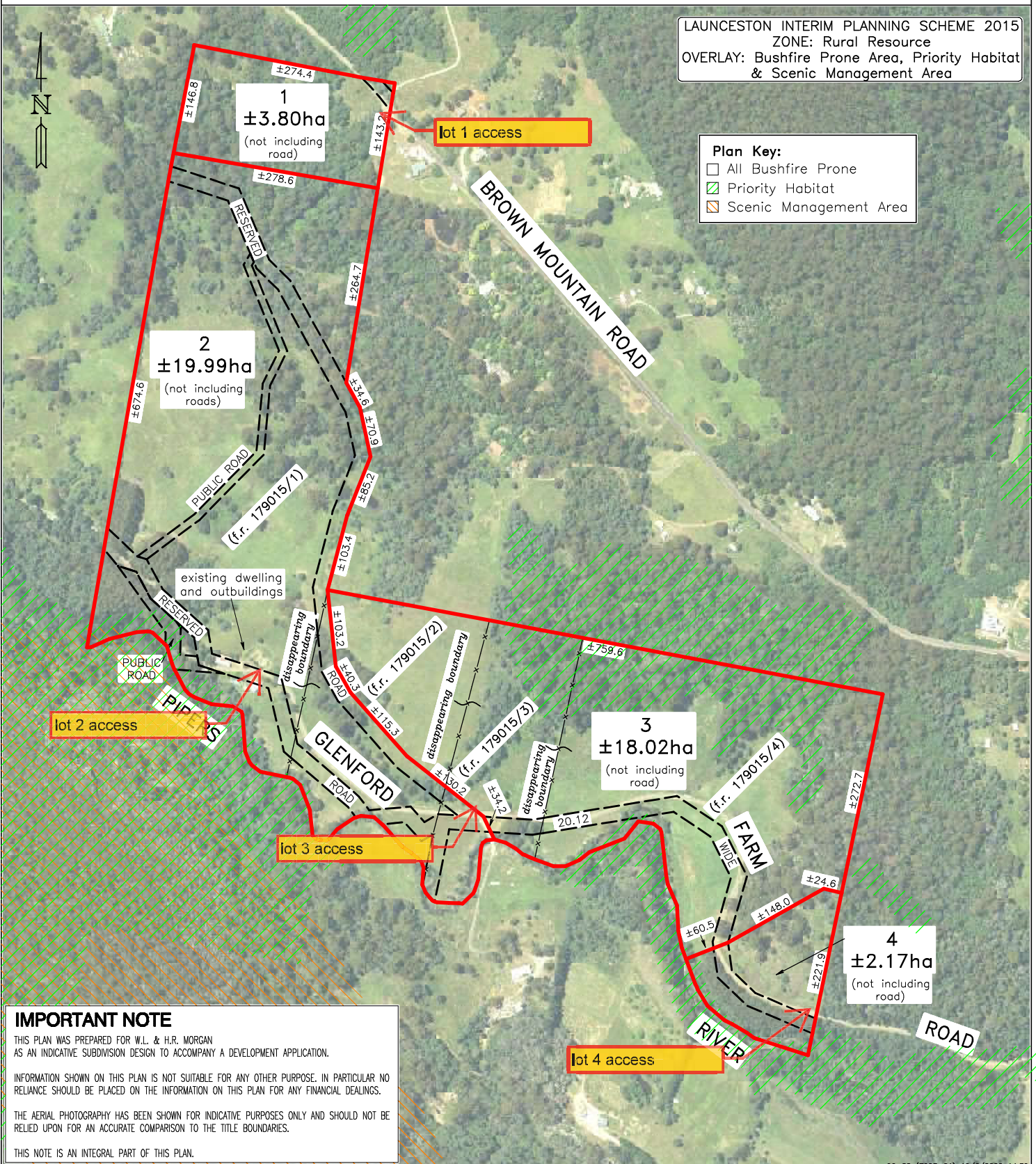


Council Meeting - 26 November 2020 - Agenda Item 9.4
Attachment 2 - Plans to be Endorsed - 175 Glenford Farm Road Underwood

	<p>COHEN & ASSOCIATES P/L LAND & AERIAL SURVEYORS ABN 70 689 298 535 103 CAMERON STREET PO BOX 990 LAUNCESTON 7250 TAS TELEPHONE : 03 6331 4633</p> <p>www.surveyingtas.com.au EMAIL : admin@surveyingtas.com.au</p>	<p>PLAN OF SUBDIVISION SHEET 1 OF 1</p>	<p>REF: 96-88 (7923)</p>
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<p>Municipality: LAUNCESTON CITY COUNCIL</p> <p>Site Address: 175 GLENFORD FARM RD UNDERWOOD TAS 7268</p> <p>Tasmap Sheet: -</p> <p>Grid Reference: E: 516162 N: 5429454 (MGA)</p>	<p>Owners: W.L. & H.R. MORGAN</p> <p>Title Refs: 179015/1, 179015/2, 179015/3 & 179015/4</p> <p>Dates: Version 1: 25/05/2020 Version 2: 10/06/2020</p> <p>Scale: 1 : 5000 @ A3</p>
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DISCLAIMER: This is a preliminary plan prepared without field survey and forms part of an application to subdivide the land described and is not to be used for any other purpose. Contours and levels may be transcribed from other sources and their accuracy has not been verified. These should not be used. The dimensions, area, location of improvements and number of lots are approximate and may vary as a result of decisions by the Municipality, Land Use Planning Review Panel, engineering or other advice. Easements may not be shown as these are to be determined at the time of survey. The plan is not to be copied unless this note is included.



LAUNCESTON INTERIM PLANNING SCHEME 2015
ZONE: Rural Resource
OVERLAY: Bushfire Prone Area, Priority Habitat & Scenic Management Area

Plan Key:

-  All Bushfire Prone
-  Priority Habitat
-  Scenic Management Area

IMPORTANT NOTE

THIS PLAN WAS PREPARED FOR W.L. & H.R. MORGAN AS AN INDICATIVE SUBDIVISION DESIGN TO ACCOMPANY A DEVELOPMENT APPLICATION.

INFORMATION SHOWN ON THIS PLAN IS NOT SUITABLE FOR ANY OTHER PURPOSE. IN PARTICULAR NO RELIANCE SHOULD BE PLACED ON THE INFORMATION ON THIS PLAN FOR ANY FINANCIAL DEALINGS.

THE AERIAL PHOTOGRAPHY HAS BEEN SHOWN FOR INDICATIVE PURPOSES ONLY AND SHOULD NOT BE RELIED UPON FOR AN ACCURATE COMPARISON TO THE TITLE BOUNDARIES.

THIS NOTE IS AN INTEGRAL PART OF THIS PLAN.

Bushfire Hazard Management Report: Subdivision 175 Glenford Farm Road, Underwood.

Report for: Warwick & Helen Morgan

Property Location: 175 Glenford Farm Road, Underwood

Prepared by: Scott Livingston

Livingston Natural Resource Services
12 Powers Road
Underwood, 7268

Date: 23rd June 2020



Client: Warwick & Helen Morgan

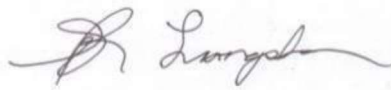
Property identification: 175 Glenford Farm Road, Underwood
CT 179015/1, 2, 3 & 4. PID 752687

Current zoning: Rural Resource, Launceston Interim Planning Scheme 2015.

Proposal: A 4 lot realignment of boundaries (subdivision) is proposed from existing titles CT 179015/1, 2, 3 & 4, 175 Glenford Farm Road, Underwood.

Assessment A field inspection of the site was conducted to determine the Bushfire Risk and Bushfire Attack Level.

Assessment by: Scott Livingston



Master Environmental Management, Natural Resource Management Consultant.

Accredited Person under part 4A of the Fire Service Act 1979: Accreditation # BFP-105.

Contents

DESCRIPTION	1
BAL AND RISK ASSESSMENT	1
ROADS	6
PROPERTY ACCESS	7
FIRE FIGHTING WATER SUPPLY	9
CONCLUSIONS	12
REFERENCES	12
APPENDIX 1 – MAPS	13
APPENDIX 2 – PHOTOS	16
Bushfire Hazard Management Plan	19
CERTIFICATE UNDER S51(2)(d) LAND USE PLANNING AND APPROVALS ACT 1993	22
CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM	29
Figure 1: Building Area BAL 19	4
Figure 2: Hazard Management Areas	6
Figure 3: Location, existing titles	13
Figure 4: Aerial Image	14
Figure 5: Proposed Subdivision Plan	15
Figure 6: Lot 1, west	16
Figure 7: Lot 1, south	16
Figure 8: Lot 3, west	17
Figure 9: Lot 4, north	17
Figure 10: Lot 4, south west	18
Figure 11: existing water supply Lot 2	18

LIMITATIONS

This report only deals with potential bushfire risk and does not consider any other potential statutory or planning requirements. This report classifies type of vegetation at time of inspection and cannot be relied upon for future development or changes in vegetation of assessed area.

DESCRIPTION

A 4 lot realignment of boundaries (subdivision) is proposed from existing titles CT 179015/1, 2, 3 & 4 at 175 Glenford Farm Road, Underwood. The property is zoned Rural Resource, *Launceston Planning Scheme, 2015*. There is an existing dwelling on proposed Lot 2.

The property has frontage to Glenford Farm and Brown Mountain Roads the southern boundaries are formed by Pipers River. The land is a mixture of grassland and forest. Surrounding land generally forested with some grassland and low threat vegetation around dwellings. The area is not serviced by a reticulated water supply.

Access to the existing dwelling is less than 30m in length. A water hole approximately 3m in diameter and 2m in depth (~12,000 L) is located 70m east of the existing dwelling on Lot 2. Glenford Farm Road provides hardstand within 3m of the waterhole. The supply is not used for other purposes and can if necessary be pump filled from Pipers River. Access across paddocks to Pipers River provides an additional potential supply 50m from the dwelling, with a firefighting pump available on the property.

See Appendix 1 for maps and site plan. Appendix 2 for photos.

BAL AND RISK ASSESSMENT

The land is mapped as being within a Bushfire Prone Area.

Lot 2 contains an existing dwelling and no boundary within 100m changes under subdivision. The ability to manage bushfire risk remains unchanged, and there is no increase in risk to the existing dwelling.

VEGETATION AND SLOPE Proposed Lots

Lot		North	East	South	West
1	Vegetation within 100m indicative dwelling location	0-25m-grassland (on lot), 25-30m road, 30-100m forest	0-33m grassland (on lot), 33-44m road, 40-100m grassland	0-5m grassland, 5-100m forest	0-8m grassland, 8-75m forest, 75-100 grassland
	Slope (degrees, over 100m)	Flat/ Upslope	Flat/ Upslope	Down slope 10-15°	Down slope 0-5°
	BAL Rating existing vegetation	BAL FZ	BAL FZ	BAL FZ	BAL FZ
	BAL Rating with setback/HMA	BAL 19	BAL 19	BAL 19	BAL 19

2	Vegetation within 100m existing dwelling	0-40m low threat, 40-100m grassland	0-20m low threat, 20-70m grassland 70-100m forest	0-12m low threat, 12-22m grassland. 22-32m river, 32-100m forest	0-30m low threat, 30-100m forest
	Slope (degrees, over 100m)	Flat/ Upslope	Flat/ Upslope	Down slope 0-5°	Down slope 0-5°
	BAL Rating existing vegetation	BAL 12.5	BAL 12.5	BAL 19	BAL 12.5

3	Vegetation within 100m indicative building location	0-100m grassland	0-60m grassland, 60-100m forest	0-80m grassland, 80-100m forest	0-80m grassland, 80-100m forest
	Slope (degrees, over 100m)	Flat/ Upslope	Flat/ Upslope	Down slope 10-15°	Flat/ Upslope
	BAL Rating at boundary	BAL FZ	BAL FZ	BAL FZ	BAL FZ
	BAL Rating with setback/HMA	BAL 19	BAL 19	BAL 19	BAL 19

4	Vegetation within 100m indicative building location	0-27m grassland, 27-100m forest	0-50m grassland, 50-100m forest	0-38m grassland, 38-48m road, 48-100m forest	0-70m grassland, 70-100m forest
	Slope (degrees, over 100m)	Flat/ Upslope	Flat/ Upslope	Down slope 0-5°	Flat/ Upslope
	BAL Rating existing vegetation	BAL FZ	BAL FZ	BAL FZ	BAL FZ
	BAL Rating with setback/HMA	BAL 19	BAL 19	BAL 19	BAL 19

BUILDING AREA BAL RATING

Setback distances for BAL Ratings have been calculated based on the vegetation that will exist after development external to the subdivision and have also considered slope gradients.

Where no setback is required for fire protection other Planning Scheme setbacks may need to be applied, other constraints to building such as topography have not been considered.

The BAL ratings applied are in accordance with the Australian Standard AS3959-2009, *Construction of Buildings in Bushfire Prone Areas*, and it is a requirement that any habitable building, or building within 6m of a habitable building be constructed to the BAL ratings specified in this document as a minimum.

	Predicted Bushfire Attack & 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

Setbacks

BAL Rating	Slope	Grassland	Forest
BAL12.5	Upslope and flat	14m	32m
	Down slope 0-5°	16m	38m
	Down slope 5-10°	19m	46m
	Down slope 10-15°	22m	56m
BAL 19	Upslope and flat	10m	15m
	Down slope 0-5°	11m	18m
	Down slope 5-10°	13m	34m
	Down slope 10-15°	15m	41m

PROPOSED LOT BAL RATING

Lots have a potential building area at BAL19, with a smaller building area available at BAL 12.5 subject to increased HMA's.

The building areas shown below are indicative of the area available with no clearing of native vegetation required for hazard management with the exception of a small area of silver wattle regrowth on Lot 1. Additional areas are available on all lots subject to vegetation clearance approval.

note and may vary as a result of decisions by the Municipality, Land Use Planning Review Panel, engineering or other advice. Easements may not be defined at the time of survey. The plan is not to be copied unless this note is included.

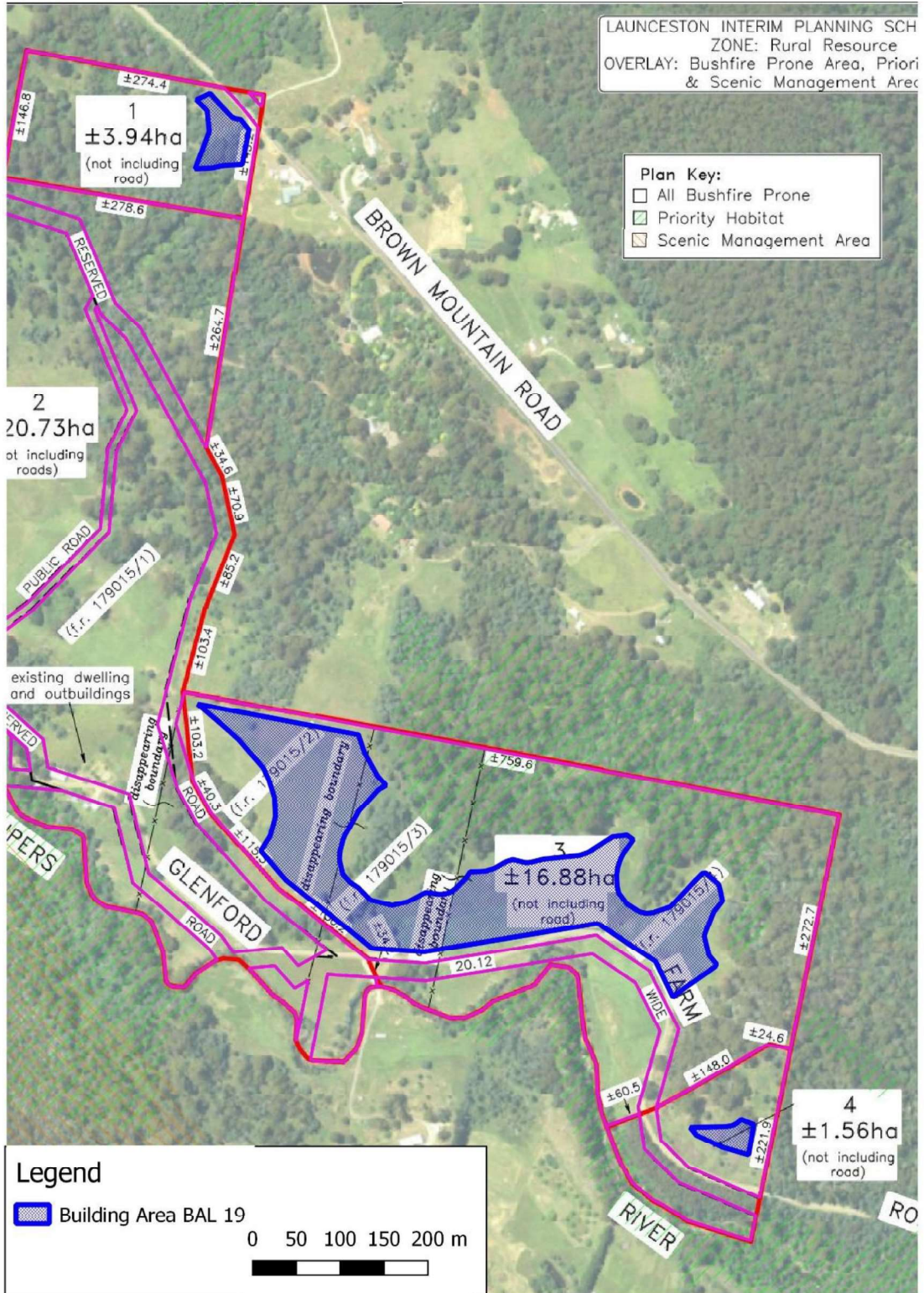


Figure 1: Building Area BAL 19

HAZARD MANAGEMENT AREAS

All land within the lot shown below must be managed as low threat vegetation for the distances specified below from facades of habitable buildings. Low threat vegetation includes maintained lawns (mown to < 100mm), gardens and orchards. Land outside the HMA may be managed at fuel loads up to woodland.

Lot	slope	Façade	Low threat	grassland	forest
1	upslope and flat	west, north, east	0-10m	10-23m	> 23m to forest
	Down slope 0-5°	south west, south east	0-11m	10-27m	> 27m to forest
	Down slope 10-15°	south	0-15m	15-41m	> 41m to forest

3 indicative only, slopes and aspects vary across the lot	upslope and flat	west, north, east	0-10m	10-23m	> 23m to forest
	Down slope 0-5°	south west, south east	0-11m	10-27m	> 27m to forest
	Down slope 10-15°	south	0-15m	15-41m	> 41m to forest

4	upslope and flat	north, east	0-10m	10-23m	> 23m to forest
	Down slope 0-5°	south east, south, south west	0-11m	10-27m	> 27m to forest

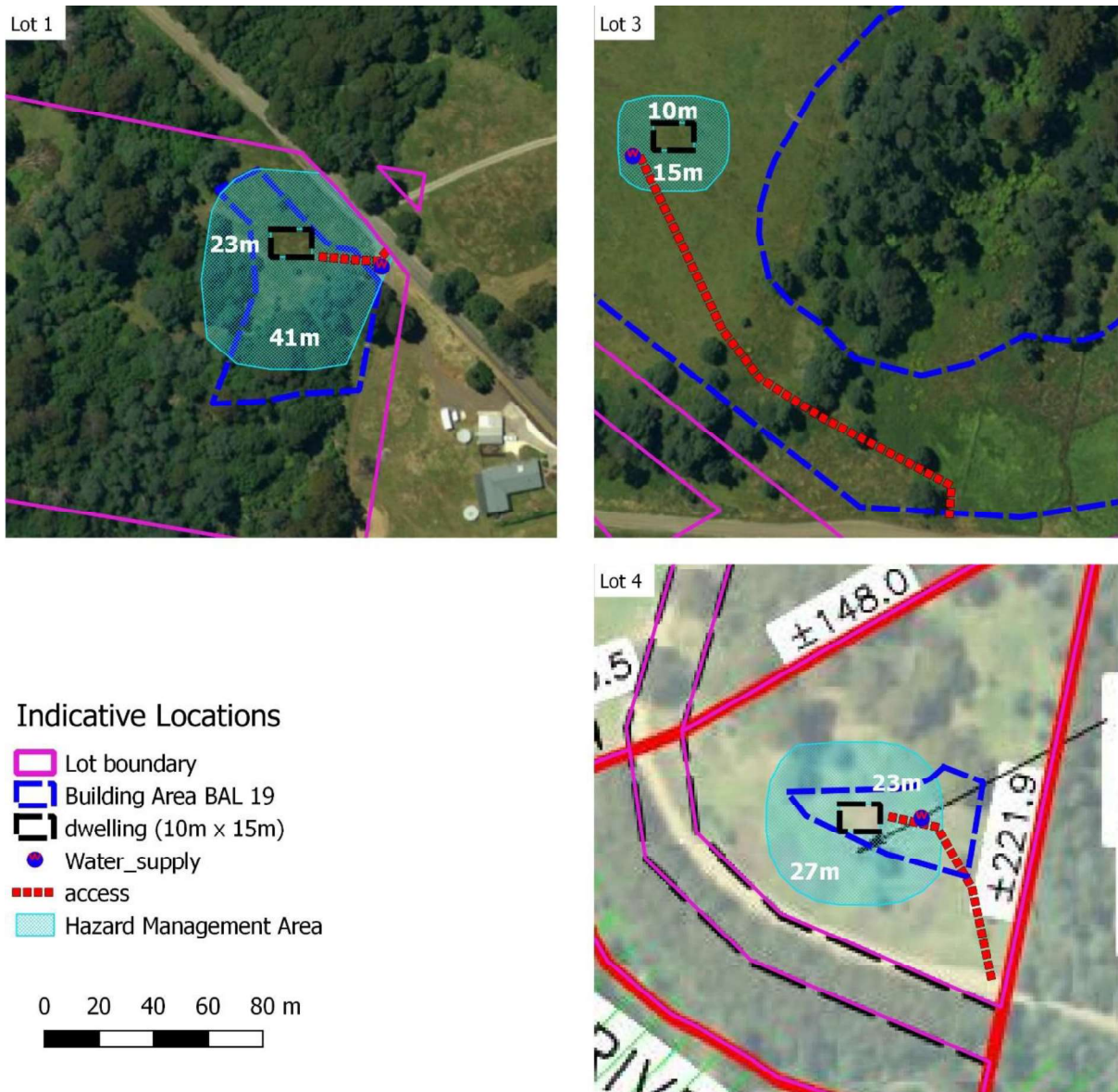


Figure 2: Hazard Management Areas

ROADS

Lot 1 has frontage to Brown Mountain Road, Lot 2-4 have frontage to Glenford Farm Road, no additional roads required for the subdivision.

PROPERTY ACCESS

Access to lots must comply with the relevant elements of Table E2 Access from the *Planning Directive No. 5.1 Bushfire-Prone Areas Code*. Access to the dwelling and water supply on lots 1 & 4 may be in excess of 30m and required to meet Element B. Access on Lot 4, may be greater than 200m and require passing bays. The indicative access and dwelling location shown for lot 2 requires an access of 187m. Existing access to Lot 2 dwelling less than 30m and water supply point within 3m of Glenford farm Road.

Table E2: Standards for Property Access

Column 1	Column 2
Element	Requirement
<p>A. Property access length is less than 30 metres; or access is not required for a fire appliance to access a water</p>	<p>There are no specified design and construction requirements.</p>

B.	Property access length is 30 metres or greater; or access for a fire appliance to a water connection point.	<p>The following design and construction requirements apply to property access:</p> <ol style="list-style-type: none"> (1) All-weather construction; (2) Load capacity of at least 20 tonnes, including for bridges and culverts; (3) Minimum carriageway width of 4 metres; (4) Minimum vertical clearance of 4 metres; (5) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway; (6) Cross falls of less than 3 degrees (1:20 or 5%); (7) Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle; (8) Curves with a minimum inner radius of 10 metres; (9) 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 (10) Terminate with a turning area for fire appliances provided by one of the following: <ol style="list-style-type: none"> (a) A turning circle with a minimum inner radius of 10 metres; or (b) A property access encircling the building; or (c) A hammerhead “T” or “Y” turning head 4 metres wide and 8 metres long.
C.	Property access length is 200 metres or greater.	<p>The following design and construction requirements apply to property access:</p> <ol style="list-style-type: none"> (1) The Requirements for B above; and (2) Passing bays of 2 metres additional carriageway width and 20 metres length provided every 200 metres.
D.	Property access length is greater than 30 metres, and access is provided to 3 or more properties.	<p>The following design and construction requirements apply to property access:</p> <ol style="list-style-type: none"> (1) Complies with Requirements for B above; and (2) Passing bays of 2 metres additional carriageway width and 20 metres length must be provided every 100 metres.

FIRE FIGHTING WATER SUPPLY

The subdivision is not serviced by a reticulated supply, Habitable buildings must have a static water installed to the standards listed in Table 4 of the *Planning Directive No. 5.1 Bushfire-Prone Areas Code. Existing water supply for Lot 2.*

Table E5 Static water supply for fire fighting

Column Element	Column 2 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 water connection point of a static water supply; and b) The distance must be measured as a hose lay, between the water point and the furthest part of the building area.
B. Static Water Supplies	<p>A static water supply:</p> <ul style="list-style-type: none"> a) May have a remotely located offtake connected to the static water supply; b) May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times; c) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems; d) Must be metal, concrete or lagged by non-combustible materials if above ground; and e) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2009, the tank may be constructed of any material provided that the lowest 400 mm of the tank exterior is protected by: <ul style="list-style-type: none"> (i) metal; (ii) non-combustible material; or (iii) fibre-cement a minimum of 6 mm thickness.

Column 2	
Column Element	Requirement
C.	<p>Fittings and pipework associated with a water connection 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 (compliant with AS/NZS 3500.1-2003 Clause 5.23); (e) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to fire fighting equipment; (f) Ensure the coupling is accessible and available for connection at all times; (g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length); (h) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and (i) Where a remote offtake is installed, ensure the offtake is in a position that is: <ul style="list-style-type: none"> (i) Visible; (ii) Accessible to allow connection by fire fighting equipment; (iii) At a working height of 450 – 600mm above ground level; and (iv) Protected from possible damage, including damage by vehicles
D.	<p>The water connection 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: Water tank signage requirements within AS 2304-2011 Water storage tanks for fire protection systems; or (b) comply with water tank signage requirements within Australian Standard AS 2304-2011 Water storage tanks for fire protection systems; or (c) comply with the Tasmania Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service.

Column Element	Column 2 Requirement
<p>E.</p> <p>Hardstand</p>	<p>A hardstand area for fire appliances must be provided:</p> <ul style="list-style-type: none"> (a) No more than three metres from the water connection point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like); (b) No closer than six metres from the building area to be protected; (c) With a minimum width of three metres constructed to the same standard as the carriageway; and (d) Connected to the property access by a carriageway equivalent to the standard of the property access.

CONCLUSIONS

A 4 lot subdivision is proposed from 4 existing titles CT 239928/1at 175 Glenford Farm Road, Underwood. The area is mapped as bushfire prone.

Lot 2 has an existing dwelling, there is sufficient area on proposed lots 1,3 & 4 to provide building and hazard management areas at BAL 19, BAL 12.5 construction is also possible with additional hazard management and setbacks. Extended building areas are available subject to vegetation clearing approval.

Dwellings will require a hazard management area – low threat vegetation at specified distances from habitable buildings.

No additional roads are required, access to new habitable buildings and water supply on lots must comply with the relevant elements of Table E2 Access from the *Planning Directive No. 5.1 Bushfire-Prone Areas Code*

New Habitable buildings must have a static water supply installed to the standards listed in Table 4 of the *Planning Directive No. 5.1 Bushfire-Prone Areas* prior to construction of habitable buildings.

REFERENCES

Launceston City Council (2015) *Launceston Interim Planning Scheme*.

Standards Australia. (2009). *AS 3959-2009 Construction of Buildings in Bushfire Prone Areas*.

Planning Commission (2017), *Planning Directive No. 5.1 Bushfire-Prone Areas Code*

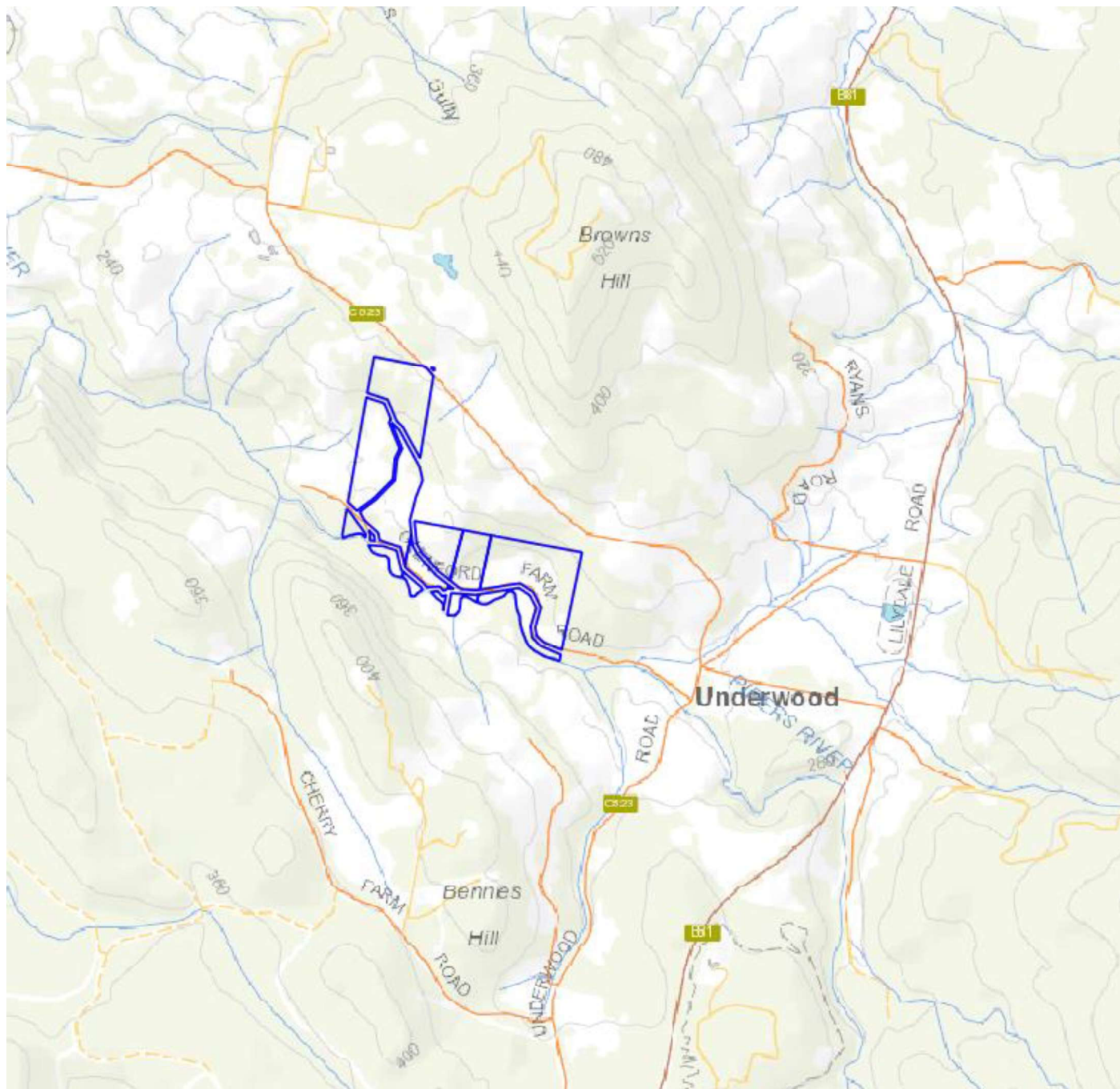


Figure 3: Location, existing titles



Figure 4: Aerial Image

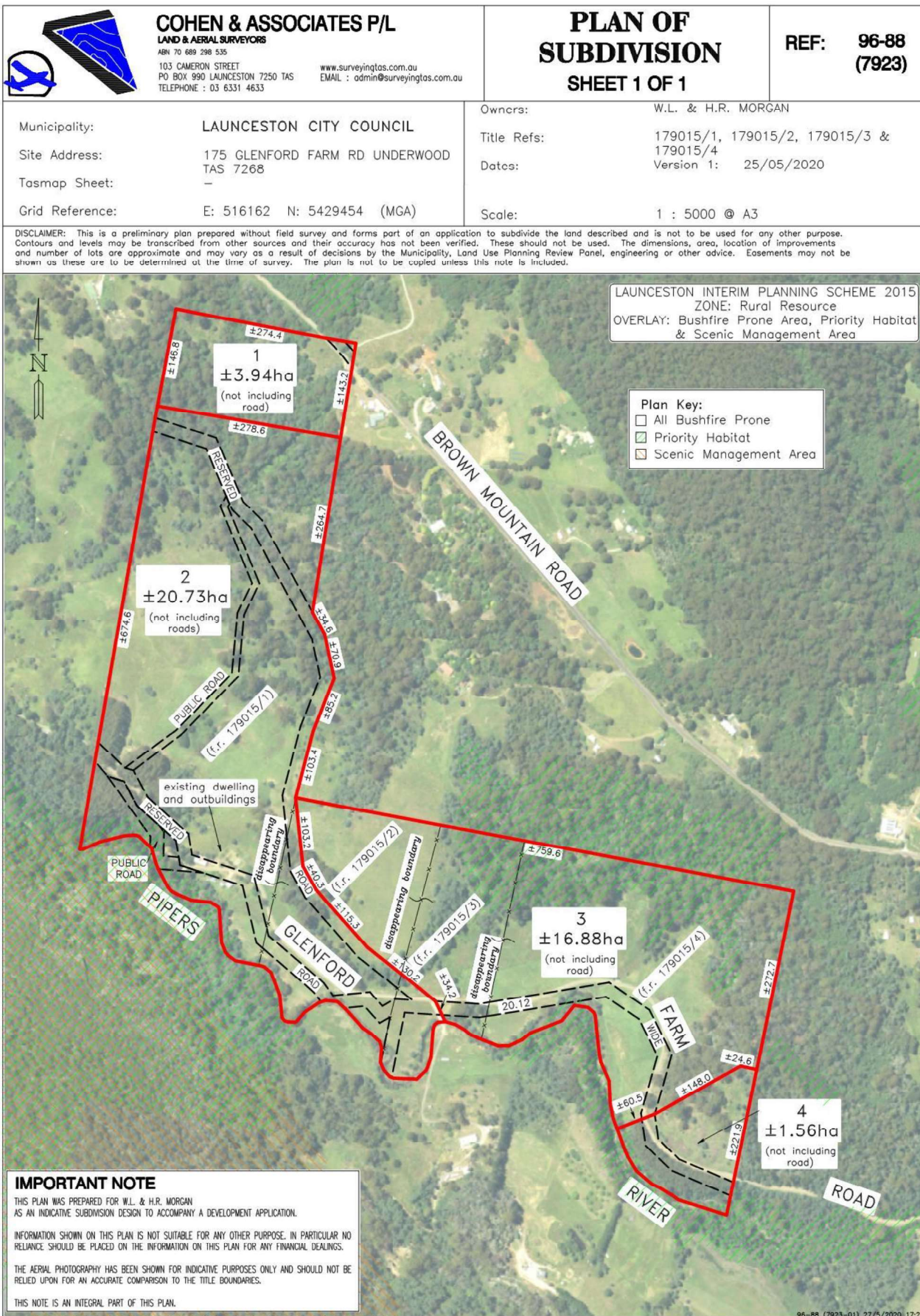


Figure 5: Proposed Subdivision Plan



Figure 6: Lot 1, west



Figure 7: Lot 1, south



Figure 8: Lot 3, west



Figure 9: Lot 4, north



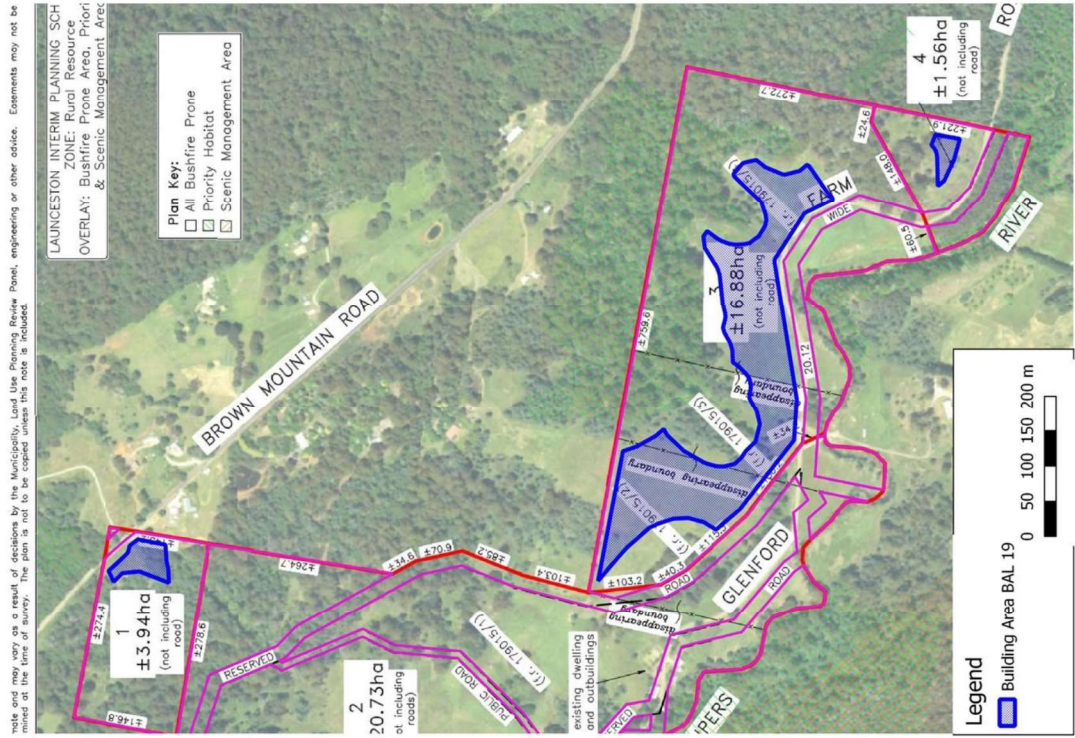
Figure 10: Lot 4, south west



Figure 11:existing water supply Lot 2

Bushfire Hazard Management Plan:

Building Areas



Proposed Development	Subdivision, 4 lots from 4 lots.
Plan of Subdivision	Cohen & Associates, Plan of Subdivision, 25/05/2020
Property Owner	Helen & Warrick Morgan
Address	175 Glenford Farm Road, Underwood
CT	CT 179015/1, 2, 3 & 4
PID	752687

Construction: BAL 19 as shown

Buildings in Bushfire Prone Area to be built in accordance with the Building Code of Australia and Australian Standard AS3959.

Building setbacks / BAL ratings apply to habitable buildings (Class 1, 2, 3, 8 or 9) and class 10a buildings within 6m of a habitable building

BAL 19	Grassland	Forest
Upslope and flat	10m	15m
Down slope 0-5°	11m	18m
Down slope 5-10°	13m	34m
Down slope 10-15°	15m	41m

This BHMP has been prepared to satisfy the requirements of the *Launceston Interim Planning Scheme, 2015* and *Planning Directive No. 5.1 Bushfire-Prone Areas Code*.
 This plan should be read in conjunction with the report titled: *Bushfire Hazard Management Report 175 Glenford Farm Road, Underwood, Livingston Natural Resource Services*

Scott Livingston
 Accreditation: BFP – 105: 1, 2, 3A, 3B, 3C
 Date 23/6/2020
 SRL20/355

Hazard Management Areas (HMA)

Hazard management areas include the area to protect the buildings as well as the access and water supplies.

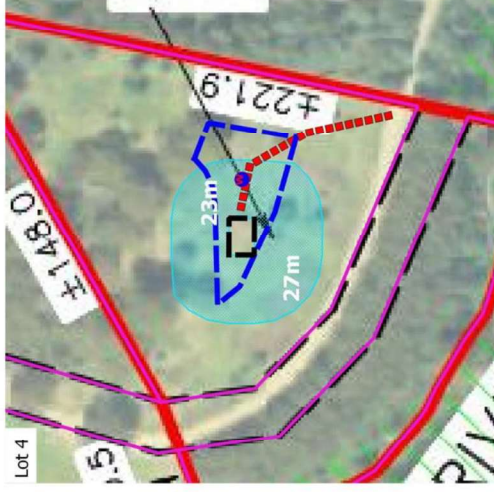
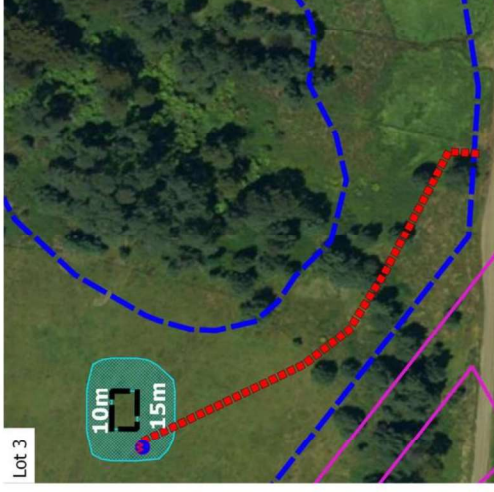
All land within the distances shown below must be managed as low threat vegetation from commencement of construction of that dwelling.

Low threat vegetation, includes maintained lawns (<100mm in height), gardens and orchards

Maintenance Schedule: managed land

- Cut lawns to less than 100mm
- Remove pine bark and other flammable garden mulch
- Prune larger trees to establish and maintain horizontal and vertical canopy separation.
- Minimise storage of petroleum fuels
- Maintain road access to the dwelling and water connection point.
- Remove fallen limbs, leaf & bark from roofs, gutters and around buildings.

Lot	slope	façade	Low threat	grass-land	forest
1	upslope and flat	west, north, east	0-10m	10-23m	> 23m to forest
	Down slope 0-5°	south west, south east	0-11m	10-27m	> 27m to forest
	Down slope 10-15°	south	0-15m	15-41m	> 41m to forest
2	upslope and flat	west, north, east	0-10m	10-23m	> 23m to forest
	Down slope 0-5°	south west, south east	0-11m	10-27m	> 27m to forest
	Down slope 10-15°	south	0-15m	15-41m	> 41m to forest
4	upslope and flat	north, east	0-10m	10-23m	> 23m to forest
	Down slope 0-5°	south east, south, west	0-11m	10-27m	> 27m to forest



Indicative Locations

- Lot boundary
- Building Area BAL 19 dwelling (10m x 15m)
- Water_supply access
- Hazard Management Area



Scott Livingston
Accreditation: BFP – 105: 1, 2, 3A, 3B, 3C
Date 23/6/2020

SR120/355

Water Supply

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

A static water supply:

- a. may have a remotely located offtake connected to the static water supply;
- b. may be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times;
- c. must be a minimum of 10,000 per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems;
- d. must be metal, concrete or lagged by non-combustible materials if above ground; and
- e. if a tank can be located so it is shielded in all directions in compliance with section 3.5 of *Australian Standard AS 3959-2009 Construction of buildings in bushfire-prone areas*, the tank may be constructed of any material provided that the lowest 400mm of the tank exterior is protected by:
 - i. metal;
 - ii. non-combustible material; or fibre-cement a minimum of 6mm thickness.

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

- a. have a minimum nominal internal diameter of 50mm;
- 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. if buried, have a minimum depth of 300mm¹;
- e. provide a DIN or NEN standard forged Storz 65mm coupling fitted with a suction washer for connection to fire fighting equipment;
- f. ensure the coupling is accessible and available for connection at all times;
- g. ensure the coupling is fitted with a blank cap and securing chain (minimum 220mm length);
- h. ensure underground tanks have either an opening at the top of not less than 250mm diameter or a coupling c o m p l i a n t with this Table; and
- i. if a remote offtake is installed, ensure the offtake is in a position that is:
 - i. visible;
 - ii. accessible to allow connection by fire fighting equipment;
 - iii. at a working height of 450–600mm above ground level; and
 - iv. protected from possible damage, including damage by vehicles.

The fire fighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must:

- a. comply with water tank signage requirements within *Australian Standard AS 2304-2011 Water storage tanks for fire protection systems*; or
- b. Comply with the Tasmania Fire Service Water Supply Guideline published by Tasmania Fire Service

A hardstand area for fire appliances must be:

- a. no more than 3m from the fire fighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like);
- b. no closer than 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

Access

If property access exceeds 30m to a habitable buildings and water supply point it must be constructed to

- a. All-weather construction;
- b. Load capacity of at least 20 tonnes, including for bridges and culverts;
- c. Minimum carriageway width of 4m;
- d. Minimum vertical clearance of 4m;
- e. Minimum horizontal clearance of 0.5m from the edge of the carriageway;
- f. Cross falls of less than 3° (1:20 or 5%)
- g. Dips less than 7° (1:8 or 12.5%)
- h. Curves with a minimum inner radius of 10m;
- i. Maximum gradient of 15° (1:3.5 or 28%) for sealed roads, and 10° (1:5.5 or 18%) for unsealed road; and
- j. Terminate with a turning area for fire appliances provided by one of the following:
 - i) A turning circle with a minimum inner radius of 10m;
 - ii) A property access encircling the building; or
 - iii) A hammerhead “T” or “Y” turning head 4m wide and 8m long
- k. Passing bays of 2 metres additional carriageway width and 20 metres length must be provided every 200 metres.

Scott Livingston
Accreditation: BFP – 105: 1, 2, 3A, 3B, 3C
Date 23/6/2020



SR120/355

BUSHFIRE-PRONE AREAS CODE

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

1. Land to which certificate applies²

Land that is the Use or Development Site that is relied upon for bushfire hazard management or protection.

Name of planning scheme or instrument:

Launceston Interim Planning Scheme 2015

Street address:

175 Glenford Farm Road, Underwood

Certificate of Title / PID:

CT 179015/1, 2, 3 & 4.

PID 752687

Land that is not the Use or Development Site that is relied upon for bushfire hazard management or protection.

Street address:

Certificate of Title / PID:

2. Proposed Use or Development

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

² If the certificate relates to bushfire management or protection measures that rely on land that is not in the same lot as the site for the use or development described, the details of all of the applicable land must be provided.

Description of Use or Development:

4 lot subdivision from 4 existing titles

Code Clauses:

E1.4 Exempt Development

E1.5.1 Vulnerable Use

E1.5.2 Hazardous Use

E1.6.1 Subdivision

3. Documents relied upon

Documents, Plans and/or Specifications

Title: Plan of Subdivision

Author: Cohen & Associates

Date: 25/5/2020

Version: 1,

Bushfire Hazard Report

Title: Bushfire Hazard Management Report, 175 Glenford Farm Road

Author: Scott Livingston

Date: 24/6/2020

Version: 1

Bushfire Hazard Management Plan

Title: Bushfire Hazard Management Plan 175 Glenford Farm Road

Author: Scott Livingston

Date: 24/6/2020

Version: 1

Other Documents

Title:

Author:

Date: _____

Version:

4. Nature of Certificate

E1.4 – Use or development exempt from this code

Assessment Criteria	Compliance Requirement	Reference to Applicable Document(s)
<input checked="" type="checkbox"/> E1.4 (a)	Insufficient increase in risk	House lot only

E1.5.1 – Vulnerable Uses

Assessment Criteria	Compliance Requirement	Reference to Applicable Document(s)
<input type="checkbox"/> E1.5.1 P1	Residual risk is tolerable	
<input type="checkbox"/> E1.5.1 A2	Emergency management strategy	
<input type="checkbox"/> E1.5.1 A3	Bushfire hazard management plan	

E1.5.2 – Hazardous Uses

Assessment Criteria	Compliance Requirement	Reference to Applicable Document(s)
<input type="checkbox"/> E1.5.2 P1	Residual risk is tolerable	
<input type="checkbox"/> E1.5.2 A2	Emergency management strategy	
<input type="checkbox"/> E1.5.2 A3	Bushfire hazard management plan	

E1.6 – Development standards for subdivision

E1.6.1 Subdivision: Provision of hazard management areas

Assessment Criteria	Compliance Requirement	Reference to Applicable Document(s)
<input type="checkbox"/> E1.6.1 P1	Hazard Management Areas are sufficient to achieve tolerable risk	
<input type="checkbox"/> E1.6.1 A1 (a)	Insufficient increase in risk	
<input checked="" type="checkbox"/> E1.6.1 A1 (b)	Provides BAL 19 for all lots	Bushfire Hazard Management Plan 175 Glenford Farm Road
<input type="checkbox"/> E1.6.1 A1 (c)	Consent for Part 5 Agreement	

E1.6.2 Subdivision: Public and fire fighting access

Assessment Criteria	Compliance Requirement	Reference to Applicable Document(s)
<input type="checkbox"/> E1.6.2 P1	Access is sufficient to mitigate risk	
<input type="checkbox"/> E1.6.2 A1 (a)	Insufficient increase in risk	
<input checked="" type="checkbox"/> E1.6.2 A1 (b)	Access complies with Tables E1, E2 & E3	Bushfire Hazard Management Plan 175 Glenford Farm Road

E1.6.3 Subdivision: Provision of water supply for fire fighting purposes

Assessment Criteria	Compliance Requirement	Reference to Applicable Document(s)
<input type="checkbox"/> E1.6.3 A1 (a)	Insufficient increase in risk	
<input type="checkbox"/> E1.6.3 A1 (b)	Reticulated water supply complies with Table E4	
<input type="checkbox"/> E1.6.3 A1 (c)	Water supply consistent with the objective	
<input type="checkbox"/> E1.6.3 A2 (a)	Insufficient increase in risk	
<input checked="" type="checkbox"/> E1.6.3 A2 (b)	Static water supply complies with Table E5	Bushfire Hazard Management Plan 175 Glenford Farm Road
<input checked="" type="checkbox"/> E1.6.3 A2 (c)	Static water supply is consistent with the objective	Bushfire Hazard Management Plan 175 Glenford Farm Road -Lot 2

5. Bushfire Hazard Practitioner³

Name:	Scott Livingston	Phone No:	0438 951 021
Address:	12 Powers Road	Fax No:	
	Underwood	Email	scottlivingston.lnra@gmail.com
	Tasmania	Address:	
			7250
Accreditation No:	BFP – 105	Scope:	1, 2, 3A, 3B, 3C

6. Certification

I, certify that in accordance with the authority given under Part 4A of the Fire Service Act 1979 –

The use or development described in this certificate is exempt from application of Code E1 – Bushfire-Prone Areas in accordance with Clause E1.4 (a) because there is an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measure in order to be consistent with the objectives for all the applicable standards identified in Section 4 of this Certificate.

or

There is an insufficient increase in risk from bushfire to warrant the provision of specific measures for bushfire hazard management and/or bushfire protection in order for the use or development described to be consistent with the objective for each of the applicable standards identified in Section 4 of this Certificate.

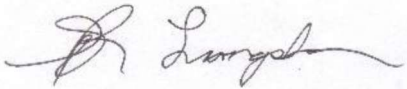
and/or

The Bushfire Hazard Management Plan/s identified in Section 3 of this certificate is/are in accordance with the Chief Officer's requirements and can deliver an outcome for the use or development described that is consistent with the objective and the relevant compliance test for each of the applicable standards identified in Section 4 of this Certificate.

³ A Bushfire Hazard Practitioner is a person accredited by the Chief Officer of the Tasmania Fire Service under Part IVA of Fire Service Act 1979. The list of practitioners and scope of work is found at www.fire.tas.gov.au.

Signed:

certifier



Date: 23/6/2020

Certificate No: SRL20/35S

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Owner /Agent

Address

Suburb/postcode

Qualified person details:

Qualified person:

Address:

Phone No:

Fax No:

Licence No:

Email address:

Qualifications and Insurance details:

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

Speciality area of expertise:

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

Details of work:

Address: 175 Glenford Farm Road

Lot No: 1 -4

Underwood

7268

Certificate of title No: 179015

The assessable item related to this certificate:

Bushfire Attack Level (BAL)

(description of the assessable item being certified)

Assessable item includes –

- a material;
- a design
- a form of construction
- a document
- testing of a component, building system or plumbing system
- an inspection, or assessment, performed

Certificate details:

Certificate type:

Bushfire Hazard

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

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

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

or

a building, temporary structure or plumbing installation:

In issuing this certificate the following matters are relevant –

Documents: Bushfire Attack Level Assessment Report and Bushfire Hazard Management Plan

Relevant calculations: NA

Australian Standard 3959

- Planning Directive No.5.1 *Bushfire-Prone Areas Code*
- Building Amendment Regulations 2016
- Director of Building Control, Determination
 - Application of Requirements for Building in Bushfire Prone Areas. (Aug 2017)
- Guidelines for development in bushfire prone areas of Tasmania

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

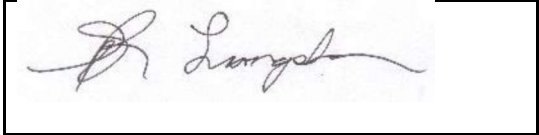
1. Assessment of the site Bushfire Attack Level (BAL) to Australian Standards 3959
2. Bushfire Hazard Management Plan

Assessed as -BAL 19,

Proposal is compliant with DTS requirements, clauses 4.1, 4.2, 4.3 & 4.4 Directors Determination Requirements for Building in Bushfire Prone Areas (v2.1)

Scope and/or Limitations

I certify the matters described in this certificate.

	<i>Signed:</i>	<i>Certificate No:</i>	<i>Date:</i>
Qualified person:		SRL20/35S	23/6/2020

JD Consulting

ABN 42410316529

PO Box 8

Riverside Tas 7250

Mob: 0457469617

Email: jldoherty581@bigpond.com

**Onsite Waste Water Assessment for Lots 1 & 4 of
the Proposed 4 Lot Subdivision**

at

175 Glenford Farm Road Underwood

Prepared for

W L & H R Morgan

Prepared by: James Doherty

Date of Site inspection: August 2020

TABLE OF CONTENTS

1	Introduction.....	3
2	Site Conditions.....	4
2.1	Lot 1 – 3.94 ha.....	4
2.2	Site Orientation.....	4
2.3	Land Surface Shape.....	4
2.4	Water Regimen.....	4
2.4.1	Surface water run-off.....	4
2.5	Lot 4 – 1.56 ha.....	4
2.6	Site Orientation.....	5
2.7	Land Surface Shape.....	5
2.8	Water Regimen.....	5
2.8.1	Surface water run-off.....	5
2.9	Seasonal rainfall and temperature data.....	5
2.10	Exposure.....	6
2.11	Soil Survey.....	6
2.11.1	Permeability of receiving soils.....	6
2.12	Environmental Risk.....	6
2.12.1	Proximity to waterways.....	6
2.12.2	Roadside drainage.....	6
2.12.3	Existing wastewater system.....	7
3	Development Proposal - Wastewater.....	7
4	Conclusion.....	7
5	Recommendations.....	7
	Appendices.....	8
	APPENDIX A – Plan of Subdivision.....	8
	APPENDIX B – Indicative Soil Profile.....	9
	APPENDIX C – site photos.....	11
	APPENDIX D – Climatic Statistics.....	17

Scope

This report is to detail the proposed four lot subdivision at 175 Glenwood Road Underwood. The land is currently listed as four Titles (CT 179015/1 -4) with a PID ref No of 7526873. The owners intend to subdivide the current lots, creating four new lots and titles and enabling them to sell lots 1 and 4 on the Plan of Subdivision prepared by Cohen & Associates P/L and shown as Appendix A.

The property is approximately 43ha in area and is predominantly located on the northern side of Glenford Farm Road, although all of the current lots are bounded on the southern boundary by Pipers River.

There is a residential dwelling and outbuildings on what is currently CT 179015/1 and shown on the Plan of Subdivision as lot 2.

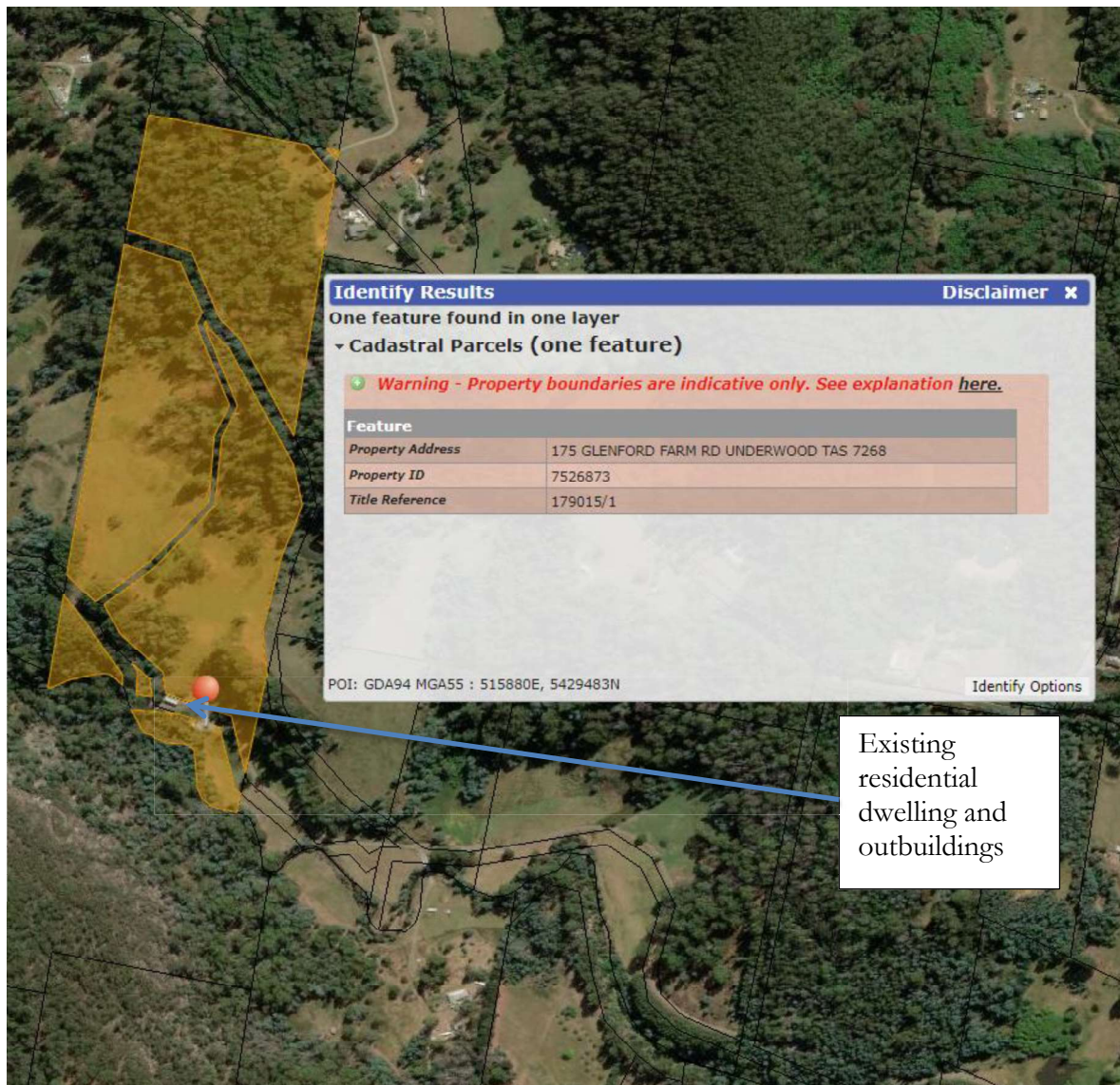


Figure 1 Aerial view from the LIST

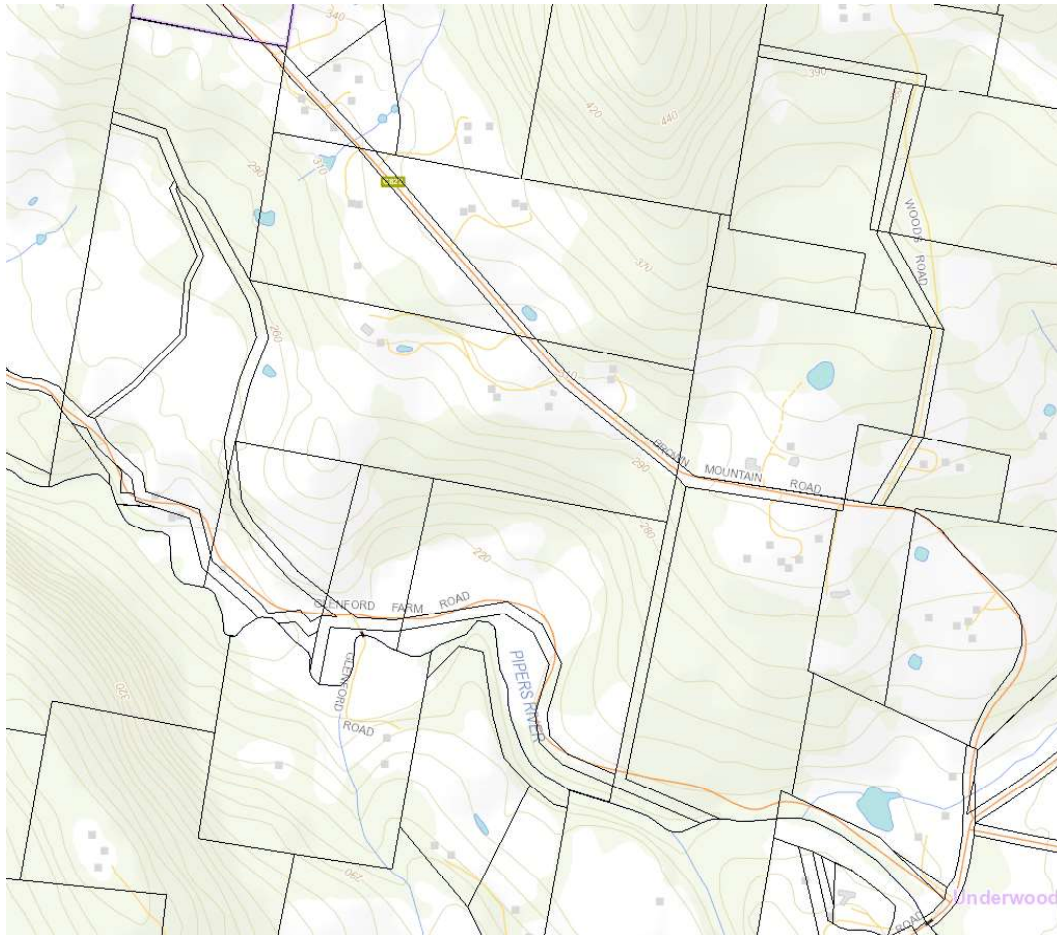


Figure 2 Property location and contours from LIST map

The onsite wastewater report for the proposed development is based on the principles contained within Appendix C of AS/NZS 1547:2012 (Site and Soil Evaluation for Planning Rezoning, and Subdivision of Land) and provides preliminary recommendations on the type of waste water disposal systems suited to lots 1 & 4 on the Plan of Subdivision.

1 Introduction

JD Consulting has been engaged to undertake the initial site investigation of the land for the suitability of wastewater disposal on lots 1 & 4. The preliminary evaluation included a site walk over and a physical assessment of the site.

The title deed (CT 179015/1, CT 179015/2, CT 179015/3 & CT 179015/4) are currently in the names of W L & H M Morgan.

The land is currently 4 lots with a total area of approximately 43ha with an onsite wastewater system installed for the collection, treatment and disposal of effluent from the existing dwelling located on Lot 1 and shown as Lot 2 on the Plan of Subdivision provided by Cohen & Associates.

The owners are intending to submit a planning application through Cohen & Associates to the Launceston City Council seeking approval to subdivide the current lots, creating four new lots and titles and enabling them to sell lots 1 and 4 with the new lot 2 retaining the dwelling, outbuildings and the wastewater system.

The proposed lots with the exception of lot 1 will have road frontage to Glenford Farm Road. Lot 1 will have road frontage to Brown Mountain Road.

2 Site Conditions

2.1 Lot 1 – 3.94 ha

The site is currently undeveloped with grass and standing trees and shrubs. The area closest to Brown Mountain Road is reasonably clear and could support a residential dwelling. During the site visit it was noted that there is both surface and subsurface rock on the land which may limit the type or the location of an onsite wastewater system.

2.2 Site Orientation

The proposed lot is rectangular in shape and partly bounded by Brown Mountain Road to the north and neighbouring properties on all boundaries.



Figure 3 Contour Map showing 280m to 320m contour lines

2.3 Land Surface Shape

The land has a waxing planar slope of greater than 6 degrees to the south.

2.4 Water Regimen

2.4.1 Surface water run-off

Given the slope and the direction of the slope, surface water run-off from the existing land would be naturally directed to the southern area of the land, the northern boundary of what is shown on the Plan of Subdivision as lot 2.

2.5 Lot 4 – 1.56 ha

The site is also currently undeveloped with grass, ferns and standing shrubs and trees. The land fronts Glenford Farm Road and the current title and the future title if the subdivision is approved will be bounded by the Pipers River along the southern boundary.

There are a few locations where a residential dwelling could be constructed, but if built too close to the road, would require the wastewater to be pumped to a higher area on the land for disposal. While walking over the site, it was noted that there is both surface and subsurface rock on the land which may limit the type or the location of an onsite wastewater system.

2.6 Site Orientation

The proposed lot site is triangular in shape and bounded by the proposed lot 3, the Pipers River and No 676 Brown Mountain Road .



Figure 4 Contour Map showing 220m to 260m contour lines

2.7 Land Surface Shape

The land has a linear divergent slope of greater than 6 degrees to the south west.

2.8 Water Regimen

2.8.1 Surface water run-off

Surface water run-off from the land would be naturally directed to the table drain on Glenford Farm Road and finally discharge into the Pipers River.

2.9 Seasonal rainfall and temperature data

There are no weather stations in this area.

For reference, historical rainfall data has been sourced from the Lilydale and Launceston Ti Tree Bend weather stations.

Lilydale weather station (91053) is located at the Lilydale Post Office (Lat: 41.25S Long: 147.22E) and is 158m above sea level.

Launceston Ti Tree Bend (91237) is located at (Lat: 41.42S Long: 147.12E) and is 5.0m above sea level

Data sourced from the Bureau of Meteorology indicates the area receives an annual rainfall of 950mm with the maximum mean monthly rainfall occurring during the month of July. In comparison Ti Tree Bend receives 680mm with August being the wettest month.

There are no mean maximum and minimum monthly temperatures available from the Lilydale weather station. Data has been sourced from Ti Tree weather station and has been included in this report for information only. The mean monthly maximum temperature of 24 degrees Celsius occurs in January and February. The mean monthly minimum temperature of 2.9 degrees Celsius occurs in July and the mean maximum for this month is 12.7 degrees Celsius.

2.10 Exposure

Both sites are basically south to south west facing and would not be impacted or affected by the prevailing northerly and north westerly winds.

2.11 Soil Survey

The soil survey conducted on the site aims to evaluate the soil types present and the suitability of these soils for onsite waste water disposal from the existing units and the proposed development.

Two test holes were dug, one on each lot with similar soil profiles identified.

Soil profile of the test holes is included in Appendix B.

2.11.1 Permeability of receiving soils

A permeability test was not conducted during the site assessments. Given the size of the proposed lots and the uniformity in soil types, it would be reasonably estimated that the upper soil layer would have a permeability of between 0.12 –0.5m/d as noted in Table 5.2 (Soil Categories and Recommended Design Irrigation/Loading Rates (DIR/DLR) for Land Application Systems).

A more thorough assessment will be required when undertaking the wastewater design at the building/plumbing stage of development.

2.12 Environmental Risk

2.12.1 Proximity to waterways

Lot 1 is not impacted by or will impact on any waterway.

The lower section Lot 4 may be impacted by the Pipers River during times of flood. The location of a future dwelling and the associated onsite wastewater system should be considered to ensure that there is no possibility of runoff or seepage from the lot finding its way into roadside table drain and subsequently into the waterway.

2.12.2 Roadside drainage

There is a roadside table drain along both Brown Mountain and Glenfrod Farm Roads. The roadside table drain on Brown Mountain Road is upslope of the lot. The table drain on

Glenford Farm Road is downslope of the proposed lot and would collect surface and surface run off from both the lot and the road surface.

2.12.3 Existing wastewater system

There are no existing wastewater systems on the proposed lots.

There is an existing system on what is currently lot1 (proposed lot 2). As part of the development, it is proposed that the wastewater disposal system currently servicing the residence will be retained on that lot.

3 Development Proposal - Wastewater

The development proposal is as follows:

Lot 1 is suitable for the installation of an onsite wastewater treatment and disposal system. The type of system may be dependent on the location and size of the dwelling (number of bedrooms). Consideration should be given to the soil type when designing and installing the system.

Lot 4 is suitable for the installation of an onsite wastewater treatment and disposal system. The type of system may be dependent on the location and size of the dwelling (number of bedrooms). Consideration should be given to the soil type when designing and installing the system.

4 Conclusion

It is my opinion that both lots 1 and 4 are capable of supporting an onsite wastewater system be it a primary or secondary type system. The type and design of the system will need to form part of the building/plumbing application to council.

5 Recommendations

It is recommended that;

1. The application for the proposed subdivision is approved with lots 1 and 4 being suitable for onsite waste water disposal with site specific requirements applied where applicable.

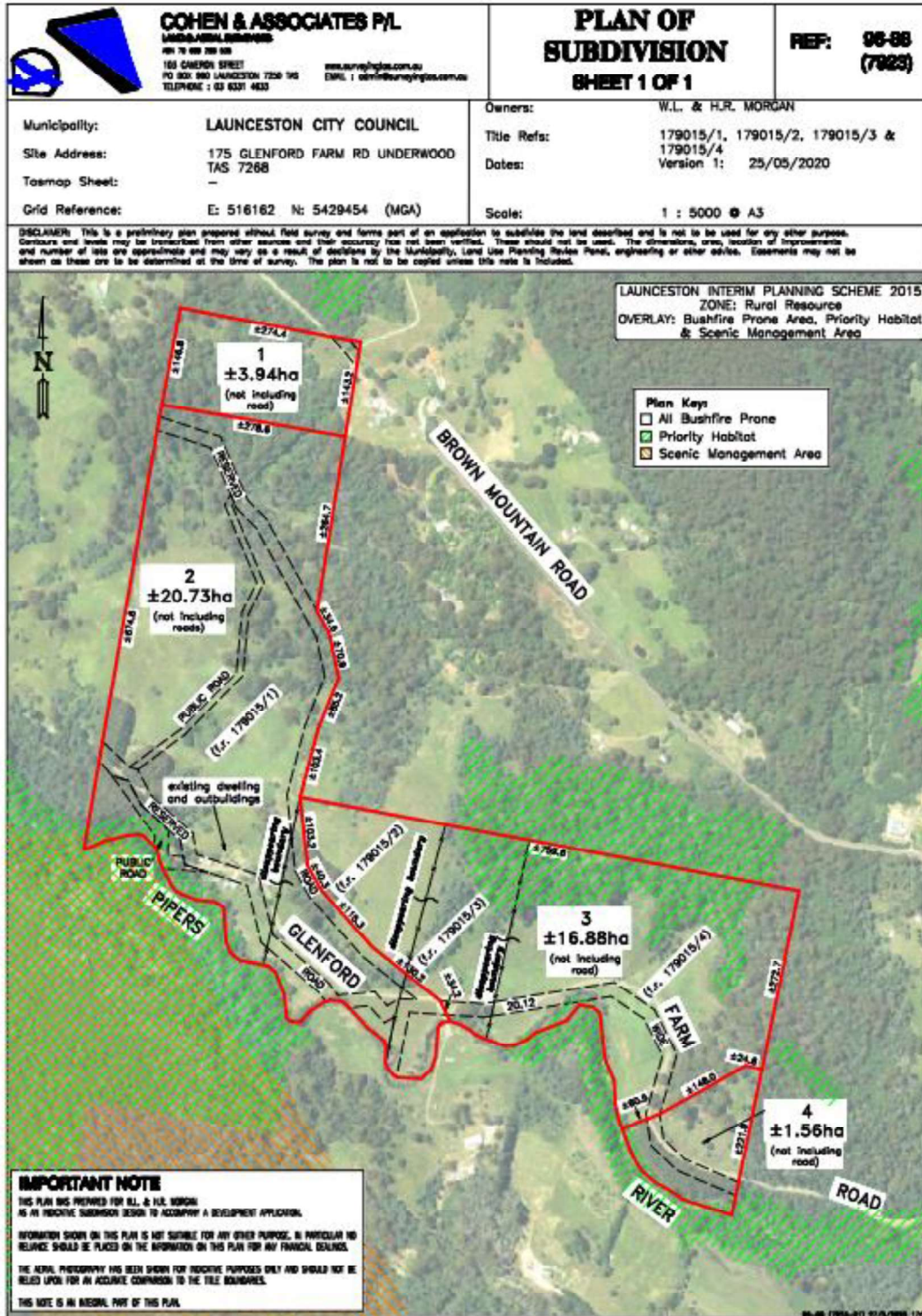
The final determination on the type of system and the layout will need to be provided to the Council at building/plumbing permit stage.



James Doherty
JD Consulting
Date: 23.8.2020

Appendices

APPENDIX A – Plan of Subdivision



APPENDIX B – Indicative Soil Profile

Job No. 051/2020	Borehole No.	1																			
Client: W & H Morgan																					
Site Address: 175 Glenford Farm Road, Underwood																					
Project: Subdivision assessment Lot 1																					
Date: 11.8.2020																					
Logged by: James Doherty																					
										Equipment					Spade						
Co-Ords																					
Method	Penetration				Notes Samples Tests	Water	Graphic Log	Classification	Material Description	Moisture condition		Consistency density index	Structure, additional observations								
	1	2	3	4																	
								SM	Silty loam orange brown friable	M	L		high/moderate structured surface and subsurface rock								
					N I L	0.25															
								CI	Clay loam brown friable	M	F		strongly structured subsurface rock easily removed								
						0.5															
								BOH	(refusal on rock)												
						0.75															

Job No. 051/2020	Borehole No.	1											
Client: W & H Morgan													
Site Address: 175 Glenford Farm Road, Underwood													
Project: Subdivision assessment Lot 4													
Date: 11.8.2020													
Logged by: James Doherty													
					Equipment			Spade					
Co-Ords													
Method	Penetration				Notes Samples Tests	Water	Graphic Log	Classification	Material Description	Moisture condition		Consistency density index	Structure, additional observations
	1	2	3	4						M	L		
								SM	Silty loam orange brown friable	M	L		high/moderate structured surface and subsurface rock
					N I L	0.25							
						0.5		CI	Clay loam brown friable	M	F		strongly structured subsurface rock easily removed
						0.75							
BOH													

APPENDIX C – site photos

Lot 1



photo 1 View of northern section of lot from Brown Mountain Road



photo 2 View of northern section of lot from Brown Mountain Road



photo 3 Looking from eastern boundary to west. Part of Brown Mountain Road can be seen in the background



photo 4 Looking from eastern boundary to west. Broken tree branches are from the recent snowfall

Lot 4



photo 5 Proposed Lot 4 looking west to east on Glenford Farm Road



photo 6 Table drain and piped crossover towards the western end of lot



photo 7 View looking from Glenford Farm Road north up the lot



photo 8 View looking from Glenford Farm Road north west up the lot



photo 9 Trees grass and rock in lower section near road



photo 10 Looking from western side to road in background



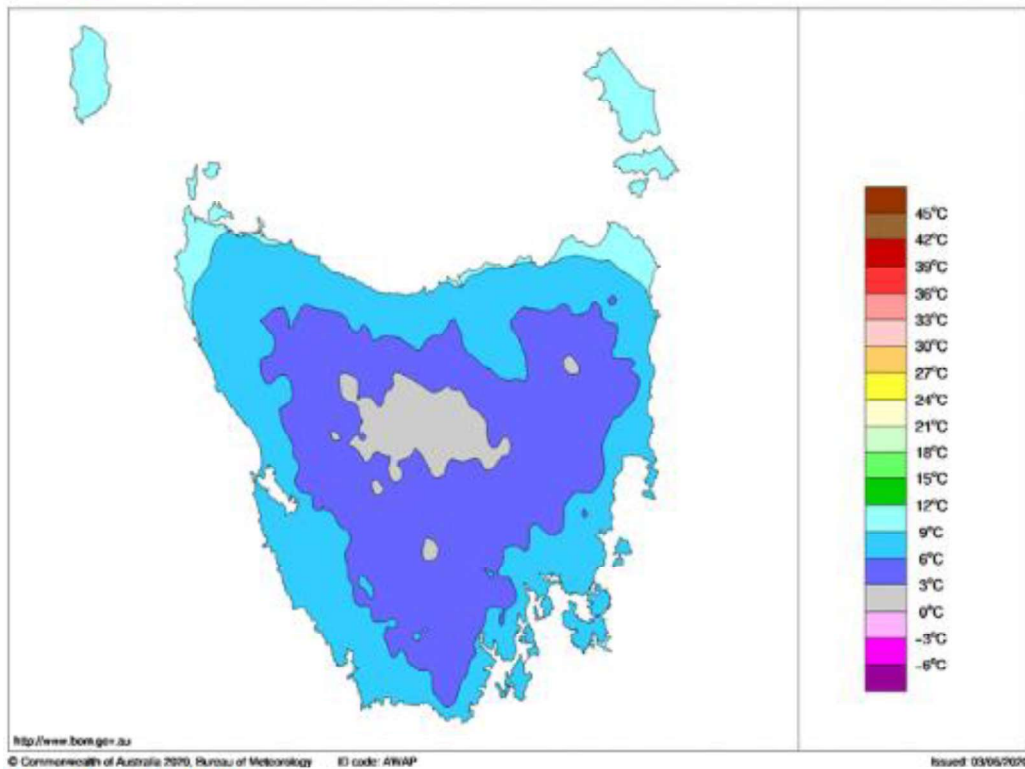
photo 11 Upper area of lot



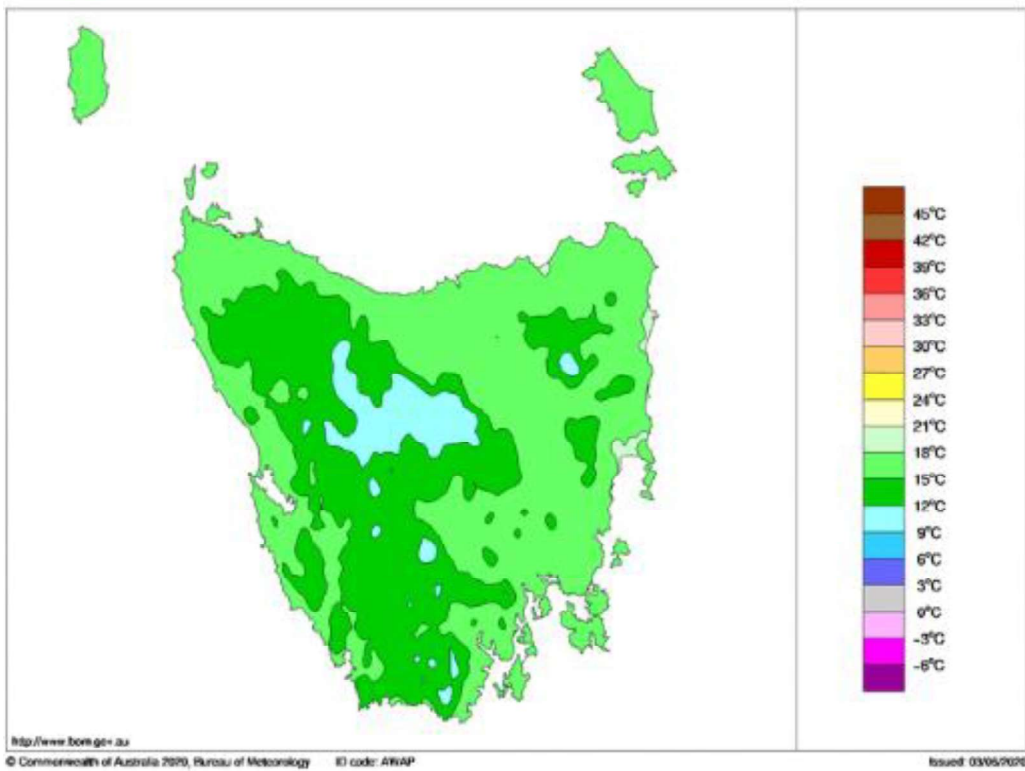
photo 12 Higher section of lot

APPENDIX D – Climatic Statistics

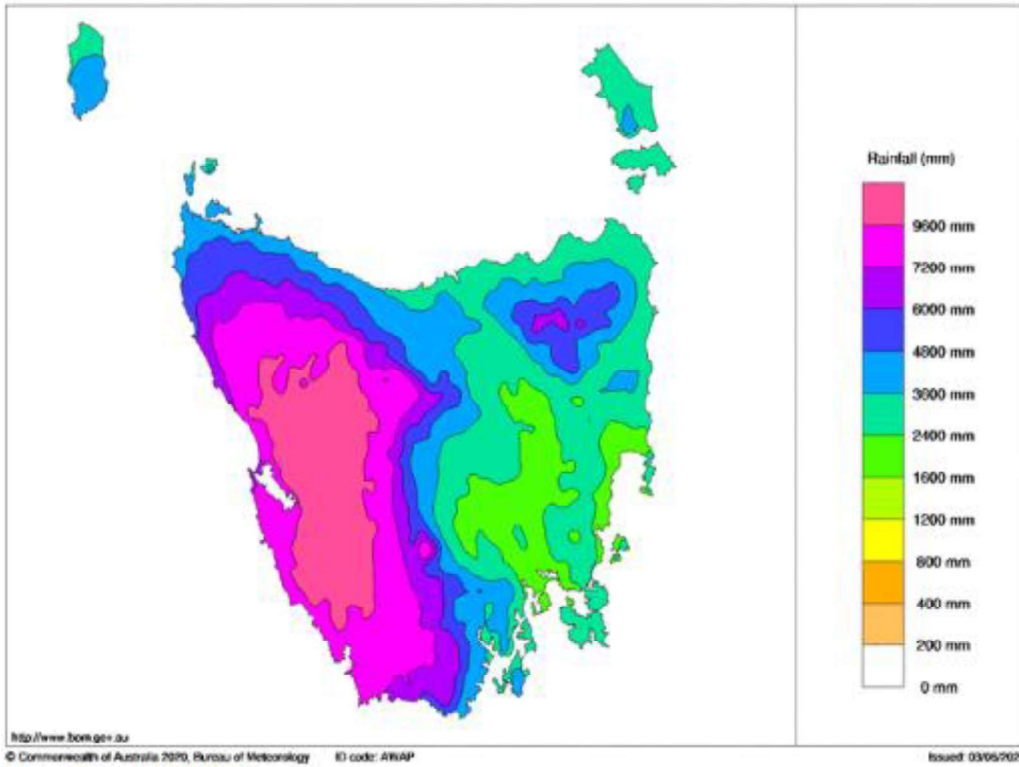
Minimum Temperature (°C) 1 June 2019 to 31 May 2020
Australian Bureau of Meteorology



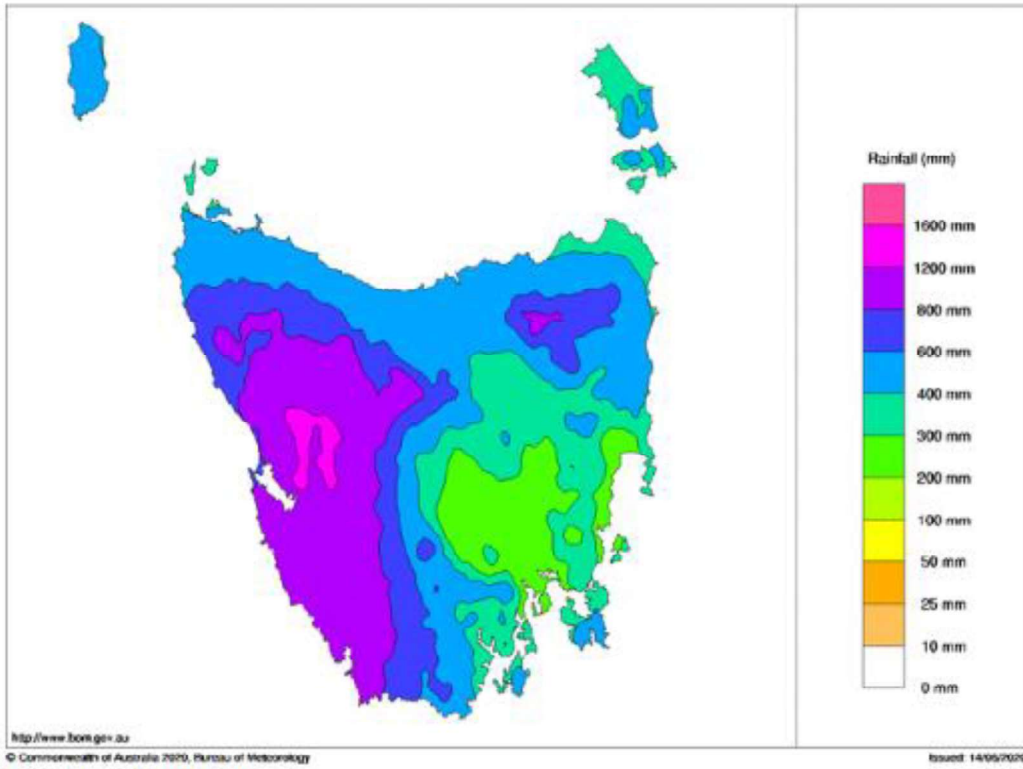
Maximum Temperature (°C) 1 June 2019 to 31 May 2020
Australian Bureau of Meteorology



Tasmanian Rainfall totals (mm) 1 June 2016 to 31 May 2020
Australian Bureau of Meteorology



Tasmanian Rainfall Totals (mm) 1 January to 14 June 2020
Australian Bureau of Meteorology



Flora and Fauna Habitat Survey

175 Glenford Farm Rd

Underwood, Tasmania



Figure 1. Brown Mountain lot recommended building envelop with *Eucalyptus regnans* forest in the back ground



Bushways

Environmental Services - Tasmania

Dr Helen Morgan 175 Glenford Farm Rd Underwood TAS 7268

Tel: 0429 197671

Table of Contents

Table of Contents	2
Summary	3
1 Introduction	4
1.1 Background	4
1.2 Description of proposed activity	4
1.3 Description of the study area.....	4
2 Survey Methodology	6
2.1 Background Research.....	6
2.2 Flora Survey	6
2.3 Threatened Fauna Habitat Assessment.....	6
2.4 Limitations	6
2.5 Assessment of Conservation Significance	6
3 Flora and fauna habitat survey	7
3.1 Vegetation Communities	7
3.1.1 Eucalyptus viminalis wet forest (TASVEG Code WVI)	7
3.1.2 Eucalyptus regnans forest (TASVEG Code WRE)	8
3.1.3 Eucalyptus obliqua forest with broad-leaf shrubs (TASVEG Code WOB).....	9
3.1.5 Regenerating cleared land (TASVEG Code FRG)	9
3.1.6 Plantation (TASVEG Code FPU)	9
3.1.7 Agricultural land (TASVEG Code FAG)	9
3.2 Threatened flora species	11
3.3 Threatened fauna habitat	11
3.4 Weeds.....	11
4 Potential impacts and management for mitigation.....	12
4.1 Threatened vegetation community	12
4.2 Threatened fauna habitat and non threatened vegetation communities.....	12
4.3 Erosion and weed control.....	12
5 Legislative Implications	13
5.1 Tasmanian Threatened Species Protection Act 1995.....	13
5.2 Commonwealth Environment Protection and Biodiversity Conservation Act 1999.....	13
5.3 Tasmanian Nature Conservation Act 2002 and Wildlife Regulations 1999	13
6 References	14
7 Appendices	15
Appendix 1 Legislation relating to species of conservation significance.....	15
Appendix 2 Vascular flora species recorded on the property.....	16
Appendix 3 Threatened flora previously recorded within 5km of the survey site	18
Appendix 4 Threatened fauna previously recorded within 5km of the survey site	19

Summary

This survey was required to assess the status of the vegetation communities, flora species and fauna habitat on the property at 175 Glenford Farm Rd Underwood (PID 7526873), to support a planning application to Launceston City Council. The owners propose to reinstate the original four lots on the property with boundary adjustments greater than 10% from the original positions, which, under the Interim planning Scheme, requires an application for subdivision. The property is 43.98 ha with ~17 ha of native bush with the remaining land being paddocks used for livestock grazing. The property forms an 'L' shape from ~1 km frontage to Pipers River along Glenford Farm Rd up to Brown Mountain Rd. Elevation ranges from 220–320 m.

The survey (conducted 26th January 2020) confirmed that the vegetation communities on site included *Eucalyptus viminalis* wet forest, listed as a threatened native vegetation community in Schedule 3A *Nature Conservation Act 2002* and non threatened native vegetation communities *Eucalyptus regnans* forest, *Eucalyptus obliqua* forest with broad-leaf shrubs and *Acacia dealbata* forest. Non-native communities included Agricultural land, Regenerating cleared land and Plantation.

No threatened flora or fauna species were recorded during the survey. Habitat for threatened fauna exists on the property and threatened fauna species previously observed or heard on the property were recorded on the Natural Values Atlas. These included eastern barred bandicoot (*Peremeles gunnii*), grey goshawk (*Accipiter novaehollandiae*), masked owl (Tasmanian) (*Tyto novaehollandiae* subsp *castanops*), spotted-tail quoll (*Dasyurus maculatus* subsp *maculatus*), and Tasmanian wedge-tailed eagle (*Aquila audax* subsp. *fleayi*). Threatened flora and fauna previously recorded within 500 m and 5 km of the property are tabled in the report.

Impacts to natural values from the proposed subdivision are considered to include potential vegetation clearing associated with any future development associated with the proposed titles such as fencing or residential construction including clearing for fire safety zones.

The threatened vegetation community requires protection from any proposed vegetation clearing. Other potential impacts from vegetation clearing include loss of habitat for threatened fauna and non threatened flora and fauna, and disturbance to soil with potential for erosion, spread of weeds and soil pathogens.

In order to avoid and reduce potential impacts to natural values the proposed boundaries of the reinstated lots have been designed to:

- avoid steep slopes, wetlands and threatened vegetation community;
- retain the threatened vegetation community within two larger parcels;
- retain the productive grazing land within two larger parcels;
- leave the smaller lots as suitable for residential use;
- follow existing fence lines and reserved roads where possible.

The subdivision proposal will not impact the threatened vegetation community as:

- the current management of stock exclusion will not be altered by the boundary adjustment;
- the proposed boundaries avoid this community; and
- the building envelopes recommended on the three lots without existing dwellings have adequate space for fire safe zones that avoid clearing threatened vegetation and minimise clearing of non threatened native vegetation.

Potential residential building in the future is not likely to remove critical threatened fauna habitat.

1 Introduction

1.1 Background

This survey was required to assess the status of the vegetation communities, flora species and fauna habitat on the property at 175 Glenford Farm Rd Underwood (PID 7526873), to support a planning application to Launceston City Council. The owners propose to reinstate the original four lots on the property with boundary adjustments greater than 10% from the original positions, which, under the Interim Planning Scheme, requires an application for subdivision.

This report documents the survey and is prepared with reference to the *Guidelines for Natural Values Surveys -- Terrestrial Development Proposals* (DPIPWE, 2015).

1.2 Description of proposed activity

The subdivision proposes boundary adjustments to the four original Lots: 2408, 3387, 9804, 1526. The four original lots divided the “L” shaped property with north-south boundaries in straight lines irrespective of topography or steepness of the land, agricultural land, remnant bush or wetlands. The proposal for boundary adjustment aims to accommodate these environmental and agricultural factors, retaining the grazing land within the two larger parcels of land while the two smaller titles comprise land that is not suitable for agricultural use. The original lots were approximately 3 ha, 6 ha, 14 ha and 20 ha. The sizes of the proposed lots are 2.3 ha, 4 ha, 18.7 ha and 20.7 ha.

The shape of the proposed titles is irregular as influenced by Pipers River, Glenford Farm Road, the reserved roads, topography and wetlands. The shape and size of the proposed lots are also influenced by the aim to retain productive grazing land and priority native vegetation intact, and minimise the amount of native vegetation clearing that may be required for building and fire safety zones in association with any potential future development. The proposed boundary of the Pipers, Homestead and Big Hill and River lots follows existing fences. The southern boundary of the proposed Brown Mountain lot is not currently fenced.

Building envelopes have been recommended for the three proposed lots (Brown Mountain, Big Hill and River, and Pipers) without existing dwellings for the purposes of obtaining a Bushfire Hazards Management Plan. The building envelopes have been placed to allow for access and space for building and to avoid excessive vegetation clearing (see Fig. 2).

1.3 Description of the study area

The study area is located ~26 km northeast of Launceston in Underwood on Pipers River. The property is 43.98 ha with native bush (~17 ha) and the remaining land is paddocks managed for livestock grazing with some small patches of eucalypt plantation (~27 ha). The property extends in an ‘L’ shape from Glenford Farm Rd with ~1 km frontage to Pipers River up to Brown Mountain Rd (see Fig. 2). Elevation ranges from 220–320 m.

The previous owner grazed cattle over the whole property but under current ownership the native forests and riparian vegetation have been fenced to exclude livestock and revegetation has been carried out in riparian zones and a shelterbelt on the western boundary. Weed control activities including willow removal and foliar spraying of blackberry have also been undertaken.

The property adjoins a Conservation Reserve connected to a Private Sanctuary and a Conservation Covenant on private land across the river to the south and is proximal to land protected by a Conservation Covenant on Brown Mountain to the north.

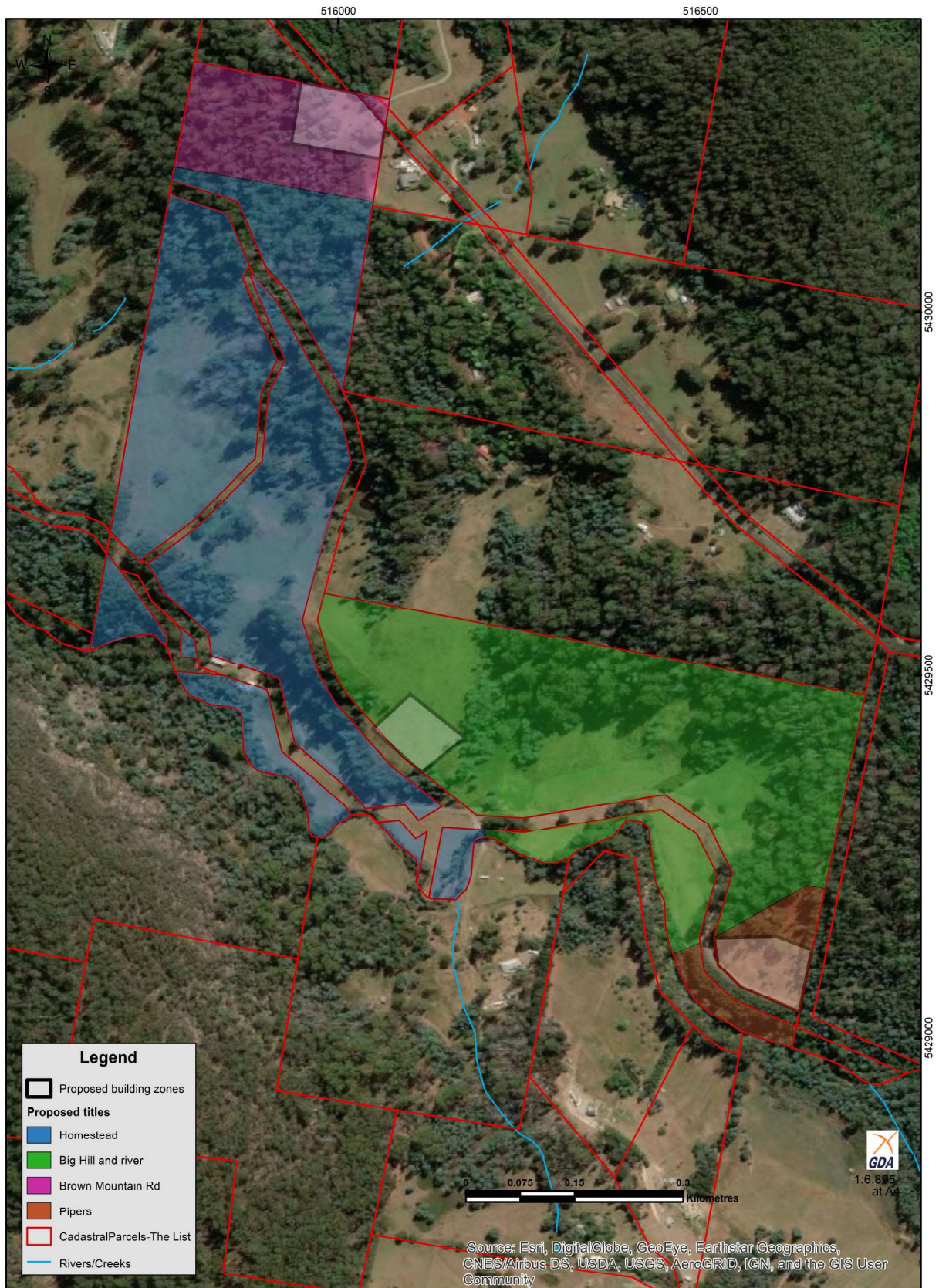


Fig 2 Study site showing proposed lots 175 Glenford Farm Rd, Underwood

2 Survey Methodology

2.1 Background Research

The List and the Natural Values Atlas was searched for all threatened flora and fauna records within 5 kilometres of the site, flora and fauna of conservation significance and TASVEG communities in the area (26/1/20).

2.2 Flora Survey

The field survey was carried out by Helen Morgan on 26th January 2020.

Ecological vegetation communities were described according to TASVEG version 3.0 classifications (Harris & Kitchener, 2013). All botanical names are in accordance with the recently updated “A Census of the Vascular Plants of Tasmania and Index to the Student’s Flora of Tasmania and Flora of Tasmania Online” (de Salas and Baker 2019). Particular attention was paid to the location of threatened species or likely habitat.

Locations were recorded with a handheld GPS, using datum WGS84 (equivalent to GDA94), Map Grid of Australia MGA94 Zone 55.

2.3 Threatened Fauna Habitat Assessment

Fauna and signs of them were searched for and recorded during the course of the survey. The site was assessed for potential habitat for threatened fauna known to be likely in the area.

2.4 Limitations

Some plant species are not visible above ground at this time, making identification of these difficult. Some species vary in abundance from year to year. In particular many orchids emerge in different seasons or sporadically under conditions as yet poorly understood. Bryophytes and lichens were not surveyed.

A full fauna survey was not carried out. However, signs of fauna and any potential habitat for threatened fauna were noted.

2.5 Assessment of Conservation Significance

“Threatened” flora and fauna species are those listed at a state level on schedules 3, 4 or 5 of the Tasmanian *Threatened Species Protection Act 1995*, as well as those listed at a Commonwealth level on the *Environment Protection and Biodiversity Conservation Act 1999*. The term “threatened” or “listed” is used to cover all of the categories on these schedules, including critically endangered, endangered, vulnerable and rare (and also presumed extinct or extinct in the wild). These terms are further explained in Appendix 1.

Threatened native vegetation communities are those listed on schedule 3a of the Tasmanian *Nature Conservation Act 2002* (and clarified in the Threatened Native Vegetation Communities list, DPIWE 2014), as well as those listed at a Commonwealth level on the *Environment Protection and Biodiversity Conservation Act 1999*.

3 Flora and fauna habitat survey

3.1 Vegetation Communities

The vegetation communities on the property included *Eucalyptus viminalis* wet forest (TASVEG Code WVI), listed as a threatened native vegetation community in Schedule 3A *Nature Conservation Act 2002* and non threatened native vegetation communities *Eucalyptus regnans* forest (TASVEG Code WRE), *Eucalyptus obliqua* forest with broad-leaf shrubs (TASVEG Code WOB), *Acacia dealbata* forest (TASVEG Code NAD) and Regenerating cleared land (TASVEG Code FRG). Non-native communities included Plantation (TASVEG Code FPU) and Agricultural land (TASVEG Code FAG).

Vegetation community	TASVEG Code	Status	Area (ha)
<i>Eucalyptus viminalis</i> wet forest	WVI	Threatened NCA 2002	8.45
<i>Eucalyptus regnans</i> forest	WRE	Non-threatened	6.68
<i>Eucalyptus obliqua</i> forest with broad-leaf shrubs	WOB	Non-threatened	0.32
<i>Acacia dealbata</i> forest	NAD	Non-threatened	1.30
Plantation	FPU	Non-threatened	1.00
Regenerating cleared land	FRG	Non-threatened	0.50
Agricultural land	FAG	Non-threatened	25.20

3.1.1 *Eucalyptus viminalis* wet forest (TASVEG Code WVI)

Eucalyptus viminalis wet forest occurs in three areas on the property. *Eucalyptus viminalis* (white gum), was dominant with *Eucalyptus regnans* (swamp gum) co-dominant on the higher slopes and *Eucalyptus obliqua* (stringy bark) common on the lower slopes. A subcanopy consisted of *Acacia dealbata* (silver wattle) and *Acacia melanoxylon* (blackwood) while shrubs in the understorey included *Coprosma quadrifida* (native currant), *Pomaderris apetala* (dogwood) *Bursaria spinosa* (prickly box) and *Acacia verticillata* (prickly moses). In shaded gullies the climber *Muehlenbeckia adpressa* (Macquarie vine) was dense and ferns included *Antarctica dicksonia* (tree fern), *Blechnum nudum* (fishbone fern) and *Polystichum proliferum* (mother shieldfern) while on drier slopes *Senecio linearifolius* (fireweed) was dense, grasses occurred in places and *Pteridium esculentum* (bracken fern) was common throughout. Blackberry was common with elderberry present in one remnant (see Fig. 3). Some white gums were dead with indication of ginger syndrome effects (see Fig. 4), on the drier slopes and edges. Some recruitment of juvenile white gum was evident and occasional older trees contained large tree hollows. Debris and leaf litter were throughout with fallen logs providing ground cover and habitat. A TasNetworks powerline runs up the hill on the edge of this community and the *E. regnans* forest community and is subject to regular clearing and cutting for maintenance.



Fig 3 *Eucalyptus viminalis* wet forest in the centre of the property



Fig 4 Threatened vegetation community, wet white gum forest, showing livestock exclusion fencing and dead and dying white gums (ginger syndrome) in the south east corner of property.

3.1.2 *Eucalyptus regnans* forest (TASVEG Code WRE)

Eucalyptus regnans (swamp gum) was dominant in all the patches of this vegetation community with *Eucalyptus viminalis* (white gum) and *Eucalyptus obliqua* (stringy bark) present. The understorey was mostly dominated by *Acacia dealbata* (silver wattle) and *Pomaderris apetala* (dogwood) which was dense in places, with *Coprosma quadrifida* (native currant) common. Other shrubs included *Cassinia aculeata* (dollybush), *Olearia argophylla* (musk) and *Ozothamnus ferrugineus* (tree everlastingbush). The gullies contained ferns, *Antarctica dicksonia*, *Blechnum nudum* (fishbone fern) and *Polystichum proliferum* (mother shieldfern) while bracken fern, *Senecio linearifolius* (fireweed) was common and dense in areas previously grazed. Climbers included *Clematis aristata* (mountain clematis) and *Muehlenbeckia adpressa* (Macquarie vine). A TasNetworks powerline runs up the hill on the edge of this community and is subject to regular clearing and cutting for maintenance.



Fig 5 *Eucalyptus regnans* forest, centre of property.

3.1.3 Eucalyptus obliqua forest with broad-leaf shrubs (TASVEG Code WOB)

Small areas of this community occurred with *Eucalyptus obliqua* (stringy bark) dominant and *E. viminalis* (white gum) present although many of these individuals were dead or dying. Small trees included scattered *Exocarpos cupressiformis* (native cherry). The understorey included shrubs, ferns, sedges and rushes, such as *Bursaria spinosa* (prickly box), *Coprosma quadrifida* (native currant) and *Senecio linearifolius* (fireweed) with *Pteridium esculentum* (bracken fern) and *Polystichum proliferum* (mother shieldfern). *Carex apressa* (tall sedge) and *Juncus procerus* (tall rush) and *J. pallidus* (pale rush) were common. Weeds included introduced grasses and blackberry.

3.1.4 Acacia dealbata forest (TASVEG Code NAD)

Tall mature *Acacia dealbata* (silver wattle) was dominant with *A. melanoxylon* (blackwood) present. Understorey shrubs were sparse but included *Bursaria spinosa* (prickly box), *Coprosma quadrifida* (native currant) and *Senecio linearifolius* (fireweed) with sedges *Lepidosperma elatius* (tall sword sedge), tree ferns and bracken fern.



Fig. 6 *Acacia dealbata* forest, centre of property

3.1.5 Regenerating cleared land (TASVEG Code FRG)

Two small areas of this community occurred near the northern boundary and featured *Pteridium esculentum* (bracken fern), *Carex apressa*, (tall sedge) *Lepidosperma* sp. (sword sedge), introduced grasses and blackberry with silver wattle and blackwood on edges.

3.1.6 Plantation (TASVEG Code FPU)

Plantation patches were established >20 years ago and contain *Eucalyptus nitens* (shining gum) with regrowth understorey species including silver wattle, blackwood, dogwood, dolly bush, bracken and weeds such as blackberry. Some radiata pine remains from earlier plantation in the same position.

3.1.7 Agricultural land (TASVEG Code FAG)

Agricultural land comprises pasture areas on the river flats and the hills leading up to Brown Mountain Road. Grasses are mostly introduced species but some hill paddocks include patches of native grasses mainly *Rytidosperma* spp. (wallaby grasses). Some parts were weedy with blackberry and thistle. Along the riparian strip native vegetation, including tea tree, paperbark, blackwood and silver wattle, has been retained and replanted with weed control and livestock exclusion fencing.

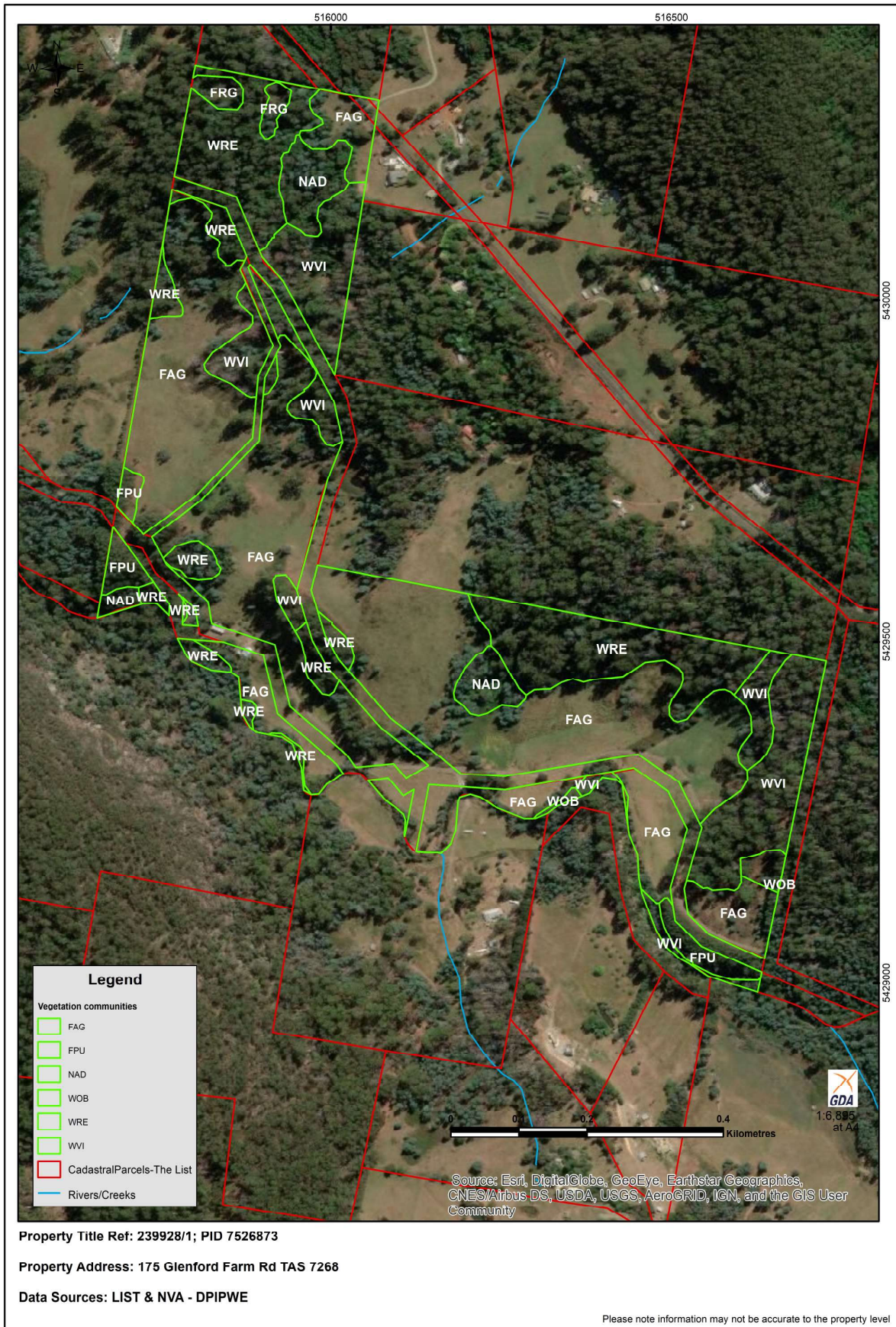


Fig. 7 Vegetation communities on the property (TASVEG version 3.0 amended)

3.2 Threatened flora species

No threatened flora species were recorded during the survey. Sixteen threatened flora species were previously recorded within 500 m and 5 km of the site (NVA 26/01/20). Those species (see Appendix 3) were searched for during the survey but not found.

3.3 Threatened fauna habitat

Threatened fauna species eastern barred bandicoot (*Peremeles gunnii*), grey goshawk (*Accipiter novaehollandiae*), masked owl (Tasmanian) (*Tyto novaehollandiae* subsp *castanops*), spotted-tail quoll (*Dasyurus maculatus* subsp *maculatus*), and Tasmanian wedge-tailed eagle (*Aquila audax* subsp. *fleayi*) have been previously recorded on the property and green and gold frog (*Litoria raniformis*) previously recorded within 500 m (NVA 26/02/20).

Suitable shelter, foraging and hunting habitat is available for these animals on the property. Eastern barred bandicoots are often observed in all paddocks and the garden and spotted-tail quolls have been observed in these areas, although less often (pers. obs. Helen Morgan). Tree hollows suitable for masked owl nesting occur in the white gum forests. No eagle or goshawk nests were found or have been recorded on the property. Ten wedge-tailed eagle nests have been recorded within 5 km of the property.

In addition to the threatened fauna species listed above, there is potential habitat on the property for threatened fauna recorded within 5 km of the site, such as eastern quoll (*Dasyurus viverrinus*), Tasmanian devil (*Sarcophilus harrisii*) and aquatic species green and gold frog (*Litoria raniformis*), giant freshwater crayfish (*Astacopsis gouldi*) and Mount Arthur burrowing crayfish (*Engaeus orramakunna*).

Threatened fauna species recorded within 500 m and 5 km (NVA 26/02/20) of the site are tabled in Appendix 4.

3.4 Weeds

Declared weeds blackberry, gorse and Spanish heath were recorded on site and within 500 m (NVA 26/02/20). Other woody weeds included hawthorn, crack willow, sweet briar (see Appendix 2). Introduced grasses were also common on edges of remnants and in paddocks.



Fig. 8 Recommended building envelope on the Pipers lot

4 Potential impacts and management for mitigation

4.1 Threatened vegetation community

Eucalyptus viminalis wet forest (see map TASVEG Code WVI), occurs within the two larger proposed lots. The subdivision proposal is not likely to impact the threatened vegetation community as:

- current management of stock exclusion will not be altered by the boundary adjustment;
- proposed boundaries avoid this community; and
- building envelopes are recommended with adequate space to avoid clearing threatened vegetation for fire safe zones.

4.2 Threatened fauna habitat and non threatened vegetation communities

Threatened fauna habitat may potentially be impacted by vegetation clearing that could occur in the future for building, fire safety zones and boundary fencing.

The two larger lots are proposed to be retained as grazing land with the bush protected with livestock exclusion fencing. The Homestead lot has an existing dwelling. The Big Hill and River lot has a recommended building envelop in the grazing land and the native vegetation will not be cleared on either of these larger lots as a result of the proposed subdivision.

The two smaller lots proposed as suitable for residential use contain areas predominately comprised of disused agricultural land and regenerating cleared land. While this land currently provides foraging habitat for threatened small mammals, such as eastern barred bandicoots and spotted-tail quolls, and threatened raptors including masked owl, wedge-tailed eagle and grey goshawk, any potential residential building in the future is not likely to remove critical threatened fauna habitat. The building envelopes recommended on the proposed small lots have been placed to avoid excessive vegetation clearing (see Figs. 1 and 8).

4.3 Erosion and weed control

Erosion and weed spread as a result of soil disturbance from fencing and building are potential threats to natural values. Keep all soil disturbances to a minimum and practice erosion control measures where necessary such as sand bagging, laying vegetation cuttings to trap sediment and replacing disturbed soil and vegetation wherever possible. Avoid implementing works in very wet conditions.

Wash down machinery prior to entering the site to avoid introducing more weed species and/or soil pathogens.

Weeds on site, blackberry, Spanish heath, thistles, flourish in disturbed soil and reproductive parts can be transported via machinery. Avoid unnecessary disturbance in existing weed areas, clean off vegetative material between the agricultural land and the bush and avoid unnecessary disturbance to native vegetation.

Washdown guidelines are available at:

https://dpiwve.tas.gov.au/Documents/15130802_52keepingitcleanspreadswe.pdf

5 Legislative Implications

5.1 Tasmanian Threatened Species Protection Act 1995

No threatened flora species listed under this Act were recorded on site.

Fauna species listed under this Act have previously been recorded on site:

- grey goshawk (*Accipiter novaehollandiae*) – endangered
- masked owl (Tasmanian) (*Tyto novaehollandiae* subsp. *castanops*) – endangered
- Tasmanian wedge-tailed eagle (*Aquila audax* subsp. *fleayi*) – endangered
- spotted-tailed quoll (*Dasyurus maculatus* subsp. *maculatus*) – rare

The proposed subdivision (boundary adjustment) is unlikely to impact these species. A permit will be required from the Policy and Conservation Assessment Branch, DPIPWE, if any threatened fauna species are confirmed to be on site prior to or during any construction works.

5.2 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

There were no threatened flora species listed under this Act found on site.

Fauna species listed as threatened under this Act have been recorded on site:

- eastern barred bandicoot (*Peremeles gunnii*) – Vulnerable
- spotted-tailed quoll (*Dasyurus maculatus* subsp. *maculatus*) – Vulnerable
- masked owl (Tasmanian) (*Tyto novaehollandiae* subsp. *castanops*) – Vulnerable
- Tasmanian wedge-tailed eagle (*Aquila audax* subsp. *fleayi*) – Endangered

Potential habitat was found for fauna species listed as threatened under this Act:

- eastern quoll (*Dasyurus viverrinus*) – Endangered
- Tasmanian devil (*Sarcophilus harrisi*) – Endangered
- green and gold frog (*Litoria raniformis*) – Vulnerable
- giant freshwater crayfish (*Astacopsis gouldi*) – Vulnerable
- Mount Arthur burrowing crayfish (*Engaeus orramakunna*) – Vulnerable

The proposed subdivision (boundary adjustment) is unlikely to have a significant impact (as defined under the Act) on these species.

5.3 Tasmanian Nature Conservation Act 2002 and Wildlife Regulations 1999

Eucalyptus viminalis wet forest (TASVEG Code WVI) is listed as a threatened native vegetation community in Schedule 3A *Nature Conservation Act 2002*. Three areas of this community occur on the property and none are likely to be impacted by the proposed subdivision.

Wildlife protected under the Wildlife Regulations is likely to occur on site. A permit may be required, from the Conservation Assessment Section, DPIPWE, if protected wildlife are killed or injured, or their products (nests etc) are damaged.

6 References

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7 Appendices

Appendix 1 Legislation relating to species of conservation significance

The Threatened Species list for Tasmania consists of plants and animals listed under the *Environmental Protection and Biodiversity Conservation Act 1999* at the Commonwealth level and/or listed under the *Tasmanian Threatened Species Protection Act 1995* at the State level.

Tasmanian Threatened Species Protection Act 1995

There are specified criteria and mechanisms for listing and de-listing of taxa under the *Tasmanian Threatened Species Protection Act 1995*. The Minister is responsible for this, but is advised by a Scientific Advisory Committee (S.A.C.). Criteria are described in Guidelines for the Listing of Species under the *Tasmanian Threatened Species Protection Act 1995*⁵. It is an offence to knowingly “take” (including kill or injure) threatened flora or fauna without a permit. Permits may be applied for from the Threatened Species Unit, Department of Primary Industries, Water and Environment.

At the State level, threatened species may be placed in one of four categories that indicate their level of extinction risk. The four categories or risk codes are listed in order of decreasing seriousness:

Extinct (x): Those species presumed extinct.

Endangered (e): Those species in danger of extinction because long-term survival is unlikely while the factors causing them to be endangered continue operating.

Vulnerable (v): Those species likely to become endangered while the factors causing them to become vulnerable continue operating.

Rare (r): Those species with a small population in Tasmania that are at risk.

Commonwealth Environment Protection and Biodiversity Conservation Act 1999

At the Commonwealth level threatened species listed in the *Environment Protection and Biodiversity Conservation Act 1999* may be placed in one of five categories that indicate their level of extinction risk. It is an offence to undertake an action that will have a significant impact on listed threatened species or communities without approval or exemption from the federal Environment Minister. A process is defined for applying for approval.

The five categories or risk codes are listed in order of decreasing seriousness:

Extinct (EX): Where a species has not definitely been located in the wild for the past 50 years.

Extinct In The Wild (EW): A species cannot be found living in the wild despite exhaustive surveys, but is still known to exist in captivity. At present we do not have any in this category in Tasmania.

Critically Endangered (CR): In this case a species is in extreme danger of becoming extinct in the immediate future.

Endangered (EN): A species at very high risk of becoming extinct in the near future.

Vulnerable (VU): A species is facing a high risk of extinction in the medium term future.

Tasmanian Regional Forest Agreement 1997

Priority Species Requiring Consideration are listed in Attachment 2 of the *Tasmanian Regional Forest Agreement 1997*. The list includes threatened species, species protected through other mechanisms (such as the Forest Practices Code) and others requiring further research to determine requirement for protection. For instance, the list includes hollow dependent species.

Tasmanian Wildlife Regulations 1999 (Nature Conservation Act 2002)

Protected wildlife (currently fauna species only) is listed on Schedules 1, 2, 3 and 4. Note that these schedules also list threatened species from other states, and are updated less frequently than the schedules in the *Threatened Species Protection Act 1995*. It is illegal to “take” (including kill or injure) protected wildlife or their products (nests, burrows, etc), unless authorized by a permit or licence. Permits may be applied for from the Nature Conservation Branch, Department of Primary Industries, Water and Environment.

Tasmanian Forest Practices Act 1985 and Regulations

Available at www.fpa.tas.gov.au is a Forest Practices Authority 2009 information sheet that describes the legislation affecting land clearing under this Act.

Appendix 2 Vascular flora species recorded on the property

Survey conducted 26th January 2020

Key:

i = introduced and naturalised in Tasmania; eT= endemic in Tasmania; d = declared weed

Threatened species in bold-

Tasmanian status (*Threatened Species Protection Act 1995*):

en = Endangered; x = Presumed Extinct; v = Vulnerable; r = Rare

Commonwealth status (*Environment Protection and Biodiversity Conservation Act 1999*):

EX = extinct; CR = Critically Endangered; EN = Endangered; VU = Vulnerable.

Family	Species name	Common name	Endemism
	Eudicots – broad leafed plants		
ADOXACEAE	<i>Sambucus gaudichaudiana</i>	white elderberry	
ASTERACEAE	<i>Bedfordia salicina</i>	tasmanian blanketleaf	eT
	<i>Cassinia aculeata</i>	dollybush	
	<i>Olearia argophylla</i>	musk daisybush	
	<i>Olearia lirata</i>	forest daisybush	
	<i>Olearia ramulosa</i>	twiggy daisybush	
	<i>Ozothamnus ferrugineus</i>	tree everlastingbush	
	<i>Senecio biserratus</i>	crosscut fireweed	
	<i>Senecio linearifolius</i>	common fireweed groundsel	
	<i>Senecio minimus</i>	shrubby fireweed	
ATHEROSPERMACEAE	<i>Atherosperma moschatum</i>	sassafras	
ELAEOCARPACEAE	<i>Aristotelia peduncularis</i>	heartberry	eT
ERICACEAE	<i>Erica lusitanica</i>	spanish heath	i
EUPHORBIACEAE	<i>Beyeria viscosa</i>	pinkwood	
GENTIANACEAE	<i>Centaurium erythraea</i>	common centaury	i
GERANIACEAE	<i>Geranium potentilloides</i>	mountain cranesbill	
HALORAGACEAE	<i>Gonocarpus teucroides</i>	forest raspwort	
MIMOSACEAE	<i>Acacia dealbata</i>	silver wattle	
	<i>Acacia melanoxylon</i>	blackwood	
	<i>Acacia verticillata</i>	prickly moses	
MYRTACEAE	<i>Eucalyptus obliqua</i>	stringybark	
	<i>Eucalyptus regnans</i>	giant ash	
	<i>Eucalyptus viminalis</i>	white gum	
	<i>Leptospermum lanigerum</i>	woolly teatree	
	<i>Melaleuca ericifolia</i>	coast paperbark	
NOTHOFAGACEAE	<i>Nothofagus cunninghamii</i>	myrtle beech	
OLEACEAE	<i>Notelaea ligustrina</i>	native olive	
ONAGRACEAE	<i>Epilobium billardioreanum</i>	robust willowherb	
OXALIDACEAE	<i>Oxalis perennans</i>	grassland woodsorrel	
PITTIOSPORACEAE	<i>Billardiera longiflora</i>	purple appleberry	eT
	<i>Bursaria spinosa</i>	prickly box	
	<i>Pittosporum bicolor</i>	cheesewood	
POLYGONACEAE	<i>Muehlenbeckia adpressa</i>	climbing lignum	
RANUNCULACEAE	<i>Clematis aristata</i>	mountain clematis	

RHAMNACEAE	<i>Pomaderris apetala</i>	common dogwood	
ROSACEAE	<i>Acaena novae-zelandiae</i>	common buzzy	
	<i>Crataegus monogyna</i>	hawthorn	i
	<i>Rosa rubiginosa</i>	sweet briar	i
	<i>Rubus fruticosus</i>	blackberry	i
	<i>Rubus parvifolius</i>	native raspberry	
RUBIACEAE	<i>Coprosma quadrifida</i>	native currant	
SANTALACEAE	<i>Exocarpos cupressiformis</i>	common native-cherry	
URTICACEAE	<i>Urtica incisa</i>	scrub nettle	
Monocots – narrow leafed plants			
CYPERACEAE	<i>Carex appressa</i>	tall sedge	
	<i>Gahnia grandis</i>	cutting grass	
	<i>Lepidosperma elatius</i>	tall swordgrass	
	<i>Uncinia riparia</i>	river hookgrass	
JUNCACEAE	<i>Juncus pallidus</i>	pale rush	
	<i>Juncus pauciflorus</i>	looseflower rush	
	<i>Juncus procerus</i>	tall rush	
	<i>Juncus sarophorus</i>	broom rush	
LILIACEAE	<i>Dianella tasmanica</i>	forest flaxlily	
POACEAE	<i>Rytidosperma caespitosa</i>	common wallabygrass	
	<i>Ehrharta stipoides</i>	weeping grass	
	<i>Poa sieberiana</i>	grey tussockgrass	
	<i>Poa tenera</i>	scrambling tussockgrass	
Pteridophyta - Ferns			
ADIANTACEAE	<i>Pellaea falcata</i>	sickle fern	
ASPLENIACEAE	<i>Asplenium bulbiferum</i>	mother spleenwort	
BLECHNACEAE	<i>Blechnum minus</i>	soft waterfern	
	<i>Blechnum nudum</i>	fishbone waterfern	
	<i>Blechnum patersonii</i>	strap waterfern	
	<i>Blechnum wattsii</i>	hard waterfern	
DENNSTAEDTIACEAE	<i>Histiopteris incisa</i>	batswing fern	
	<i>Hypolepis rugosula</i>	ruddy groundfern	
	<i>Pteridium esculentum</i>	bracken	
DICKSONIACEAE	<i>Dicksonia antarctica</i>	soft treefern	
DRYOPTERIDACEAE	<i>Polystichum proliferum</i>	mother shieldfern	
HYMENOPHYLLACEAE	<i>Crepidomanes venosum</i>	bristle filmyfern	
	<i>Hymenophyllum rarum</i>	narrow filmyfern	
POLYPODIACEAE	<i>Microsorium pustulatum</i>	kangaroo fern	
OSMUNDACEAE	<i>Todea barbara</i>	king fern	

Appendix 3 Threatened flora previously recorded within 5km of the survey site

(Natural Values Atlas, 26th January 2020).

Key:

Species recorded with 500 m marked *

Tasmanian status (*Threatened Species Protection Act 1995*):

en = Endangered; x = Presumed Extinct; v = Vulnerable; r = Rare

pv/pr = protected as vulnerable/rare (This taxon is either a component of a vulnerable/rare taxon, or the name has changed from that which appears in the official legislation.)

Commonwealth status (*Environment Protection and Biodiversity Conservation Act 1999*):

EX = extinct; CR = Critically Endangered; EN = Endangered; VU = Vulnerable.

Scientific name	Common name	Conservation Status		Comments
		State	Cwth	
<i>Boronia hemichiton</i>	Mt Arthur boronia	e	VU	Not found, unlikely here
<i>Caladenia lindleyana</i>	Lindleys spider-orchid	e	CR	
<i>Carex longebrachiata</i>	drooping sedge	r		Not found, this habitat too dry
<i>Corunastylis nuda</i>	tiny midge-orchid	r		Not found, potential habitat here
<i>Epilobium pallidiflorum</i>	showy willow herb	r		Not found,
<i>Euphrasia collina</i> <i>subsp. deflexifolia</i>	Eastern eyebright	r		Not found, this habitat too dry
<i>Hovea tasmanica</i>	rockfield purplepea	r		Not found, potential habitat here
<i>Isoetes elatior</i>	tall quillwort	r		Aquatic species
<i>Juncus amabilis</i>	gentle rush	r?		Not found
<i>Juncus vaginatus</i>	clustered rush	r		Semi-aquatic
<i>Pimelea flava</i> <i>subsp. flava</i>	Yellow riceflower	r		Not found, this habitat too dry
<i>Poa mollis</i>	soft tussockgrass	r		Not found, potential habitat here
<i>Pomaderris intermedia</i>	lemon dogwood	r		Not found, potential habitat here
<i>Pterostylis grandiflora</i> *	superb greenhood	r		Not found, potential habitat here
<i>Spyridium vexilliferum</i> <i>var. vexilliferum</i>	helicopter bush	r		Not found, potential habitat here
<i>Uncinia elegans</i>	handsome hooksedge	r		Not found, potential habitat here
<i>Westringia angustifolia</i>	narrowleaf westringia	r		Not found

Appendix 4 Threatened fauna previously recorded within 5km of the survey site

(recorded on site in bold or within 500m marked *)

(Natural Values Atlas, 26/02/20).

Key:

Tasmanian status (*Threatened Species Protection Act 1995*):

en = Endangered; x = Presumed Extinct; v = Vulnerable; r = Rare

pv/pr = protected as vulnerable/rare (This taxon is either a component of a vulnerable/rare taxon, or the name has changed from that which appears in the official legislation.)

Commonwealth status (*Environment Protection and Biodiversity Conservation Act 1999*):

EX = extinct; CR = Critically Endangered; EN = Endangered; VU = Vulnerable.

Scientific name	Common name	Tas. status TSPA 1995	Cwth status EPBC 1999	Comments
<i>Accipiter novaehollandiae</i>	Grey goshawk	e		Suitable nesting habitat on site, regularly sighted hunting in the area.
<i>Aquila audax subsp. fleayi</i>	Wedge-tailed eagle	e	EN	No suitable nesting habitat on site, regularly sighted hunting in the area (several nest records within 5km)
<i>Charopidae sp. "Skemps"</i>	skemps snail	e		No habitat on site, possibly too dry.
<i>Dasyurus maculatus maculatus</i>	Spotted-tail quoll	r	VU	Several sightings on property, likely to forage on and near site, as part of wider range.
<i>Dasyurus viverrinus</i>	Eastern quoll		EN	Likely to forage on or near site, as part of wider range.
<i>Engaeus orramakunna</i>	mt. arthur burrowing crayfish	v	VU	Crayfish chimneys seen in gullies and along river, no ID
<i>Litoria raniformis*</i>	Green and gold frog	v	VU	Potential habitat on site, permanent water bodies
<i>Peremeles gunnii gunnii</i>	Eastern barred bandicoot		VU	Known habitat on site, regularly sighted foraging across property and on camera traps
<i>Sarcophilus harrisii</i>	Tasmanian devil	e	EN	Likely to forage across site, as part of wider range. No den sites found.
<i>Tyto novaehollandiae castanops</i>	Masked owl (Tasmanian)	e	VU	Some potential habitat in forest with tree hollows potentially suitable for nesting. Heard calling on property and recorded.

Livingston Natural Resource Services

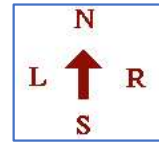
ABN 36 435 836 438

12 Powers Road

Underwood, TAS, 7268

Mob 0438 951 021

Email: scottlivingston.lnrs@gmail.com



23rd June 2020

Flora and Fauna Habitat: 175 Glenford Farm Road, Underwood

I have assessed the proposed subdivision of 175 Glenford Farm Road, Underwood, including a site inspection for Bushfire. I have also reviewed the Bushways Flora and Fauna Habitat survey, dated February 2020.

The bushfire report includes building areas and access that do not require clearing of threatened vegetation communities. Lot 4 will require limited clearing of silver wattle forest on previously cleared land. All other lots have access, building and hazard management areas withing existing agricultural land and require no disturbance of native vegetation communities.

I endorse the evaluations and findings of the Bushways report. There is not likely to be any impact on natural values from the establishment of dwelling on the lots or associated infrastructure.

Yours sincerely

Scott Livingston

Master Environmental Management,
Forest Practices Officer, Planning
Bushfire Practitioner, Accreditation # 105

Agricultural Report

Report for: H & W Morgan

Property Location: Brown Mountain Rd

Prepared by: Astrid Ketelaar and Michael Tempest
AK Consultants
29 York Town Square
LAUNCESTON, TAS 7250

Date: 17th June 2020



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Launceston Tas 7250
Phone: (03) 6334 1033
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SUMMARY

Client: H & W Morgan

Property identification: Lot 1 as per site Plan 96-88 (723) by Cohens & Associates (see Figure 4) Underwood.
Rural Resource Zone, (*Launceston Interim Planning Scheme 2015*).

Proposal: Proposed construction of a dwelling.

Purpose: To assess the agricultural/primary industry aspects of the proposal.

Land Capability: Published Land Capability at 1:100 000 Class 5.

Assessment comments: All relevant information available at desktop level was considered. A site assessment was not considered necessary as the imagery is good and the desktop information correlates with the proponents' information. This report summarises the findings of the desktop assessment.

Conclusion: The title is approximately 3.8ha in area and is almost entirely covered in native vegetation. Due to existing vegetation, Land Capability limitations and lack of a developed irrigation water resource and proximity of adjacent residential development, the agricultural/primary industry potential of the subject title is considered to be negligible. The title is also limited for farming in conjunction with other agricultural/primary industry land. There are no setbacks required from adjacent titles for agricultural purposes.

Assessment by:



Astrid Ketelaar, Natural Resource
Management Consultant,
Member, Agricultural Institute
Australia (current)

and



Michael Tempest,
Natural Resource Management
Consultant



INTRODUCTION

The subject title (Lot 1, see Figure 4, site plan) is located at Brown Mountain Rd, Underwood. This title and all surrounding land is zoned as 'Rural Resource' under the *Launceston Interim Planning Scheme 2015* (the Planning Scheme).

The proponent seeks to gain discretionary approval to construct a dwelling on the title. Generally, there are two pathways for approval for the construction of a dwelling in the Rural Resource zone.

1. A dwelling may be constructed where it is directly associated and a subservient part of a resource development use (i.e., the development needs to be part of a farming operation).
2. A dwelling may be constructed where the site is practically incapable of supporting an agricultural or primary industry use or being included with other land for agricultural or other primary industry uses.

Whether the title is practically capable of supporting an agricultural/primary industry use depends on the current land-use, previous land use and potential land use, size of the title, Land Capability, whether there is an irrigation water resource or potential for an irrigation water resource, and whether the title supports any threatened vegetation or threatened species habitat. Whether the title can be farmed in conjunction with other land also needs to be considered.

If it can be demonstrated that the title cannot be utilised for agriculture/primary industry, then it also needs to be demonstrated that the house will not impact on any adjacent agricultural land/primary industry use. This can usually be achieved through appropriate buffers and boundary setbacks.

The relevant sections of the Planning Scheme in relation to this assessment are as follows:

26.0 Rural Resource Zone

26.3.2 Dwellings

Objective

To ensure that dwellings are:

- a) Directly associated with and a subservient part of a Resource development; or
- b) Located on land with limited primary industry uses potential; and
- c) Located where they do not constrain surrounding agricultural uses, and
- d)N/A for this assessment.....

Performance Criteria:

26.3.2.P1.2 A dwelling may be constructed where the site is practically incapable of supporting an agricultural use or being included with agricultural or other primary industry uses, having regard to:

- a) Limitations created by an existing use or development surrounding the site;
- b) The topography of the site;
- c) The capacity of the land for primary industry uses; and
- d) A report from a suitably qualified person.

26.4.1 Building Height, Setback and Siting

Objective

To ensure that:

- a)N/A for this assessment.....; and
- b) Buildings for sensitive uses do not constrain primary industry uses.

Performance Criteria

26.4.1.P3 Buildings for sensitive uses must be setback so as not to constrain adjoining primary industry uses, having regard to:

- a) The topography of the site;
- b) The prevailing setbacks of existing buildings on nearby lots;
- c) The location of existing buildings on the site;
- d) The visual impact of the building when viewed on an adjoining road;
- e) Any proposed upgrading of adjoining roads;
- f) The retention of vegetation within the front setback;
- g) The existing use on adjoining and immediately opposite sites;
- h) The nature, frequency and intensity of emissions produced by primary industry uses on adjoining and immediately opposite lots;
- i) Any proposed attenuation measures; and
- j) any buffers created by natural or other features

All relevant information available at desktop level was considered. A site assessment was not considered necessary as the imagery is good and the desktop information correlates with the proponents' information. This report assesses the agricultural/primary industry aspects of the proposal and summarises the findings of the desktop assessment.

DESCRIPTION

The lot is 3.8ha in area and is situated on a moderately sloped parcel of land with a with a southerly aspect. The northern boundary sits at approximately 320m above sea level (ASL), while the southern boundary is approximately 290m ASL. Brown Mountain Rd runs through the north eastern corner of the title separating a small area of the lot to the north of the road from the rest of the lot to the south.

Published Land Capability mapping at 1:100 000 scale maps the entire title as Class 5 land. Class 5 land is described as Land unsuited to cropping and with slight to moderate limitations to pastoral use. Class 5 land is not classed as 'Prime Agricultural Land' as defined under the *Protection of Agricultural Land Policy 2009* (PAL Policy). Land Capability Class descriptions are in Appendix 2.

A flora and fauna habitat survey was undertaken by Helen Morgan in February 2020. She found that the lot is predominately covered in native vegetation. The dominant vegetation community is *Eucalyptus regnans* wet forest (WRE). There is also an area of *Acacia dealbata* forest (NAD). There are two small pockets of regenerating cleared land (FRG), with balance of the land in the north eastern corner mapped as Agricultural land (FAG), which would best be described as unimproved pasture. None of the communities are listed as threatened communities under the *Nature Conservation Act 2002* or are listed as Priority Habitat under the Planning Scheme. There are no records of any threatened flora or fauna on or near the lot (the LIST).

The Lot is situated within the Pipers Catchment. There are no mapped drainage lines located on the title. According to DPIPW's Water Information System of Tasmania (WIST) there are no water allocations associated with the lot or on adjacent land. Given the small size of the lot, existing vegetation and relatively poor Land Capability it is highly unlikely that irrigation resources would be developed on this lot.

Underlying geology is mapped as Cenozoic cover sequences (Qptd), which are described as; talus consisting dominantly of dolerite boulders (the LIST). There are no mining leases located near the subject lot.

There are six surrounding titles, these range in size from 0.8ha to 30.5ha. All adjacent titles are also zoned Rural Resource. Of the six adjacent titles, five have existing dwellings. To the west is CT 227443/1, this title is 27.1ha in area, has an existing dwelling and is a mix of pasture and native vegetation. To the north is CT 121408/1, this title is dissected by Brown Mountain Rd. There is a triangle shaped area of the title south of the road directly adjacent to the subject lot that is approximately 1.3ha in area and covered in native vegetation. The balance of the lot is north of Brown Mountain Rd and is a mix of native vegetation and pasture, this title is also under the same ownership as land to the north west that is associated with a commercial scale poultry farm. To the north east is CT 126845/1, which is a 4.1ha title with an existing dwelling and is a mix of pasture and native vegetation. To the east is CT 12482/1, this title is 0.8ha in area, has an existing dwelling and cleared of native vegetation. To the south east is CT 8596/1, this title is 8.1ha in area, has an existing dwelling and is predominately covered in vegetation. To the south is Lot 2 (see Figure 4), this lot is 19.99ha in area, has an existing dwelling and is a mix of pasture and native vegetation.

DISCUSSION

The subject lot does not have any “prime agricultural” land (Land Capability Classes 1-3 land) and is currently almost entirely covered in native vegetation. The title is south facing and has no current irrigation water resources which limits potential for high value crops. The native vegetation does have some potential for native forest harvesting, however, limitations derived from the location of the title, size and proximity of residential dwellings would likely limit forestry potential. These factors suggest that to develop this site for an agricultural/primary industry activity would require significant investment and it is questionable as to whether a return on investment could be achieved.

Whilst the productivity of land with these characteristics is normally best realised if farmed in conjunction with other land to achieve economies of scale. In this case the limitations of the title would limit its ability to be farmed in conjunction with other land for any agricultural/primary industry use. In addition, the characteristics of surrounding titles indicate that there is negligible chance of this title being farmed in conjunction with any adjacent land.

Potential for conflict between the proposed new dwelling and adjacent agricultural/primary industry uses needs to also be considered. There are a range of activities associated with forestry, grazing and cropping. Learmonth *et al.* (2007) detail the common range of issues associated with sensitive uses such as residential use in the Rural Resource Zone which can constrain agricultural/primary industry activities (see Appendix 3). Common conflict issues associated with residential use in the Rural Resource Zone include spray drift from chemicals which would include fungicide, herbicide, and insecticide, noise from equipment (including shooting for game control), irrigation spray drift, odours and dust.

The Western Australia Department of Health (DOH, 2012) has published guidelines relating specifically to minimising conflict between agricultural/primary industry activities and residential areas through management of buffer areas. This study particularly focuses on spray drift and dust generation and recommends a minimum separation of 300m to reduce the impact of spray drift,

dust, smoke and ash. Through the establishment of an adequately designed, implemented and maintained vegetative buffer, this minimum separation distance can be reduced to 40m. *The Launceston Planning Scheme 2015* recommends a distance of 200m as a buffer.

Because of the size and shape of the title, a 200m setback from boundaries cannot be achieved, so consideration of the type and scale of adjacent uses needs to be considered to determine suitable setbacks. The adjacent titles with existing dwellings would be described as 'lifestyle lots' to 'hobby scale'¹ lots, at best. While the title to the north is under the same ownership as a 'commercial scale' poultry enterprise to the north west, the area adjacent to the subject lot appears unlikely to be developed for intensive agricultural use due to, Land Capability, existing native vegetation and proximity of existing dwellings. Also, the areas of existing pasture on this title are more than 140m from the subject lot.

An increase in agricultural/primary industry activity in the surrounding titles is highly unlikely due to their small size and isolation from commercial scale agriculture/primary industry, so the risk for potential future conflict between a dwelling on the subject title and adjacent titles based on agricultural/primary industry activities is considered negligible. No setbacks are required from adjacent titles for agricultural purposes.

CONCLUSIONS

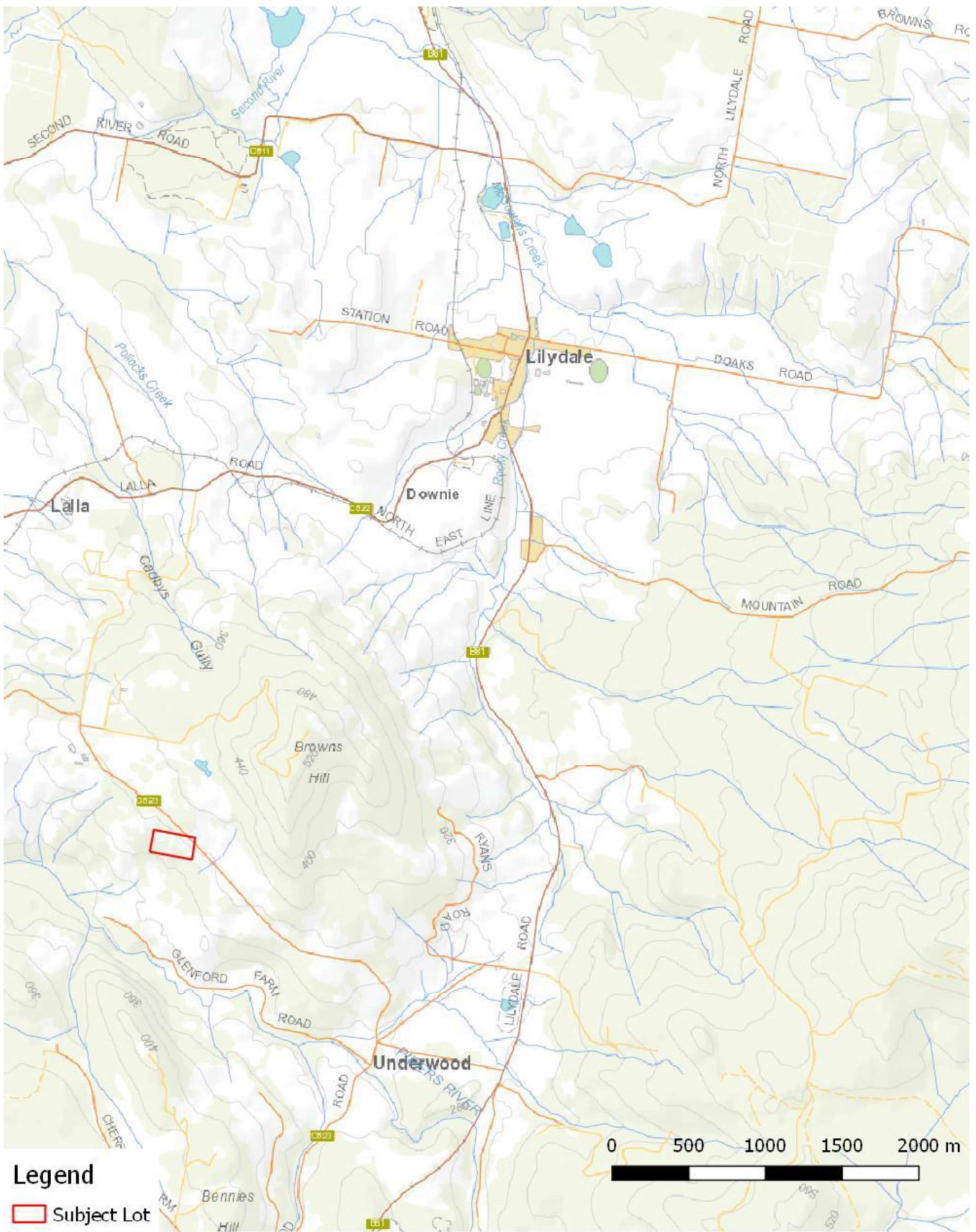
The title is approximately 3.8ha in area and is almost entirely covered in native vegetation. Due to existing vegetation, Land Capability limitations and lack of a developed irrigation water resource and proximity of adjacent residential development, the agricultural/primary industry potential of the subject title is considered to be negligible. The title is also limited for farming in conjunction with other agricultural/primary industry land. There are no setbacks required from adjacent titles for agricultural purposes.

¹As defined by AK Consultants in Ketelaar, A and Armstrong, D. 2012, *Discussions paper – Clarification of the Tools and Methodologies and Their Limitations for Understanding the Use of Agricultural Land in the Northern Region* which was a paper written for Northern Tasmania Development.

REFERENCES

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APPENDIX 1 – MAPS

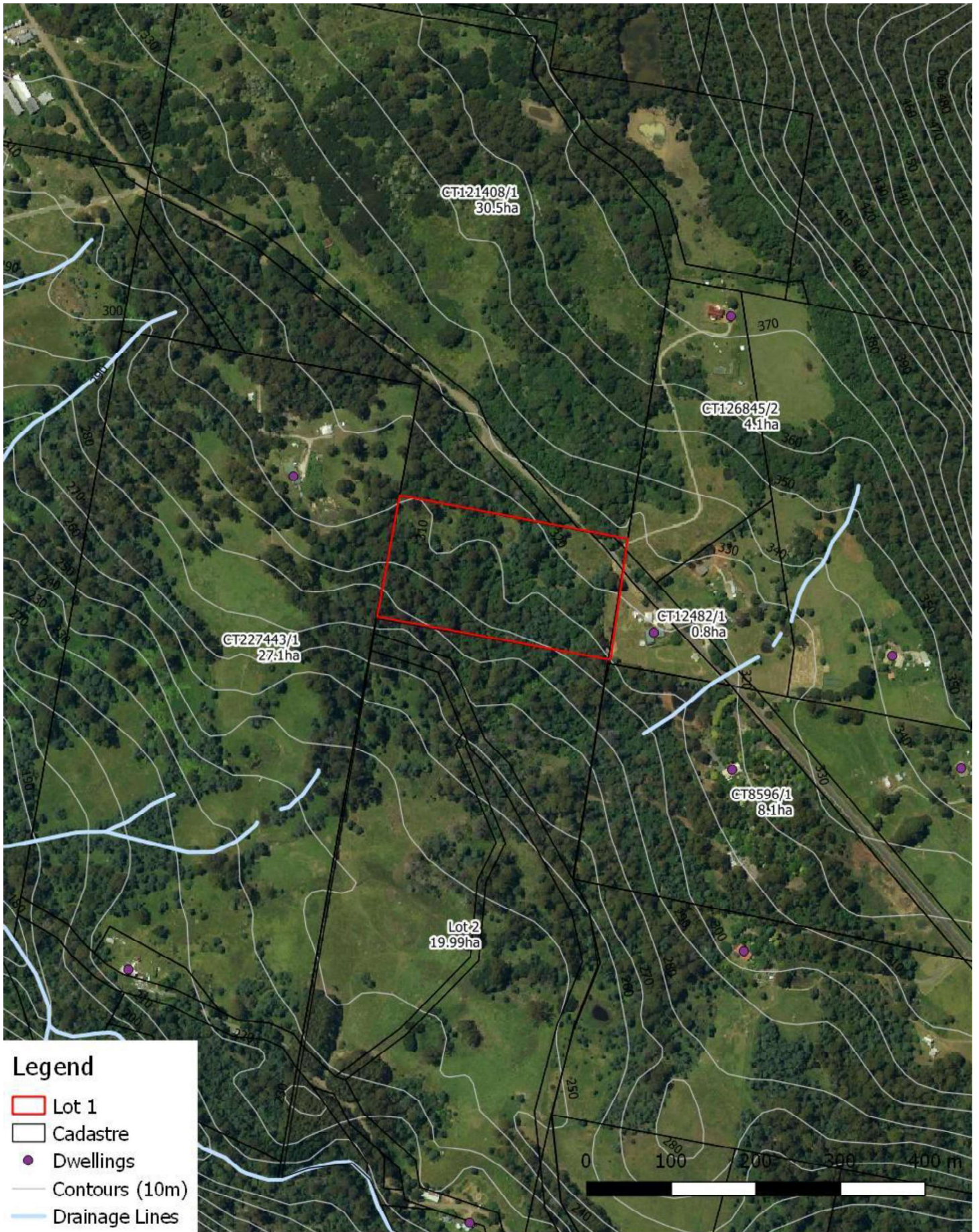


Map Name: Location
 Project: Agricultural Assessment
 Client: Morgan
 Date: 12/06/2020

BaseMap image by LIST Topo
 Cadastre from LIST (C) State of Tas



Figure 1. Location



Legend

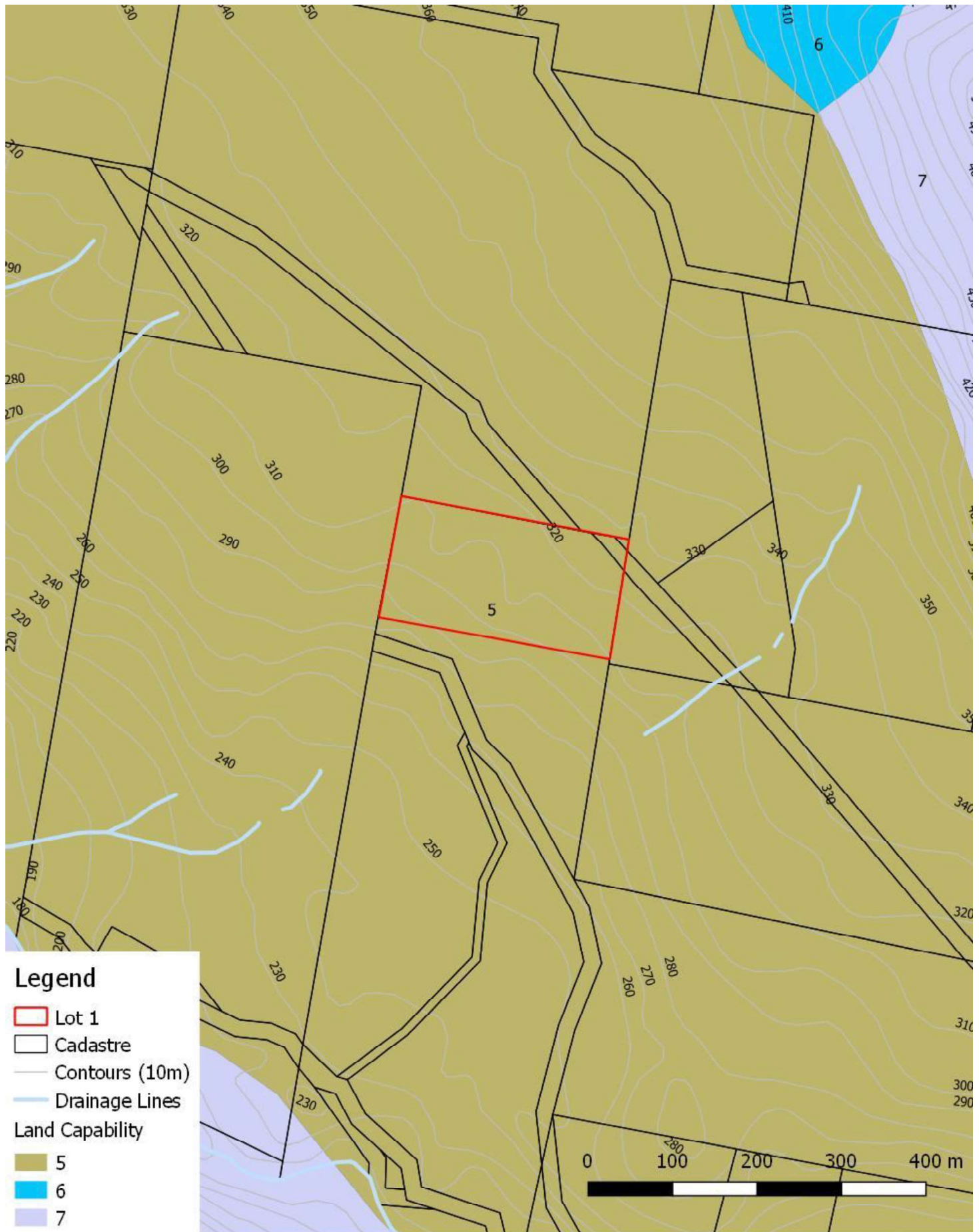
- Lot 1
- Cadastre
- Dwellings
- Contours (10m)
- Drainage Lines

Map Name: Aerial Image & Surrounds
 Project: Agricultural Assessment
 Client: Morgan
 Date: 10/06/2020

BaseMap image by LIST Ortho
 Cadastre from LIST (C) State of Tas



Figure 2. Aerial image and surrounding titles.
Agricultural Report

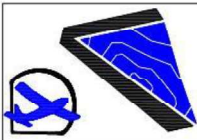


Map Name: Published Land Capability
 Project: Agricultural Assessment
 Client: Morgan
 Date: 10/06/2020

Published Land Capability 1:100,000 by DPIPWE
 Cadastre from LIST (C) State of Tas



Figure 3. Published Land Capability
 Agricultural Report



COHEN & ASSOCIATES P/L

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**PLAN OF
SUBDIVISION
SHEET 1 OF 1**

REF: **96-88
(7923)**

Municipality: LAUNCESTON CITY COUNCIL
Site Address: 175 GLENFORD FARM RD UNDERWOOD
TAS 7268
Tasmap Sheet: -
Grid Reference: E: 516162 N: 5429454 (MGA)

Owners: W.L. & H.R. MORGAN
Title Refs: 179015/1, 179015/2, 179015/3 & 179015/4
Dates: Version 1: 25/05/2020
Version 2: 10/06/2020
Scale: 1 : 5000 @ A3

DISCLAIMER: This is a preliminary plan prepared without field survey and forms part of an application to subdivide the land described and is not to be used for any other purpose. Contours and levels may be transcribed from other sources and their accuracy has not been verified. These should not be used. The dimensions, area, location of improvements and number of lots are approximate and may vary as a result of decisions by the Municipality, Land Use Planning Review Panel, engineering or other advice. Easements may not be shown as these are to be determined at the time of survey. The plan is not to be copied unless this note is included.

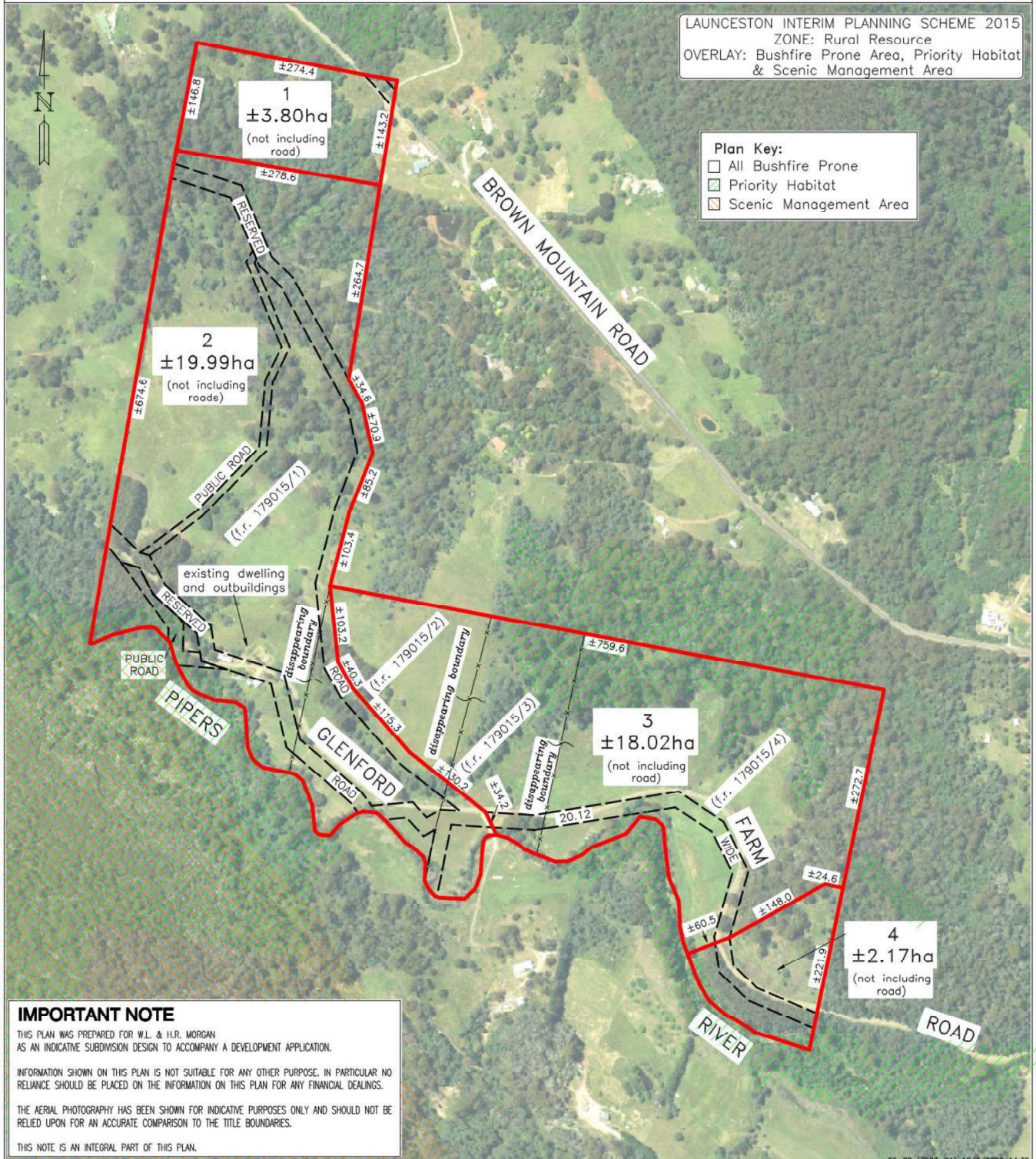


Figure 4. Subdivision Site Plan that includes the subject lot (Lot 1).

APPENDIX 2. LAND CAPABILITY DEFINITIONS FROM GROSE (1999)²

PRIME AGRICULTURAL LAND AS DESCRIBED IN THE PROTECTION OF AGRICULTURAL LAND 2009:

CLASS 1. Land well suited to a wide range of intensive cropping and grazing activities. It occurs on flat land with deep, well drained soils, and in a climate that favours a wide variety of crops. While there are virtually no limitations to agricultural usage, reasonable management inputs need to be maintained to prevent degradation of the resource. Such inputs might include very minor soil conservation treatments, fertiliser inputs or occasional pasture phases. Class 1 land is highly productive and capable of being cropped eight to nine years out of ten in a rotation with pasture or equivalent without risk of damage to the soil resource or loss of production, during periods of average climatic conditions.

CLASS 2. Land suitable for a wide range of intensive cropping and grazing activities. Limitations to use are slight, and these can be readily overcome by management and minor conservation practices. However, the level of inputs is greater, and the variety and/or number of crops that can be grown is marginally more restricted, than for Class 1 land. This land is highly productive but there is an increased risk of damage to the soil resource or of yield loss. The land can be cropped five to eight years out of ten in a rotation with pasture or equivalent during 'normal' years, if reasonable management inputs are maintained.

CLASS 3. Land suitable for cropping and intensive grazing. Moderate levels of limitation restrict the choice of crops or reduce productivity in relation to Class 1 or Class 2 land. Soil conservation practices and sound management are needed to overcome the moderate limitations to cropping use. Land is moderately productive, requiring a higher level of inputs than Classes 1 and 2. Limitations either restrict the range of crops that can be grown or the risk of damage to the soil resource is such that cropping should be confined to three to five years out of ten in a rotation with pasture or equivalent during normal years.

NON-PRIME AGRICULTURAL LAND AS DESCRIBED IN THE PROTECTION OF AGRICULTURAL LAND 2009:

CLASS 4. Land primarily suitable for grazing but which may be used for occasional cropping. Severe limitations restrict the length of cropping phase and/or severely restrict the range of crops that could be grown. Major conservation treatments and/or careful management is required to minimise degradation. Cropping rotations should be restricted to one to two years out of ten in a rotation with pasture or equivalent, during 'normal' years to avoid damage to the soil resource. In some areas longer cropping phases may be possible but the versatility of the land is very limited. (NB some parts of Tasmania are currently able to crop more frequently on Class 4 land than suggested above. This is due to the climate being drier than 'normal'. However, there is a high risk of crop or soil damage if 'normal' conditions return.).

CLASS 5. This land is unsuitable for cropping, although some areas on easier slopes may be cultivated for pasture establishment or renewal and occasional fodder crops may be possible. The land may have slight to moderate limitations for pastoral use. The effects of limitations on the grazing potential may be reduced by applying appropriate soil conservation measures and land management practices.

CLASS 6. Land marginally suitable for grazing because of severe limitations. This land has low productivity, high risk of erosion, low natural fertility or other limitations that severely restrict agricultural use. This land should be retained under its natural vegetation cover.

CLASS 7. Land with very severe to extreme limitations which make it unsuitable for agricultural use.

² Highlighted colour of Class corresponds with LIST Land Capability Class colours.

APPENDIX 3 – POTENTIAL CONFLICT ISSUES

Table 1. Typical rural land use conflict issues (Learmonth *et al.* 2007).

Issue	Explanation
Absentee landholders	Neighbours may be relied upon to manage issues such as bush fires, straying stock, trespassers etc. while the absentee landholder is at work or away.
Access	Traditional or informal 'agreements' for access between farms and to parts of farms may break down with the arrival of new people.
Catchment management	Design, funding and implementation of land, water and vegetatin management plans are complicated with larger numbers of rural land-holders with differing perspectives and values.
Clearing	Neighbours may object to the clearing of trees, especially when it is done apparently without approvals or impacts on habitat areas or local amenity.
Cooperation	Lack of mutual co-operation through the inability or unwillingness on behalf individuals to contribute may curtail or limit traditional work sharing practices on-farm or in the rural community.
Dogs	Stray domestic dogs and wild dogs attacking livestock and wildlife and causing a nuisance.
Drainage	Blocking or changing drainage systems through a lack of maintenance or failure to cooperate and not respect the rights of others.
Dust	Generated by farm and extractive industry operations including cultivating, fallow (bare) ground, farm vehicles, livestock yards, feed milling, fertiliser spreading etc.
Dwellings	Urban or residential dwellings located too close to or affecting an existing rural pursuit or routine land use practice.
Electric fences	Electric shocks to children, horses and dogs. Public safety issues.
Fencing	Disagreement about maintenance, replacement, design and cost.
Fire	Risk of fire escaping and entering neighbouring property. Lack of knowledge of fire issues and the role of the Rural Fire Service.
Firearms	Disturbance, maiming and killing of livestock and pest animals, illegal use and risk to personal safety.
Flies	Spread from animal enclosures or manure and breeding areas.
Heritage management	Destruction and poor management of indigenous and non indigenous cultural artefacts, structures and sites.
Lights	Bright lights associated with night loading, security etc.
Litter	Injury and poisoning of livestock via wind blown and dumped waste. Damage to equipment and machinery. Amenity impacts.
Noise	From farm machinery, scare guns, low flying agricultural aircraft, livestock weaning and feeding, and irrigation pumps.
Odours	Odours arising from piggeries, feedlots, dairies, poultry, sprays, fertiliser, manure spreading, silage, burning carcasses/crop residues.
Pesticides	Perceived and real health and environmental concerns over the use, storage and disposal of pesticides as well as spray drift.
Poisoning	Deliberate poisoning and destruction of trees/plants. Spray drift onto non-target plants. Pesticide or poison uptake by livestock and human health risks.
Pollution	Water resources contaminated by effluent, chemicals, pesticides, nutrients and air borne particulates.
Roads	Cost and standards of maintenance, slow/wide farm machinery, livestock droving and manure.
Smoke	From the burning of crop residues, scrub, pasture and windrows.
Soil erosion	Loss of soil and pollution of water ways from unsustainable practices or exposed soils. Lack of adequate groundcover or soil protection.
Straying livestock	Fence damage, spread of disease, damage to crops, gardens and bush/rainforest regeneration.
Theft/vandalism	Interference with crops, livestock, fodder, machinery and equipment.
Tree removal	Removal of native vegetation without appropriate approvals. Removal of icon trees and vegetation.
Trespass	Entering properties unlawfully and without agreement.
Visual/amenity	Loss of amenity as a result of reflective structures (igloos, hail netting), windbreaks plantings (loss of
Water	Competition for limited water supplies, compliance with water regulations, building of dams, changes to flows. Stock access to waterways. Riparian zone management.
Weeds	Lack of weed control particularly noxious weeds, by landholders.
	<i>Based on: Smith, RJ (2003) Rural Land Use Conflict: Review of Management Techniques – Final Report to Lismore Living Centres (PlanningNSW).</i>

APPENDIX 4. AGRICULTURAL ENTERPRISES REQUIREMENTS AND POTENTIAL CONSTRAINTS

Table 2 describes the general resource requirements for various agricultural land uses.

Resource	Livestock			Broad acre crops			Vegetables		Berries	Orchard fruits & vines	Nurseries & cut flowers	Forestry plantations
	Sheep	Cattle	Dairy	Cereals	Others	Processed	Un-processed					
	LC 3-6	LC 3-5/6	LC 3-5	LC 1-4	LC 1-4	LC 1-4	LC 1-4					
Land Capability	LC 3-6	LC 3-5/6	LC 3-5	LC 1-4	LC 1-4	LC 1-4	LC 1-4	LC 1-4/5	LC 1-4/5	LC 1-4 or N/A	LC 4-6	
Minimum paddock sizes	No minimum	No minimum	To suit grazing	10-15ha min.	5-10ha min.	10ha min.	10ha min.	2-4ha	2-5ha	2-4ha min.	10-20ha min.	
Farm size for a "viable" business	5,000-10,000 dse (area depends on rainfall)	5,000-10,000 dse (area depends on rainfall)	Capacity for at least 350 milkers	Broadacre cropping will be a mix of crops in rotation with pasture and livestock. The area required for viability is highly variable.				4-10ha	10-30ha	5-10ha	10-20ha min.	
Agricultural Land Mapping Project (3)	333ha	40ha	133ha	25ha					10ha		Not defined	
Irrigation water	Not required	Not required	Preferable 4-6ML/ha.	Not necessary	Mostly necessary, 2-3 ML/ha	Necessary, 2-6ML/ha	Necessary, 2-6ML/ha	Necessary, 1-3ML/ha	Necessary, 2-3ML/ha	Necessary, small quantity	Not required	
Climate specifications	Lower rainfall preferred for wool	No preferences	High rainfall (or irrigation)	Susceptible to spring frosts. Difficult to harvest in humid coastal conditions	Susceptible to spring frosts	Susceptible to spring frosts	Susceptible to spring frosts	High rainfall (or irrigation)	Susceptible to spring frosts for vines. Susceptible to summer rains for cherries. Susceptible to disease in high humidity in March for vines	Preferably low frost risk area	Rainfall above 700-800 mm	
Infrastructure	Yards & shed	Yards, crush, loading ramp	Dairy shed	Minimal	Irrig facilities	Irrig facilities	Irrig facilities	Irrig facilities	Irrig facilities	Plastic/glass houses	None	
Plant & equipment	Minimal	Minimal; hay feeding plant	General purpose tractor, hay/silage feeding	Tractors & implements	Tractors & implements	Tractors & implements	Tractors & implements	Tractors & implements	Tractors & implements	Small plant	None	
Market contracts	Not required	Not required	Necessary	Not required	Generally required	Necessary	Highly preferred	Desired	Desired	Contracts preferable	Varies	
Labour	Medium	Low	High	Low	Low	Low	Variable/medium	High at times	High at times	High at times	Low	
Local services	Shearers	Vet	Vet, dairy shed technician	Agronomist, contractors	Agronomist, contractors	Agronomist, contractors	Agronomist, contractors	Pickers	Pickers	Pickers	Contractors	
Regional suitability	Dryer areas good for wool. All areas suitable; larger farm sizes needed for viability.	All areas suitable. Suits small farms.	Economics dictate large area necessary. Needs high rainfall or large water resource for irrigation.	Generally large areas, so need larger paddocks and larger farms.	Generally large areas, so need larger paddocks and larger farms.	Medium sized paddocks & farms; area for crop rotations and irrigation.	Medium sized paddocks & farms; area for crop rotations and irrigation;	Specific site requirements; proximity to markets and transport/carriers.	Specific site requirements; potentially available in most municipalities.	Proximity to markets is important.	Low rainfall areas less preferred.	
Recommended min. buffer for individual dwellings (1)	50m to grazing area	50m to grazing area	50m to grazing area, 250m to dairy shed and 300m to effluent storage or continuous application areas (2)	200m to crop	200m to crop	200m to crop	200m to crop	200m to crop	200m to crop	200m to crop	100m from crop for aerial spraying.	
Recommended min. buffer for residential areas (1)	50m to grazing area	50m to grazing area	50m to grazing area, 500m to dairy shed	300m to crop	300m to crop	300m to crop	300m to crop	300m to crop	300m to crop	300m to crop	Site specific (1)	

(1) From (Learmonth, Whitehead, Boyd & Fletcher, 2007). These are industry specific recommended setbacks which do not necessarily align with Planning Scheme Setback requirements. Council should ensure they are aware of attenuation setback requirements for specific activities.
 (2) From (State Dairy Effluent Working Group, 1997).
 (3) The Agricultural Land Mapping Project (Dept of Justice, 2017) defined minimum threshold titles sizes that could potentially sustain a standalone agricultural enterprise.

Agricultural Report

Report for: H & W Morgan

Property Location: Glenford Farm Rd, Underwood

Prepared by: Astrid Ketelaar and Michael Tempest
AK Consultants
29 York Town Square
LAUNCESTON, TAS 7250

Date: 17th June 2020



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Web: www.akconsultants.com.au

SUMMARY

Client: H & W Morgan

Property identification: Lot 4 as per site Plan 96-88 (723) by Cohens & Associates Underwood Rural Resource Zone, (*Launceston Interim Planning Scheme 2015*).

Proposal: Proposed construction of a dwelling

Purpose: To assess the agricultural/primary industry aspects of the proposal.

Land Capability: Published Land Capability at 1:100 000 Class 5 and Class 4.

Assessment comments: All relevant information available at desktop level was considered. A site assessment was not considered necessary as the imagery is good and the desktop information correlates with the proponents' information. This report summarises the findings of the desktop assessment.

Conclusion: The title is approximately 2.17ha in area and is covered unimproved pasture with a small area of plantation and native vegetation. Due to existing vegetation, Land Capability limitations and lack of a developed irrigation water resource, the agricultural/primary industry potential of the subject title is considered to be negligible. The title is also limited for farming in conjunction with other agricultural/primary industry land. There are no setbacks required from adjacent titles for agricultural or primary industry purposes.

Assessment by:



Astrid Ketelaar, Natural Resource Management Consultant, Member, Agricultural Institute Australia (current)

and



Michael Tempest, Natural Resource Management Consultant



INTRODUCTION

The subject title (Lot 4, see Figure 4, site plan) is located at Glenford Farm Rd, Underwood. This title and all surrounding land is zoned as 'Rural Resource' under the *Launceston Interim Planning Scheme 2015* (the Planning Scheme).

The proponent seeks to gain discretionary approval to construct a dwelling on the title. Generally, there are two pathways for approval for the construction of a dwelling in the Rural Resource zone.

1. A dwelling may be constructed where it is directly associated and a subservient part of a resource development use (i.e., the development needs to be part of a farming operation).
2. A dwelling may be constructed where the site is practically incapable of supporting an agricultural or primary industry use or being included with other land for agricultural or other primary industry uses.

Whether the title is practically capable of supporting an agricultural/primary industry use depends on the current land-use, previous land use and potential land use, size of the title, Land Capability, whether there is an irrigation water resource or potential for an irrigation water resource, and whether the title supports any threatened vegetation or threatened species habitat. Whether the title can be farmed in conjunction with other land also needs to be considered.

If it can be demonstrated that the title cannot be utilised for agriculture/primary industry, then it also needs to be demonstrated that the house will not impact on any adjacent agricultural land/primary industry use. This can usually be achieved through appropriate buffers and boundary setbacks.

The relevant sections of the Planning Scheme in relation to this assessment are as follows:

26.0 Rural Resource Zone

26.3.2 Dwellings

Objective

To ensure that dwellings are:

- a) Directly associated with and a subservient part of a Resource development; or
- b) Located on land with limited primary industry uses potential; and
- c) Located where they do not constrain surrounding agricultural uses, and
- d)N/A for this assessment.....

Performance Criteria:

26.3.2.P1.2 A dwelling may be constructed where the site is practically incapable of supporting an agricultural use or being included with agricultural or other primary industry uses, having regard to:

- a) Limitations created by an existing use or development surrounding the site;
- b) The topography of the site;
- c) The capacity of the land for primary industry uses; and
- d) A report from a suitably qualified person.

26.4.1 Building Height, Setback and Siting

Objective

To ensure that:

- a)N/A for this assessment.....; and
- b) Buildings for sensitive uses do not constrain primary industry uses.

Performance Criteria

26.4.1.P3 Buildings for sensitive uses must be setback so as not to constrain adjoining primary industry uses, having regard to:

- a) The topography of the site;
- b) The prevailing setbacks of existing buildings on nearby lots;
- c) The location of existing buildings on the site;
- d) The visual impact of the building when viewed on an adjoining road;
- e) Any proposed upgrading of adjoining roads;
- f) The retention of vegetation within the front setback;
- g) The existing use on adjoining and immediately opposite sites;
- h) The nature, frequency and intensity of emissions produced by primary industry uses on adjoining and immediately opposite lots;
- i) Any proposed attenuation measures; and
- j) any buffers created by natural or other features

All relevant information available at desktop level was considered. A site assessment was not considered necessary as the imagery is good and the desktop information correlates with the proponents' information. This report assesses the agricultural/primary industry aspects of the proposal and summarises the findings of the desktop assessment.

DESCRIPTION

The lot is 2.17ha in area and is situated on a moderately sloped parcel of land with a with a southerly aspect. The northern boundary sits at approximately 220m above sea level (ASL), while the southern boundary is approximately 290m ASL. Glenford Farm Rd runs through the lot and separates a small area (approximately 0.6ha) south of the road, with the balance to the north. the Pipers River forms the title's southern boundary.

Published Land Capability mapping at 1:100 000 scale maps the majority of the title as Class 5 land. Class 5 land is described as 'Land unsuited to cropping and with slight to moderate limitations to pastoral use'. There is also a small area mapped as Class 4 along the southern boundary. Neither Class 4 land nor Class 5 land is classed as 'Prime Agricultural Land' as defined under the *Protection of Agricultural Land Policy 2009* (PAL Policy). Land Capability Class descriptions are in Appendix 2.

A flora and fauna habitat survey was undertaken by Helen Morgan in February 2020. She found the lot is predominately covered in unimproved pasture, with a small patch of native vegetation along the north western boundary, and a small area of plantation forest south of Glenford Farm Rd as well as a strip of native vegetation along the Pipers River. The native vegetation along the north western boundary is assessed as partially *Eucalyptus obliqua* wet forest (WOB) and partially *Eucalyptus viminalis* wet forest (WVI). The strip of native vegetation along the Pipers River is assessed WVI. WVI is listed as threatened communities under the *Nature Conservation Act 2002*. The Morgan (2020) assessment found no threatened flora or fauna on or near the lot.

The Lot is situated within the Pipers Catchment. With the Pipers River forming the lot's southern boundary. According to DPIPWE's Water Assessment Tool (WAT) there is a substantial volume of Surety 5 water and Surety 6 water available for irrigation as a winter take from the Pipers River at the most western point of the property. Surety 5 water is expected to be available eight years out of ten and Surety 6, approximately six to seven years out of ten. To utilise this water for summer, a

storage would need to be constructed. Given the small size of the lot, existing vegetation and relatively poor Land Capability it is highly unlikely that irrigation resources would be developed on this lot.

Underlying geology is mapped as Cenozoic cover sequences (Qptd), which are described as; talus consisting dominantly of dolerite boulders (the LIST). There are no mining leases located near the subject lot.

There are five surrounding titles, these range in size from 3.4ha to 18.8ha. All adjacent titles are also zoned 'Rural Resource'. Of the five adjacent titles, four have existing dwellings. To the west and north is Lot 3 (see Figure 4), this title is 18.02ha in area and is a mix of pasture and native vegetation. All native vegetation associated with this title is mapped as Priority Habitat. Glenford Farm Rd dissects the property, with a small area south of the road and the majority north of the road. There is no dwelling associated with land. To the east is CT 131513/1, this title is 15.3ha in, has an existing dwelling in the north east section and is predominately covered in native vegetation.

Adjacent to Lot 3, south of the Pipers River are three titles; CT 246151/1, CT 14826/1 and CT 37011/1. CT 246151/1 is the most western of the three titles, it is 5.8ha in area, has an existing dwelling near the southern boundary and is a mix of pasture and native vegetation. CT 14826/1 is directly south of Lot 4, it is 3.4ha in area, has an existing dwelling and the title is predominately pasture with pockets of native vegetation. To the south east is CT 37011/1, this title is 18.8ha in area, has an existing dwelling near the southern boundary and is a mix of pasture and native vegetation.

DISCUSSION

The subject lot is small (2.17 ha) does not have any "prime agricultural" land (Land Capability Classes 1-3 land) and is currently mostly covered in unimproved pasture. The subject lot has a southerly aspect, no current irrigation water resources and is mainly Class 5 Land Capability. While there is a small stand of plantation timber, this stand is very small in area and disconnected from any nearby plantation forests with 'commercial scale'¹ characteristics. The subject lot has negligible agricultural potential.

Whilst the productivity of land with these characteristics is normally best realised if farmed in conjunction with other land to achieve economies of scale. In this case the limitations of the title would limit its ability to be farmed in conjunction with other land for any agricultural/primary industry use. In addition, the characteristics of surrounding titles indicate that there is negligible chance of this title being farmed in conjunction with any adjacent land. The adjacent title with the most agricultural potential, CT 37011/1, is to the south east, however, with the Pipers River separating these two titles, it is highly unlikely that these titles would be farmed in conjunction because of their 'lifestyle' and 'hobby scale' characteristics (Ketelaar & Armstrong 2012).

Potential for conflict between the proposed new dwelling and adjacent agricultural/primary industry uses needs to also be considered. There are a range of activities associated with forestry, grazing and

¹As defined by AK Consultants in Ketelaar, A and Armstrong, D. 2012, *Discussions paper – Clarification of the Tools and Methodologies and Their Limitations for Understanding the Use of Agricultural Land in the Northern Region* which was a paper written for Northern Tasmania Development.

cropping. Learmonth *et al.* (2007) detail the common range of issues associated with sensitive uses such as residential use in the Rural Resource Zone which can constrain agricultural/primary industry activities (see Appendix 3). Common conflict issues associated with residential use in the Rural Resource Zone include spray drift from chemicals which would include fungicide, herbicide, and insecticide, noise from equipment (including shooting for game control), irrigation spray drift, odours and dust.

The Western Australia Department of Health (DOH, 2012) has published guidelines relating specifically to minimising conflict between agricultural/primary industry activities and residential areas through management of buffer areas. This study particularly focuses on spray drift and dust generation and recommends a minimum separation of 300m to reduce the impact of spray drift, dust, smoke and ash. Through the establishment of an adequately designed, implemented and maintained vegetative buffer, this minimum separation distance can be reduced to 40m. *The Launceston Planning Scheme 2015* recommends a distance of 200m as a buffer.

Because of the size and shape of the lot, a 200m setback from boundaries cannot be achieved, so consideration of the type and scale of adjacent uses needs to be considered to determine suitable setbacks. The adjacent titles with existing dwellings would be described as 'lifestyle lots' to 'hobby scale' lots, at best (Ketelaar & Armstrong 2012). The three south titles are also separated by the Pipers River.

An increase in agricultural/primary industry activity in the surrounding titles is highly unlikely due to their small size and isolation from agriculture/primary industry with commercial scale characteristics, so the risk for potential future conflict between a dwelling on the subject lot and adjacent titles based on agricultural/primary industry activities is considered negligible. No setbacks are required from adjacent titles for agricultural purposes.

CONCLUSIONS

The title is approximately 2.17ha in area and is covered unimproved pasture with a small area of plantation and native vegetation. Due to existing vegetation, Land Capability limitations and lack of a developed irrigation water resource, the agricultural/primary industry potential of the subject title is considered to be negligible. The title is also limited for farming in conjunction with other agricultural/primary industry land. There are no setbacks required from adjacent titles for agricultural or primary industry purposes.

REFERENCES

- Department of Health (2012). *Guidelines for Separation of Agricultural and Residential Land Uses. Establishment of Buffer Areas*
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- Grose, C. J. (1999). *Land Capability Handbook. Guidelines for the Classification of Agricultural Land in Tasmania*. (Second Edition ed.). Tasmania, Australia: Department of Primary Industries, Water and Environment.
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- City of Launceston (2015). *Launceston Interim Planning Scheme*.

APPENDIX 1 – MAPS

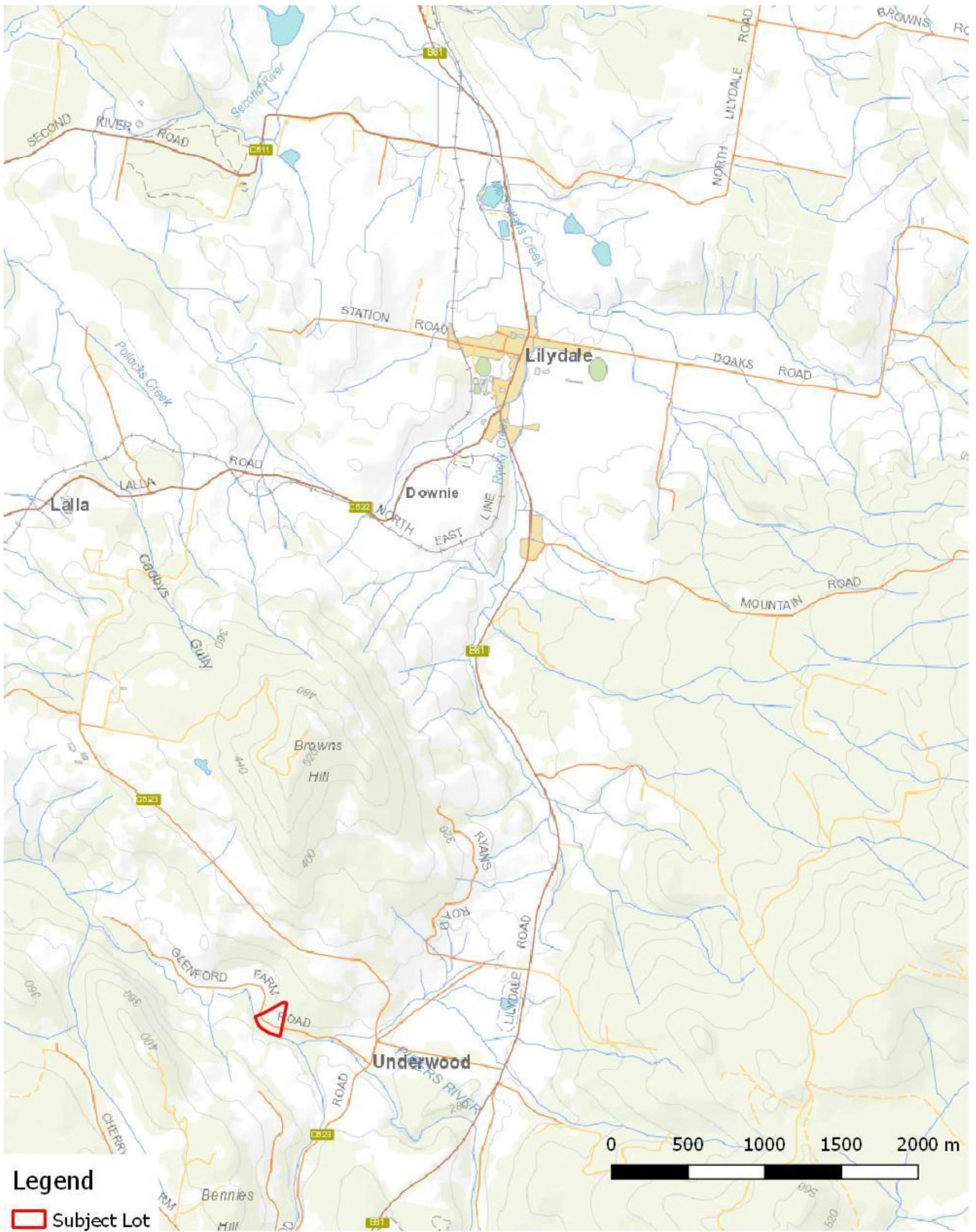
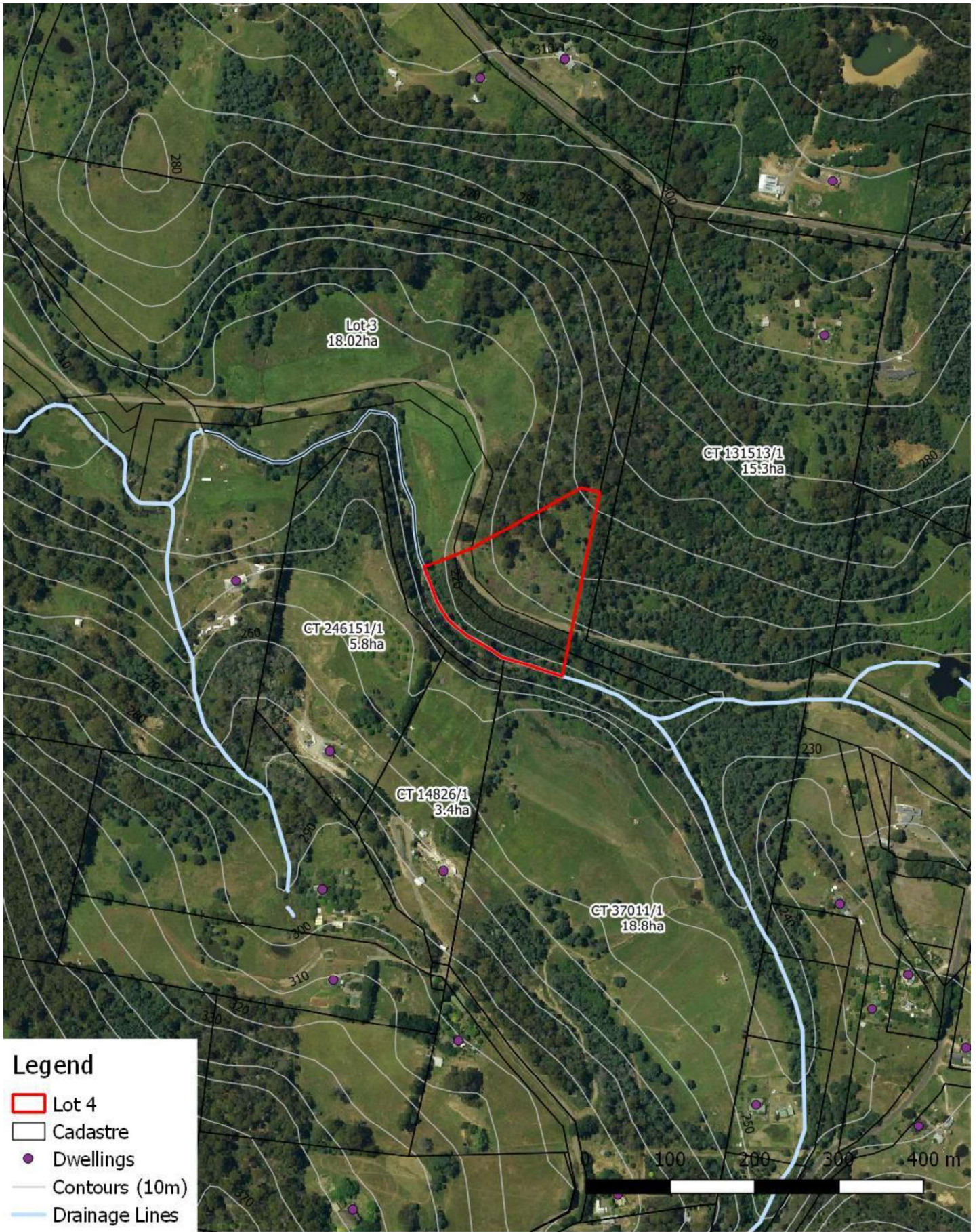


Figure 1. Location

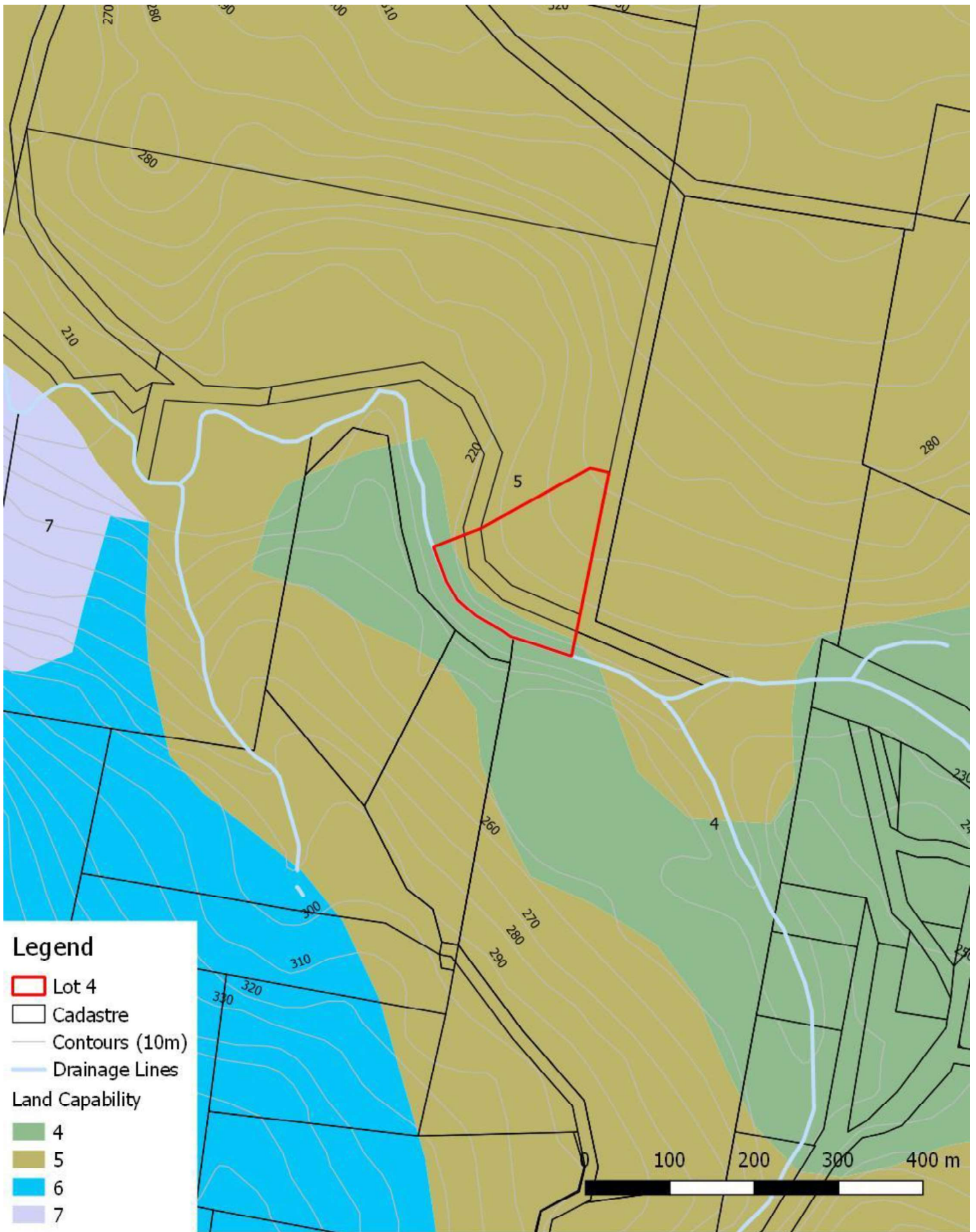


Map Name: Aerial Image & Surrounds
 Project: Agricultural Assessment
 Client: Morgan
 Date: 10/06/2020

BaseMap image by LIST Ortho
 Cadastre from LIST (C) State of Tas



Figure 2. Aerial image and surrounding titles.

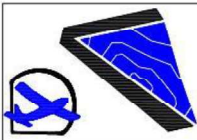


Map Name: Published Land Capability
 Project: Agricultural Assessment
 Client: Morgan
 Date: 10/06/2020

Published Land Capability 1:100,000 by DPIPW
 Cadastre from LIST (C) State of Tas



Figure 3. Published Land Capability



COHEN & ASSOCIATES P/L

LAND & AERIAL SURVEYORS

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**PLAN OF
SUBDIVISION
SHEET 1 OF 1**

REF: **96-88
(7923)**

Municipality: LAUNCESTON CITY COUNCIL
Site Address: 175 GLENFORD FARM RD UNDERWOOD
TAS 7268
Tasmap Sheet: -
Grid Reference: E: 516162 N: 5429454 (MGA)

Owners: W.L. & H.R. MORGAN
Title Refs: 179015/1, 179015/2, 179015/3 & 179015/4
Dates: Version 1: 25/05/2020
Version 2: 10/06/2020
Scale: 1 : 5000 @ A3

DISCLAIMER: This is a preliminary plan prepared without field survey and forms part of an application to subdivide the land described and is not to be used for any other purpose. Contours and levels may be transcribed from other sources and their accuracy has not been verified. These should not be used. The dimensions, area, location of improvements and number of lots are approximate and may vary as a result of decisions by the Municipality, Land Use Planning Review Panel, engineering or other advice. Easements may not be shown as these are to be determined at the time of survey. The plan is not to be copied unless this note is included.

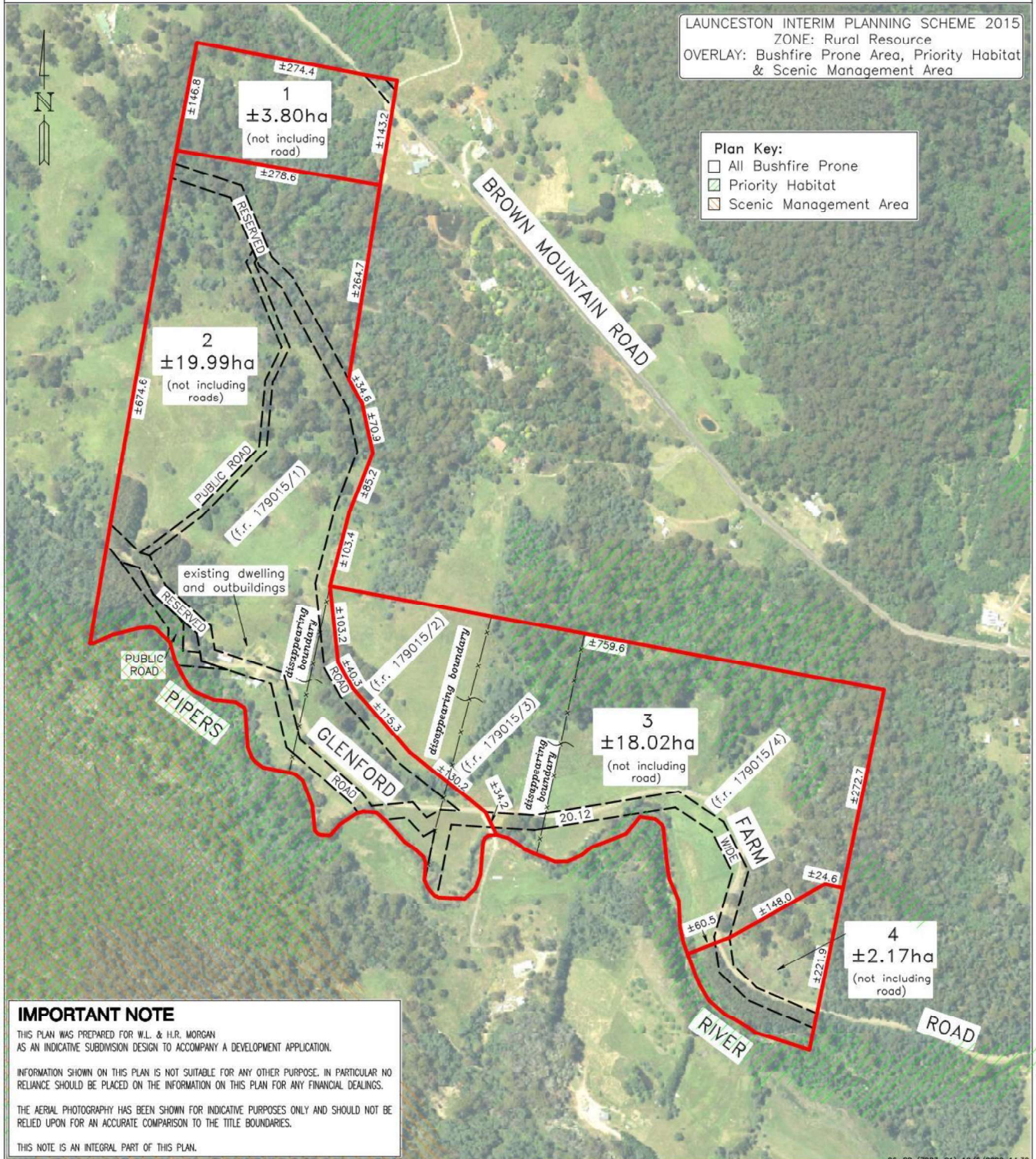


Figure 4. Subdivision Site Plan that includes the subject lot (Lot 1).

APPENDIX 2. LAND CAPABILITY DEFINITIONS FROM GROSE (1999)²

PRIME AGRICULTURAL LAND AS DESCRIBED IN THE PROTECTION OF AGRICULTURAL LAND 2009:

CLASS 1. Land well suited to a wide range of intensive cropping and grazing activities. It occurs on flat land with deep, well drained soils, and in a climate that favours a wide variety of crops. While there are virtually no limitations to agricultural usage, reasonable management inputs need to be maintained to prevent degradation of the resource. Such inputs might include very minor soil conservation treatments, fertiliser inputs or occasional pasture phases. Class 1 land is highly productive and capable of being cropped eight to nine years out of ten in a rotation with pasture or equivalent without risk of damage to the soil resource or loss of production, during periods of average climatic conditions.

CLASS 2. Land suitable for a wide range of intensive cropping and grazing activities. Limitations to use are slight, and these can be readily overcome by management and minor conservation practices. However, the level of inputs is greater, and the variety and/or number of crops that can be grown is marginally more restricted, than for Class 1 land. This land is highly productive but there is an increased risk of damage to the soil resource or of yield loss. The land can be cropped five to eight years out of ten in a rotation with pasture or equivalent during 'normal' years, if reasonable management inputs are maintained.

CLASS 3. Land suitable for cropping and intensive grazing. Moderate levels of limitation restrict the choice of crops or reduce productivity in relation to Class 1 or Class 2 land. Soil conservation practices and sound management are needed to overcome the moderate limitations to cropping use. Land is moderately productive, requiring a higher level of inputs than Classes 1 and 2. Limitations either restrict the range of crops that can be grown or the risk of damage to the soil resource is such that cropping should be confined to three to five years out of ten in a rotation with pasture or equivalent during normal years.

NON-PRIME AGRICULTURAL LAND AS DESCRIBED IN THE PROTECTION OF AGRICULTURAL LAND 2009:

CLASS 4. Land primarily suitable for grazing but which may be used for occasional cropping. Severe limitations restrict the length of cropping phase and/or severely restrict the range of crops that could be grown. Major conservation treatments and/or careful management is required to minimise degradation. Cropping rotations should be restricted to one to two years out of ten in a rotation with pasture or equivalent, during 'normal' years to avoid damage to the soil resource. In some areas longer cropping phases may be possible but the versatility of the land is very limited. (NB some parts of Tasmania are currently able to crop more frequently on Class 4 land than suggested above. This is due to the climate being drier than 'normal'. However, there is a high risk of crop or soil damage if 'normal' conditions return.).

CLASS 5. This land is unsuitable for cropping, although some areas on easier slopes may be cultivated for pasture establishment or renewal and occasional fodder crops may be possible. The land may have slight to moderate limitations for pastoral use. The effects of limitations on the grazing potential may be reduced by applying appropriate soil conservation measures and land management practices.

CLASS 6. Land marginally suitable for grazing because of severe limitations. This land has low productivity, high risk of erosion, low natural fertility or other limitations that severely restrict agricultural use. This land should be retained under its natural vegetation cover.

CLASS 7. Land with very severe to extreme limitations which make it unsuitable for agricultural use.

² Highlighted colour of Class corresponds with LIST Land Capability Class colours.

Table 1. Typical rural land use conflict issues (Learmonth *et al.* 2007).

Issue	Explanation
Absentee landholders	Neighbours may be relied upon to manage issues such as bush fires, straying stock, trespassers etc. while the absentee landholder is at work or away.
Access	Traditional or informal 'agreements' for access between farms and to parts of farms may break down with the arrival of new people.
Catchment management	Design, funding and implementation of land, water and vegetatin management plans are complicated with larger numbers of rural land-holders with differing perspectives and values.
Clearing	Neighbours may object to the clearing of trees, especially when it is done apparently without approvals or impacts on habitat areas or local amenity.
Cooperation	Lack of mutual co-operation through the inability or unwillingness on behalf individuals to contribute may curtail or limit traditional work sharing practices on-farm or in the rural community.
Dogs	Stray domestic dogs and wild dogs attacking livestock and wildlife and causing a nuisance.
Drainage	Blocking or changing drainage systems through a lack of maintenance or failure to cooperate and not respect the rights of others.
Dust	Generated by farm and extractive industry operations including cultivating, fallow (bare) ground, farm vehicles, livestock yards, feed milling, fertiliser spreading etc.
Dwellings	Urban or residential dwellings located too close to or affecting an existing rural pursuit or routine land use practice.
Electric fences	Electric shocks to children, horses and dogs. Public safety issues.
Fencing	Disagreement about maintenance, replacement, design and cost.
Fire	Risk of fire escaping and entering neighbouring property. Lack of knowledge of fire issues and the role of the Rural Fire Service.
Firearms	Disturbance, maiming and killing of livestock and pest animals, illegal use and risk to personal safety.
Flies	Spread from animal enclosures or manure and breeding areas.
Heritage management	Destruction and poor management of indigenous and non indigenous cultural artefacts, structures and sites.
Lights	Bright lights associated with night loading, security etc.
Litter	Injury and poisoning of livestock via wind blown and dumped waste. Damage to equipment and machinery. Amenity impacts.
Noise	From farm machinery, scare guns, low flying agricultural aircraft, livestock weaning and feeding, and irrigation pumps.
Odours	Odours arising from piggeries, feedlots, dairies, poultry, sprays, fertiliser, manure spreading, silage, burning carcasses/crop residues.
Pesticides	Perceived and real health and environmental concerns over the use, storage and disposal of pesticides as well as spray drift.
Poisoning	Deliberate poisoning and destruction of trees/plants. Spray drift onto non-target plants. Pesticide or poison uptake by livestock and human health risks.
Pollution	Water resources contaminated by effluent, chemicals, pesticides, nutrients and air borne particulates.
Roads	Cost and standards of maintenance, slow/wide farm machinery, livestock droving and manure.
Smoke	From the burning of crop residues, scrub, pasture and windrows.
Soil erosion	Loss of soil and pollution of water ways from unsustainable practices or exposed soils. Lack of adequate groundcover or soil protection.
Straying livestock	Fence damage, spread of disease, damage to crops, gardens and bush/rainforest regeneration.
Theft/vandalism	Interference with crops, livestock, fodder, machinery and equipment.
Tree removal	Removal of native vegetation without appropriate approvals. Removal of icon trees and vegetation.
Trespass	Entering properties unlawfully and without agreement.
Visual/amenity	Loss of amenity as a result of reflective structures (igloos, hail netting), windbreaks plantings (loss of
Water	Competition for limited water supplies, compliance with water regulations, building of dams, changes to flows. Stock access to waterways. Riparian zone management.
Weeds	Lack of weed control particularly noxious weeds, by landholders.
	<i>Based on: Smith, RJ (2003) Rural Land Use Conflict: Review of Management Techniques – Final Report to Lismore Living Centres (PlanningNSW).</i>

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Table 2 describes the general resource requirements for various agricultural land uses.

Resource	Livestock			Broad acre crops			Vegetables		Berries	Orchard fruits & vines	Nurseries & cut flowers	Forestry plantations
	Sheep	Cattle	Dairy	Cereals	Others	Processed	Un-processed					
	LC 3-6	LC 3-5/6	LC 3-5	LC 1-4	LC 1-4	LC 1-4	LC 1-4					
Land Capability	LC 3-6	LC 3-5/6	LC 3-5	LC 1-4	LC 1-4	LC 1-4	LC 1-4	LC 1-4/5	LC 1-4/5	LC 1-4 or N/A	LC 4-6	
Minimum paddock sizes	No minimum	No minimum	To suit grazing	10-15ha min.	5-10ha min.	10ha min.	10ha min.	2-4ha	2-5ha	2-4ha min.	10-20ha min.	
Farm size for a "viable" business	5,000-10,000 dse (area depends on rainfall)	5,000-10,000 dse (area depends on rainfall)	Capacity for at least 350 milkers	Broadacre cropping will be a mix of crops in rotation with pasture and livestock. The area required for viability is highly variable.				4-10ha	10-30ha	5-10ha	10-20ha min.	
Agricultural Land Mapping Project (3)	333ha	40ha	133ha	25ha					10ha		Not defined	
Irrigation water	Not required	Not required	Preferable 4-6ML/ha.	Not necessary	Mostly necessary, 2-3 ML/ha	Necessary, 2-6ML/ha	Necessary, 2-6ML/ha	Necessary, 1-3ML/ha	Necessary, 2-3ML/ha	Necessary, small quantity	Not required	
Climate specifications	Lower rainfall preferred for wool	No preferences	High rainfall (or irrigation)	Susceptible to spring frosts. Difficult to harvest in humid coastal conditions	Susceptible to spring frosts	Susceptible to spring frosts	Susceptible to spring frosts	High rainfall (or irrigation)	Susceptible to spring frosts for vines. Susceptible to summer rains for cherries. Susceptible to disease in high humidity in March for vines	Preferably low frost risk area	Rainfall above 700-800 mm	
Infrastructure	Yards & shed	Yards, crush, loading ramp	Dairy shed	Minimal	Irrig facilities	Irrig facilities	Irrig facilities	Irrig facilities	Irrig facilities	Plastic/glass houses	None	
Plant & equipment	Minimal	Minimal; hay feeding plant	General purpose tractor, hay/silage feeding	Tractors & implements	Tractors & implements	Tractors & implements	Tractors & implements	Tractors & implements	Tractors & implements	Small plant	None	
Market contracts	Not required	Not required	Necessary	Not required	Generally required	Necessary	Highly preferred	Desired	Desired	Contracts preferable	Varies	
Labour	Medium	Low	High	Low	Low	Low	Variable/medium	High at times	High at times	High at times	Low	
Local services	Shearers	Vet	Vet, dairy shed technician	Agronomist, contractors	Agronomist, contractors	Agronomist, contractors	Agronomist, contractors	Pickers	Pickers	Pickers	Contractors	
Regional suitability	Dryer areas good for wool. All areas suitable; larger farm sizes needed for viability.	All areas suitable. Suits small farms.	Economics dictate large area necessary. Needs high rainfall or large water resource for irrigation.	Generally large areas, so need larger paddocks and larger farms.	Generally large areas, so need larger paddocks and larger farms.	Medium sized paddocks & farms; area for crop rotations and irrigation.	Medium sized paddocks & farms; area for crop rotations and irrigation;	Specific site requirements; proximity to markets and transport/carriers.	Specific site requirements; potentially available in most municipalities.	Proximity to markets is important.	Low rainfall areas less preferred.	
Recommended min. buffer for individual dwellings (1)	50m to grazing area	50m to grazing area	50m to grazing area, 250m to dairy shed and 300m to effluent storage or continuous application areas (2)	200m to crop	200m to crop	200m to crop	200m to crop	200m to crop	200m to crop	200m to crop	100m from crop for aerial spraying.	
Recommended min. buffer for residential areas (1)	50m to grazing area	50m to grazing area	50m to grazing area, 500m to dairy shed	300m to crop	300m to crop	300m to crop	300m to crop	300m to crop	300m to crop	300m to crop	Site specific (1)	

(1) From (Learmonth, Whitehead, Boyd & Fletcher, 2007). These are industry specific recommended setbacks which do not necessarily align with Planning Scheme Setback requirements. Council should ensure they are aware of attenuation setback requirements for specific activities.
 (2) From (State Dairy Effluent Working Group, 1997).
 (3) The Agricultural Land Mapping Project (Dept of Justice, 2017) defined minimum threshold titles sizes that could potentially sustain a standalone agricultural enterprise.

Mr & Mrs W. Morgan
175 Glenford Farm Rd
Underwood 7268

Via email: millybrook@gmail.com

17th June 2020

Dear Helen & Warwick,

Application for Subdivision (no additional lots) at 175 Glenford Farm Rd, Underwood

We have undertaken a desktop assessment of the feasibility of the proposed subdivision (no additional titles created) at 175 Glenford farm Rd, Underwood. In our opinion, the proposal provides sufficient regard to the productive capacity of the land and will satisfactorily meet the requirements of the Planning Scheme from an agricultural perspective.

The following section of the Launceston Interim Planning Scheme 2015 (*the Planning Scheme*) is relevant;
26.4.2 Development Standards in the Rural Resource Zone

(P1.5) Subdivision not creating additional lots and not meeting the requirements of clause 9.3 maybe approved, having regard to:

- a) The size, shape and orientation of the lots;
- b) The setback to any existing building;
- c) The capacity of the lots for productive agricultural use;
- d) Any topographical constraints to agricultural use; and
- e) Current irrigation practices and the potential for irrigation.

The proposal is to adjust the boundary between four titles; CT 179015/1 (21.01ha), CT 179015/2 (5.67ha), CT 179015/3 (3.54ha) and CT 179015/4 (13.76ha). The proposal is to realign the boundaries to consolidate the pastured areas onto two titles as well as the threatened vegetation communities onto two titles. See Figure 4 for the proposed layout of the new lots. Lot 1 will be 3.8ha, Lot 2 will be 19.99ha, Lot 3 will be 18.02ha and Lot 4 will be 2.17ha. There is an existing dwelling located on CT 179015/1, this will be included in Lot 2.



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CT 179015/1 is 21.01ha in area and has an existing dwelling. The title has a southerly aspect with a steep to moderately sloped gradient. The northern boundary sits at 320m Above Sea Level (ASL), while the southern boundary sits at 210m ASL. Pipers River forms the title's southern boundary. Glenford Farm Rd runs east to west through the southern section of the title and separates a small area of the title adjacent to Pipers River from the majority of the title. A flora and fauna habitat survey was undertaken by Helen Morgan in February 2020 (the flora & fauna survey). According to the survey, the northern half of the title is covered in native vegetation. This area as a mix of *Eucalyptus viminalis* wet forest (WVI), *Eucalyptus regnans* forest (WRE), *Acacia dealbata* forest (NAD), with a couple of small pockets of regenerating cleared land (FRG) mapped within the forested areas and the most northern eastern pocket mapped as Agricultural land (FAG). Almost all of the balance of the title that is north of Glenford Rd is mapped as FAG, however, there is also a small area mapped as WVI and another small area mapped a WRE, as well as a small area of plantation which extends south on the other side of Glenford Rd. South of Glenford Rd, along the Pipers River is more vegetation mapped as WRE and NAD. WVI is listed as a threatened community under the *Nature Conservation Act 2002* and is also mapped as Priority Habitat under the Planning Scheme. The pastured area of the title is utilised for grazing. Published Land Capability at a scale of 1:100,000 maps the majority of the title as Class 5 land, with a very small area mapped as Class 7. Class 5 land is described as 'Land unsuited to cropping and with slight to moderate limitations to pastoral use' (the LIST).

CT 179015/2 is 5.67ha in area. There is no dwelling associated with this title. The title has a southerly aspect with a steeply sloped gradient. The northern boundary sits at 280m ASL, while the southern boundary sits at approximately 210m ASL. Pipers River forms the title's southern boundary. Glenford Farm Rd runs east to west through the southern section of the title and separates a small area of the title adjacent to Pipers River from the majority of the title. The flora & fauna survey maps the majority of the title as FAG, there is also a small area mapped as WRE. Published Land Capability at a scale of 1:100,000 maps the majority of the title as Class 5 land, with a very small area mapped as Class 7 adjacent to the Pipers River.

CT 179015/3 is 3.54ha in area. There is no dwelling associated with this title. The title has a south easterly aspect with a moderate to steeply sloped gradient. The north western corner is 270m ASL, while the southern area of the title is <220m ASL. Pipers River forms the title's southern boundary. Glenford Farm Rd runs east to west through the southern section of the title and separates a small area of the title adjacent to Pipers River from the majority of the title. The northern half of the title is covered in native vegetation. The flora & fauna survey maps this as WRE and NAD. The southern half is predominately pasture and is mapped as FAG. Published Land Capability at a scale of 1:100,000 maps the title as Class 5 land.

CT 179015/4 is 13.76ha in area. There is no dwelling associated with this title. The title has a southerly to south westerly aspect with a moderate to steeply sloped gradient. The north eastern boundary sits at 290m ASL, while the southern boundary sits at approximately 210m ASL. Approximately half the title (on the upper slopes) is covered in native vegetation, which the flora & fauna survey maps as WRE, WVI, with a small pocket of *Eucalyptus obliqua* wet forest (WOB). The balance of the title is pasture. Published Land Capability at a scale of 1:100,000 maps the majority of the title as Class 5 land with a small area of Class 4 land along the southern boundary.

There are no existing irrigation water resources associated with the property. According to DPIPW's Water Assessment Tool (WAT) there is a substantial volume of Surety 5 water and Surety 6 water available for irrigation as a winter take from the Pipers River at the most western point of the property. Surety 5 water is expected to be available eight years out of ten and Surety 6, approximately six to seven years out of ten. To utilise this water for summer, a storage would need to be constructed. Based on the 10m contours there are negligible potential dam sites across the property. Furthermore, based on the published Land Capability and existing slope it is unlikely the land would be utilised for irrigation beyond occasional irrigation of pasture. It is unlikely to be economically viable to develop irrigation on the property under these circumstances.

The proposal will realign boundaries and not create any new lots and will consolidate the main grazing areas onto two lots. It will also consolidate the existing threatened vegetation communities onto two lots (Lots 2 & 3). The proponents have indicated the land associated with Lots 2 & 3 will continue to be utilised for grazing at the same capacity that is currently the case (hobby scale¹). While the two smaller blocks created on unproductive land will likely be sold in the future. The new boundaries will not reduce any of the existing setbacks between the existing dwelling and adjacent boundaries.

The alignment of lots will not affect the capacity for current and future productive agriculture.

Yours Sincerely,



Michael Tempest

Natural Resource Management Consultant.

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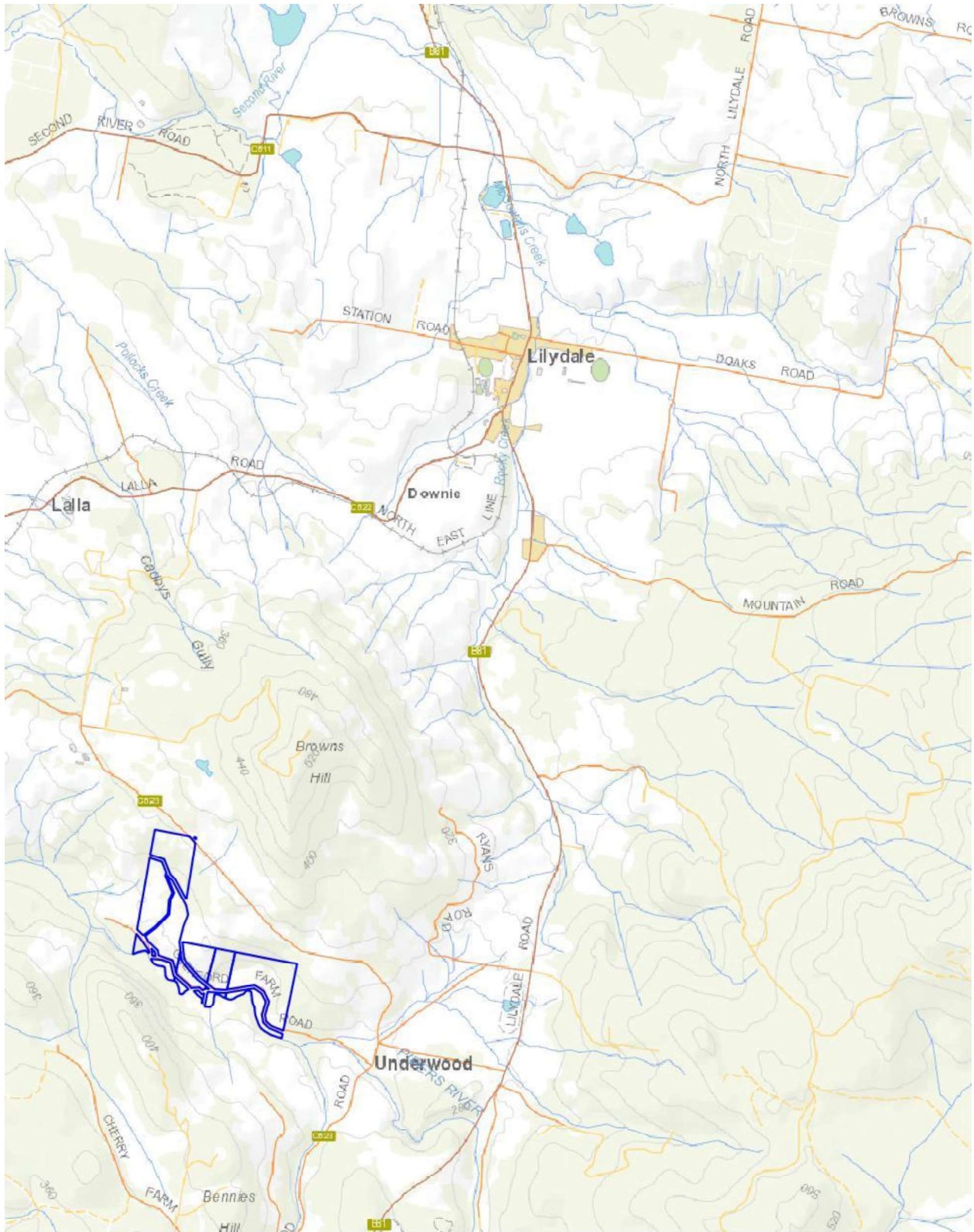
Web: www.akconsultants.com.au

¹ As defined by AK Consultants in Ketelaar, A and Armstrong, D. 2012, *Discussions paper – Clarification of the Tools and Methodologies and Their Limitations for Understanding the Use of Agricultural Land in the Northern Region* which was a paper written for Northern Tasmania Development.

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- Morgan, H. (2020). *Flora and Fauna Habitat Survey 175 Glenford Farm Rd, Underwood*. Bushways Environmental Services – Tasmania

Appendix 1 – Maps



Map Name: Location
Project: Agricultural Assessment
Client: Morgan
Date: 10/06/2020

BaseMap image by LIST Topo
Cadastral from LIST (C) State of Tas



Figure 1: Location of titles.

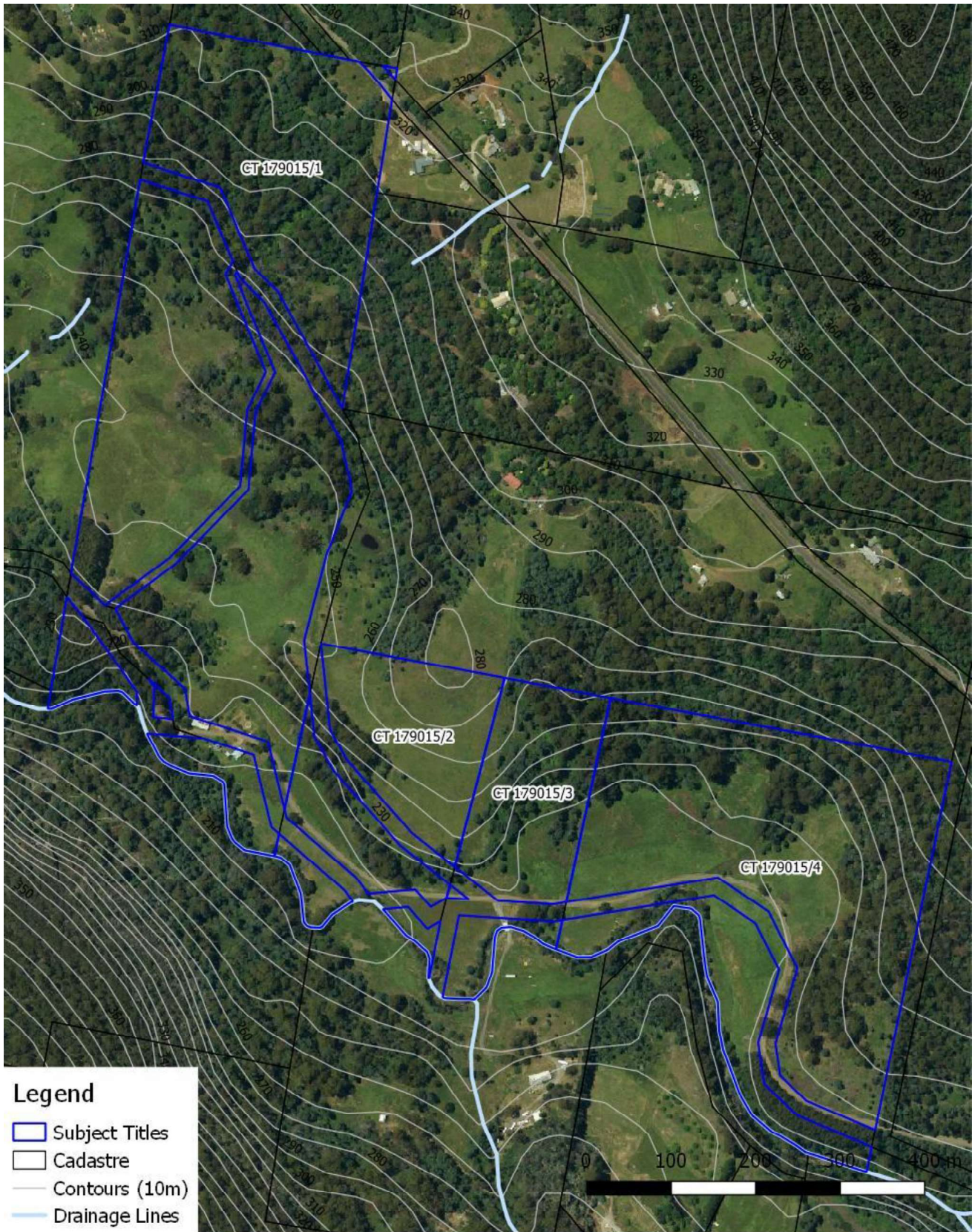
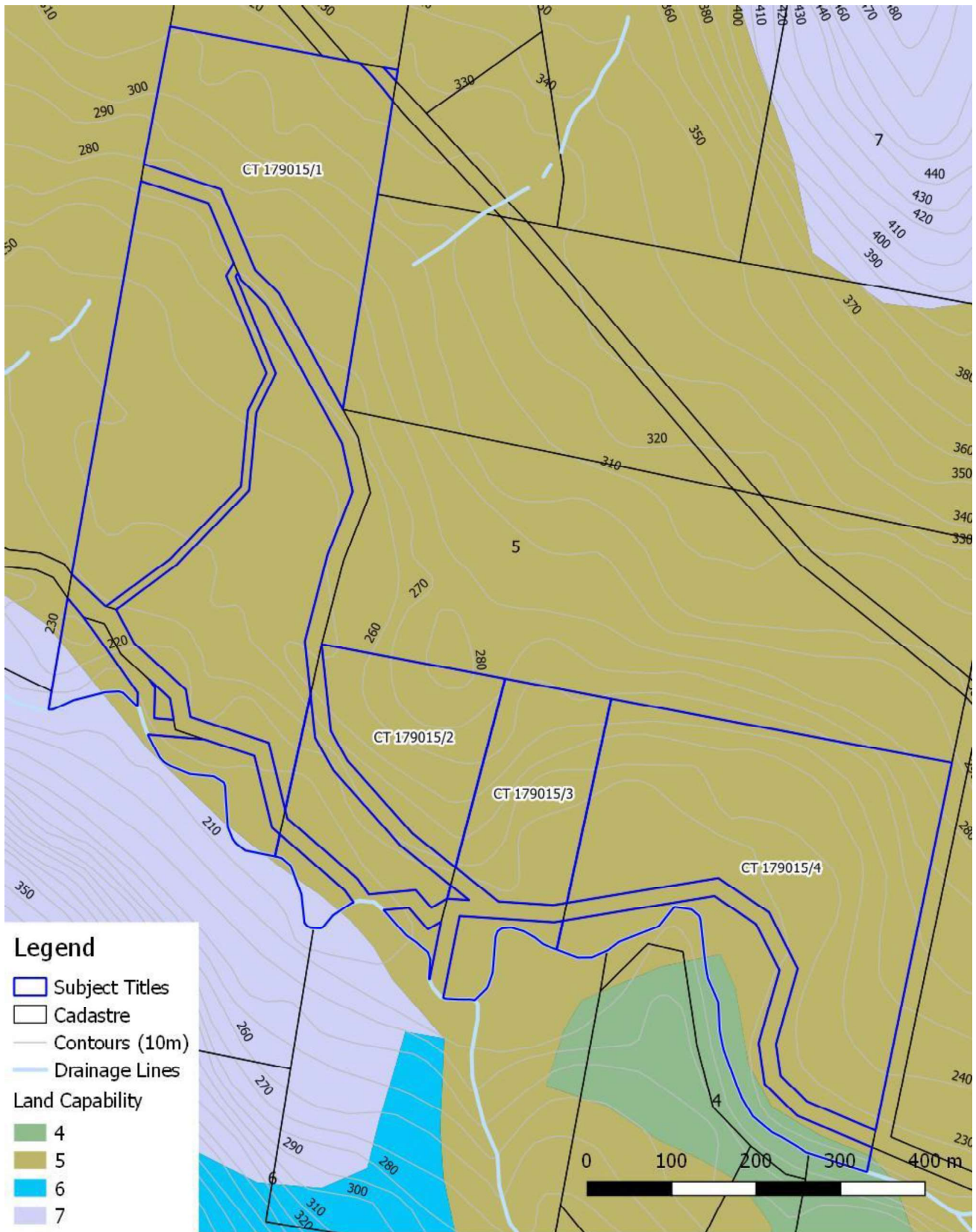


Figure 2: Aerial Image of Subject Titles

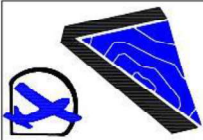


Map Name: Published Land Capability
 Project: Agricultural Assessment
 Client: Morgan
 Date: 10/06/2020

BaseMap image by LIST Ortho
 Published Land Capability 1:100,000 by DPIPW
 Cadastre from LIST (C) State of Tas



Figure 3: Published Land Capability (1:100,000)



COHEN & ASSOCIATES P/L

LAND & AERIAL SURVEYORS

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PLAN OF SUBDIVISION SHEET 1 OF 1

REF: **96-88
(7923)**

Municipality: LAUNCESTON CITY COUNCIL
Site Address: 175 GLENFORD FARM RD UNDERWOOD
TAS 7268
Tasmap Sheet: -
Grid Reference: E: 516162 N: 5429454 (MGA)

Owners: W.L. & H.R. MORGAN
Title Refs: 179015/1, 179015/2, 179015/3 & 179015/4
Dates: Version 1: 25/05/2020
Version 2: 10/06/2020
Scale: 1 : 5000 @ A3

DISCLAIMER: This is a preliminary plan prepared without field survey and forms part of an application to subdivide the land described and is not to be used for any other purpose. Contours and levels may be transcribed from other sources and their accuracy has not been verified. These should not be used. The dimensions, area, location of improvements and number of lots are approximate and may vary as a result of decisions by the Municipality, Land Use Planning Review Panel, engineering or other advice. Easements may not be shown as these are to be determined at the time of survey. The plan is not to be copied unless this note is included.

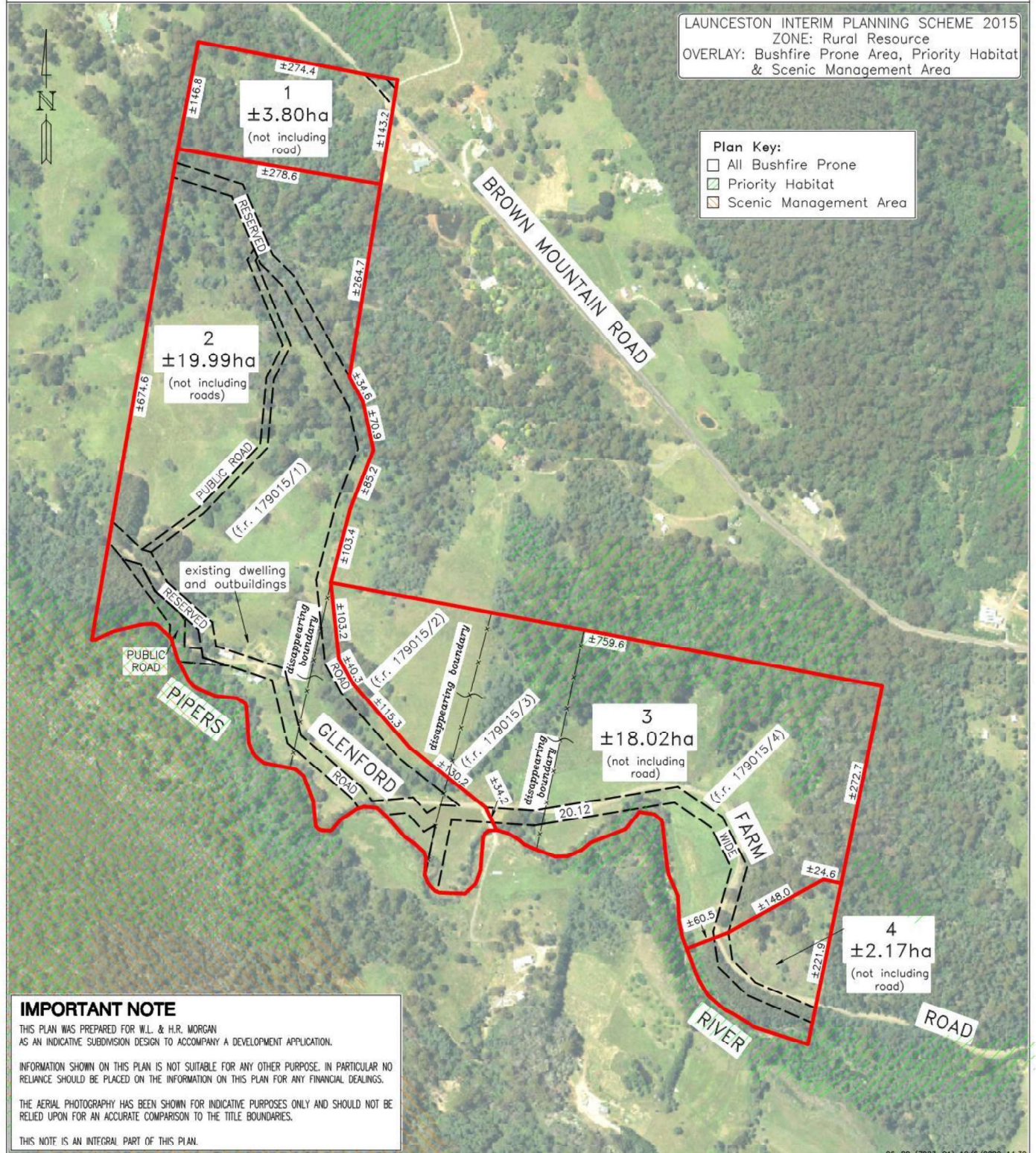


Figure 3: Proposed Site Plan