>E. viminalis</i>), (<i>E. globulus</i>)
Trees/tall shrubs	6-10 m 25%	<u><i>Eucalyptus amygdalina</i></u> , <i>Exocarpos cupressiformis</i> , (<i>E. viminalis</i>), (<i>E. globulus</i>), <i>Acacia mearnsii</i> , <i>A. dealbata</i>
Shrubs	2-4 m ~20%	<i>Pomaderris elliptica</i> , <i>Exocarpos cupressiformis</i>
Graminoids	40-80%	<u><i>Gahnia radula</i></u> , <u><i>Lomandra longifolia</i></u>
Grasses	+	<i>Poa sieberiana</i> , <i>Austrostipa</i> spp., <i>Rytidosperma</i> spp., <i>Microlaena stipoides</i> , <i>Tetrarrhena distichophylla</i>
Herbs	+	<i>Dichondra repens</i> , <i>Goodenia lanata</i> , <i>Euchiton japonicus</i> , <i>Gonocarpus tetragynus</i>
Ferns	variable	<i>Pteridium esculentum</i>

***Eucalyptus globulus* dry forest and woodland (TASVEG code DGL)**

DGL is the dominant vegetation community across the title, occurring on the lower slopes and relatively fertile sites with well-formed soils.

DGL is characterised by the dominance of *Eucalyptus globulus* that forms a multi-aged canopy structure with *E. amygdalina* and *E. viminalis* common subdominants in the north and *E. sieberi* in the south. The tree/tall shrub layer is variable depending on disturbance history with *Acacia mearnsii* generally dominating. Areas of relatively mature form DGL are present in areas not historically cleared on ridges and along drainage features. These areas have a relatively high structural diversity and floristic composition. The old pasture areas are generally depauperate with scattered regenerating *E. globulus* and *A. mearnsii* over a very dense graminoid layer of *Gahnia radula* and *Lomandra longifolia*.

DGL is gradational with DAC on insolated and rocky north-facing sites, NBA in the disturbed old pasture areas, WGL along the moist and fertile creeks and drainage features, and DSG on the broad and dry ridge in the south between Four Mile and Banticks creeks.

DGL is generally in good condition with few weeds recorded. The declared weed *Erica lusitanica* (spanish heath) was noted in the vicinity of Banticks Creek. No symptoms of plant disease were observed.



(LHS) DGL surrounding dam in centre of title

(RHS) DGL to the (north) along access road to existing residence (NBA regrowth is on the left)



(LHS) DGL regrowth invading former pasture areas in north surrounded by a dense tree/tall shrub layer of *Acacia mearnsii*

(RHS) DGL in north above Lumera Creek with a high percentage of rock cover due to the insolation at the site and high fire frequency that has 'scorched' the rocks



DGL in north above Lumera Creek with remnant mature individual of *E. globulus*

Stratum	Height (m) Cover (%)	Species (underline = dominant, parentheses = sparse; + = present)
Trees	20-25 (<30) m 5-20%	<u><i>Eucalyptus globulus</i></u> , (<i>E. amygdalina</i>), (<i>E. viminalis</i>), (<i>E. sieberi</i>) – present in the south near Four Mile Creek
Trees	~12 m 10%	<u><i>Eucalyptus globulus</i></u> , (<i>E. amygdalina</i>), (<i>E. viminalis</i>), (<i>E. sieberi</i>)
Tall shrubs	6-8 m 10-25%	<u><i>Acacia mearnsii</i></u> , (<i>Bursaria spinosa</i>), (<i>A. dealbata</i>), (<i>Allocasuarina littoralis</i>), (<i>Eucalyptus globulus</i> and <i>E. amygdalina</i>) present as regrowth on the margins), <i>Exocarpos cupressiformis</i>
Shrubs	<4 m <10%	<i>A. mearnsii</i> , (<i>Bursaria spinosa</i>), (<i>Acacia verticillata</i>), <i>Exocarpos cupressiformis</i>
Grasses	<0.5 m <5-70%	<i>Microlaena stipoides</i> , <i>Agrostis capillaris</i> , <i>Themeda triandra</i> , <i>Rytidosperma</i> spp., <i>Tetrarrhena distichophylla</i> , <i>Anthoxanthum odoratum</i>
Graminoids	<1 m 40 to 100%	<u><i>Gahnia radula</i></u> , (<i>Lomandra longifolia</i>)
Herbs	+ 20%	<i>Dichondra repens</i> , <i>Viola hederacea</i> , <i>Acaena echinata</i> , <i>Gonocarpus tetragynus</i> , <i>Oxalis perennans</i>
Ferns	<1 m <5%	<i>Pteridium esculentum</i> , <i>Cheilanthes austrotenuifolia</i>

***Eucalyptus sieberi* forest and woodland on granite (TASVEG code: DSG)**

DSG has been mapped in the south of the title on the broad ridge between Four Mile and Banticks creeks. DSG is structurally and compositionally quite similar to DGL albeit somewhat more dense regrowth of dominant canopy species (typical for ironbark-dominated forests).

The mapped area of DSG has been dissected by a telecommunication easement; however, overall DSG is in excellent ecological condition with no significant weeds or symptoms of plant disease observed.



(both images) DSG on the ridge between Four Mile and Banticks creeks in south of title

Stratum	Height (m) Cover (%)	Species (underline = dominant, parentheses = sparse; + = present)
Trees	18-30 m 20-30%	<u><i>Eucalyptus sieberi</i></u> , (<i>Eucalyptus globulus</i>)
Trees/tall shrubs	10-14 m 10%	<i>Eucalyptus sieberi</i> , (<i>E. globulus</i>), (<i>E. amygdalina</i>)
Tall shrubs	3-8 m 5%	<u><i>Exocarpos cupressiformis</i></u> , <i>Allocasuarina littoralis</i> , <i>Acacia dealbata</i> , (<i>Banksia marginata</i>)
Shrubs	1-3 m <10%	<i>Epacris impressa</i> , <i>Kunzea ambigua</i>
Low shrubs	<0.5 m +	<i>Styphelia adscendens</i> , <i>Lissanthe strigosa</i>
Graminoids	<1 m 30-50%	<i>Gahnia radula</i> , <i>Lomandra longifolia</i> , <i>Lepidosperma concavum</i> , <i>Lepidosperma laterale</i>
Grasses	+	<i>Poa sieberiana</i> , <i>Austrostipa</i> spp., <i>Rytidosperma</i> spp., <i>Microlaena stipoides</i> , <i>Tetrarrhena distichophylla</i>
Herbs	+	<i>Goodenia lanata</i> , <i>Gonocarpus tetragynus</i>
Ferns	variable to 10%	<i>Pteridium esculentum</i>

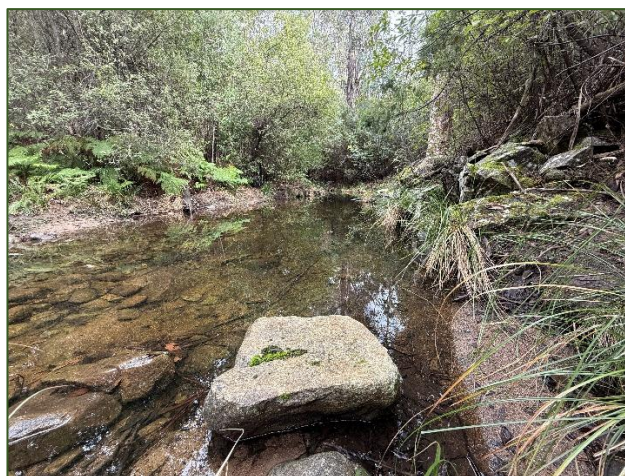
***Eucalyptus globulus* wet forest (TASVEG code: WGL)**

WGL occurs along all drainage features that dissect the title as a riparian community associated with fertile and moist river terraces and southerly slopes. Floristic composition within WGL varies depending on a number of factors such as creek size, soil development, rock exposure and fire history.

WGL is characterised by a dominant tree layer of *Eucalyptus globulus* with a secondary canopy of *Acacia melanoxylon*. *Eucalyptus viminalis* occurs as a codominant or subdominant species along the fertile and moist larger creeks in the south. A dense tall shrub layer is present dominated by *Pomaderris apetala* with *Beyeria viscosa* present as a subdominant. Ferns are present at all sites with *Dicksonia antarctica* occurring on river terraces and a diversity of ferns occurring on the stream margins. A variably dense sedge layer dominated by *Lepidosperma* species is present at all sites.

WGL is gradational with DGL as sites become more insolated generally on south-facing slopes with DGL dominating the exposed, steep and rocky northerly slopes.

WGL is mostly in good condition with few to no weeds recorded in the northern drainage features. The declared weed *Erica lusitanica* (spanish heath) was noted along Banticks Creek. The mapped area of WGL along Four Mile Creek is in poor condition with several declared and environmental weed species dominating the understorey. This is discussed further in Findings **Other natural values** Weed species. No symptoms of plant disease were observed.



(LHS) WGL in north of title and (RHS) WGL along Banticks Creek in south of title

Stratum	Height (m) Cover (%)	Species (underline = dominant, parentheses = sparse; + = present)
Trees	30-50 m 25-30%	<u><i>Eucalyptus globulus</i></u> , <i>Eucalyptus viminalis</i>
Trees	15-20 m 10%	<u><i>Eucalyptus globulus</i></u> , <i>Eucalyptus viminalis</i> , <i>Acacia melanoxylon</i> , (<i>A. dealbata</i>)
Tall shrubs	6-12 m 40-50%	<u><i>Pomaderris apetala</i></u> , <i>Beyeria viscosa</i>
Shrubs	<2 m +	<i>Coprosma quadrifida</i>
Graminoids	variable	<i>Lepidosperma elatius</i> , <i>Carex appressa</i> , (<i>Lomandra longifolia</i>)
Herbs	+	<i>Goodenia lanata</i> , <i>Gonocarpus tetragynus</i> , <i>Lagenophora stipitata</i> , <i>Viola hederacea</i>
Ferns	variable to 60%	<i>Dicksonia antarctica</i> , <i>Polystichum proliferum</i> , <i>Blechnum nudum</i> , <i>Hypolepis rugosula</i> , (<i>Pteridium esculentum</i>)

APPENDIX B. Vascular plant species recorded from study area

Botanical nomenclature follows *A Census of the Vascular Plants of Tasmania* (de Salas & Baker 2025), with family placement updated to reflect the nomenclatural changes recognised in the *Flora of Tasmania Online* (de Salas 2025+) and APG (2016); common nomenclature follows *The Little Book of Common Names of Tasmanian Plants* (Wapstra et al. 2005+, updated online at www.nre.tas.gov.au).

e = endemic to Tasmania

i = naturalised in Tasmania

EW = environmental weed (authors' opinion)

DW = declared weed; Tasmanian *Biosecurity Act 2019* (*Biosecurity Regulations 2022*)

TSPA = Tasmanian *Threatened Species Protection Act 1995* (status indicated)

Table B1. Summary of vascular species recorded from study area

STATUS	ORDER		
	DICOTYLEDONAE	MONOCOTYLEDONAE	PTERIDOPHYTA
	61	37	12
e	2	-	-
i	1	11	-
Sum	89	48	12
TOTAL	149		

DICOTYLEDONAE

ACANTHACEAE

i *Acanthus mollis* bears breeches

APOCYNACEAE

i *Vinca major* blue periwinkle EW

ARALIACEAE

Hydrocotyle hirta hairy pennywort

ASTERACEAE

Cassinia aculeata subsp. *aculeata* common dollybush

i *Cirsium vulgare* spear thistle EW

i *Delairea odorata* cape ivy EW

Euchiton japonicus common cottonleaf

i *Hypochaeris glabra* smooth catsear

i *Hypochaeris radicata* rough catsear

Lagenophora stipitata blue bottledaisy

i *Leontodon saxatilis* hairy hawkbit

Olearia argophylla musk daisybush

Olearia lirata forest daisybush

Olearia ramulosa twiggy daisybush

Senecio biserratus jagged fireweed

Senecio minimus shrubby fireweed

i *Sonchus oleraceus* common sowthistle

i *Taraxacum officinale* common dandelion

BORAGINACEAE

Hackelia suaveolens sweet houndstongue

CAPRIFOLIACEAE

i *Leycesteria formosa* himalayan honeysuckle DW

CARYOPHYLLACEAE

i *Cerastium glomeratum* sticky mouse-ear

i *Stellaria media* garden chickweed

CASUARINACEAE

Allocasuarina littoralis black sheoak

Allocasuarina verticillata drooping sheoak

	CONVOLVULACEAE		
	<i>Dichondra repens</i>	kidneyweed	
	CRASSULACEAE		
	<i>Crassula sieberiana</i>	rock stonecrop	
	ERICACEAE		
	<i>Acrotriche serrulata</i>	ants delight	
	<i>Epacris impressa</i>	common heath	
i	<i>Erica lusitanica</i>	spanish heath	DW
	<i>Lissanthe strigosa</i> subsp. <i>subulata</i>	peachberry heath	
	<i>Styphelia humifusa</i>	native cranberry	
	EUPHORBIACEAE		
	<i>Beyeria viscosa</i>	pinkwood	
	FABACEAE		
	<i>Acacia dealbata</i> subsp. <i>dealbata</i>	silver wattle	
	<i>Acacia longifolia</i> subsp. <i>sophorae</i>	coast wattle	
	<i>Acacia mearnsii</i>	black wattle	
	<i>Acacia melanoxylon</i>	blackwood	
	<i>Acacia verticillata</i> subsp. <i>verticillata</i>	prickly moses	
	<i>Bossiaea prostrata</i>	creeping bossia	
	<i>Glycine clandestina</i>	twining glycine	
	<i>Goodia lotifolia</i>	smooth goldentip	
	<i>Indigofera australis</i> subsp. <i>australis</i>	native indigo	
	<i>Pultenaea daphnoides</i>	heartleaf bushpea	
i	<i>Vicia sativa</i> subsp. <i>sativa</i>	common vetch	
	GENTIANACEAE		
i	<i>Centaurium erythraea</i>	common centaury	
	GERANIACEAE		
	<i>Geranium potentilloides</i> var. <i>potentilloides</i>	mountain cranesbill	
	GOODENIACEAE		
	<i>Goodenia lanata</i>	trailing native-primrose	
	<i>Goodenia ovata</i>	hop native-primrose	
	HALORAGACEAE		
	<i>Gonocarpus tetragynus</i>	common raspwort	
	<i>Gonocarpus teucroides</i>	forest raspwort	
	HYPERICACEAE		
	<i>Hypericum gramineum</i>	small st johns-wort	
	LAMIACEAE		
i	<i>Prunella vulgaris</i>	selfheal	
	LAURACEAE		
	<i>Cassytha glabella</i> f. <i>glabella</i>	longfruit slender dodderlaurel	
	<i>Cassytha melantha</i>	large dodderlaurel	
	MYRTACEAE		
e	<i>Eucalyptus amygdalina</i>	black peppermint	
	<i>Eucalyptus globulus</i>	tasmanian blue gum	
	<i>Eucalyptus sieberi</i>	ironbark	
	<i>Eucalyptus viminalis</i> subsp. <i>viminalis</i>	white gum	
	<i>Kunzea ambigua</i>	white kunzea	
e(i)	<i>Melaleuca pustulata</i>	warty paperbark	TSPA (rare)
	[introduced to site & planted on margin of dam overflow next to cultivated garden area with fruit trees and olives, etc. – not considered further]		
	OXALIDACEAE		
	<i>Oxalis perennans</i>	grassland woodsorrel	
	PICRODENDRACEAE		
	<i>Poranthera microphylla</i>	small poranthera	
	PITTIOSPORACEAE		
	<i>Bursaria spinosa</i> subsp. <i>spinosa</i>	prickly box	
i	<i>Pittosporum undulatum</i>	sweet pittosporum	EW
	PLANTAGINACEAE		
i	<i>Digitalis purpurea</i>	foxglove	
i	<i>Plantago coronopus</i> subsp. <i>coronopus</i>	slender buckshorn plantain	
i	<i>Plantago lanceolata</i>	ribwort plantain	
	<i>Plantago varia</i>	variable plantain	
	<i>Veronica calycina</i>	hairy speedwell	
	<i>Veronica gracilis</i>	slender speedwell	
	POLYGALACEAE		
	<i>Comesperma volubile</i>	blue lovecreeper	
	POLYGONACEAE		
i	<i>Acetosella vulgaris</i>	sheep sorrel	
	<i>Muehlenbeckia gunnii</i>	forest lignum	

	PRIMULACEAE		
i	<i>Lysimachia arvensis</i>	scarlet pimpernel	
	PROTEACEAE		
e	<i>Hakea epiglottis</i> subsp. <i>epiglottis</i>	beaked needlebush	
	RANUNCULACEAE		
	<i>Clematis aristata</i>	mountain clematis	
	RHAMNACEAE		
	<i>Pomaderris apetala</i> subsp. <i>apetala</i>	common dogwood	
	<i>Pomaderris elliptica</i> var. <i>elliptica</i>	yellow dogwood	
	ROSACEAE		
	<i>Acaena echinata</i>	spiny sheepsburr	
	<i>Acaena novae-zelandiae</i>	common buzzy	
i	<i>Rubus leucostachys</i>	blackberry	DW
	RUBIACEAE		
	<i>Coprosma quadrifida</i>	native currant	
	SANTALACEAE		
	<i>Exocarpos cupressiformis</i>	common native-cherry	
	SAPINDACEAE		
	<i>Dodonaea viscosa</i> subsp. <i>spatulata</i>	broadleaf hopbush	
	SOLANACEAE		
i	<i>Solanum nigrum</i>	blackberry nightshade	
	STYLIDIACEAE		
	<i>Stylidium graminifolium</i>	narrowleaf triggerplant	
	THYMELAEACEAE		
	<i>Pimelea humilis</i>	dwarf riceflower	
	URTICACEAE		
	<i>Urtica incisa</i>	scrub nettle	
i	<i>Urtica urens</i>	stinging nettle	
	VIOLACEAE		
	<i>Viola hederacea</i>	ivyleaf violet	
	MONOCOTYLEDONAE		
	ARACEAE		
i	<i>Arum italicum</i>	italian arum	EW
i	<i>Zantedeschia aethiopica</i>	arum lily	EW
	ASPARAGACEAE		
i	<i>Cordylina australis</i>	cabbage tree	EW
	ASPHODELACEAE		
	<i>Bulbine glauca</i>	bluish bulbine-lily	
	CYPERACEAE		
	<i>Carex appressa</i>	tall sedge	
	<i>Carex breviculmis</i>	shortstem sedge	
	<i>Eleocharis sphacelata</i>	tall spikesedge	
	<i>Gahnia radula</i>	thatch sawsedge	
	<i>Isolepis fluitans</i>	floating clubsedge	
?i	<i>Isolepis levynsiana</i>	fan clubsedge	
	<i>Isolepis marginata</i>	little clubsedge	
	<i>Lepidosperma concavum</i>	sand swordedge	
	<i>Lepidosperma curtisiae</i>	little swordedge	
	<i>Lepidosperma elatius</i>	tall swordedge	
	<i>Lepidosperma ensiforme</i>	arching swordedge	
	<i>Lepidosperma gunnii</i>	narrow swordedge	
	<i>Lepidosperma laterale</i>	variable swordedge	
	<i>Schoenus apogon</i>	common bogsedge	
	JUNCACEAE		
i	<i>Juncus articulatus</i>	jointed rush	
	<i>Juncus australis</i>	southern rush	
	<i>Juncus bassianus</i>	forest rush	
	<i>Juncus bufonius</i>	toad rush	
	<i>Juncus filicaulis</i>	thread rush	
	<i>Juncus pallidus</i>	pale rush	
	<i>Juncus procerus</i>	tall rush	
	ORCHIDACEAE		
	<i>Acianthus caudatus</i>	mayfly orchid	
	<i>Pterostylis nutans</i>	nodding greenhood	
	<i>Pterostylis pedunculata</i>	maroonhood	
	POACEAE		
i	<i>Agrostis capillaris</i>	browntop bent	
i	<i>Aira caryophyllea</i> subsp. <i>caryophyllea</i>	silvery hairgrass	

	<i>Anthosachne scabra</i>	rough wheatgrass
	<i>Austrostipa flavescens</i>	yellow speargrass
i	<i>Briza minor</i>	lesser quaking-grass
	<i>Dichelachne rara</i>	common plumegrass
i	<i>Holcus lanatus</i>	yorkshire fog
i	<i>Hordeum murinum</i>	shortflower barleygrass
	<i>Microlaena stipoides</i> var. <i>stipoides</i>	weeping grass
i	<i>Poa annua</i>	winter grass
	<i>Poa labillardierei</i> var. <i>labillardierei</i>	silver tussockgrass
	<i>Poa rodwayi</i>	velvet tussockgrass
	<i>Poa sieberiana</i> var. <i>sieberiana</i>	grey tussockgrass
	<i>Poa tenera</i>	scrambling tussockgrass
	<i>Rytidosperma caespitosum</i>	common wallabygrass
	<i>Rytidosperma setaceum</i>	bristly wallabygrass
	<i>Tetrarrhena distichophylla</i>	hairy ricegrass
	<i>Themeda triandra</i>	kangaroo grass
	RESTIONACEAE	
	<i>Centrolepis aristata</i>	pointed bristlewort
	TYPHACEAE	
	<i>Typha orientalis</i>	broadleaf cumbungi
	PTERIDOPHYTA	
	ASPLENIACEAE	
	<i>Asplenium flabellifolium</i>	necklace fern
	BLECHNACEAE	
	<i>Blechnum nudum</i>	fishbone waterfern
	<i>Blechnum parrissii</i>	common raspfern
	CULCITACEAE	
	<i>Calochlaena dubia</i>	rainbow fern
	DENNSTAEDTIACEAE	
	<i>Histiopteris incisa</i>	batswing fern
	<i>Hypolepis rugosula</i>	ruddy groundfern
	<i>Pteridium esculentum</i> subsp. <i>esculentum</i>	bracken
	DICKSONIACEAE	
	<i>Dicksonia antarctica</i>	soft treefern
	DRYOPTERIDACEAE	
	<i>Polystichum proliferum</i>	mother shieldfern
	PTERIDACEAE	
	<i>Adiantum aethiopicum</i>	common maidenhair
	<i>Cheilanthes austrotenuifolia</i>	green rockfern
	<i>Pteris tremula</i>	tender brake

APPENDIX C. Analysis of database records of threatened flora

Table C1 provides a listing of threatened flora from within 5,000 m of the study area (nominal buffer width usually used to discuss the potential of a particular study area to support various species listed in databases), with comments on whether potential habitat is present for the species, and possible reasons why a species was not recorded.

Table C1. Threatened flora records from within 5,000 m of boundary of study area

Species listed below are listed as rare (r), vulnerable (v), endangered (e), or extinct (x) on the Tasmanian *Threatened Species Protection Act 1995* (TSPA); vulnerable (VU), endangered (EN), critically endangered (CR) or extinct (EX) on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA). Information below is sourced from DNRET's *Natural Values Atlas* (DNRET 2025a) and other sources where indicated. Habitat descriptions are taken from FPA (2022) and TSS (2003+), except where otherwise indicated. Species marked with # are listed in CofA (2025).

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on project area and database records
<i>Blechnum cartilagineum</i> gristle fern	v -	<i>Blechnum cartilagineum</i> favours sheltered sites along creeklines in northern and eastern Tasmania. Sites are within dry sclerophyll or wet sclerophyll forest, sometimes associated strongly with the floodplain of a creek (e.g. Little Beach) but also on slopes away from riparian areas (e.g. Dial Range, Lone Star).	Potential habitat widespread along Four Mile, Banticks and Lumera creeks. There have been several targeted searches for this species in the Four Mile Creek area (M. Wapstra pers. comm.). Species not detected (no seasonal constraint on detection and/or identification).
<i>Blechnum neohollandicum</i> prickly raspfern	e -	<i>Blechnum neohollandicum</i> is known from a single site near Chain of Lagoons where it grows in shrubby damp sclerophyll forest along a rocky (Devonian granodiorite) creekline.	Species restricted to a highly localised area along Old Billys Creek (south of Four Mile Creek). Otherwise, as above.
<i>Caladenia caudata</i> tailed spider-orchid	v VU # only	<i>Caladenia caudata</i> has highly variable habitat, which includes the central north: <i>Eucalyptus obliqua</i> heathy forest on low undulating hills; the northeast: <i>E. globulus</i> grassy/heathy coastal forest, <i>E. amygdalina</i> heathy woodland and forest, <i>Allocasuarina</i> woodland; and the southeast: <i>E. amygdalina</i> forest and woodland on sandstone, coastal <i>E. viminalis</i> forest on deep sands. Substrates vary from dolerite to sandstone to granite, with soils ranging from deep windblown sands, sands derived from sandstone and well-developed clay loams developed from dolerite. A high degree of insolation is typical of many sites.	Potential habitat marginally present. While the survey was outside the peak flowering period (Wapstra 2018), a follow-up timed-targeted survey is not considered warranted because there is a statistically very low likelihood of occurrence as the species has a naturally disjunct and usually highly localised and low abundance occurrence (and in this case, habitat is marginal).
<i>Callitris oblonga</i> subsp. <i>oblonga</i> south esk pine	v EN # only	<i>Callitris oblonga</i> subsp. <i>oblonga</i> occurs predominantly in riparian scrub, woodland and forest (where it can extend away from rivers) in areas with low precipitation and usually sandy soil. It is local on the East Coast, particularly on the margins of the Swan, Apsley, South Esk, Cygnet and St Pauls rivers. A small population is also present in Cataract Gorge.	Potential habitat absent (wholly atypical of all recorded sites).

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on project area and database records
<i>Calystegia soldanella</i> sea bindweed	r -	<i>Calystegia soldanella</i> is recorded from coastal sands, mainly in the northeast of the State (but it is now also known from the northeast coast of King Island). It has also been found growing in granite soils and grazed coastal grasslands.	Potential habitat absent (wholly atypical of all recorded sites).
<i>Conospermum hookeri</i> tasmanian smokebush	v VU	<i>Conospermum hookeri</i> usually occurs in coastal and near-coastal heathland and heathy forest/woodland dominated by <i>Eucalyptus amygdalina</i> or <i>E. tenuiramis</i> . It extends from Bruny Island to the Furneaux islands, on granite or sandy, acid, low-nutrient soils. There are some inland occurrences in heathy <i>E. amygdalina</i> forest on granite substrates (e.g. near Avoca, Royal Ruby Flats).	Potential habitat absent (wholly atypical of all recorded sites).
<i>Desmodium gunnii</i> southern ticktrefoil	v -	<i>Desmodium gunnii</i> occurs in the north and sub-coastal areas of the northeast, with outlying sites at Woolnorth. It grows mostly in damp sclerophyll forest and woodland, usually on fertile sites.	Species detected on the title historically (refer to FINDINGS Threatened flora for further details.).
<i>Glycine microphylla</i> small-leaf glycine	v -	<i>Glycine microphylla</i> occurs in dry to dampish sclerophyll forest and woodland in the north and east of the State, with outlying sites at Woolnorth.	Species detected on the title historically (refer to FINDINGS Threatened flora for further details.).
<i>Gratiola pubescens</i> hairy brooklime	v -	<i>Gratiola pubescens</i> is most commonly located in permanently or seasonally damp or swampy ground, including the margins of farm dams.	Potential habitat marginally present around the dam (this habitat is avoided by the proposal). Species not detected (no seasonal constraint on detection and/or identification).
<i>Lepidium hyssopifolium</i> soft peppergrass	e EN #	The native habitat of <i>Lepidium hyssopifolium</i> is the growth suppression zone beneath large trees in grassy woodlands and grasslands (e.g. over-mature black wattles and isolated eucalypts in rough pasture). <i>Lepidium hyssopifolium</i> is now found primarily under large exotic trees on roadsides and home yards on farms. It occurs in the eastern part of Tasmania between sea-level to 500 metres a.s.l. in dry, warm and fertile areas on flat ground on weakly acid to alkaline soils derived from a range of rock types. It can also occur on frequently slashed grassy/weedy roadside verges where shade trees are absent.	Potential habitat absent (wholly atypical of all recorded sites).
<i>Lotus australis</i> australian trefoil	r -	<i>Lotus australis</i> is found mainly in near-coastal areas around the State within <i>Poa</i> tussock grassland, low coastal shrubbery and dunes.	Potential habitat absent (wholly atypical of all recorded sites).
<i>Phebalium daviesii</i> davies waxflower	e CR # only	The native distribution of <i>Phebalium daviesii</i> has become restricted to the George River near St Helens (with historic records from nearby Constable Creek). It occurs in a narrow valley in	Potential habitat absent (wholly atypical of all recorded sites). The site is well outside the recognised range.

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on project area and database records
		the flood zone close to the river in riparian <i>Eucalyptus viminalis</i> woodland with an understorey of heath and wet sclerophyll species on generally poor, coarse, granitic sands.	
<i>Paraprasophyllum</i> [syn. <i>Prasophyllum</i>] <i>apoxychilum</i> tapered leek-orchid	v EN	<i>Paraprasophyllum apoxychilum</i> is restricted to eastern and northeastern Tasmania where it occurs in coastal heathland or grassy and scrubby open eucalypt forest on sandy and clay loams, often among rocks. It occurs at a range of elevations and seems to be strongly associated with dolerite in the east and southeast of its range.	Potential habitat very marginally present. While the survey was outside the peak flowering period (Wapstra 2018), a follow-up timed-targeted survey is not considered warranted because there is a statistically very low likelihood of occurrence as the species has a naturally disjunct and usually highly localised and low abundance occurrence (and in this case, habitat is marginal).
<i>Pseudocephalozia</i> <i>paludicola</i> liverwort	- VU	<i>Pseudocephalozia paludicola</i> occurs on wet ground in subalpine grassland in the west of the State and on its central and eastern mountains. Species of <i>Pseudocephalozia</i> mostly occur on permanently damp mineral soil or over peat and are frequently found in moorland and sphagnum areas.	Potential habitat absent (wholly atypical of all recorded sites).
<i>Pterostylis ziegelerei</i> grassland greenhood	v VU # only	<i>Pterostylis ziegelerei</i> occurs in the State's south, east and north, with an outlying occurrence in the northwest. In coastal areas, the species occurs on the slopes of low stabilised sand dunes and in grassy dune swales, while in the Midlands it grows in native grassland or grassy woodland on well-drained clay loams derived from basalt.	Potential habitat very marginally present. While the survey was outside the peak flowering period (Wapstra 2018), a follow-up timed-targeted survey is not considered warranted because there is a statistically very low likelihood of occurrence as the species has a naturally disjunct and usually highly localised and low abundance occurrence (and in this case, habitat is marginal).
<i>Scutellaria humilis</i> dwarf scullcap	r -	<i>Scutellaria humilis</i> is found in moist, shady places in the northeast and southeast of the State. Recent sites have been associated with rocky slopes and rises.	Potential habitat present in damp south-facing sites and amongst rock outcrop areas in the north. Species not detected (some seasonal constraint on detection and/or identification but survey ideally timed).
<i>Solanum opacum</i> greenberry nightshade	e -	<i>Solanum opacum</i> is known from a variety of habitats. On King Island, the species occurs in poorly-drained tall <i>Melaleuca ericifolia</i> swamp forest. Similarly, on Inner Sister Island, it occurs in <i>Melaleuca ericifolia</i> / <i>Leptospermum laevigatum</i> scrub on sandy loams in a small gully associated with an ephemeral stream. On Prime Seal Island, the species was recorded from open shrubberies on granite outcrops. The habitat of the site from Harford is simply reported as a "rocky hilltop".	Potential habitat present. Species not detected (no seasonal constraint on detection and/or identification).

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on project area and database records
<i>Senecio psilocarpus</i> swamp fireweed	e VU # only	<i>Senecio psilocarpus</i> is known from six widely scattered sites in the northern half of the State, including King and Flinders islands. It occurs in swampy habitats including broad valley floors associated with rivers, edges of farm dams amongst low-lying grazing/cropping ground, herb-rich native grassland in a broad swale between stable sand dunes, adjacent to wetlands in native grassland, herbaceous marshland and low-lying lagoon systems.	Potential habitat present surrounding the existing dam. Species not detected (no seasonal constraint on detection and/or identification).
<i>Spyridium lawrencei</i> small-leaf dustymiller	v EN # only	<i>Spyridium lawrencei</i> occurs on the Central East Coast and the Eastern Midlands, with its main populations centred on the Swan, Apsley and St Pauls rivers, with an outlying population in the Three Thumbs area, south of Orford. The species mainly occurs in the zone between riparian vegetation, woodland or forest, and occasionally pasture. It also occurs on rock plates on forested slopes. It can be maintained by regular disturbances such as fire or flooding.	Potential habitat absent (wholly atypical of all recorded sites).
<i>Stenanthemum pimeleoides</i> propeller plant	v VU # only	<i>Stenanthemum pimeleoides</i> is restricted to Tasmania's central East Coast and the Northern Midlands, where it occurs in dry sclerophyll forest or woodland with an open heathy or shrubby understorey. The topography tends to be flat to gently sloping. The species occurs in the drier parts of the State with rainfall between 500-800 mm per year, and usually at elevations below 100 m.	Potential habitat absent (wholly atypical of all recorded sites).
<i>Teucrium corymbosum</i> forest germander	r -	<i>Teucrium corymbosum</i> occurs in a wide range of habitats from rocky steep slopes in dry sclerophyll forest and <i>Allocasuarina</i> (sheoak) woodland, riparian flats and forest.	Potential habitat present amongst rock outcrop areas in the north. Species not detected (no seasonal constraint on detection and/or identification).
<i>Thelymitra jonesii</i> skyblue sun-orchid	e EN # only	<i>Thelymitra jonesii</i> occurs in moist coastal heath on sandy to peaty soils and in <i>Eucalyptus obliqua</i> forest in deep loam soil over dolerite.	Potential habitat absent (wholly atypical of all recorded sites).
<i>Tricoryne elatior</i> yellow rushlily	v -	<i>Tricoryne elatior</i> occurs in native grassland, grassy woodland and forest.	Potential habitat marginally present with artificially-induced grassy areas present in the north. While the survey was outside the peak flowering period (TSS 2003+), a follow-up timed-targeted survey is not considered warranted because there is a statistically very low likelihood of occurrence within the proposed dwelling sites.
<i>Veronica plebeia</i> trailing speedwell	r -	<i>Veronica plebeia</i> typically occurs in dry to damp sclerophyll forest dominated by <i>Eucalyptus amygdalina</i> on dolerite or	Potential habitat present. Species not detected (no seasonal constraint on detection and/or

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on project area and database records
		Tertiary sediments, but can also occur in <i>Eucalyptus ovata</i> grassy woodland/forest and <i>Melaleuca ericifolia</i> swamp forest.	identification). The widespread and superficially similar <i>V. calycina</i> was detected.
<i>Xerochrysum palustre</i> swamp everlasting	v VU # only	<i>Xerochrysum palustre</i> has a scattered distribution with populations in the northeast, east coast, Central Highlands and Midlands, all below about 700 m elevation. It occurs in wetlands, grassy to sedgy wet heathlands and extends to associated heathy <i>Eucalyptus ovata</i> woodlands. Sites are usually inundated for part of the year.	Potential habitat absent (wholly atypical of all recorded sites).

APPENDIX D. Analysis of database records of threatened fauna

Table D1 provides a listing of threatened fauna from within 5,000 m of the study area (nominal buffer width usually used to discuss the potential of a particular study area to support various species listed in databases), with comments on whether potential habitat is present for the species, and possible reasons why a species was not recorded.

Table D1. Threatened fauna records from 5,000 m of boundary of study area

Species listed below are listed as rare (r), vulnerable (v), endangered (e), or extinct (x) on the Tasmanian *Threatened Species Protection Act 1995* (TSPA); vulnerable (VU), endangered (EN), critically endangered (CR) or extinct (EX) on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA). Information below is sourced from the DNRET's *Natural Values Atlas* (DNRET 2025a), Bryant & Jackson (1999), FPA (2025) & McNab (2022); marine, wholly pelagic and littoral species such as marine mammals, fish and offshore seabirds are excluded. Species marked with # are listed in CofA (2025). Note that the use of the descriptions of "potential habitat" and "significant habitat" as provided in FPA (2025) does not imply a direct relationship between these concepts and the concept of "significant habitat" as per C7.3.1 of the *State Planning Provisions*.

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
<i>Accipiter</i> [syn. <i>Tachyspiza</i>] <i>novaehollandiae</i> grey goshawk	e -	Potential habitat is native forest with mature elements below 600 m altitude, particularly along watercourses. Significant habitat may be summarised as areas of wet forest, rainforest and damp forest patches in dry forest, with a relatively closed mature canopy, low stem density, and open understorey in close proximity to foraging habitat and a freshwater body (i.e. stream, river, lake, swamp, etc.).	Potential habitat present (along watercourses and associated slopes). Significant habitat absent. The species may utilise the greater title area as part of a home range and for foraging but small-scale development within the context of surrounding land uses should not have a significant impact on potential habitat of the species, noting that future development is wholly within unsuitable habitat. This species should not require further consideration.
<i>Antipodia chaostola</i> tax. <i>leucophaea</i> chaostola skipper	e EN #	Potential habitat is dry forest and woodland supporting <i>Gahnia radula</i> (usually on sandstone and other sedimentary rock types) or <i>Gahnia microstachya</i> (usually on granite-based substrates). Significant habitat is all potential habitat within 5 km of a known record.	Potential habitat present - <i>Gahnia radula</i> is an occasional to locally dominant component of the understorey. Hand-searching of patches of <i>Gahnia radula</i> failed to detect evidence of the species (e.g. larval shelters) within the proposed dwelling zones and surrounds (or elsewhere). Significant habitat absent (no records along this part of the coast). This species should not require further consideration.
<i>Apus pacificus</i> fork-tailed swift	- - # only	Seasonal migrant (December through March) with habitat open skies over any habitat, more commonly associated with forested hills and mountains (McNab 2022).	Potential habitat widespread but this is a species that flies at high altitude, very fast and highly mobile, feeding on the wing and virtually never perches (McNab 2022). This species should not require further consideration.
<i>Aquila audax</i> subsp. <i>fleayi</i> wedge-tailed eagle	e EN #	Potential habitat comprises potential nesting habitat and potential foraging habitat . Potential foraging habitat is a wide variety of forest (including areas	Potential foraging habitat widespread. Potential nesting habitat effectively absent within title because of combination of aspect and stature of forest. No nests were detected.

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
		<p>subject to native forest silviculture) and non-forest habitats.</p> <p>Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Nests are usually not constructed close to sources of disturbance and nests close to disturbance are less productive.</p> <p>Significant habitat is all native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where the nest tree is still present).</p>	<p>Significant habitat absent (no known nests within 1 km of boundary of study area).</p> <p>The species may utilise the greater area as part of a home range and for foraging but small-scale development within the context of surrounding land uses should not have a significant impact on potential habitat of the species.</p> <p>This species should not require further consideration.</p>
<i>Botaurus poiciloptilus</i> australasian bittern	- EN #	<p>Potential habitat is comprised of wetlands with tall dense vegetation, where it forages in still, shallow water up to 0.3 m deep, often at the edges of pools or waterways, or from platforms or mats of vegetation over deep water. It favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and reeds or cutting grass growing over a muddy or peaty substrate (TSSC 2011).</p>	<p>Potential habitat absent (no water features present within or immediately adjacent to the title meeting this description).</p> <p>This species should not require further consideration.</p>
<i>Bubulcus coromandus</i> [syn. <i>B. ibis</i> , <i>Ardea ibis</i>] cattle egret	- - # only	<p>Seasonal migrant (April through October) with habitat agricultural lands, crops, dams, pastures, particularly those with cattle, mudflats and wetlands (McNab 2022).</p>	<p>Potential habitat absent, except in a general sense (in that the species utilises poorly-drained paddocks and farm dams).</p> <p>This species should not require further consideration.</p>
<i>Ceyx azureus</i> subsp. <i>diemenensis</i> [syn. <i>Alcedo azurea</i> subsp. <i>diemenensis</i>] Tasmanian azure kingfisher	e EN # only	<p>Potential habitat comprises potential foraging habitat and potential breeding habitat.</p> <p>Potential foraging habitat is primarily freshwater (occasionally estuarine) waterbodies such as large rivers and streams with well-developed overhanging vegetation suitable for perching and water deep enough for dive-feeding.</p> <p>Potential breeding habitat is usually steep banks of large rivers (a breeding site is a hole (burrow) drilled in the bank).</p>	<p>Potential foraging habitat marginally present however, watercourses and waterholes too shallow for dive feeding.</p> <p>Potential breeding habitat absent (as above). Margins of watercourses lack suitable banks for nesting (mostly rock).</p> <p>This species should not require further consideration.</p>
<i>Dasyurus maculatus</i> subsp. <i>maculatus</i> spotted-tailed quoll	r VU #	<p>Potential habitat is coastal scrub, riparian areas, rainforest, wet forest, damp forest, dry forest and blackwood</p>	<p>Potential habitat present, albeit atypical for denning because of lack of suitable hollow logs, large tree bases,</p>

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
		<p>swamp forest (mature and regrowth), particularly where structurally complex and steep rocky areas are present, and includes remnant patches in cleared agricultural land.</p> <p>Significant habitat is all potential denning habitat within the core range of the species. Potential denning habitat for the spotted-tailed quoll includes 1) any forest remnant (>0.5 ha) in a cleared or plantation landscape that is structurally complex (high canopy, with dense understorey and ground vegetation cover), free from the risk of inundation, or 2) a rock outcrop, rock crevice, rock pile, burrow with a small entrance, hollow logs, large piles of coarse woody debris and caves.</p>	<p>rock piles, overhangs, etc. No evidence of the species was noted (e.g. scats, etc.).</p> <p>Significant habitat absent (not within core range).</p> <p>The species may utilise the greater title area as part of a home range and for foraging but small-scale development within the context of surrounding land uses should not have a significant impact on potential habitat of the species.</p> <p>This species should not require further consideration.</p>
<i>Dasyurus viverrinus</i> eastern quoll	- EN #	<p>Potential habitat is all terrestrial native vegetation types, forestry plantations and pasture. Dry forest and native grassland mosaics that are bounded by agricultural land are likely to support higher population densities of eastern quolls.</p>	<p>Potential habitat present.</p> <p>See under spotted-tailed quoll.</p> <p>This species should not require further consideration.</p>
<i>Galaxiella fontanus</i> swan galaxias	e EN #	<p>Potential habitat is slow to moderately fast flowing streams containing permanent water (even when not flowing), which have good in-stream cover from overhanging banks and/or logs, and shade from overhanging vegetation. A population can only be maintained where barriers have prevented establishment of trout and redfin perch. The nature of these barriers is variable and can include permanent natural structures such as waterfalls and chutes and also low flow-dependent features such as marshes, ephemeral water-losing and remnant channels, and braided channel floodplain features.</p> <p>Significant habitat is all potential habitat and a 30m stream-side reserve within the core range. This includes the Wildlife Priority Areas (Fauna Special Management Zones) on the upper Swan River, Tater Garden Creek and upper Blue Tier Creek, and other upper catchments of tributaries of the Macquarie, Blackman and Isis Rivers.</p>	<p>Potential habitat absent.</p> <p>Significant habitat absent.</p> <p>The assessment area and entire catchments in area are well outside the recognised range of this species.</p> <p>This species should not require further consideration.</p>
<i>Galaxiella pusilla</i> eastern dwarf galaxiid	v VU	<p>Potential habitat is slow-flowing waters such as swamps, lagoons, drains or backwaters of streams, often with aquatic vegetation. It may also be found in temporary waters that dry up in summer for as long as 6-7 months, especially if burrowing crayfish burrows are present (although these will usually be connected to permanent water). Habitat may include forested swampy areas but does not include blackwood</p>	<p>Potential habitat absent.</p> <p>Significant habitat absent.</p> <p>The site is well outside the recognised range of the species with no records reported south of the Ansons River.</p> <p>This species should not require further consideration.</p>

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
		swamp forest. Juveniles congregate in groups at the water surface in pools free of vegetation. Significant habitat is all potential habitat and a 30 m stream-side reserve within the core range.	
<i>Gallinago hardwickii</i> Latham's snipe	- VU # only	Seasonal migrant that prefers brackish, fresh and saline habitats including lagoons, lakes, marshes, swamps, wet grasslands and paddocks and wetlands with tussock grasses (McNab 2022).	Potential habitat absent, except in the most general of senses. This species should not require further consideration.
<i>Haliaeetus</i> [syn. <i>Ichthyophaga</i>] <i>leucogaster</i> white-bellied sea-eagle	v -	Potential habitat comprises potential nesting habitat and potential foraging habitat . Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (class 1), lakes or complexes of large farm dams. Scattered trees along river banks or pasture land may also be used. Significant habitat is all native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where nest tree still present).	Potential foraging habitat widespread (although this is more likely over the open waters of the nearby Tasman Sea). Potential nesting habitat effectively absent within title because of combination of aspect and stature of forest. No nests were detected. Significant habitat absent (no known nests within 1 km of boundary of study area). The species may utilise the greater area as part of a home range and for foraging but small-scale development within the context of surrounding land uses should not have a significant impact on potential habitat of the species. This species should not require further consideration.
<i>Hirundapus caudacutus</i> white-throated needletail	- VU #	Seasonal migrant (December through March) with habitat open skies over any habitat, more commonly associated with forested hills and mountains (McNab 2022).	Potential habitat widespread but this is a species that flies at high altitude, very fast and highly mobile, feeding on the wing and virtually never perches (McNab 2022). This species should not require further consideration.
<i>Lathamus discolor</i> swift parrot	e CR #	Potential breeding habitat comprises potential foraging habitat and potential nesting habitat , and is based on definitions of foraging and nesting trees (see Table A in swift parrot habitat assessment Technical Note). Potential foraging habitat comprises <i>Eucalyptus globulus</i> or <i>E. ovata</i> trees that are old enough to flower. In the Eastern Tiers, potential foraging habitat also includes <i>E. brookeriana</i> where it has the potential to contribute a substantial foraging resource. The occurrence of foraging-habitat can be remotely assessed, although only to a limited extent, by using mapping layers such as GlobMap (DPIPWE 2010). Due to the scale and inadequacies in current foraging-habitat mapping, potential	Potential foraging habitat present - <i>Eucalyptus globulus</i> (blue gum) is widespread. Potential nesting habitat present (scattered hollow-bearing trees were observed but site is highly atypical of nesting habitat, which tends to be in hollow-rich mature forest on ridges and upper slopes). Significant habitat absent. This species should not require further consideration but see FINDINGS Threatened fauna for more details.

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
		<p>foraging-habitat density within operational areas should be identified by ground-based surveys as per Table B in the swift parrot habitat assessment Technical Note. For management purposes potential nesting habitat is considered to comprise eucalypt forests that contain hollow-bearing trees. The FPA mature habitat availability map (see Technical Note 2) predicts the availability of hollow-bearing trees using the relevant definitions of habitat provided in Table C of the swift parrot habitat assessment Technical Note. The mature habitat availability map is designed to be used to make landscape-scale assessments and may not be reliable for stand-level assessments required during the development of a Forest Practices Plan. At the stand-level the availability and distribution of hollow-bearing trees across a coupe or operation area is best determined from a ground-based assessment (see Table C in the swift parrot habitat assessment Technical Note).</p> <p>Significant habitat is all potential breeding habitat within the SE potential breeding range and the NW breeding areas.</p> <p>The site is within the St Marys Swift Parrot Important Breeding Area (SPIBA).</p>	
<p><i>Leucopatus</i> [syn. <i>Tasmanipatus</i>] <i>anophthalmus</i> blind velvet worm</p>	<p>e EN #</p>	<p>Potential habitat can be divided into prime potential habitat and marginal potential habitat. Prime potential habitat is forest that has not been subject to any high-intensity or frequent fires within at least the last 20 years, containing numerous rotting eucalypt logs including large (greater than 40 cm in mid-log diameter) decaying eucalypt logs with a soft rot centre, that remain moist in areas protected from disturbance such as fire. Marginal potential habitat is other eucalypt forest with rotting logs.</p>	<p>Potential habitat present. However, the site is outside the range of the species (FPA 2025). This species should not require further consideration.</p>
<p><i>Myiagra cyanoleuca</i> satin flycatcher</p>	<p>- - # only</p>	<p>Seasonal migrant (November through march) with habitat scrub, wet and dry sclerophyll forests, woodlands and creeklines (McNab 2022).</p>	<p>Potential habitat present. This is a spring-summer migrant that may utilise the greater study area for foraging and nesting. Any proposal should not deleteriously affect potential habitat at any reasonable scale. This species should not require further consideration.</p>
<p><i>Neophema chrysostoma</i> blue-winged parrot</p>	<p>- VU #</p>	<p>Seasonal migrant (October through April) with habitat agricultural lands, crops, dams, paddocks, coastal scrub, open grassy woodlands, heathland and saltmarshes (McNab 2022).</p>	<p>Potential habitat present, albeit only in a general sense. See notes under swift parrot.</p>

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
		Potential habitat includes native eucalypt forest, native eucalypt woodlands, grasslands and wetlands (FPA 2025).	Any proposal should not deleteriously affect potential habitat at any reasonable scale. This species should not require further consideration but see FINDINGS Threatened fauna for more details.
<i>Perameles gunnii</i> subsp. <i>gunnii</i> eastern barred bandicoot	- VU # only	Potential habitat is open vegetation types including woodlands and open forests with a grassy understorey, native and exotic grasslands, particularly in landscapes with a mosaic of agricultural land and remnant bushland. Significant habitat is dense tussock grass-sagg-sedge swards, piles of coarse woody debris and denser patches of low shrubs (especially those that are densely branched close to the ground providing shelter) within the core range of the species.	Potential habitat present. Significant habitat absent. The species may utilise the greater title area as part of a home range and for foraging but small-scale development within the context of surrounding land uses should not have a significant impact on potential habitat of the species. This species should not require further consideration.
<i>Prototroctes maraena</i> Australian grayling	v VU #	Potential habitat is all streams and rivers in their lower to middle reaches. Areas above permanent barriers (e.g. Prosser River dam, weirs) that prevent fish migration are not habitat.	Potential habitat present - watercourses as described present in the form of Four Mile and Banticks creeks (although these are probably too shallow and ephemeral). These habitat elements will not be disturbed by the current proposal. This species should not require further consideration.
<i>Pseudemoia pagenstecheri</i> tussock skink	v -	Potential habitat is grassland and grassy woodland (including rough pasture with paddock trees), generally with a greater than 20% cover of native grass species, especially where medium to tall tussocks are present.	Potential habitat absent (no areas with greater than 20% cover of tussock-forming grass species present). This species should not require further consideration.
<i>Pseudemoia rawlinsoni</i> glossy grass skink	r -	Potential habitat is wetlands and swampy sites, including grassy wetlands, teatree swamps and grassy sedgeland, and margins of such habitat.	Potential habitat absent (no swampy habitats as described present). This species should not require further consideration.
<i>Pseudomys novaehollandiae</i> pookila, New Holland mouse	e VU #	Potential habitat is heathlands (mainly dry heathlands but also where dry heathlands form a mosaic with other heathland, moorland and scrub complexes), heathy woodlands (i.e. eucalypt canopy cover 5-20%), <i>Allocasuarina</i> -dominated forests on sandy substrates (not dolerite or basalt), and vegetated sand dunes. Key indicator plant species include (but are not restricted to) <i>Aotus ericoides</i> , <i>Lepidosperma concavum</i> , <i>Hypolaena fastigiata</i> and <i>Xanthorrhoea</i> spp. Significant habitat is all potential habitat within the potential range of the species.	Potential habitat absent (site lacks heathy vegetation and key elements). Significant habitat absent (as above). This species should not require further consideration.

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
<i>Ranoidea</i> [syn. <i>Litoria</i>] <i>raniformis</i> subsp. <i>major</i> green and golden frog	v VU #	Potential habitat is permanent and temporary waterbodies, usually with vegetation in or around them, including features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water-holding sites such as old quarries, slow-flowing stretches of streams and rivers and drainage features. Significant habitat is still or very slow flowing water bodies, with at least some vegetation, and a lack of obvious pollutants (oils, chemicals, etc.).	Potential habitat present. Suitable water features present in the form of the dam and creeks. Significant habitat present. Any proposal should not deleteriously affect potential habitat at any reasonable scale. Furthermore, favourable habitat elements are avoided by the current proposal. This species should not require further consideration.
<i>Sarcophilus harrisi</i> tasmanian devil	e EN #	Potential habitat all terrestrial native habitats, forestry plantations and pasture. Devils require shelter (e.g. dense vegetation, hollow logs, burrows or caves) and hunting habitat (open understorey mixed with patches of dense vegetation) within their home range (427 km ²). Significant habitat is a patch of potential denning habitat where three or more entrances (large enough for a devil to pass through) may be found within 100 m of one another, and where no other potential denning habitat with three or more entrances may be found within a 1 km radius, being the approximate area of the smallest recorded devil home range. Potential denning habitat is areas of burrowable, well-drained soil, log piles or sheltered overhangs such as cliffs, rocky outcrops, knolls, caves and earth banks, free from risk of inundation and with at least one entrance through which a devil could pass.	Potential habitat present, albeit atypical for denning because of lack of suitable hollow logs, large tree bases, rock piles, overhang, etc.). No evidence of the species was noted (e.g. scats, etc.). Significant habitat absent (no potential denning habitat present). The species may utilise the greater title area as part of a home range and for foraging but small-scale development within the context of surrounding land uses should not have a significant impact on potential habitat of the species. This species should not require further consideration.
<i>Tasmanipatus barretti</i> giant velvet worm	r -	Potential habitat includes wet sclerophyll forest grading into rainforest or mixed forest and dry forest within its known range.	Potential habitat present. Species detected. Refer to FINDINGS Threatened fauna more details.
<i>Tyto novaehollandiae</i> subsp. <i>castanops</i> masked owl	e VU #	Potential habitat is all areas with trees with large hollows (≥ 15 cm entrance diameter). Remnants and paddock trees (in any dry or wet forest type) in agricultural areas may constitute potential habitat. Significant habitat is any areas within the core range of native dry forest with trees over 100 cm dbh with large hollows (≥ 15 cm entrance diameter).	Potential habitat present in the form of potential foraging habitat and localised potential temporary roosting habitat but potential nesting habitat is absent because of the lack of large trees with large hollows. Significant habitat absent (as above). The species may utilise the greater title area as part of a home range and for foraging but small-scale development within the context of surrounding land uses should not have a significant impact on potential habitat of the species. This species should not require further consideration but see FINDINGS Threatened fauna for more details.

APPENDIX E. DNRET's *Natural Values Atlas* report for study area

Appended as pdf file.

APPENDIX F. Forest Practices Authority's *Biodiversity Values Atlas* report for study area

Appended as pdf file.

APPENDIX G. CofA's *Protected Matters* report for study area

Appended as pdf file.

ATTACHMENTS

- .shp/.dwg file of revised vegetation mapping
- .shp/.dwg file of point locations of weeds

December 2025

BUSHFIRE HAZARD REPORT

3 LOT SUBDIVISION

21921 Tasman Highway, Four Mile Creek.



Job Number: 240903

Prepared by: Geoff McGregor (geoff@woolcott.au)

Bushfire Hazard Practitioner BFP-176

Rev.no	Description	Date
1	Final	11/12/2025

References

Director's Determination - Bushfire Hazard Areas - 2024 v1.2.

AS 3959:2018 Construction of buildings in bushfire prone areas, s.l.: Standards Australia Limited 2018.

Tasmanian Planning Commission, 2024. *Tasmanian Planning Scheme - State Planning Provisions, s.l.:* Tasmanian Planning Commission.

The referenced documents were referred to in the preparation of and should be read in connection with this report.

Prepared by
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Executive Summary

This report has been undertaken for Dustin Hollick for the purpose of a 3-lot subdivision at 21921 Tasman Highway, Four Mile Creek. The subdivision will consist of creating 3 new titles, lot 2 will contain the existing dwelling and outbuildings with lots 1 and 3 being vacant. The site falls within the Bushfire-prone areas overlay of the Tasmanian Planning Scheme – Break O'Day Local Provisions. A bushfire event at this site or within the immediate area is likely to impact any buildings at this location. A bushfire hazard management plan has been prepared and is provided as an appendix to this report. The plan sets out the owner's responsibilities to maintain the managed areas for each lot, taking into consideration the relevant requirements under Australian Standard AS3959-2018 Construction of buildings in bushfire-prone areas.

Signed



Author: Geoff McGregor

Accreditation No: BFP 176

1. Introduction

A bushfire assessment is a process of analysing information about the potential impacts that a proposed development is likely to encounter in a bushfire hazard scenario.

A 'bushfire-prone area' is an area where a bushfire event is likely to occur that may result in significant adverse impact on buildings and life. In Tasmania, all local councils have a Planning Scheme overlay map that identifies bushfire-prone areas. Subdivision within a bushfire-prone area triggers an assessment under the provisions of the Bushfire-prone Areas Code of the planning scheme. The assessment requires a Bushfire Hazard Management Plan (BHMP) to be provided as part of the application.

The bushfire assessment will determine the Bushfire Attack Level (BAL) for the proposed and existing lot. This measures the possible exposure of a building to bushfire hazards. The BAL is assessed in accordance with Australian Standard AS 3959-2018 construction of buildings in bushfire-prone areas.

The assessment has been undertaken in accordance with C13.0 Bushfire-Prone Areas Code to accompany a subdivision application under the Tasmanian Planning Scheme – West Tamar.

It is also required to understand the fuel management requirements for the subject site and to demonstrate that future buildings on the proposed lot can be constructed to a minimum of BAL19 level under the Building Act 2016.

2. Subject site

2.1 Site details

Address	353 Gravelly Beach Road, Gravelly Beach TAS 7276
Property ID	1963407
Title	128063/500
Property Owners	Dustin Hollick Rebecca Hollick
Planning Authority	Break O'Day Council
Planning Scheme	Tasmanian Planning Scheme – Break O'Day
Access	Tasman Highway – State Growth
Zone	Landscape Conservation
Identified on a Bushfire Overlay Map	Yes
Proposal	3 Lot Subdivision
Existing use	Existing single dwelling and outbuildings
Water Supply	Static water supply

2.2 Site description and context

The subject title has a total area of 81.06ha and is located on the Tasman Highway west of Four Mile Creek. The site contains an existing dwelling and associated outbuildings. The site is surrounded by similar sized titles that contain dwellings.

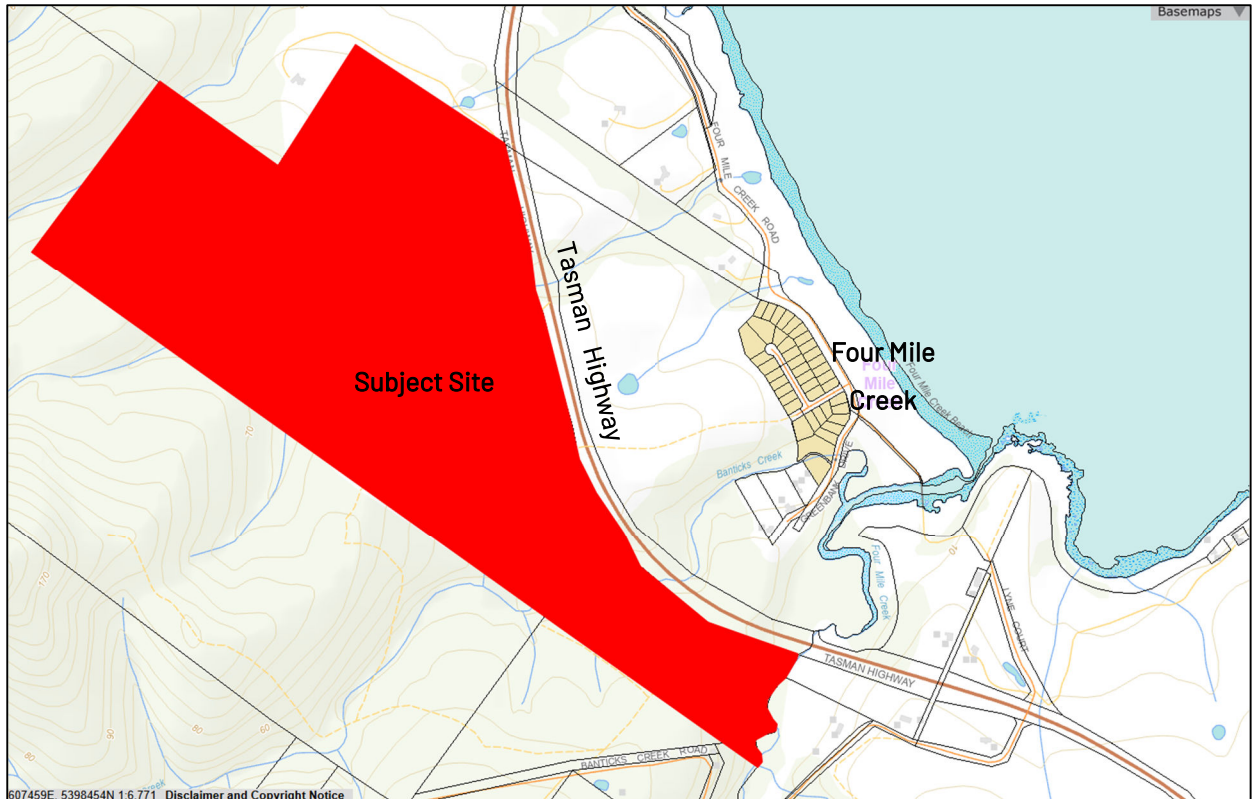


Figure 1 Aerial view of the subject site (Source: LIST)

The site is zoned Rural Living C.

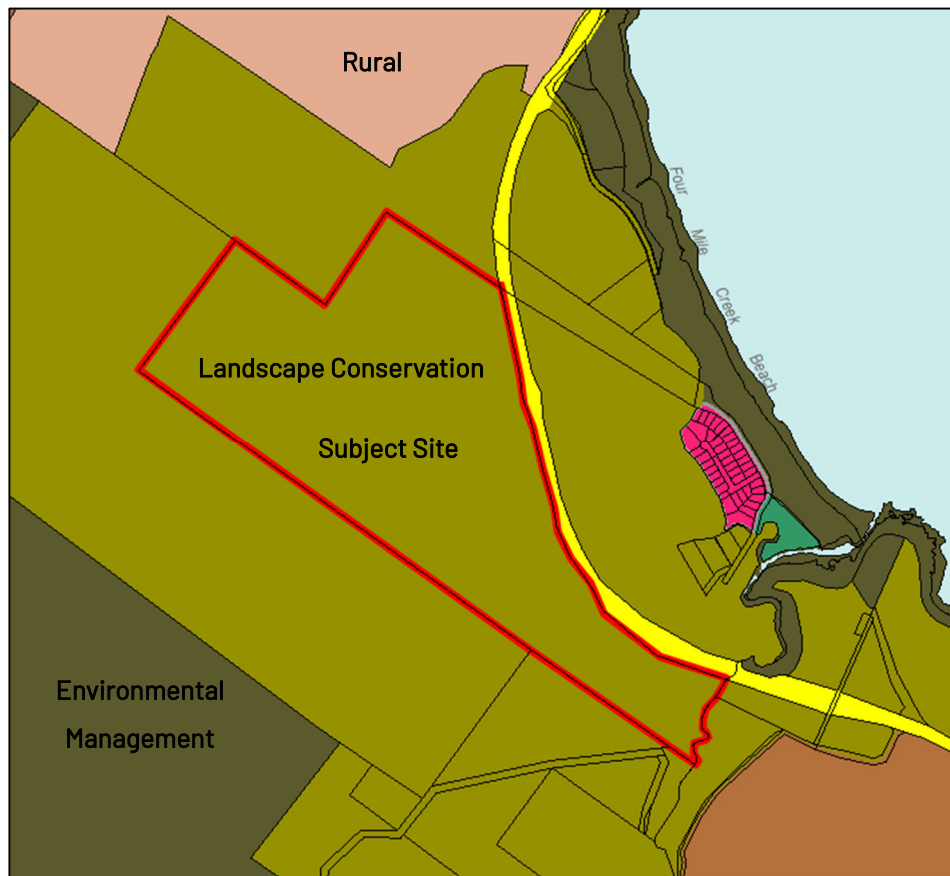


Figure 2 Zoning of surrounding area and the subject site (Source: LIST)

3. Proposal

An extract from the 3-lot proposal plan is shown below:

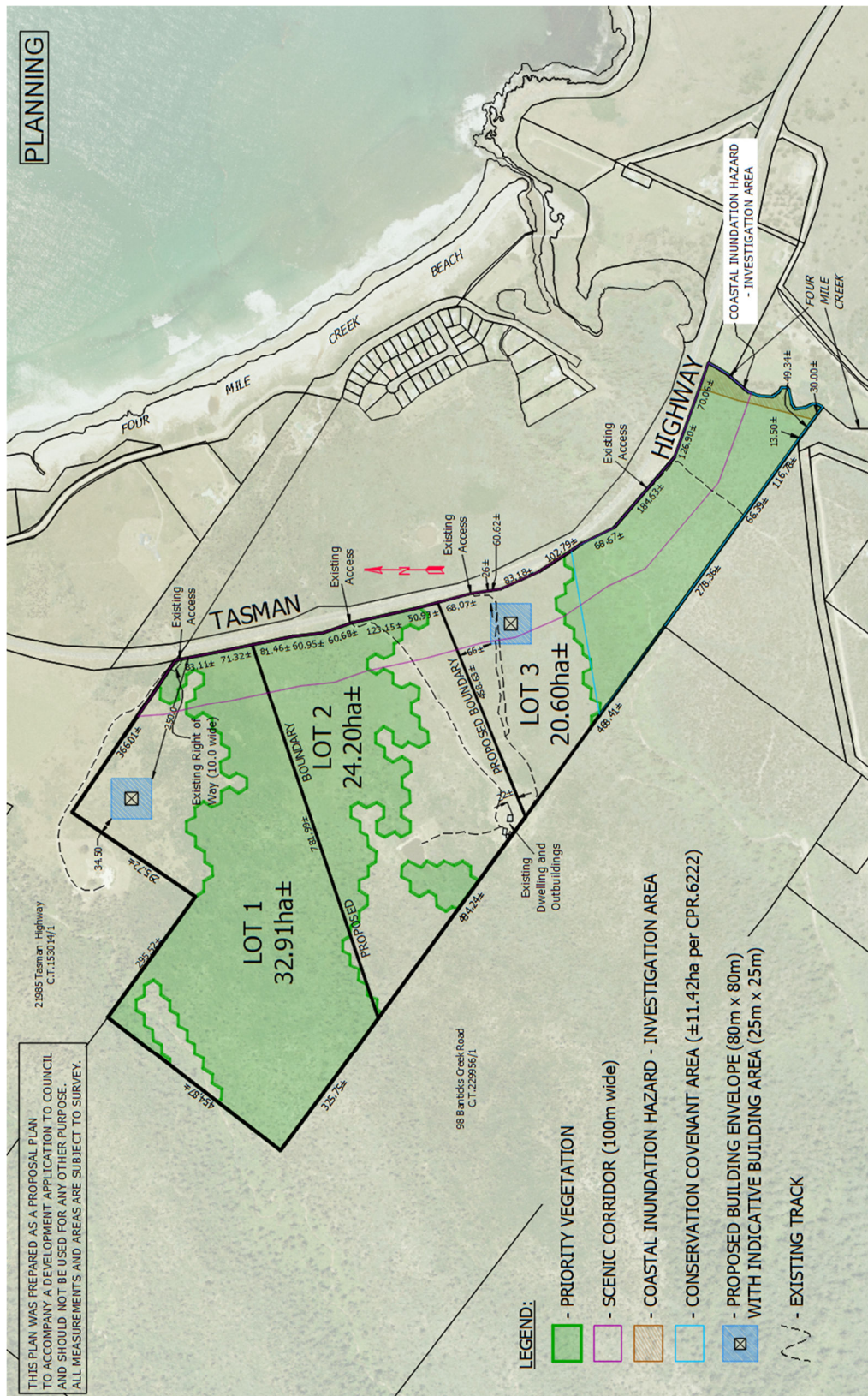


Figure 3 Proposed subdivision layout

4. Bushfire site assessment

4.1 Vegetation analysis

A site visit was conducted on the 20th November 2025. The vegetation in the subject site has been classified as forest with the exception of the managed land around the existing dwelling and outbuildings. The vegetation on the neighbouring lands to has also been classified as forest apart from a small portion of managed land around the dwelling to the north and an area of grassland as shown below.

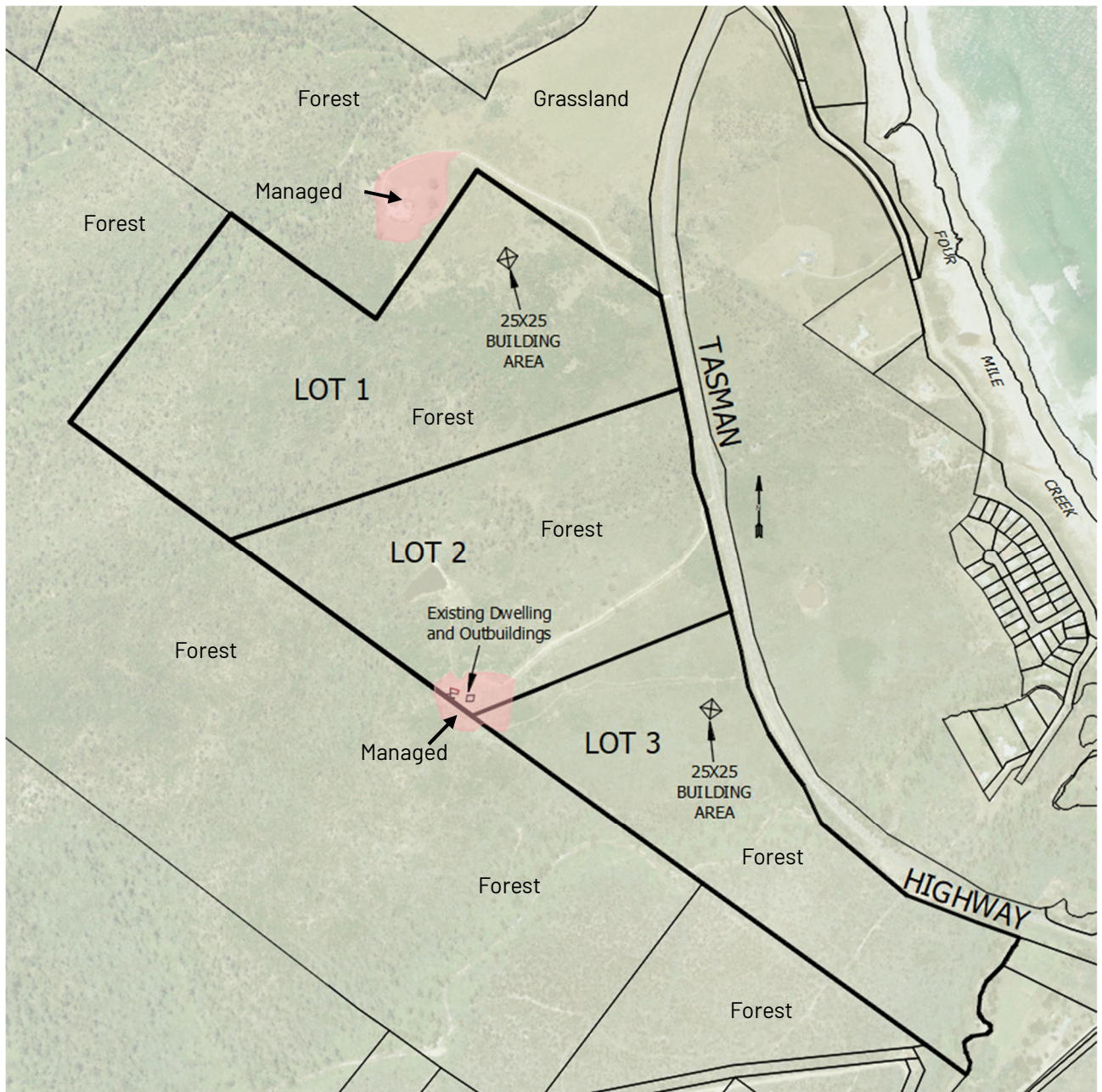


Figure 4 Bushfire prone vegetation

4.2 Effective slope analysis

Figure 5 illustrates the slope characteristics of the land beneath the classified vegetation in each lot, showing a gentle downslope of approximately 4° from west to east.

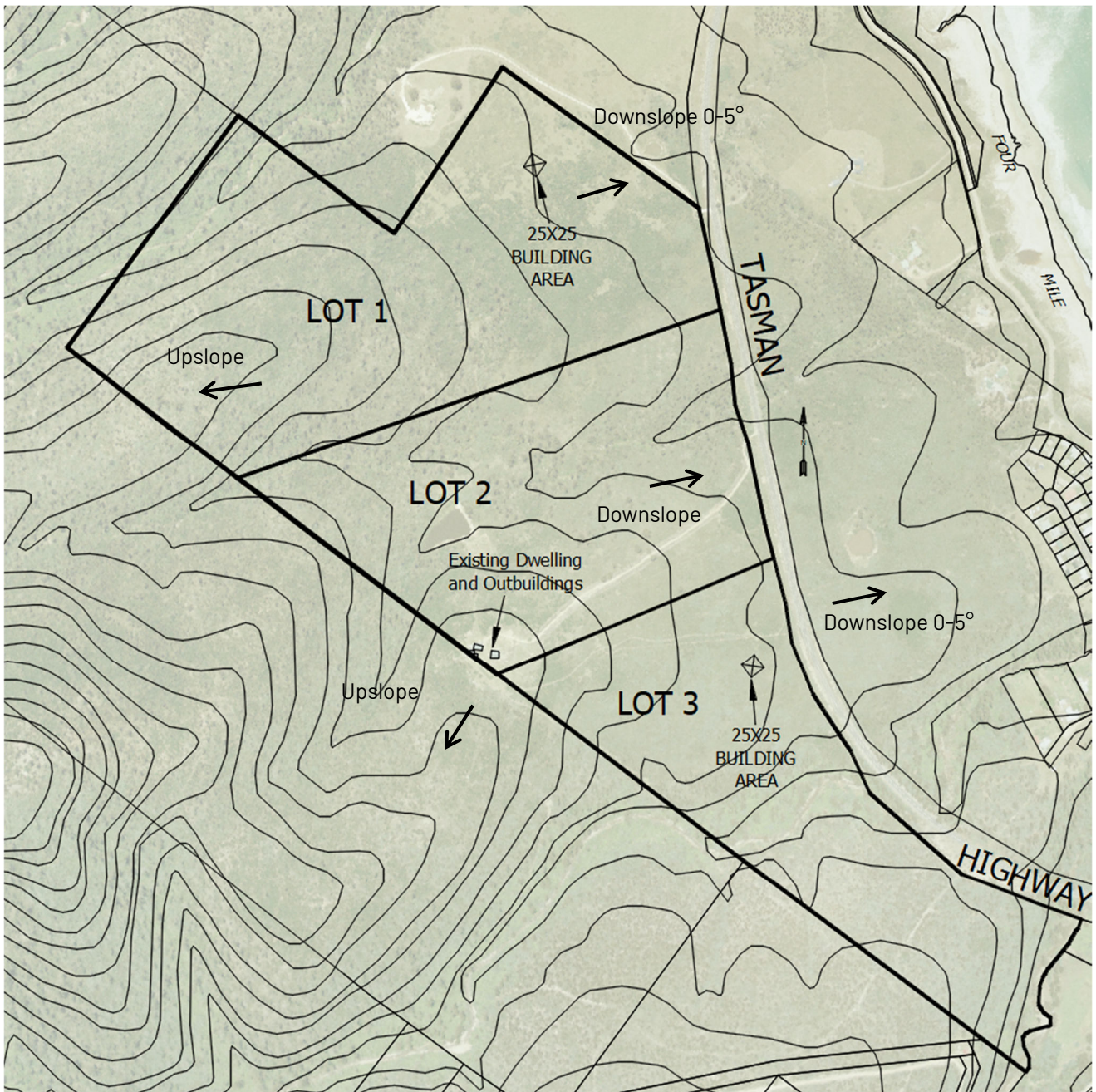


Figure 5 Slope of land under the bushfire prone vegetation

4.3 Site photos



Figure 8 Existing dwelling with managed land



Figure 9 Existing dwelling with out buildings



Figure 10 Existing access in lot 2.



Figure 11 Existing access at dwelling on lot 2



Figure 12 Typically vegetation found on all lots



Figure 13 Existing access for lot 2

5. Bushfire protection measures

5.1 BAL Rating

The purpose of the BAL assessment is to identify the minimum separation between the bushfire prone vegetation and a building area within each proposed lot. The definition of BAL 19 and BAL 12.5 is highlighted as follows:

BUSHFIRE ATTACK LEVEL (BAL)	PREDICTED BUSHFIRE ATTACK AND EXPOSURE LEVEL
BAL-LOW	Insufficient risk to warrant specific construction requirements
BAL-12.5	Ember attack, radiant heat below 12.5kW/m ²
BAL-19	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 12.5-19kW/m ²
BAL-29	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 19-29kW/m ²
BAL-40	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 29-40kW/m ²
BAL-FZ	Direct exposure to flames radiant heat and embers from the fire front.

The distances from the existing dwelling in lot 2 and proposed buildings location in lots 1 and 3 to the classified vegetation is presented below, along with the slope and type of vegetation and required hazard management setbacks.

LOT 1	NORTH	EAST	SOUTH	WEST
Vegetation within 100m 25x25 proposed building location	0m-100m Forest	0m-100m Forest	0m-100m Forest	0m-100m Forest
Slope (degrees) over 100m)	Downslope 0-5	Downslope 0-5	Upslope	Upslope

BAL 19 Setbacks	27m	27m	23m	23m
BAL 12.5 Setbacks	38m	38m	32m	32m

LOT 2	NORTH	EAST	SOUTH	WEST
Vegetation within 100m of the existing dwelling	0m-40m Managed 40m-100m Forest	0m-70m Managed 70m-100m Grassland	0m-48m Managed 48m-100m Forest	0m-36m Managed 36m-100m Forest
Slope (degrees) over 100m)	Downslope 0-5	Downslope 0-5	Upslope	Upslope
BAL 19 Setbacks	27m	27m	23m	23m
BAL 12.5 Setbacks	38m	38m	32m	32m

LOT 3	NORTH	EAST	SOUTH	WEST
Vegetation within 100m 25x25 proposed building location	0m-100m Forest	0m-100m Forest	0m-100m Forest	0m-100m Forest
Slope (degrees) over 100m)	Downslope 0-5	Downslope 0-5	Upslope	Upslope
BAL 19 Setbacks	27m	27m	23m	23m
BAL 12.5 Setbacks	38m	38m	32m	32m

5.2 Hazard management areas (HMA)

The existing dwelling in lot 2 provides a compliant BAL 12.5 HMA, this Hazard Management Area must continue to be maintained. A Hazard Management Area meeting the separation distances required for BAL 19 and Bal 12.5 can be achieved for lots 1 and 3 future dwellings, Hazard Management Areas must be maintained in accordance with the certified Bushfire Hazard Management Plan and this report to achieve the following outcomes:

- to reduce the quantity of windborne sparks and embers reaching buildings.
- to reduce radiant heat at the building; and
- prevent flame contact.

Maintenance of Hazard Management Areas

It is the responsibility of the property owner to maintain and manage the vegetation in accordance with the Bushfire Hazard Management Plan and this report.

This area is to be regularly managed and maintained. Vegetation in this area will be minimised:

- Grass maintained to a maximum height of 100mm, with fuel loads kept to less than 2 tonnes per hectare which will be maintained at this level.
- Trees and any undergrowth to be kept clear of buildings on all sides.
- All undergrowth and understorey of trees (up to 2m) will be removed within the hazard management area.
- Select larger trees can be retained within the HMA, ensuring a minimum 5m canopy separation is provided between each established tree.
- Pathways to 1 metre surrounding the buildings and landscaping material, must be non-combustible (stone, pebbles etc.).
- The total shrub cover will be a maximum of 20% of the available area.
- There will be a clear space from the buildings of at least four (4) times the mature height of any shrubs planted.
- Shrubs will not be planted in clumps, this is to avoid build-up of debris and dead vegetation materials.

Landscaping

- vegetation along the pathways to comprise low-flammable style succulent ground cover or plants (avoid plants that produce fine fuel which are easily ignited, plants that produce a lot of debris, trees and shrubs which retain dead material in branches or which shed long strips of bark, rough fibrous bark or drop large quantities of leaves in the spring and summer, vines on walls or tree canopies which overhang roofs)

- Timber woodchip and flammable mulches cannot be used, brush and timber fencing should be avoided where possible and not to be located within 6m of habitable buildings.

5.3 Access

The existing access from the Tasman Highway through to the existing dwelling on lot 2 is compliant apart from requiring the installation of passing bays of 2m wide and 20m long every 200 metres, **These passing bays must be installed as part of the subdivision works and must be completed prior to sealing of the final plan of subdivision.** All private access roads must be in accordance with section B and C in the below table. Access to the future dwellings in lots 1 and 3 is not required as part of the subdivision works

ELEMENT		REQUIREMENT
A.	Property access length is less than 30m; or access is not required for a fire appliance to access a fire fighting water point.	NA.
B.	Property access length is 30m or greater; or access is required for a fire appliance to a fire fighting water point.	<p>The following design and construction requirements apply to property access:</p> <ul style="list-style-type: none"> ▪ all-weather construction; ▪ load capacity of at least 20t, including for bridges and culverts; ▪ minimum carriageway width of 4m; ▪ minimum vertical clearance of 4m; ▪ minimum horizontal clearance of 0.5m from the edge of the carriageway; ▪ cross falls of less than 3 degrees (1:20 or 5%); ▪ dips less than 7 degrees (1:8 or 12.5%) entry and exit angle; ▪ curves with a minimum inner radius of 10m; ▪ maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and ▪ terminate with a turning area for fire appliances provided by one of the following: <ul style="list-style-type: none"> ▪ a turning circle with a minimum outer radius of 10m; or

		<ul style="list-style-type: none"> ▪ a property access encircling the building; or ▪ a hammerhead "T" or "Y" turning head 4m wide and 8m long.
C	Property access length is 200m or greater.	<p>The following design and construction requirements apply to property access:</p> <ul style="list-style-type: none"> a) the requirements for B above; and b) passing bays of 2m additional carriageway width and 20m length provided every 200m.
D.	Property access length is greater than 30m, and access is provided to 3 or more properties.	<ul style="list-style-type: none"> a) NA

5.4 Fire Fighting water supply

The existing dwelling on lot 2 must establish a dedicated firefighting onsite static water supply of a minimum 10,000L, ensuring tank and fittings are compliant with standards for building in a bushfire prone area and the below table. **The static water supply for the existing dwelling on lot 2 must be installed prior to sealing of the final plan of subdivision.** Future dwellings on all lots must provide a compliant dedicated firefighting onsite static water supply of a minimum 10,000L ensuring tank and fittings are compliant with standards for building in a bushfire prone area and the below table.

The static water supply for Lot 1 and lot3 is not required as part of the subdivision works but must be installed prior to occupancy of future dwellings

ELEMENT		REQUIREMENT
A.	Distance between building area to be protected and water supply	<p>The following requirements apply:</p> <ul style="list-style-type: none"> a) The building area to be protected must be located within 90 metres of the firefighting water point of a static water supply; and b) The distance must be measured as a hose lay, between the firefighting water point and the furthest part of the building area.
B.	A static water supply:	<p>May have a remotely located offtake connected to the static water supply;</p> <ul style="list-style-type: none"> a) May be a supply for combined use (firefighting and other uses) but the specified minimum quantity of firefighting water must be available at all times;

		<ul style="list-style-type: none"> b) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including firefighting sprinkler or spray systems; c) Must be metal, concrete or lagged by non-combustible materials if above ground; and d) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2009, the tank may be constructed of any material provided that the lowest 400 mm of the tank exterior is protected by: <ul style="list-style-type: none"> i. metal; ii. non-combustible material; or e) fibre-cement a minimum of 6 mm thickness
C	Fittings, pipework and accessories (including stands and tank supports)	<p>Fittings and pipework associated with a firefighting water point for a static water supply must:</p> <ul style="list-style-type: none"> a) Have a minimum nominal internal diameter of 50mm; b) Be fitted with a valve with a minimum nominal internal diameter of 50mm; c) Be metal or lagged by non-combustible materials if above ground; d) Where buried, have a minimum depth of 300mm; e) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to firefighting equipment; f) Ensure the coupling is accessible and available for connection at all times; g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length); h) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and i) Where a remote offtake is installed, ensure the offtake is in a position that is <ul style="list-style-type: none"> i. Visible; ii. Accessible to allow connection by firefighting equipment; iii. At a working height of 450 – 600mm above ground level; and <p>Protected from possible damage, including damage by vehicles.</p>

D	Signage for Static Water Connections	<p>The firefighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must:</p> <ul style="list-style-type: none"> a) Comply with tank signage requirements within AS2304:2019; or <p>Comply with the Tasmanian Fire Service Water Supply Signage Guidelines published by the Tasmania Fire Service.</p>
E	Hardstand	<p>A hardstand area for fire appliances must be:</p> <ul style="list-style-type: none"> a) no more than 3m from the firefighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like) b) no closer than 6m from the building area to be protected; c) a minimum width of 3m constructed to the same standard as the carriageway; and d) connected to the property access by a carriageway equivalent to the standard of the property access.

6. Bushfire-prone areas code assessment

The following provides an assessment against the provisions of C13.0 Bushfire-prone areas code, according to the Scheme.

C13.6 Development Standards for Subdivision

C13.6.1 Subdivision: Provision of hazard management areas

Objective	
<p>Subdivision provides for hazard management areas that:</p> <ul style="list-style-type: none"> a) facilitate an integrated approach between subdivision and subsequent building on a lot; b) provide for sufficient separation of building areas from bushfire-prone vegetation to reduce the radiant heat levels, direct flame attack and ember attack at the building area; and c) provide protection for lots at any stage of a staged subdivision. 	
Acceptable solutions	Proposed solutions
<p>A1</p> <ul style="list-style-type: none"> a) TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant the provision of hazard management areas as part of a subdivision; or b) The proposed plan of subdivision: <ul style="list-style-type: none"> i. shows all lots that are within or partly within a bushfire-prone area, including those developed at each stage of a staged subdivision; ii. shows the building area for each lot; iii. shows hazard management areas between bushfire-prone vegetation and each building area that have dimensions equal to, or greater than, the separation distances required for BAL 19 in Table 2.6 of <i>Australian Standard AS3959:2018 Construction of buildings in bushfire-prone areas</i>; and 	<ul style="list-style-type: none"> A1a) Not applicable. A1b) The acceptable solution is achieved. The BHMP: <ul style="list-style-type: none"> i) shows all lots within the bushfire prone area. Each site can provide a bushfire hazard management area. ii) Each lot can provide for a building area that can meet BAL 19 setbacks. iii) shows a HMA associated with each building area demonstrating the separation distances required for BAL 19 in Table 2.4.4 of AS 3959 – 2018 Construction of buildings in bushfire-prone area. iv) is prepared by an accredited bushfire hazard practitioner. A1c) not applicable as Part 5 agreement is not required.

<p>iv. is accompanied by a bushfire hazard management plan that addresses all the individual lots and that is certified by the TFS or accredited person, showing hazard management areas equal to, or greater than the separation distances required for BAL 19 in Table 2.6 of <i>Australian Standard AS3959:2018 Construction of buildings in bushfire-prone Areas</i>; and</p> <p>c) If hazard management areas are to be located on land external to the proposed subdivision the application is accompanied by the written consent of the owner of that land to enter into an agreement under section 71 of the Act that will be registered on the title of the neighbouring property providing for the affected land to be managed in accordance with the bushfire hazard management plan.</p>	
--	--

C13.6.2 Subdivision: Public and firefighting access

<p>Objective</p> <p>Access roads to, and the layout of roads, tracks and trails, in a subdivision:</p> <ul style="list-style-type: none"> a) allow safe access and egress for residents, fire fighters and emergency service personnel; b) provide access to the bushfire-prone vegetation that enables both property to be defended when under bushfire attack and for hazard management works to be undertaken; c) are designed and constructed to allow for fire appliances to be manoeuvred; d) provide access to water supplies for fire appliances; and e) are designed to allow connectivity, and where needed, offering multiple evacuation points. 	
<p>Acceptable solutions</p>	<p>Proposed solutions</p>
<p>A1</p> <ul style="list-style-type: none"> a) TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant specific measures for 	<ul style="list-style-type: none"> A1a) Not applicable. A1b) Compliant access must be upgraded per this report for lot 2, future dwellings must comply with table C13.2.

<p>public access in the subdivision for the purposes of fire fighting; or</p> <p>b) A proposed plan of subdivision showing the layout of roads and fire trails, and the location of property access to building areas, and which complies to the extent necessary with Tables C13.1, C13.2 & C13.3, is included in a bushfire hazard management plan certified by the TFS or accredited person.</p>	
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C13.6.3 Subdivision: Provision of water supply for firefighting purposes

<p>Objective</p> <p>Adequate, accessible and reliable water supply for the purposes of firefighting can be demonstrated at the subdivision stage and allow for the protection of life and property associated with the subsequent use and development of bushfire-prone areas.</p>	
Acceptable solutions	Proposed solutions
<p>A1 In areas serviced with reticulated water by the water corporation:</p> <p>a) TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant the provision of a water supply for fire fighting purposes;</p> <p>b) A proposed plan of subdivision showing the layout of fire hydrants, and building areas, is included in a bushfire hazard management plan approved by the TFS or accredited person as being compliant with Table E4; or</p> <p>c) A bushfire hazard management plan certified by the TFS or an accredited person demonstrates that the provision of water supply for fire fighting purposes is sufficient to manage the risks to property and lives in the event of a bushfire.</p>	<p>A1</p> <p>a) Not applicable</p> <p>b) Not applicable.</p> <p>c) Not applicable.</p>
A2	A2a) Not applicable.

<p>In areas that are not serviced by reticulated water by the water corporation:</p> <ul style="list-style-type: none"> a) The TFS or an accredited person certifies that there is an insufficient increase in risk from bushfire to warrant provision of a water supply for fire fighting purposes; b) The TFS or an accredited person certifies that a proposed plan of subdivision demonstrates that a static water supply, dedicated to fire fighting, will be provided and located compliant with Table E5; or c) A bushfire hazard management plan certified by the TFS or an accredited person demonstrates that the provision of water supply for fire fighting purposes is sufficient to manage the risks to property and lives in the event of a bushfire. 	<p>A2b) Not applicable.</p> <p>A2c) Acceptable solution achieved. The proposed plan of subdivision demonstrates that a static water supply can be provided and located compliant with Table C13.5.</p>
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Conclusions and recommendations

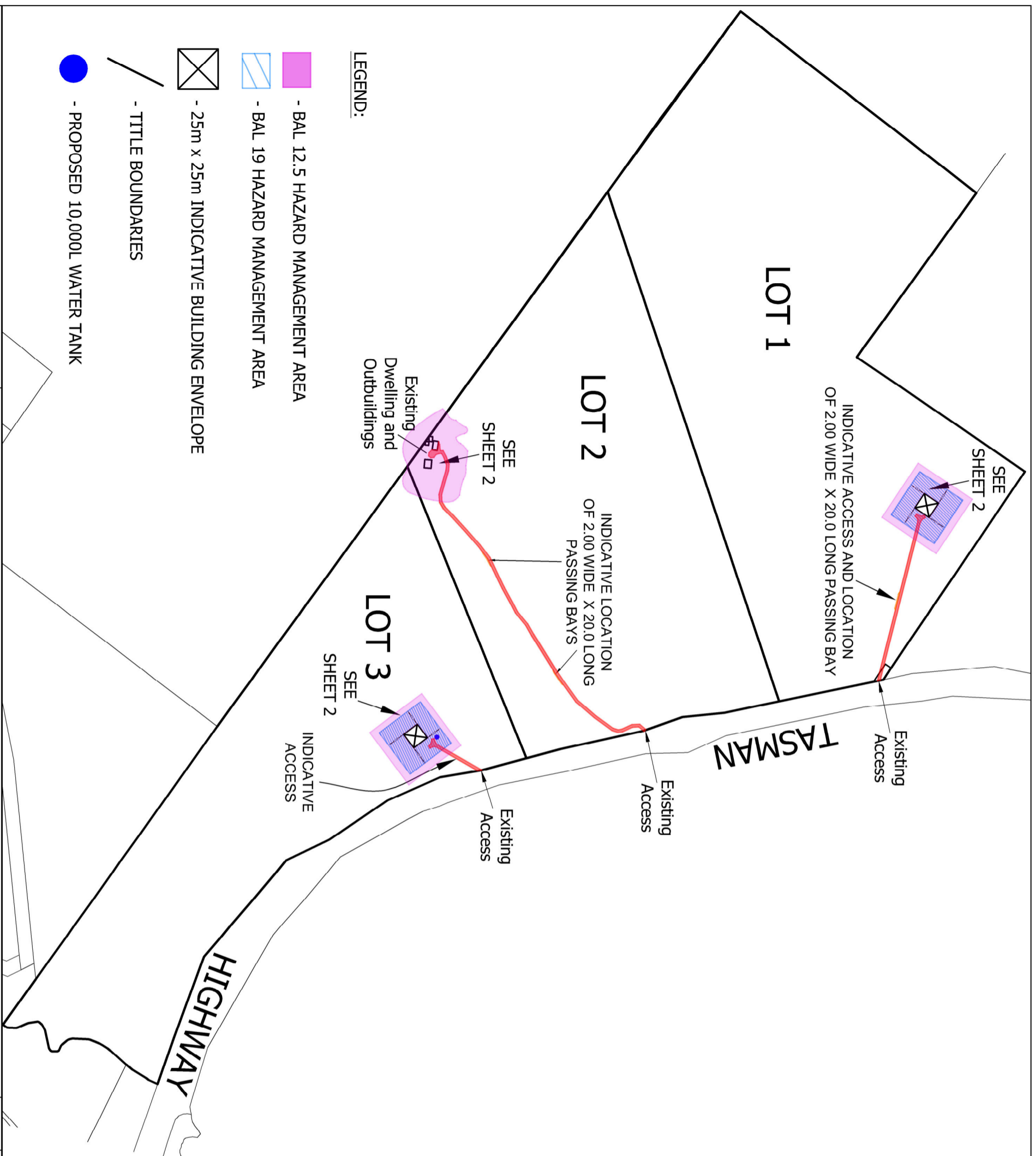
The proposal seeks planning approval for a 3-lot subdivision at 21921 Tasman Highway Four Mile Creek 7215. The existing dwelling on lot 2 provides an existing Bal 12.5 Hazard Management Area with lots 1 and 3 can accommodate a Bal 19 and Bal 12.5 Hazard Management Area for a future dwelling. Access and static water supply requirements can be achieved.

- a) Hazard Management Areas meeting the requirements of BAL 19 and BAL 12.5 can be achieved for each lot. The existing dwelling on lot 2 must continue to maintain the existing Hazard Management Area as shown on the HMP All Hazard Management Area must be maintained in perpetuity as outlined in section 5.2 of this report.
- b) The existing access from the Tasman Highway through to the existing dwelling on lot 2 is compliant apart from requiring the installation of passing bays of 2m wide and 20m long every 200 metres, **these passing bays must be installed as part of the subdivision works and must be completed prior to sealing of the final plan of subdivision**. All private access roads must be in accordance with section 5.3 of this report. Future dwellings on lots 1 and 3 must provide compliant access at the time of occupancy
- c) The existing dwellings on Lot 2 must establish a dedicated firefighting onsite static water supply of minimum 10,000L, ensuring tank and fittings are compliant with standards for building in a bushfire prone area - static water supply and section 5.4 of this report. **The compliant static water supply for the dwelling on lot 2 must be installed prior to sealing of the final plan of subdivision**. Future dwellings in lots 1 and 3 must establish a dedicated firefighting onsite static water supply of minimum 10,000L, ensuring tank and fittings are compliant with standards for building in a bushfire prone area - static water supply and section 5.4 of this report. The compliant static water supply for future dwellings on lots 1 and 3 must be installed at the time of occupancy
- d) Future habitable buildings constructed and alterations and additions to existing habitable buildings on all lots will need to be designed and constructed to AS3959:2018.

Annexure 1 – Bushfire Hazard Management Plan

Annexure 2 – Subdivision Proposal Plan

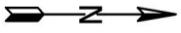
Annexure 3 – Planning Certificate



- LEGEND:**
- BAL 12.5 HAZARD MANAGEMENT AREA
 - BAL 19 HAZARD MANAGEMENT AREA
 - 25m x 25m INDICATIVE BUILDING ENVELOPE
 - TITLE BOUNDARIES
 - PROPOSED 10,000L WATER TANK

Design and construction of habitable buildings.
Buildings sited in accordance with this BHMP are to be designed and constructed to AS 3959:2018.

BUSHFIRE HAZARD MANAGEMENT PLAN
Proposed 3 lot subdivision
Dustin Hollick
21921 Tasman Highway, Four Mile Creek
C.T.128063/500, PID 1963407



Static Fire Fighting Water Supply

The existing dwelling on Lot 2 and future dwellings on lot 1 and 3 must install a metal or concrete firefighting water tank with a minimum of 10,000 litres stored water dedicated to firefighting, fitted with a compliant storz water connection point located within <90m of furthest element of the habitable building, measured as a hose lay, & accessible within <3m of the handstand, may have remote offtake connected to the static water supply. Identify the firefighting water point with permanently fixed signage complying with TFS guidelines. Vegetation is to be kept of the connection point.
Handstand area for fire appliance access to the firefighting water point must be minimum 3m wide, constructed to the same standard as the property access and located <3m from the firefighting water point and >6m from the building to be protected. The compliant static water supply for lot 2 must be installed prior to sealing of the final plan of survey.

Hazard Management – Vegetation Management

Vegetation in Hazard Management Areas are to be managed and maintained in a minimum fuel condition in perpetuity - refer to section 5.2 of Bushfire Hazard Report
Future dwellings are to provide a Hazard Management Area as dimensioned and shown. Hazard Management Areas may be subject to change and future assessment, depending on the location of a future dwelling.

Access Road

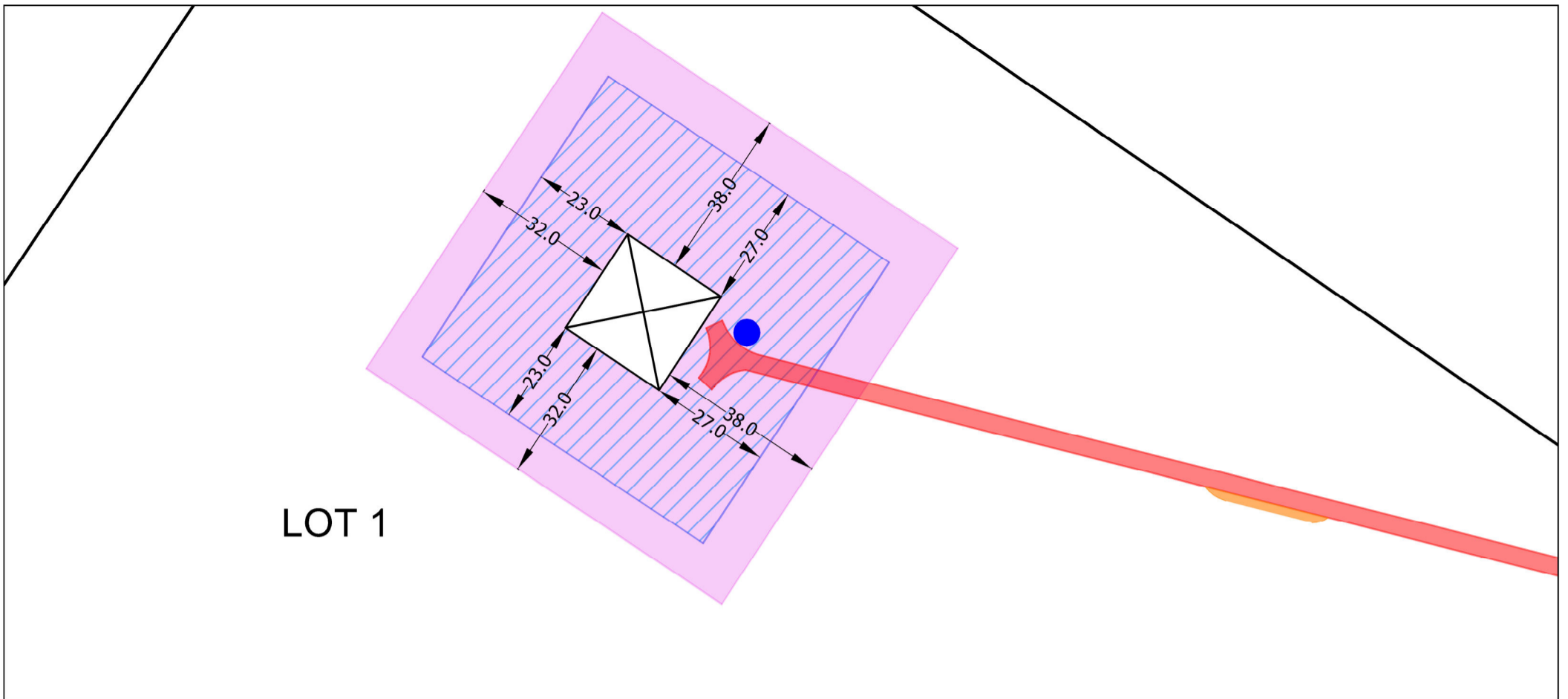
The existing access from the Tasman Highway through to the existing dwelling on lot 2 is compliant apart from requiring the installation of passing bays of 2m wide and 20m long every 200 metres. These passing bays must be installed as part of the subdivision works and must be completed prior to sealing of the final plan of subdivision
Property access for lots 1 and 3 is not required as part of the subdivision works but must be compliant prior to occupancy for future dwellings if access must be from the public road crossover through to the firefighting water point and the dwelling. Property access must:

- Be of all-weather construction (minimum)
- Minimum carriageway width of 4m.
- Vegetation must be cleared to a height of 4m above the carriageway and 0.5m each side of the carriageway.
- Must terminate with a turning area for fire appliances of either a turning circle with a minimum inner radius of 10m, or a hammerhead "T" or "Y" turning head 4m wide and 8m long.
- Property access exceeding 200m in length must provide one passing bay 20m x 2m every 200m. Passing bay must be of all weather construction.

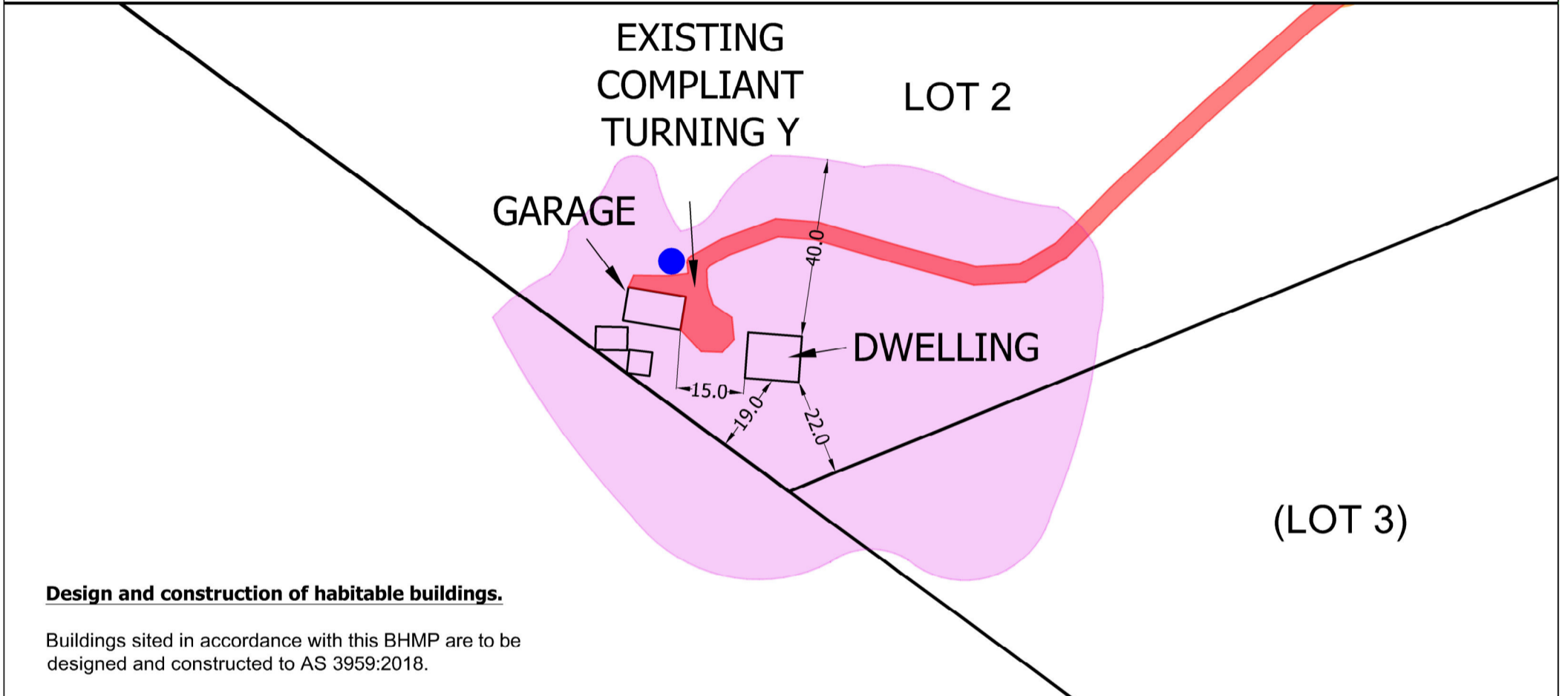
Notes:

1. Refer plans –Woolcott Land Services, 240903- Proposed 3 Lot Subdivision, 21921 Tasman HWY, Four Mile Creek TAS 7215, date 24/11/25 - V1.1
2. All future works to comply with Director's Determination – Bushfire Hazard Area's V1.1.
3. Plan to be read in conjunction with Bushfire Hazard Report 240903 dated 11/12/2025

<p>Woolcott LAND SERVICES</p> <p>10 Goodman Court Invermay, TAS 7248 PO Box 593 Mowbray Heights TAS 7248 Phone (03) 6332 3760 Fax (03) 6332 3764 Email: enquiries@woolcott.au</p>	Job Number	240903								
	<p>Drawn</p> <p>GM</p>	File name	240903-BHMP	Date	11/12/25	Scale	1:1000@A3	Edition	V01	Sheet



LOT 1



EXISTING COMPLIANT TURNING Y

LOT 2

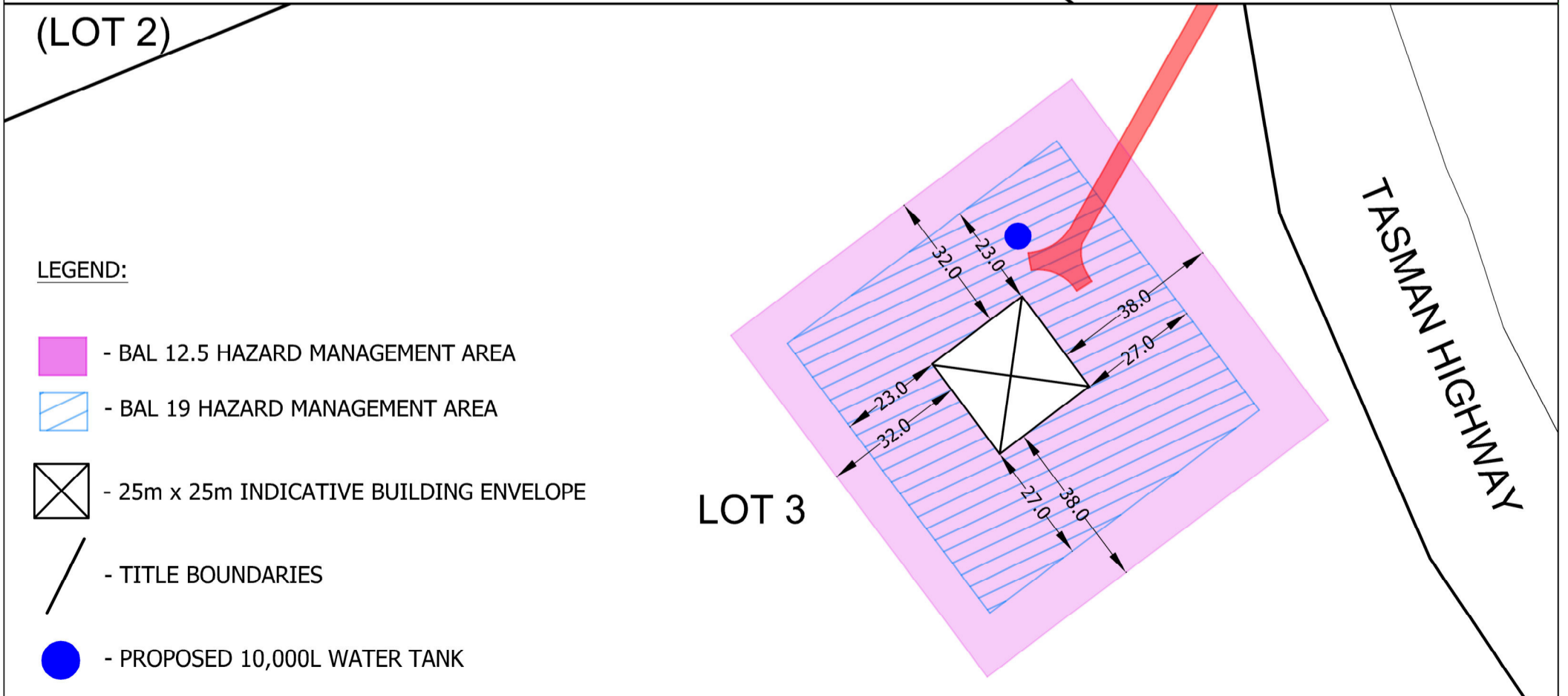
GARAGE

DWELLING

(LOT 3)






Design and construction of habitable buildings.

Buildings sited in accordance with this BHMP are to be designed and constructed to AS 3959:2018.



(LOT 2)

LEGEND:

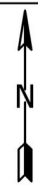
-  - BAL 12.5 HAZARD MANAGEMENT AREA
-  - BAL 19 HAZARD MANAGEMENT AREA
-  - 25m x 25m INDICATIVE BUILDING ENVELOPE
-  - TITLE BOUNDARIES
-  - PROPOSED 10,000L WATER TANK

LOT 3

TASMAN HIGHWAY



BUSHFIRE HAZARD MANAGEMENT PLAN
 Proposed 3 lot subdivision
 Dustin Hollick
 21921 Tasman Highway, Four Mile Creek
 C.T.128063/500, PID 1963407



10 Goodman Court Invermay TAS 7248
 PO Box 593 Mowbray Heights TAS 7248
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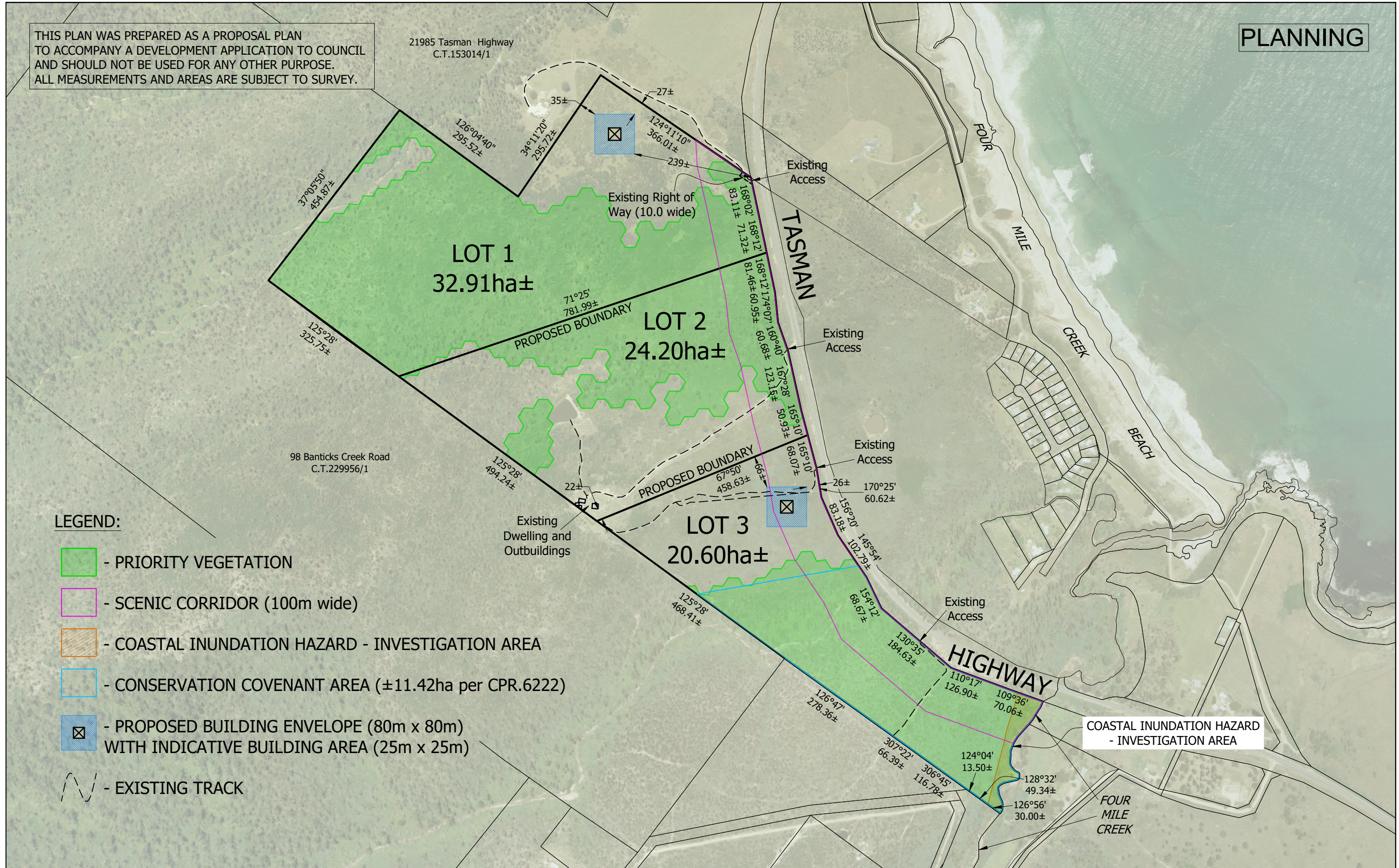
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 240903

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 File name
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Date
 11/12/25
 Scale
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Edition
 V01
 Sheet
 2/2

THIS PLAN WAS PREPARED AS A PROPOSAL PLAN TO ACCOMPANY A DEVELOPMENT APPLICATION TO COUNCIL AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. ALL MEASUREMENTS AND AREAS ARE SUBJECT TO SURVEY.



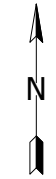
LEGEND:

- PRIORITY VEGETATION
- SCENIC CORRIDOR (100m wide)
- COASTAL INUNDATION HAZARD - INVESTIGATION AREA
- CONSERVATION COVENANT AREA (± 11.42 ha per CPR.6222)
- X - PROPOSED BUILDING ENVELOPE (80m x 80m) WITH INDICATIVE BUILDING AREA (25m x 25m)
- EXISTING TRACK

Notes:

- Aerial photography is sourced from DPIPW E ARCGIS and is dated 16.01.2011. It may not be an accurate representation of site features.
- Boundaries are sourced from the LIST and are approximate and subject to survey.

PROPOSED 3 LOT SUBDIVISION
 21921 Tasman Highway, Four Mile Creek
 C.T.128063/500



Woolcott LAND SERVICES		10 Goodman Court Invermay TAS 7248 PO Box 593 Mowbray Heights TAS 7248 Phone (03) 6332 3760 Email: enquiries@woolcott.au		Job Number E240903	
Drawn EGB	File name E240903_PropPlan_241125_v1.1.dwg	Date 24/11/25	Scale 1:7000@A3	Edition v1.1	Sheet 1/1

BUSHFIRE-PRONE AREAS CODE

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

1. Land to which certificate applies

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

Street address:

21921 Tasman Highway, Four Mile Creek TAS 7215

Certificate of Title / PID:

CT.128063/500. PID 1963407

2. Proposed Use or Development

Description of proposed Use and Development:

3 lot subdivision

Applicable Planning Scheme:

Tasmanian Planning Scheme – Break O'Day

3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
Bushfire Hazard Report	Woolcott Land Services	11/12/2025	1
Bushfire Hazard Management Plan	Woolcott Land Services	11/12/2025	1
Proposed 3 Lot Subdivision	Woolcott Land Services	24/11/2025	1.1

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

4. Nature of Certificate

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

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

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

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

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

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

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

5. Bushfire Hazard Practitioner

Name:

Geoff McGregor

Phone No:

0409 800 387

Postal Address:

PO BOX 593, Mowbray, Tas, 7248

Email Address:

geoff@woolcott.au

Accreditation No:

BFP – 176

Scope:


1, 2, 3B.

6. Certification

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

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

Signed:
certifier



Name:

Geoff McGregor

Date:

12/12/2025

Certificate
Number:

240903

(for Practitioner Use only)

13 November 2025

Reference No. GL25668Ab

Dustin & Bec Hollick
21921 Tasman Highway
FOUR MILE CREEK TAS 7215

Dear Sir and Madam

**RE: Preliminary On-site Wastewater and Stormwater Disposal Site Evaluation
21921 Tasman Highway, Four Mile Creek**

We have pleasure in submitting herein our report detailing the results of a preliminary on-site wastewater disposal site evaluation conducted at the above site.

Should you require clarification of any aspect of this report, please contact Anne Foster on 03 6326 5001.

For and on behalf of

Geoton Pty Ltd



Tony Barriera

Director – Principal Geotechnical Engineer

Rev No.	Date	Written By	Reviewed By	Description
Ab	13/11/2025	A Foster	S Shahandeh	Original

1 INTRODUCTION

At the request of Ms Michelle Schleiger of Woolcott Land Services, on your behalf, Geoton Pty Ltd has carried out a limited scope investigation at the site of a proposed 3 lot residential subdivision at 21921 Tasman Highway, Four Mile Creek.

We understand that the proposed subdivision of the property will allocate the existing dwelling and shed to be contained within Lot 2. Two new lots are proposed within the north-western and south-eastern portions of the property (proposed Lots 1 and 3).

The investigation is to determine if the proposed new Lots 1 and 3 can support, for the purposes of subdivision approval:

- On-site wastewater and stormwater disposal systems (in accordance with AS/NZS 1547:2012 “On-site domestic-wastewater management”); and
- On-site stormwater disposal systems (in accordance with AS/NZS 3500.3 – 2021 “Stormwater Drainage”).

It should be noted that this is a preliminary assessment for subdivision approval and that site-specific assessments for the proposed new Lots 1 and 3 will be required by the developers/owners once the actual location and size of residential developments are known.

A draft site plan was provided by Woolcott Land Services showing the lot layout (Job No. 240903, dated 04 September 2025).

We understand that proposed Lots 1 and 3 are 32.9ha and 20.6ha, respectively.

1.1 Previous Investigation

Geoton Pty Ltd has previously carried out an on-site wastewater disposal assessment and design for the existing dwelling within proposed Lot 2, our Reference No. GL22428Ab, dated 02 August 2022. A Wisconsin Mound system was designed.

2 FIELD INVESTIGATION

The field investigation was conducted on 15 October 2025 and involved the drilling of 4 boreholes by 4WD mounted auger rig to the investigated depths of 1.5m.

The logs of the boreholes are included in Appendix A and their locations are shown on Drawing 1, attached.

3 SITE CONDITIONS

Proposed Lot 2 is currently developed with an existing dwelling and shed, while proposed Lot 1 is partially developed with a small cabin, and proposed Lot 3 is undeveloped. The existing wastewater disposal area within proposed Lot 2 is located to the northeast of the dwelling and is contained within the proposed Lot 2, and appropriately set back from the proposed boundaries. Several watercourses traverse the property as shown on Drawing 1, attached.

Preliminary On-site Wastewater and Stormwater Disposal Site Evaluation

The ground surface within the building envelopes of proposed Lots 1 and 3 generally has a gentle fall towards the east and a cover of trees, grass and sags (Plates 1 and 2).



Plate 1: View of the building area within proposed Lot 1 looking to the west.



Plate 2: View of the building area within proposed Lot 3 looking to the north.

Preliminary On-site Wastewater and Stormwater Disposal Site Evaluation

The MRT Digital Geological Atlas 1:25,000 Series, indicates that the site is located on Devonian to Carboniferous period granitoids and related rocks, with this being generally confirmed by our field investigation.

Examination of the LIST Landslide Planning Map – Landslide Hazard Bands Overlay indicates that the proposed development areas are not within a mapped landslide hazard band. Low and medium landslide hazard bands are mapped elsewhere on the property.

The investigation indicated that the soil profile varies slightly across the site. Boreholes BH01 and BH02 encountered clayey silt topsoil to depths of 0.1m, overlying sandy to silty clay to depths of 0.8m to 1.2m, underlain by sand and clayey sand to the investigated depths of 1.5m. Boreholes BH03 and BH04 encountered clayey silt topsoil to depths of 0.1m, underlain by sandy to silty clay to the investigated depths of 1.5m.

The boreholes did not encounter any signs of groundwater seepage over the investigated depths.

Full details of the soil conditions encountered are presented on the borehole logs.

4 EFFLUENT DISPOSAL

4.1 Permeability of Soil and Soil Classification

Based on the general findings of the borehole investigation, the soil conditions at the site have been classified as follows:

- Texture – Heavy clay (Table E1 from AS1547-2012);
- Structure – Massive (Table E4 from AS/NZS1547-2012); and
- Category – 6 (Table E1 from AS/NZS1547:2012).

For massive Category 6 soils the indicative permeability from AS1547 Table L1 is <0.06m/day.

- Adopted Permeability – 0.02m/day.

4.2 Disposal and Treatment Method

The soil within the proposed effluent disposal area is assessed as having sufficient depth and clay content to provide an adequate attenuation period for the breakdown of pathogens within the treated effluent.

As the site contains Category 6 soils that have a very low permeability primary treated effluent (e.g. septic tank and absorption trenches) is not suitable for disposal within these soils.

Therefore, based on the findings of the investigation and provided the setback distances are adhered to, this site assessment indicates that the proposed Lots 1 and 3 are suitable for the disposal of secondary treated effluent by way of a Secondary Treatment System (STS) and sub-surface (near surface) irrigation.

4.3 Setbacks

The minimum separation distance between the disposal area and downslope features is based on Appendix R from AS/NZS 1547:2012 “Recommended Setback Distances for Land Application Systems” and Section 3.1 from the *Building Act 2016*: Director’s Guidelines for On-site Wastewater Management Systems. The following setbacks are required for secondary treated effluent:

- 19.0m from downslope sensitive features such as watercourses;
- 5.5m from downslope property boundaries;
- 1.5m from cross slope or upslope property boundaries;
- 4.0m from downslope buildings;
- 3.0m from upslope or cross-slope buildings; and
- 50.0m from groundwater bores.

The closest groundwater bore mapped on the LIST is more than 400m from the site.

4.4 Example of Minimum System Requirements

About 720m² (360m² for the effluent disposal area and 360m² as a backup [reserve] area) would be required for an STS and sub-surface irrigation system to support a standard 4-bedroom dwelling on tank water within the assessed area of the site.

5 ON-SITE STORMWATER MANAGEMENT

5.1 General

The Tasmanian Planning Scheme specifies that each lot within a subdivision must either have connection to a public stormwater system or be able to accommodate an on-site stormwater management system.

On-site disposal of stormwater via infiltration systems “are *designed to encourage stormwater to infiltrate into surrounding soils via a controlled system and are particularly suited to reducing the magnitude of peak storm discharges from impervious areas*” and “are *best suited to sandy soils with deep groundwater*”. “*Soils with low hydraulic conductivities... are more susceptible to clogging and require enhanced pretreatment*” (Derwent Estuary Program, 2012).

Lots with on-site stormwater management are required to be capable of accommodating the future use and development of the land, specifically with regard to:

- The size of the lot;
- Topography of the site;
- Soil conditions;
- Any existing buildings on the site;
- Any area of the site covered by impervious surfaces; and

- Any watercourse on the land.”

5.2 Soil Category and Permeability of Soil

Conditions encountered during the geotechnical investigation indicate that the subsurface profile can be typically characterised as medium to high plasticity clays underlain in some areas by sands, which falls under the category of a “Medium Clay” (Engineers Australia, 2006).

From Water Sensitive Urban Design (Derwent Estuary Program, 2012), Section 10.3.1.2, the saturated hydraulic conductivity (K_{sat}) for Medium Clay is 1×10^{-5} m/s to 1×10^{-6} m/s (3.6mm/hour to 36mm/hour).

5.3 Setbacks

As per Water Sensitive Urban Design – Table 0-2 (Derwent Estuary Program, 2012), and due to the site being classed as a Medium Clay, the soak-away detention trench is to be set back at least 4.0m from structures and property boundaries. The soak away detention trench is to be located downslope of on-site wastewater disposal areas.

5.4 Example of Minimum System Requirements

Adopting an average floor area for new dwellings of 260m² (Australian Bureau of Statistics, 2025) and a 5% Annual Exceedance Probability (AEP) storm event, proposed Lots 1 and 3 would each need about 42m² for the disposal of stormwater via soak-away detention trenches.

6 CONCLUSIONS

The results of the investigation indicate that the proposed new Lots 1 and 3 have sufficient available area suitable for the disposal of domestic effluent by way of secondary treated wastewater via a Secondary Treatment System and subsurface irrigation, including sufficient reserve area. Additionally, both proposed lots have sufficient area available for the disposal of stormwater via stormwater soak-away detention trenches.

7 REFERENCES

- Australian Bureau of Meteorology. (2025). *Design Rainfall Data System (2016)*. Retrieved from <http://www.bom.gov.au/water/designRainfalls/revise-ifd/>
- Australian Bureau of Statistics. (2025). *Characteristics of new residential dwellings - A 15 year summary*. Retrieved from <https://www.abs.gov.au/articles/characteristics-new-residential-dwellings-15-year-summary>
- Department of Justice. (2017). *Building Act 2016 Director's Guidelines for On-site Wastewater Management Systems v2.0*. Consumer, Building and Occupational Services.
- Derwent Estuary Program. (2012). *Water Sensitive Urban Design*. Retrieved from <https://www.derwentestuary.org.au/water-sensitive-urban-design/>
- Engineers Australia. (2006). *Australian Runoff Quality - A Guide to Water Sensitive Urban Design*. Riverwood, NSW: Engineers Media.
- Standards Australia Limited. (2012). *AS/NZS 1547 On-site Domestic Wastewater Management*. Sydney: SAI Global Limited.
- Standards Australia Limited. (2017). *AS 1726: Geotechnical Site Investigation*. Sydney: SAI Global Limited.
- Standards Australia Limited. (2021). *AS/NZS 3500.3 Plumbing and Drainage Part 3: Stormwater Drainage*. Sydney: SAI Global Limited.

Attachments:

Limitations of report

Drawing 1: Site Plan

Appendix A: Borehole Logs & Explanation Sheets

Geotechnical Consultants - Limitations of report

These notes have been prepared to assist in the interpretation and understanding of the limitations of this report.

Project specific criteria

The report has been developed on the basis of unique project specific requirements as understood by Geoton and applies only to the site investigated. Project criteria are typically identified in the Client brief and the associated proposal prepared by Geoton and may include risk factors arising from limitations on scope imposed by the Client. The report should not be used without further consultation if significant changes to the project occur. No responsibility for problems that might occur due to changed factors will be accepted without consultation.

Subsurface variations with time

Because a report is based on conditions which existed at the time of subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. For example, water levels can vary with time, fill may be placed on a site and pollutants may migrate with time. In the event of significant delays in the commencement of a project, further advice should be sought.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and at the time they are taken. All available data is interpreted by professionals to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, as it is virtually impossible to provide a definitive subsurface profile which includes all the possible variabilities inherent in soil and rock masses.

Report Recommendations

The report is based on 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 and therefore the report recommendations can only be regarded as preliminary. Where variations in conditions are encountered, further advice should be sought.

Specific purposes

This report should not be applied to any project other than that originally specified at the time the report was issued.

Interpretation by others

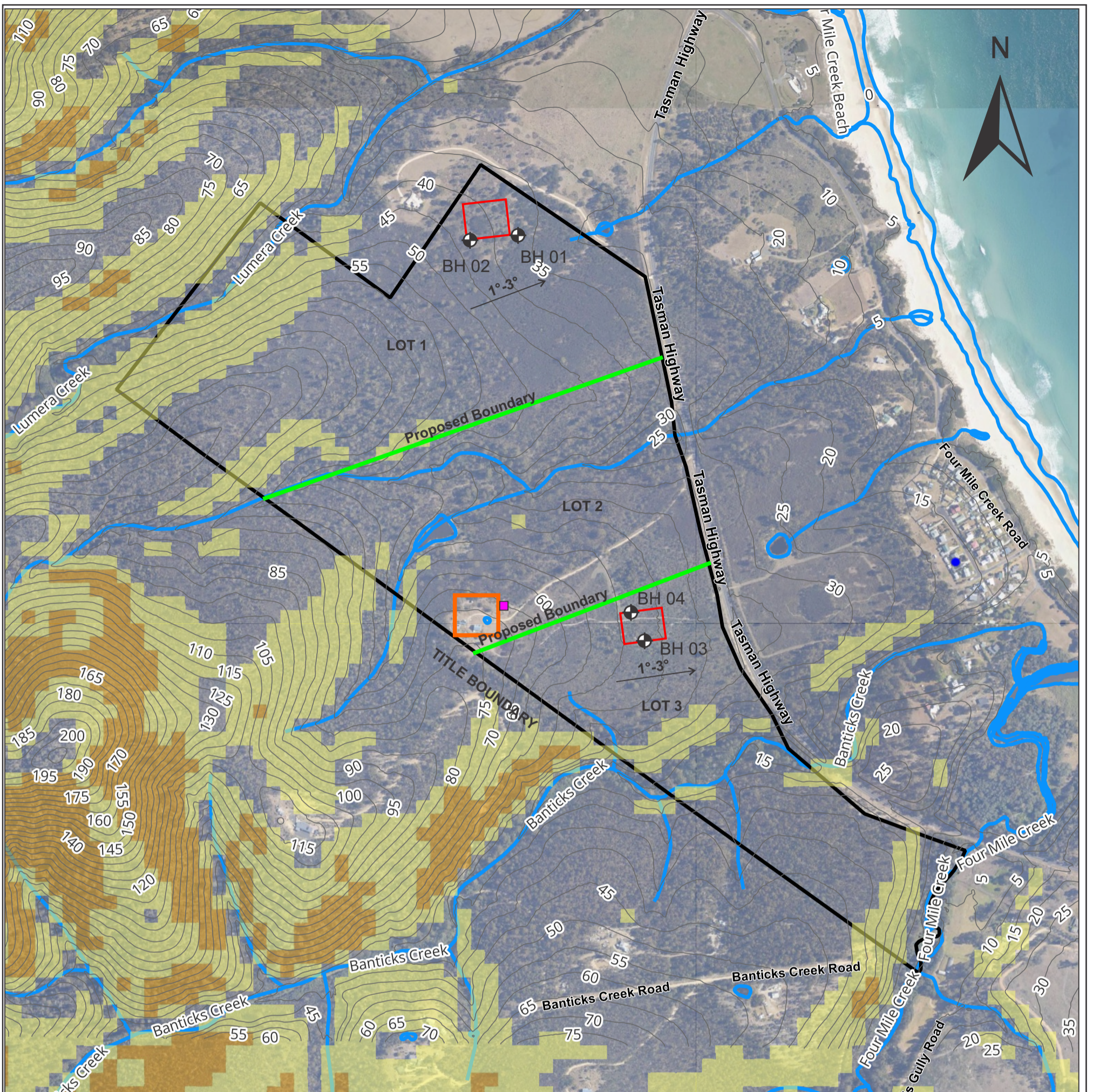
Geoton will not be responsible for interpretations of site data or the report findings by others involved in the design and construction process. Where any confusion exists, clarification should be sought from Geoton.

Report integrity










The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way.

Geoenvironmental issues

This report does not cover issues of site contamination unless specifically required to do so by the client. In the absence of such a request, Geoton take no responsibility for such issues.




Legend

- BH 01
 Approximate Borehole Location
-  Approximate Slope angle in Degrees
-  Contour in Metres (LiDAR Derived)
-  Watercourse
-  Low Landslide Hazard Band (LIST)
-  Medium Landslide Hazard Band (LIST)
-  Proposed Building Envelope
-  Existing Dwelling and Shed
-  Existing Wastewater Disposal Area

200 0 200 400 m



Approximate Scale

				Client: DUSTIN & BEC HOLLICK	
				Project: 21921 TASMAN HIGHWAY FOUR MILE CREEK	
Date	13/11/2025	Drawn	AF	Title: SITE PLAN	
Scale	1:7,500	Approved	TB	Project no: GL25668A	Drawing no. 1
Original size	A3	Rev			

Appendix A

Borehole Logs

Client : Dustin & Bec Hollick
 Project : Preliminary On-site Wastewater and Stormwater Evaluation
 Location : 21921 Tasman Highway, Four Mile Creek

Easting : 0.00
 Northing : 0.00
 Inclination : -90deg
 Azimuth :

Sheet : 1 OF 1
 Job No : GL25668A
 Logged : Anne Foster
 Logged Date : 15/10/2025
 Drill Rig : Honey Badger - 95mm

Method	Drilling	Water	Samples	Testing	Depth (m)	Graphic Log	Classification Code	Material Description	Moisture condition	Consistency density, index	Structure, Additional Observations
ADT					0.00		ML	TOPSOIL - Clayey SILT - low plasticity, brown, root fibres	D	Fr	
					0.25		CH	Silty CLAY - high plasticity, brown,	M	VSt	w ~ PL
					0.50		CI	Sandy CLAY - medium plasticity, brown, medium to coarse grained sand, trace fine gravel,	M-D	VSt	w < PL
					1.25		SW	SAND - medium to coarse grained, brown, trace low plasticity clay,	D	D	
								BH01 Terminated at 1.5 m			

Client : Dustin & Bec Hollick
 Project : Preliminary On-site Wastewater and Stormwater Evaluation
 Location : 21921 Tasman Highway, Four Mile Creek

Easting : 0.00
 Northing : 0.00
 Inclination : -90deg
 Azimuth :

Sheet : 1 OF 1
 Job No : GL25668A
 Logged : Anne Foster
 Logged Date : 15/10/2025
 Drill Rig : Honey Badger - 95mm

Method	Drilling	Water	Samples	Testing	Depth (m)	Graphic Log Classification Code	Material Description	Moisture condition	Consistency density, index	Structure, Additional Observations
ADT					0.00	ML	TOPSOIL - Clayey SILT - low plasticity, brown, trace medium to coarse grained sand root fibres	D	Fr	
					0.25	CH	Silty CLAY - high plasticity, brown,	M-D	VSt	w < PL
					0.50	CI	Sandy CLAY - medium plasticity, brown, medium to coarse grained sand, trace fine gravel,	M-D	VSt	
					0.75	SC	Clayey SAND - medium to coarse grained, brown, trace fine gravel,	M-D	D	
					1.00	SW	SAND - medium to coarse grained, brown, with low plasticity clay, with fine gravel,	D	D	
					1.25					
							BH02 Terminated at 1.5 m			

Client : Dustin & Bec Hollick
 Project : Preliminary On-site Wastewater and Stormwater Evaluation
 Location : 21921 Tasman Highway, Four Mile Creek

Easting : 0.00
 Northing : 0.00
 Inclination : -90deg
 Azimuth :

Sheet : 1 OF 1
 Job No : GL25668A
 Logged : Anne Foster
 Logged Date : 15/10/2025
 Drill Rig : Honey Badger - 95mm

Method	Drilling	Water	Samples	Testing	Depth (m)	Graphic Log Classification Code	Material Description	Moisture condition	Consistency density, index	Structure, Additional Observations
ADT					0.00	ML	TOPSOIL - Clayey SILT - low plasticity, brown, trace fine to medium gravel, root fibres	D	Fr	
					0.05	CH	Silty CLAY - high plasticity, brown,	M-D	VSt	w < PL
							BH03 Terminated at 1.5 m			

Client : Dustin & Bec Hollick
 Project : Preliminary On-site Wastewater and Stormwater Evaluation
 Location : 21921 Tasman Highway, Four Mile Creek

Easting : 0.00
 Northing : 0.00
 Inclination : -90deg
 Azimuth :

Sheet : 1 OF 1
 Job No : GL25668A
 Logged : Anne Foster
 Logged Date : 15/10/2025
 Drill Rig : Honey Badger - 95mm

Method	Drilling	Water	Samples	Testing	Depth (m)	Graphic Log Classification Code	Material Description	Moisture condition	Consistency density, index	Structure, Additional Observations
ADT					0.00	ML	TOPSOIL - Clayey SILT - low plasticity, brown, with fine to medium gravel, root fibres	D	Fr	
					0.25	CH	Silty CLAY - high plasticity, brown,	M-D	VSt	w < PL
					1.25	CH	Sandy CLAY - high plasticity, pale brown, medium to coarse grained sand,	M-D	VSt	
							BH04 Terminated at 1.5 m			

Investigation Log Explanation Sheet

METHOD – BOREHOLE

TERM	Description
AS	Auger Screwing*
AD	Auger Drilling*
RR	Roller / Tricone
W	Washbore
CT	Cable Tool
HA	Hand Auger
DT	Diatube
B	Blank Bit
V	V Bit
T	TC Bit

* Bit shown by suffix e.g. ADT

METHOD – EXCAVATION

TERM	Description
N	Natural exposure
X	Existing excavation
H	Backhoe bucket
B	Bulldozer blade
R	Ripper
E	Excavator
HT	Hand Tools




SUPPORT

TERM	Description
M	Mud
N	Nil
C	Casing
S	Shoring

PENETRATION

1	2	3	4	
█	█	█	█	No resistance ranging to Refusal

WATER

Symbol	Description
	Water inflow
	Water outflow
	17/3/08 water on date shown

NOTES, SAMPLES, TESTS

TERM	Description
U ₅₀	Undisturbed sample 50 mm diameter
U ₆₃	Undisturbed sample 63 mm diameter
U ₈₁	Undisturbed sample 81 mm diameter
D	Disturbed sample
N	Standard Penetration Test (SPT)
N*	SPT – sample recovered
N _c	SPT with solid cone
V	Vane Shear
PP	Pocket Penetrometer
P	Pressumeter
B _s	Bulk sample
E	Environmental Sample
R	Refusal – Material cannot be penetrated
DCP	Dynamic Cone Penetrometer (blows/100mm)
PL	Plastic Limit
LL	Liquid Limit
LS	Linear Shrinkage

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION

Based on AS 1726:2017

MOISTURE

TERM	Description
D	Dry
M	Moist
W	Wet

CONSISTENCY/DENSITY INDEX

TERM	Description
VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fr	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	Very dense

Soil Description Explanation Sheet (1 of 2)

DEFINITION

In engineering terms, soil includes every type of uncemented or partially cemented inorganic or organic material found in the ground. In practice, if the material can be remoulded or disintegrated by hand in its field condition or in water it is described as a soil. Other materials are described using rock description terms.

CLASSIFICATION SYMBOL AND SOIL NAME

Soils are described in accordance with the AS 1726: 2017 as shown in the table on Sheet 2.

PARTICLE SIZE DEFINITIONS

NAME	SUBDIVISION	SIZE (mm)
BOULDERS		>200
COBBLES		63 to 200
GRAVEL	Coarse	19 to 63
	Medium	6.7 to 19
	Fine	2.36 to 6.7
SAND	Coarse	0.6 to 2.36
	Medium	0.21 to 0.6
	Fine	0.075 to 0.21
SILT		0.002 to 0.075
CLAY		<0.002

MOISTURE CONDITION

Coarse Grained Soils

Dry Non-cohesive and free running.

Moist Soil feels cool, darkened in colour. Soil tends to stick together.

Wet As for moist but with free water forming when handling.

Fine Grained Soils

Moist, dry of Plastic Limited – $w < PL$

Hard and friable or powdery.

Moist, near Plastic Limit – $w \approx PL$

Soils can be moulded at a moisture content approximately equal to the plastic limit.

Moist, wet of Plastic Limit – $w > PL$

Soils usually weakened and free water forms on hands when handling.

Wet, near Liquid Limit - $w \approx LL$

Wet, wet of Liquid Limit - $w > LL$

CONSISTENCY TERMS FOR COHESIVE SOILS

TERM	UNDRAINED STRENGTH s_u (kPa)	FIELD GUIDE
Very Soft	≤ 12	Exudes between the fingers when squeezed in hand
Soft	12 to 25	Can be moulded by light finger pressure
Firm	25 to 50	Can be moulded by strong finger pressure
Stiff	50 to 100	Cannot be moulded by fingers
Very Stiff	100 to 200	Can be indented by thumb nail
Hard	> 200	Can be indented with difficulty by thumb nail
Friable	–	Can be easily crumbled or broken into small pieces by hand

RELATIVE DENSITY OF NON-COHESIVE SOILS

TERM	DENSITY INDEX (%)
Very Loose	≤ 15
Loose	15 to 35
Medium Dense	35 to 65
Dense	65 to 85
Very Dense	> 85

DESCRIPTIVE TERMS FOR ACCESSORY SOIL COMPONENTS

DESIGNATION OF COMPONENT	IN COARSE GRAINED SOILS		IN FINE GRAINED SOILS	TERM
	% Fines	% Accessory coarse fraction	% Sand/gravel	
Minor	≤ 5	≤ 15	≤ 15	Trace
	$> 5, \leq 12$	$> 15, \leq 30$	$> 15, \leq 30$	With
Secondary	> 12	> 30	> 30	Prefix

SOIL STRUCTURE

ZONING		CEMENTING	
Layer	Continuous across the exposure or sample.	Weakly cemented	Easily disaggregated by hand in air or water.
Lens	Discontinuous layer of different material, with lenticular shape.		
Pocket	An irregular inclusion of different material.	Moderately cemented	Effort is required to disaggregate the soil by hand in air or water.

GEOLOGICAL ORIGIN

WEATHERED IN PLACE SOILS

Extremely Weathered material	Material is weathered to such an extent that it has soil properties. Structure and/or fabric of parent rock material retained and visible.
Residual soil	Structure and/or fabric of parent rock material not retained and visible.

TRANSPORTED SOILS

Aeolian soil	Carried and deposited by wind.
Alluvial soil	Deposited by streams and rivers.
Colluvial soil	Soil and rock debris transported downslope by gravity.
Estuarine soil	Deposited in coastal estuaries, and including sediments carried by inflowing rivers and streams, and tidal currents.
Fill	Man-made deposit. Fill may be significantly more variable between tested locations than naturally occurring soils.
Lacustrine soil	Deposited in freshwater lakes.
Marine soil	Deposited in a marine environment.

Soil Description Explanation Sheet (2 of 2)

SOIL CLASSIFICATION INCLUDING IDENTIFICATION AND DESCRIPTION

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 63 mm and basing fractions on estimated mass)				GROUP SYMBOL	PRIMARY NAME	
COARSE GRAINED SOIL More than 65% of soil excluding oversize fraction is larger than 0.075 mm	GRAVEL More than half of coarse fraction is larger than 2.36 mm	CLEAN GRAVEL (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	GW	GRAVEL	
			Predominantly one size or a range of sizes with some intermediate sizes missing	GP	GRAVEL	
		GRAVEL WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML and MH below)	GM	Silty GRAVEL	
			Plastic fines (for identification procedures see CL, CI and CH below)	GC	Clayey GRAVEL	
	SAND More than half of coarse fraction is smaller than 2.36 mm	CLEAN SAND (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate sizes	SW	SAND	
			Predominantly one size or a range of sizes with some intermediate sizes missing	SP	SAND	
		SAND WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML and MH below)	SM	Silty SAND	
			Plastic fines (for identification procedures see CL, CI and CH below)	SC	Clayey SAND	
FINE GRAINED SOIL More than 35% of soil excluding oversize fraction is smaller than 0.075 mm	IDENTIFICATION PROCEDURES ON FRACTIONS <0.075 mm					
		DRY STRENGTH	DILATANCY	TOUGHNESS		
	SILT & CLAY (low to medium plasticity, LL ≤ 50)	None to Low	Slow to Rapid	Low	ML	SILT
		Medium to High	None to Slow	Medium	CL, CI	CLAY
		Low to Medium	Slow	Low	OL	ORGANIC SILT
	SILT & CLAY (high plasticity, LL > 50)	Low to Medium	None to Slow	Low to Medium	MH	SILT
		High to Very High	None	High	CH	CLAY
		Medium to High	None to Very Slow	Low to Medium	OH	ORGANIC CLAY
	Highly Organic Soil	Readily identified by colour, odour, spongy feel and frequently by fibrous texture.			Pt	PEAT

• LL – Liquid Limit.

COMMON DEFECTS IN SOILS

TERM	DEFINITION	DIAGRAM	TERM	DEFINITION	DIAGRAM
PARTING	A surface or crack across which the soil has little or no tensile strength. Parallel or sub parallel to layering (e.g. bedding). May be open or closed.		SOFTENED ZONE	A zone in clayey soil, usually adjacent to a defect in which the soil has a higher moisture content than elsewhere.	
FISSURE	A surface or crack across which the soil has little or no tensile strength, but which is not parallel or sub parallel to layering. May be open or closed. May include desiccation cracks.		TUBE	Tubular cavity. May occur singly or as one of a large number of separate or inter-connected tubes. Walls often coated with clay or strengthened by denser packing of grains. May contain organic matter.	
SHEARED SEAM	Zone in clayey soil with roughly parallel near planar, curved or undulating boundaries containing closely spaced, smooth or slickensided, curved intersecting fissures which divide the mass into lenticular or wedge-shaped blocks.		TUBE CAST	An infilled tube. The infill may be uncemented or weakly cemented soil or have rock properties.	
SHEARED SURFACE	A near planar curved or undulating, smooth, polished or slickensided surface in clayey soil. The polished or slickensided surface indicates that movement (in many cases very little) has occurred along the defect.		INFILLED SEAM	Sheet or wall like body of soil substance or mass with roughly planar to irregular near parallel boundaries which cuts through a soil mass. Formed by infilling of open defects.	