Andy Hamilton & Associates Pty Ltd
PO Box 223, Bicheno Tasmania 7215
Harveys Farm Road , Bicheno Tasmania
0418 593 300
ashassoc@bigpond.com
ABN 67126174187

The General Manager
GSC
PO Box 6
Triabunna 7190

31-10-18

Dear Sir

Proposed Subdivision CT 206455-1, 17010 Tasman Highway, Bicheno RBMJ Trading Trust

Property Address	Lot 1 TASMAN HWY BICHENO TAS 7215
Property ID	2976736 View Details
Title Reference	206455/1 View Details
Owner Name(s)	ROBERT JOHN LYNE BELINDA DAWN LYNE
Postal Address	17010 TASMAN HWY BICHENO TAS 7215

Zone Number	24
Zone	24.0 Light Industrial
Scheme Code	121
Planning Scheme	Glamorgan-Spring Bay Interim Planning Scheme 2015
Scheme Date	29/07/2015

Overlay Name	Scenic Landscape Corridor
Overlay Code	121.SCT
Planning Scheme Code	121
Planning Scheme	Glamorgan-Spring Bay Interim Planning Scheme 2015
Description	100m buffer of major road centerline in rural areas
Overlay Name	Attenuation Area
Overlay Code	121.ATT
Planning Scheme Code	121
Planning Scheme	Glamorgan-Spring Bay Interim Planning Scheme 2015
Description	Landfill
Class	
Planning Scheme Date	29/07/2015

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Please find proposal plan for 34 lots and balance including TIA, Effluent disposal report, Bushfire Plan, copy of title and da form.

Introduction

The site lays south of the Tasman Highway, east of the Bicheno waste transfer station. A drone survey was undertaken to provide a concise 3d model (AHD/GDA) and rectified aerial photography (Copy attached showing subject site and balance of land)

The proposal is to create lots to enable future light industrial uses in the Bicheno area – known for a lack of available opportunities to site such uses.

The site is well drained and provides for a consolidated approach in an area well suited to light industrial uses.

Drainage & Effluent

Most storm water from the site will fall to the east –see attached indicative drainage plan. The final drainage outcome to be in accordance with engineering design plans submitted prior to any construction.

See Waste Water plan by Geosolutions attached.

Scenic Landscape Corridor Overlay

A scenic landscape overlay runs along the frontage of the Land. Within this overlay, a well established vegetation buffer is in place running for the full length of the highway. Any future uses on proposed lots will need to address the requirements of the overlay, however the existing vegetation belt provides provides for desirable screening. A vegetation buffer zone can be incorporated in the future schedule of easements or via a part 5 agreement.

Attenuation Area Overlay.

Creation of lots and future development on same is anticipated within the Attenuation area around the waste transfer station (deemed 150m radius per table) It is noted that per the code point 9.2, the code does not apply to light industrial use. (quoted below)

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Future Reticulated Water

Taswater have been consulted about the opportunity to provide reticulated water to the site. They have advised: currently undertaking a feasibility study into a new reservoir for Bicheno sited to enable possible future reticulation water pressure for this site. Any water reticulation from town supply would be at a later date. A future Dam to the south of the lots is envisaged which may provide an opportunity for bulk untreated water if required/suited.

Staging

Given the nature of future uses which will be market driven, Staging is intended to be flexible with lots to be released in groups to best meet demand and construction constraints. Consent to this flexibility in staging is requested on the basis that the extent of each proposed stage is to be approved by Council as part of engineering design process. The proposed lots may be subject to minor adjustment within the intent of the DA to provide for future uses.

Layout and Roads

Roads are proposed at 20m wide. Sight distances for access from the Tasman Highway comply with Planning Scheme requirements – see attached TIA. The road system when completed provides for a turning loop as shown. As stages are developed, temporary turning facilities will be used as needed until loop is complete. Future road access to the balance is provided for as shown to enable a continuation of the layout pattern. Land to the south including the Waste Transfer Station is zoned light industrial. There is opportunity to connect the road network with this area through the balance of land in the future.

All lots are over minimum size of 1000m2, have average slopes of less than 1 in 10 and comfortably fit required build area envelopes of 20m by 20m together with required set backs, effluent areas and fire set backs..

All lots except lots 8 and 12 satisfy required frontage of 25m. Lot 8 with a 20m frontage is proposed under the performance criteria 24.5P3.– this is consistent with the zone purpose. Access to lot 12 is proposed via a right of way 20m wide as shown (24.5P3). This provides for practical access and any future public road dedicated over same will automatically replace the right of way.

Given the likely limited use of footpaths in the area and low density nature of the development, future grass nature strips are proposed for foot traffic.

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Wording in italics is from the Glamorgan Spring Bay Interim Planning Scheme 2015.

24.1.1 Zone Purpose Statements

24.1.1.1
To provide for manufacturing, processing, repair, storage and distribution of goods and materials where off-site impacts are minimal or can be managed to minimise conflict or impact on the amenity of any other uses.

24.1.1.2
To promote efficient use of existing industrial land stock.

24.1.1.3
To minimise land use conflict in order to protect industrial viability and the safety and amenity of sensitive land uses in adjacent zones.

24.1.1.4
To provide industrial activity with good access to strategic transport networks.

24.5.1 Subdivision

Objective:

To provide for lots with appropriate area, dimensions, services, roads and access to public open space to accommodate development consistent with the Zone Purpose and any relevant Local Area Objectives or Desired Future Character Statements.

Acceptable Solutions	***Performance Criteria***
A1	***P1***
The size of each lot must be no less than: *1,000 m².* *except if for public open space, a riparian reserve or utilities.*	*The size of each lot must be sufficient to accommodate development consistent with the Zone Purpose, having regard to any Local Area Objectives or Desired Future Character Statements.*
A2	***P2***
The design of each lot must provide a minimum building area that is rectangular in shape and complies with all of the following; *(a) clear of the frontage, side and rear boundary setbacks;* *(b) clear of easements;* *(c) clear of title restrictions that would limit or restrict the development of a commercial building;*	*The design of each lot must contain a building area able to satisfy all of the following:* *(a) be reasonably capable of accommodating use and development consistent with Zone Purpose, having regard to any Local Area Objectives or Desired Future Character Statements;* *(b) provides for sufficient useable area on the lot for on-site parking and maneuvering, unless adequate arrangements are made for suitable alternative solutions to future likely*

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(d) has an average slope of no more than 1 in 10;	*demand generated by the development potential of the lot;*
(e) is a minimum of 20 m x 20 m in size.	*(c) minimises the need for earth works, retaining walls, and cut & fill associated with future development.*
A3	***P3***
The frontage for each lot must be no less than: *25 m.*	*The frontage of each lot must be sufficient to accommodate development consistent with the Zone Purpose, having regard to any Local Area Objectives or Desired Future Character Statements.*
A4	***P4***
No Acceptable Solution.	*The arrangement of roads within a subdivision must satisfy all of the following:* *(a) the subdivision will not compromise appropriate and reasonable future subdivision of the entirety of the parent lot;* *(b) accords with any relevant road network plan adopted by the Planning Authority;* *(c) facilitates the subdivision of neighbouring land with subdivision potential through the provision of connector roads, where appropriate, to the common boundary;* *(d) provides for acceptable levels of access, safety, convenience and legibility through a consistent road function hierarchy.*
A5	***P5***
Each lot must be connected to services adequate to support the likely future use and development of the land.	*No Performance Criteria.*
A6	***P6***
No Acceptable Solution.	*Public Open Space must be provided as land or cash in lieu, in accordance with the relevant Council policy.*

E9.2 Application – (extract, attenuation code)

E9.2.1
This code applies to:

(a) development or use that includes the activities listed in Table E9.1 and E9.2 in a zone

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other than the Light Industrial, General Industrial or Port and Marine Zone;

(b) development or use for sensitive use, including subdivision intended for sensitive use;

(i) on land within an Attenuation Area shown on the planning scheme maps, or

(ii) on land within the relevant attenuation distance from an existing or approved (permit granted) activity listed in Tables E9.1 and E9.2 if no Attenuation Area is shown on the planning scheme maps and that activity is not located in the Light Industrial, General Industrial or Port and Marine Zone.

E9.7 table 9.1 Attenuation distances (extract)

Disposal Site	*all except specific categories below.*	*odours, dust, disease, vectors, visual*	*500*
	transfer station (except very large stations	*odours, dust, disease, vectors, visual*	*150*

E14.5 Application Requirements (scenic landscape code)

E14.5.1

In addition to any other application requirements, the planning authority may require the applicant to provide any of the following information if considered necessary to determine compliance with performance criteria:

(a) a statement of landscape significance;

(b) photographs, drawings or photomontages necessary to demonstrate the impact of the proposed development on the landscape value of the area;

(c) a landscape impact statement.

E14.2 Application

E14.2.1

This code applies to development on land defined within this Code as either of the following:

(b) a Scenic Landscape Corridor.

This code does not apply to use.

Necessary Easements to be fixed at time of survey. The owners have been advised of the lodgement of this proposal.

Yours faithfully

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
206455	1
EDITION	DATE OF ISSUE
3	16-Aug-2017

SEARCH DATE : 31-Oct-2018
SEARCH TIME : 05.51 PM

DESCRIPTION OF LAND

Parish of BICHENO, Land District of GLAMORGAN
Lot 1 on Plan 206455
Derivation : Lot 28252 Gtd. to F. Bowker.
Prior CT 2344/45

SCHEDULE 1

M644975 TRANSFER to BELINDA DAWN LYNE and ROBERT JOHN LYNE
Registered 16-Aug-2017 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
E101708 MORTGAGE to Australia and New Zealand Banking Group Limited Registered 16-Aug-2017 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

ORIGINAL – NOT TO BE REMOVED FROM TITLES OFFICE

R.P. 1469
TASMANIA
REAL PROPERTY ACT, 1862, as amended

NOTE—REGISTERED FOR OFFICE CONVENIENCE TO REPLACE Purchase Grant Vol. 184 Fol. 155

CERTIFICATE OF TITLE

Register Book Vol. 2344 Fol. 45

I certify that the person described in the First Schedule is the registered proprietor of an estate in fee simple in the land within described together with such interests and subject to such encumbrances and interests as are shown in the Second Schedule. In witness whereof I have hereunto signed my name and affixed my seal.

T.E. Hutchinson
Recorder of Titles.

RECORDER OF TITLES TASMANIA

DESCRIPTION OF LAND

PARISH OF BICHENO LAND DISTRICT OF GLAMORGAN
ONE HUNDRED AND NINETEEN ACRES THREE ROODS TWELVE PERCHES on the Plan hereon

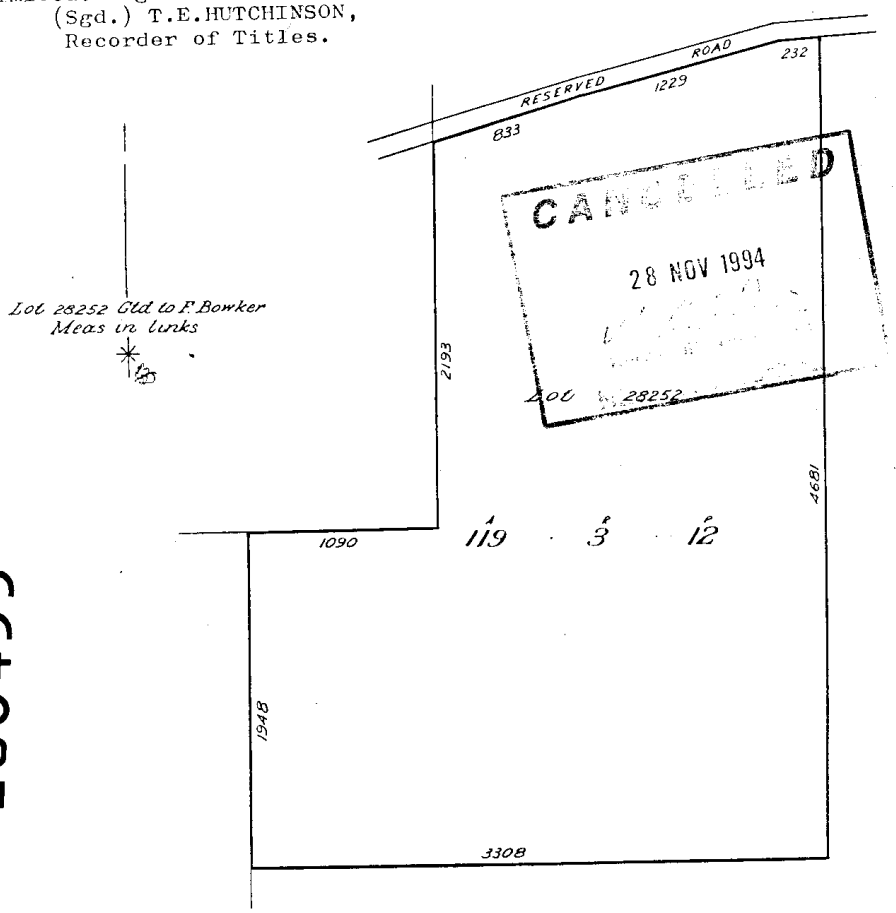
FIRST SCHEDULE (continued overleaf)

ANGUS NEIL DUNCOMBE of Somerset, Foreman and
MARIE JEAN DUNCOMBE his wife

ENTRY CANCELLED T.E. Hutchinson Recorder of Titles

SECOND SCHEDULE (continued overleaf)

NO. A287375 MORTGAGE to The Commercial Bank of Australia Limited. Registered 9th April, 1968 at Noon.
(Sgd.) T.E.HUTCHINSON,
Recorder of Titles.



FIRST Edition. Registered 13 MAY 1968
Derived from P.G. Vol. 184 Fol. 155 Transfer A191064 L. Bowker.

THE RECORDER OF TITLES ARE NO LONGER SUBSISTING.
Lot 1 of this plan consists of all the land comprised in the above-mentioned cancelled folio of the Register.

REGISTERED NUMBER 206455

Bushfire Hazard Management Report: Subdivision

Report for: RBMJ Trading Trust

Property Location: **Lot 1 Tasman Hwy, Bicheno**

Prepared by: Scott Livingston

Livingston Natural Resource Services
12 Powers Road
Underwood, 7268

Date: 26th June 2018

Client:	RBMJ Trading Trust, (R & B Lyne)
Property identification:	Lot 1 Tasman Hwy, Bicheno. CT 206455/1 PID 2976736 Current zoning: Light Industrial, Glamorgan Spring Bay Interim Planning Scheme 2015
Proposal:	A 35 lot subdivision is proposed from existing title CT 206455/1 at Tasman Hwy, Bicheno
Assessment	A field inspection of the site was conducted to determine the Bushfire Risk and Bushfire Attack Level. xxxxxxxxxxxxxxxxxxx
Comments:	

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

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 35 lot subdivision is proposed from existing title CT 206455/1 at Tasman Hwy, Bicheno. Lots 1-34 vary in size from 1,232m^2 to 6,540m^2 with a 38.8 ha balance lot (35). The area is bushfire prone, being less than 100m from vegetation greater than 1ha in size, (grassland, scrub and forest).

The property is zoned Light Industrial, Glamorgan Spring Bay Planning Scheme, 2015 and has no existing dwellings. The property has frontage to Tasman Hwy and is not serviced by a reticulated water supply. The property is bounded to the north by the Tasman Highway.

Surrounding titles to the north, east are Rural Resource zoned pasture and forest. Land to the south is Environmental Management Zoned Crown Land that is forested. Land to the west is zoned light industrial and contains the Bicheno Waste Transfer site and pasture with patches of forest. A Scenic Landscape Corridor, 100m buffer from road centreline, applies to the Tasman Highway. A 10m wide retention strip for existing tress has been applied to the highway frontage and considered to have a fuel loading of woodland. The property is currently a mosaic of grassland, woodland and forest, with some gorse infestations.

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

BAL AND RISK ASSESSMENT

The land is considered to be within a Bushfire Prone Area due to proximity of bushfire prone vegetation, greater than 1 ha in area.

VEGETATION AND SLOPE

	North	East	South	West
Vegetation within 100m Lot 200 boundarie	0-20m Road and verges, 20-100m grassland	0-100m forest	0-100m forest	0-100m grassland (portion waste transfer station)
Slope (degrees, over	Downslope 0-5°	Flat/ Upslope	Flat/ Upslope	Downslope 0-5°

BUILDING AREA BAL RATING

Setback distances for BAL Ratings have been calculated based on the vegetation that will exist after development and management of land within 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 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.

Bushfire Attack Level (BAL)	**Predicted Bushfire Attack & Exposure Level**
BAL-Low	Insufficient risk to warrant specific construction requirements
BAL-12.5	Ember attack, radiant heat below 12.5kW/m²
BAL-19	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 12.5-19kW/m²
BAL-29	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 19-29kW/m²
BAL-40	Increasing ember attack and burning debris ignited by windborne embers together with increasing heat flux between 29-40kW/m²
BAL-FZ	Direct exposure to flames radiant heat and embers from the fire front

Setbacks	**Grassland**	**Scrub**	**Woodland**	**Forest**
BAL Low				
Upslope and flat	50m	100m	100m	100m
Downslope 0-5°	50m	100m	100m	100m
BAL 12.5				
Upslope and flat	14m	27m	22m	32m
Downslope 0-5°	16m	31m	26m	38m
BAL 19				
Upslope and flat	10m	19m	15m	23m
Downslope 0-5°	11m	22m	18m	27m

PROPOSED LOT BAL RATING

It is assumed that land within the subdivision lots 1-34 will be managed to maintain fuel loads to protect developments, the balance lot may be left unmanaged and contain fuel loads up to scrub.

Lot	**BAL Rating**	Building area
1-7	BAL 12.5	>36m from northern boundary (inc 10m landscape buffer)
	BAL 19	>28m from northern boundary (inc 10m landscape buffer)

8	BAL 12.5	>36m from northern boundary (inc 10m landscape buffer)
		>32m from eastern boundary
	BAL 19	>28m from northern boundary (inc 10m landscape buffer)
		>23m from eastern boundary
9-10	BAL 12.5	>32m from eastern boundary
	BAL 19	>23m from eastern boundary
11-12	BAL 12.5	>32m from eastern boundary
		>38m from the western boundary of the ROW.
	BAL 19	>23m from eastern boundary
		>27m from the western boundary of the ROW.
13, 15, 17, 19, 21, 23, 25, 27, 29	BAL 12.5	none required
14, 16, 18, 20, 22, 24, 26, 28, 30	BAL 12.5	>11m from the southern boundary
	BAL 19	>2m from the southern boundary
31	BAL 12.5	>36m from northern boundary (inc 10m landscape buffer)
		>16m from the western boundary
	BAL 19	>28m from northern boundary (inc 10m landscape buffer)
		>11m from the western boundary
32-33	BAL 12.5	>16m from the western boundary
	BAL 19	>11m from the western boundary
34	BAL 12.5	>16m from the western boundary
		>31m from the southern boundary
	BAL 19	>11m from the western boundary
		>22m from the southern boundary
35 (balance)	BAL 12.5	>32m from the eastern, southern, northern adjacent to Waste transfer station boundaries
		>14m from the western boundary
	BAL 19	>27m from the eastern, southern, northern adjacent to Waste transfer station boundaries
		>11m from the western boundary

Additional building area would be available on Lots 12 and 34 with hazard management on the balance lot (35). This may be revised at time of construction.

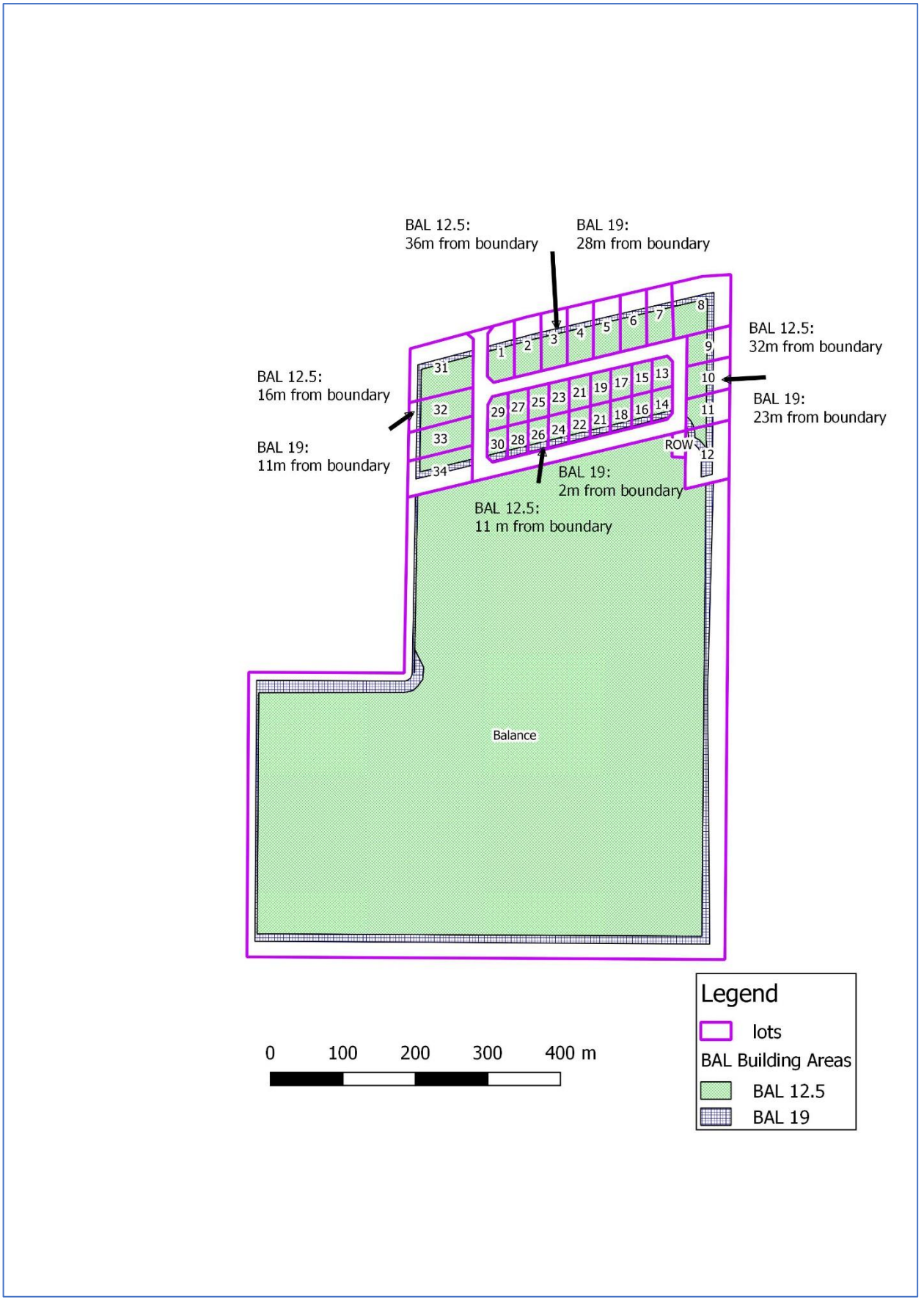


Figure 1: BAL Building Areas

HAZARD MANAGEMENT AREA

All land within lot development area (lots 1-34) must be maintained as no higher level than grassland with the exception of the 10m landscape buffer strip. During development land within the development area must be managed as low threat within 16m of any lot from commencement of construction on that lot.

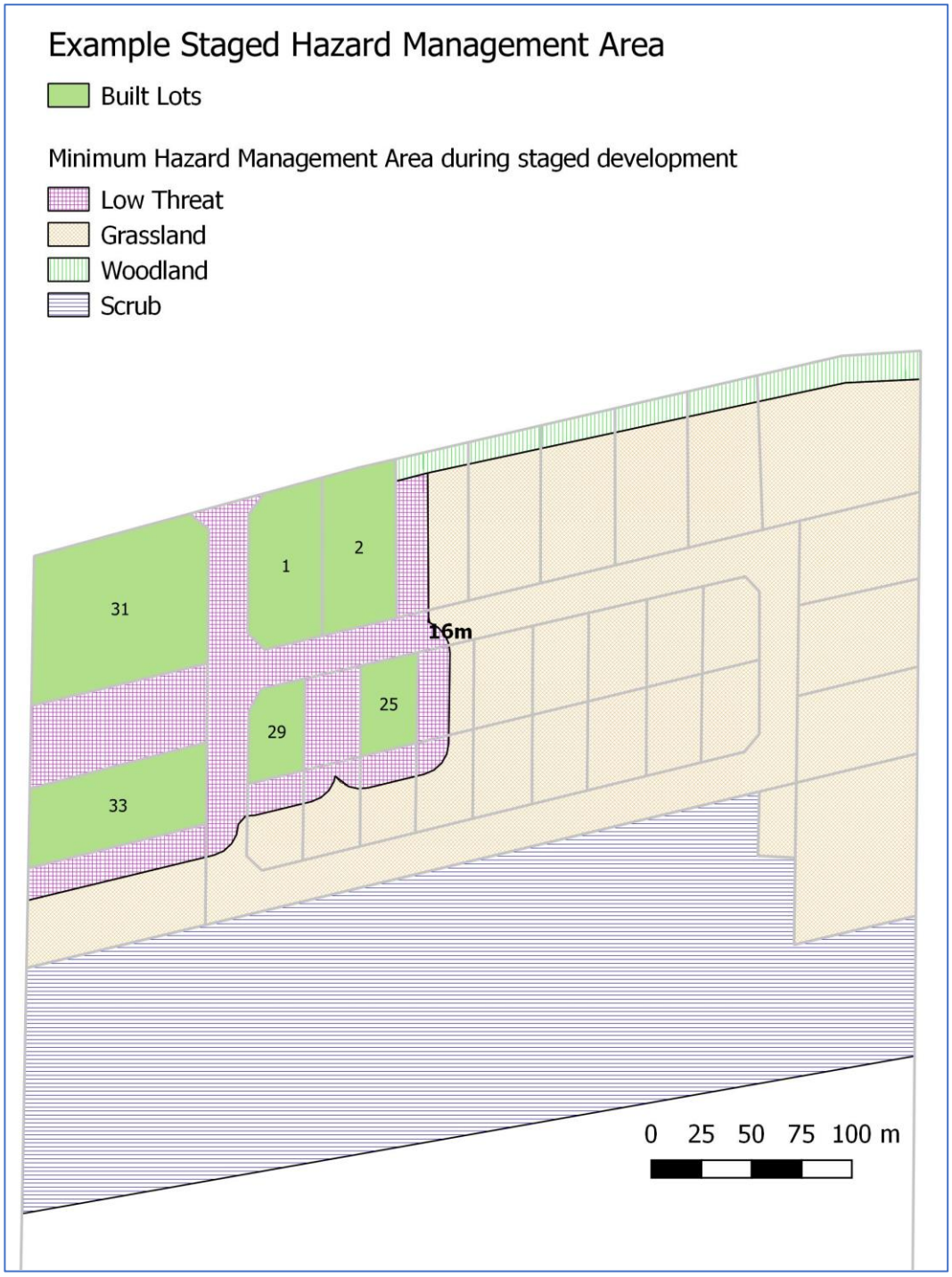


Figure 2: Example Hazard Management Area during development

ROADS

Subdivision roads must comply with the relevant elements of Table E1 Roads from the *Draft Interim Planning Directive No. 1.1 Bushfire-Prone Areas Code.* During development the terminus of any staged road will require a turning circle with a minimum 12m outer radius, this may be gravelled and temporary until further stages are added.

Table E1: Standards for roads

Element		**Requirement**
A.	Roads	Unless the development standards in the zone require a higher standard, the following apply: (a) two-wheel drive, all-weather construction; (b) load capacity of at least 20t, including for bridges and culverts; (c) minimum carriageway width is 7m for a through road, or 5.5m for a dead-end or cul-de-sac road; (d) minimum vertical clearance of 4m; (e) minimum horizontal clearance of 2m from the edge of the carriageway; (f) cross falls of less than 3 degrees (1:20 or 5%); (g) maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; (h) curves have a minimum inner radius of 10m; (i) dead-end or cul-de-sac roads are not more than 200m in length unless the carriageway is 7 metres in width; (j) dead-end or cul-de-sac roads have a turning circle with a minimum 12m outer radius; and (k) carriageways less than 7m wide have 'No Parking' zones on one side, indicated by a road sign that complies with *Australian Standard AS1743-2001 Road signs-Specifications*.

PROPERTY ACCESS

Access to lots must comply with the relevant elements of Table E2 Access from the *Interim Planning Directive No. 1.1 Bushfire-Prone Areas Code.*

Table E2: Standards for Property Access

Column 1		Column 2
Element		**Requirement**
A.	Property access length is less than 30 metres; or access is not required for a fire appliance to access a water	There are no specified design and construction requirements.
B.	Property access length is 30 metres or greater; or access for a fire appliance to a water connection point.	The following design and construction requirements apply to property access: (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: (a) A turning circle with a minimum inner radius of 10 metres; or (b) A property access encircling the building; or

C.	Property access length is 200 metres or greater.	The following design and construction requirements apply to property access: (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	The following design and construction requirements apply to property access: (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

All building areas must have a static water supply that meets the requirements of table E5 of *Interim Planning Directive No. 1.1 Bushfire-Prone Areas Code.* The supply may be pumped from the existing dam on Lot 35 or other combined supply provided water supply points are installed to meet requirements and 10,000l per building area is available. If a reticulated scheme is installed hydrants must meet requirements of table E4 of *Interim Planning Directive No. 1.1 Bushfire-Prone Areas Code.*

Table 5 of the Interim Planning Directive No. 1.1 Bushfire-Prone Areas Code.

Column		**Column 2**
Element		**Requirement**
A.	Distance between building area to be protected and water supply	The following requirements apply: a) The building area to be protected must be located within 90 metres of the 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.

Column		Column 2
Element		**Requirement**
B.	Static Water Supplies	A static water supply: a) May have a remotely located offtake connected to the static water supply; b) May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times; c) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems; d) Must be metal, concrete or lagged by non-combustible materials if above ground; and e) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2009, the tank may be constructed of any material provided that the lowest 400 mm of the tank exterior is protected by: (i) metal; (ii) non-combustible material; or (iii) fibre-cement a minimum of 6 mm thickness.
C.	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a water connection point for a static water supply must: (a) Have a minimum nominal internal diameter of 50mm; (b) Be fitted with a valve with a minimum nominal internal diameter of 50mm; (c) Be metal or lagged by non-combustible materials if above ground; (d) Where buried, have a minimum depth of 300mm (compliant with *AS/NZS 3500.1-2003 Clause 5.23);* (e) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to fire fighting equipment; (f) Ensure the coupling is accessible and available for connection at all times; (g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length); (h) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and (i) Where a remote offtake is installed, ensure the offtake is in a position that is: (i) Visible; (ii) Accessible to allow connection by fire fighting equipment; (iii) At a working height of 450 – 600mm above ground level; and (iv) Protected from possible damage, including damage by vehicles

Column		Column 2
Element		**Requirement**
D.	Signage for static water connections	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 (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.
E.	Hardstand	A hardstand area for fire appliances must be provided: (a) No more than three metres from the water connection point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like); (b) No closer than six metres from the building area to be protected; (c) With a minimum width of three metres constructed to the same standard as the carriageway; and (d) Connected to the property access by a carriageway equivalent to the standard of the property access.

CONCLUSIONS

A 35 lot subdivision is proposed from existing title CT 206455/1 at Tasman Hwy, Bicheno. Lots 1-34 vary in size from 1,232m^2 to 6,540m^2 with a 38.8 ha balance lot (35). The area is bushfire prone, being less than 100m from vegetation greater than 1ha in size, (grassland, scrub and forest).

There is sufficient area on lots to provide for BAL 12.5 and an extended area at BAL 19. All land within lot development area (lots 1-34) must be maintained as no higher level than grassland with the exception of the 10m landscape buffer strip. Land within the development area must be managed as low threat within 16m of any lot from commencement of construction on that lot. The balance lot (35) may be managed at fuel load up to scrub.

Roads and property access must meet tables E4 & 5 of *Interim Planning Directive No. 1.1 Bushfire-Prone Areas Code.* During development the terminus of any staged road will require a turning circle with a minimum 12m outer radius, this may be gravelled and temporary until further stages are added.

All building areas must have a 10,000l static water supply installed prior to commencement of construction of habitable buildings that meets the requirements of table E5 of the *Interim Planning Directive No. 1.1 Bushfire-Prone Areas Code.*

REFERENCES

Glamorgan Spring Bay (2015) *Glamorgan Spring Bay Interim Planning Scheme.*

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

Planning Commission (2017), *Draft Planning Directive No. 5.1 Bushfire-Prone Areas Code (issued as Interim Planning Directive No. 1.1))*

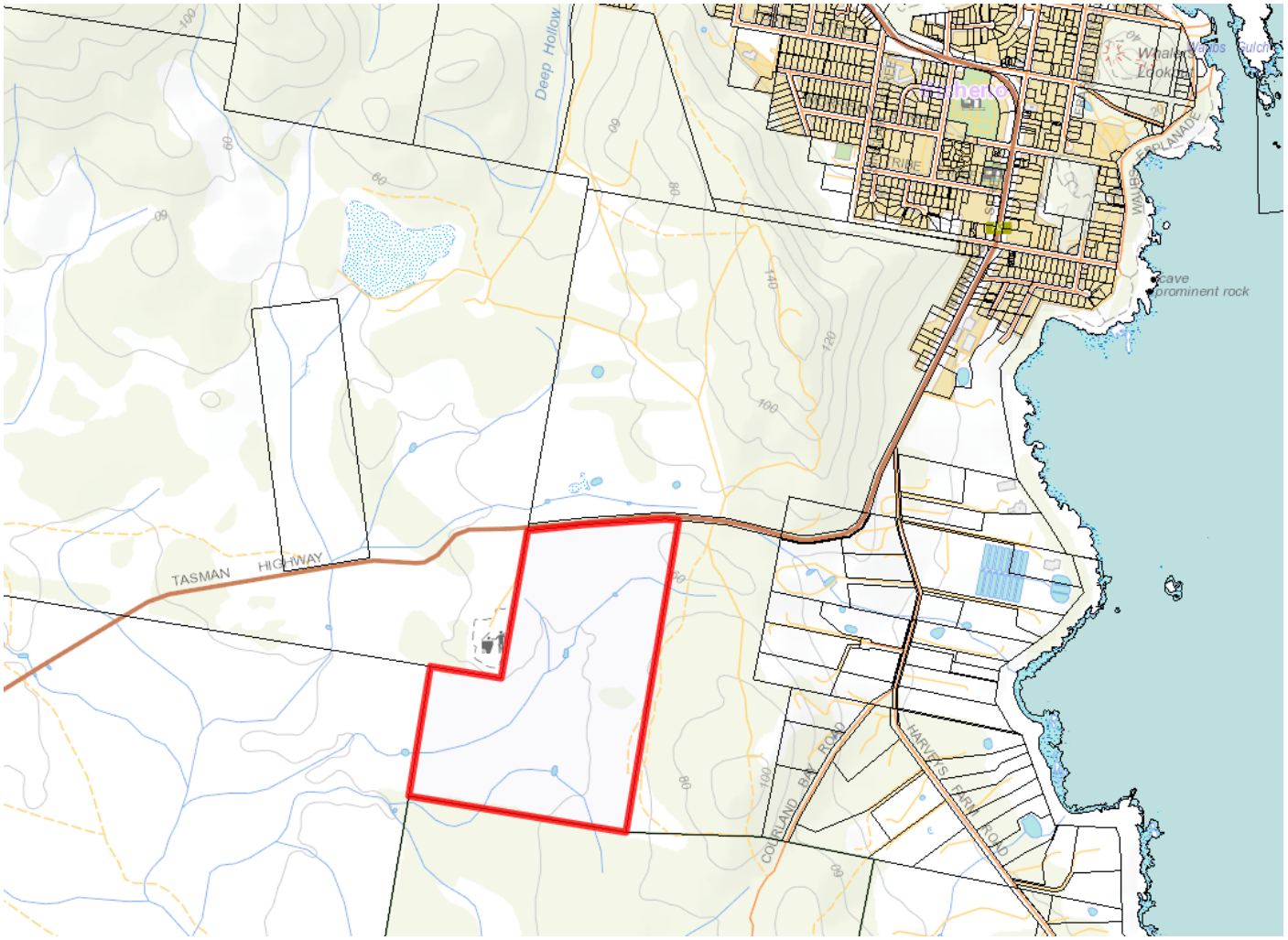


Figure 3: Location

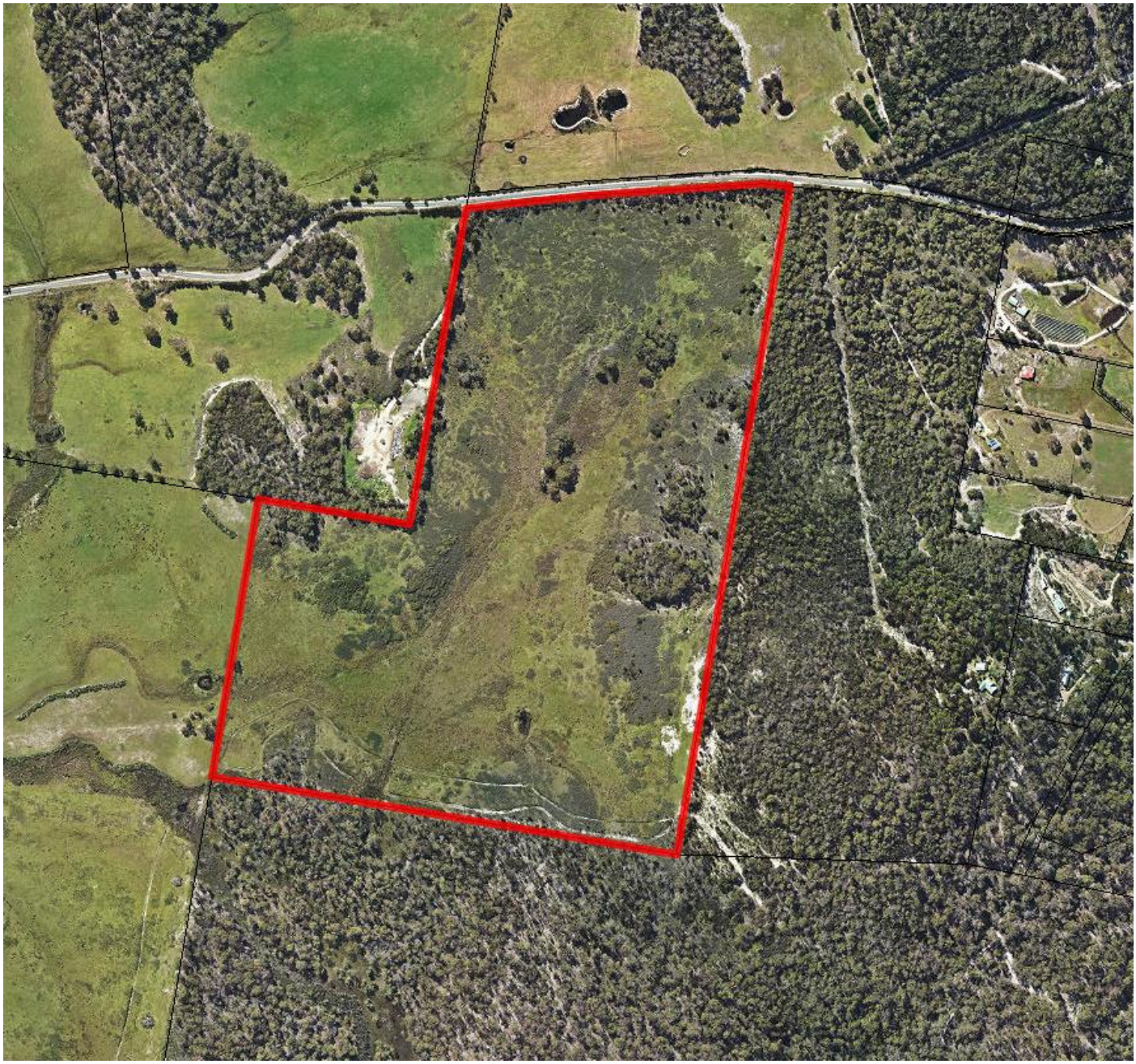


Figure 4: Aerial Image

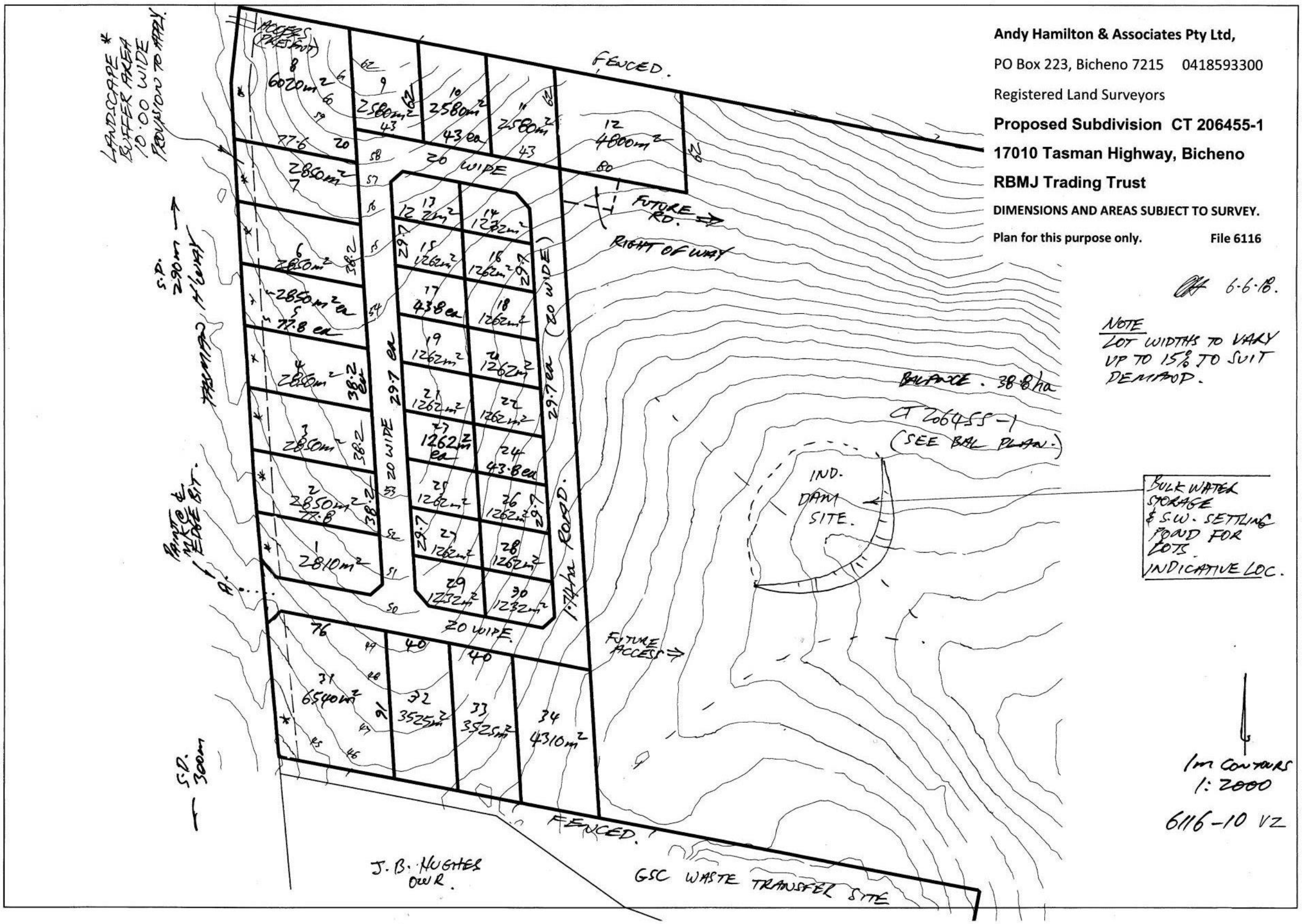


Figure 5: Proposed Subdivision Plan

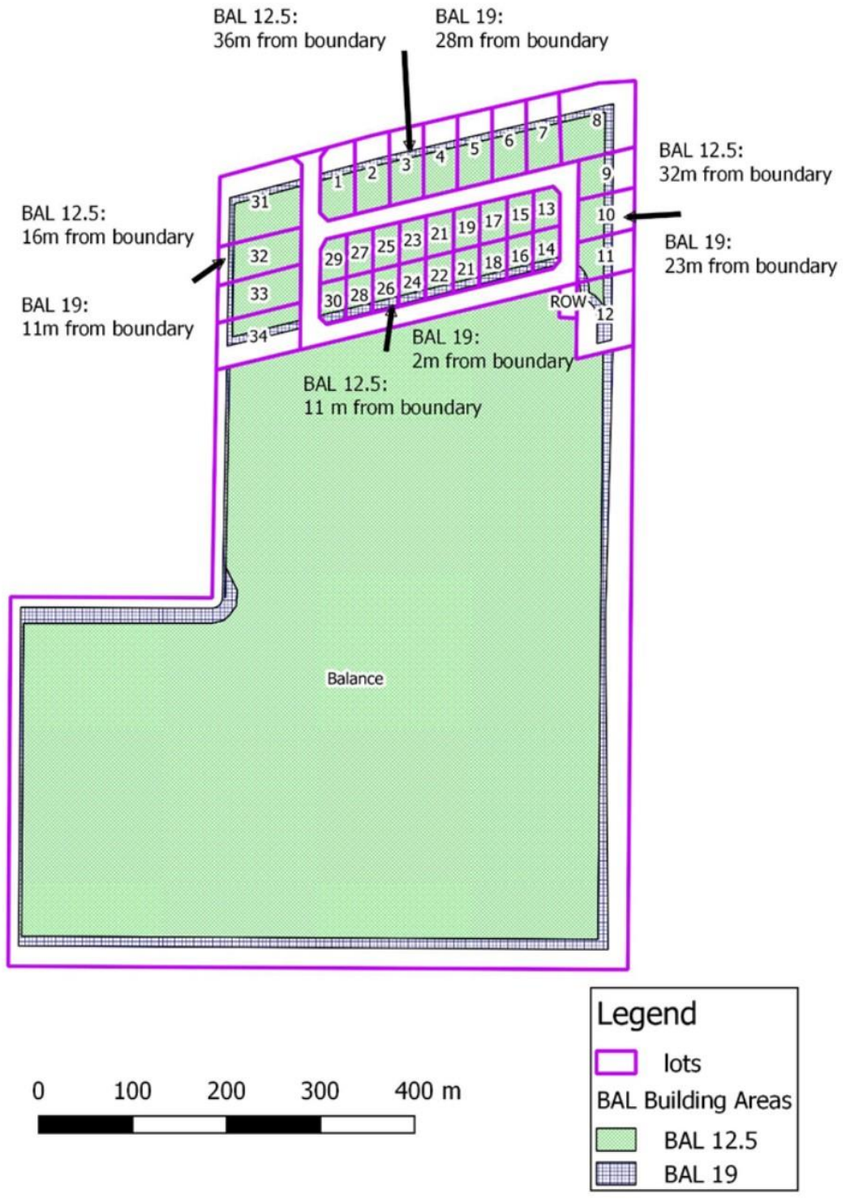
Figure 6: Contours on Orthophoto (Another Perspective)

Figure 7: eucalypts to be retained along highway, landscape buffer

Figure 8: northern portion Lot 35 adjoining development area

Figure 9: western portion of development area

Bushfire Hazard Management Plan: Subdivision of CT 206455/1 , Tasman Hwy, Bicheno



Building Areas

Lot	BAL Rating	Building area
1-7	BAL 12.5	>36m from northern boundary (inc 10m landscape buffer)
	BAL 19	>28m from northern boundary (inc 10m landscape buffer)
8	BAL 12.5	>36m from northern boundary (inc 10m landscape buffer)
		>32m from eastern boundary
	BAL 19	>28m from northern boundary (inc 10m landscape buffer)
		>23m from eastern boundary
9-10	BAL 12.5	>32m from eastern boundary
	BAL 19	>23m from eastern boundary
11-12	BAL 12.5	>32m from eastern boundary
		>38m from the western boundary of the ROW.
	BAL 19	>23m from eastern boundary
		>27m from the western boundary of the ROW.
13, 15, 17, 19, 21, 23, 25, 27, 29	BAL 12.5	none required
14, 16, 18, 20, 22, 24, 26, 28, 30	BAL 12.5	>11m from the southern boundary
	BAL 19	>2m from the southern boundary
31	BAL 12.5	>36m from northern boundary (inc 10m landscape buffer)
		>16m from the western boundary
	BAL 19	>28m from northern boundary (inc 10m landscape buffer)
		>11m from the western boundary
32-33	BAL 12.5	>16m from the western boundary
	BAL 19	>11m from the western boundary
34	BAL 12.5	>16m from the western boundary
		>31m from the southern boundary
	BAL 19	>11m from the western boundary
		>22m from the southern boundary
35 (balance)	BAL 12.5	>32m from the eastern, southern, northern adjacent to Waste transfer station boundaries
		>14m from the western boundary
	BAL 19	>27m from the eastern, southern, northern adjacent to Waste transfer station boundaries
		>11m from the western boundary

Construction: BAL 12.5 / BAL 19

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

Scott Livingston
Accreditation: BFP – 105: 1, 2, 3A, 3B, 3C
Date 26/6/2018

SRL18/42S

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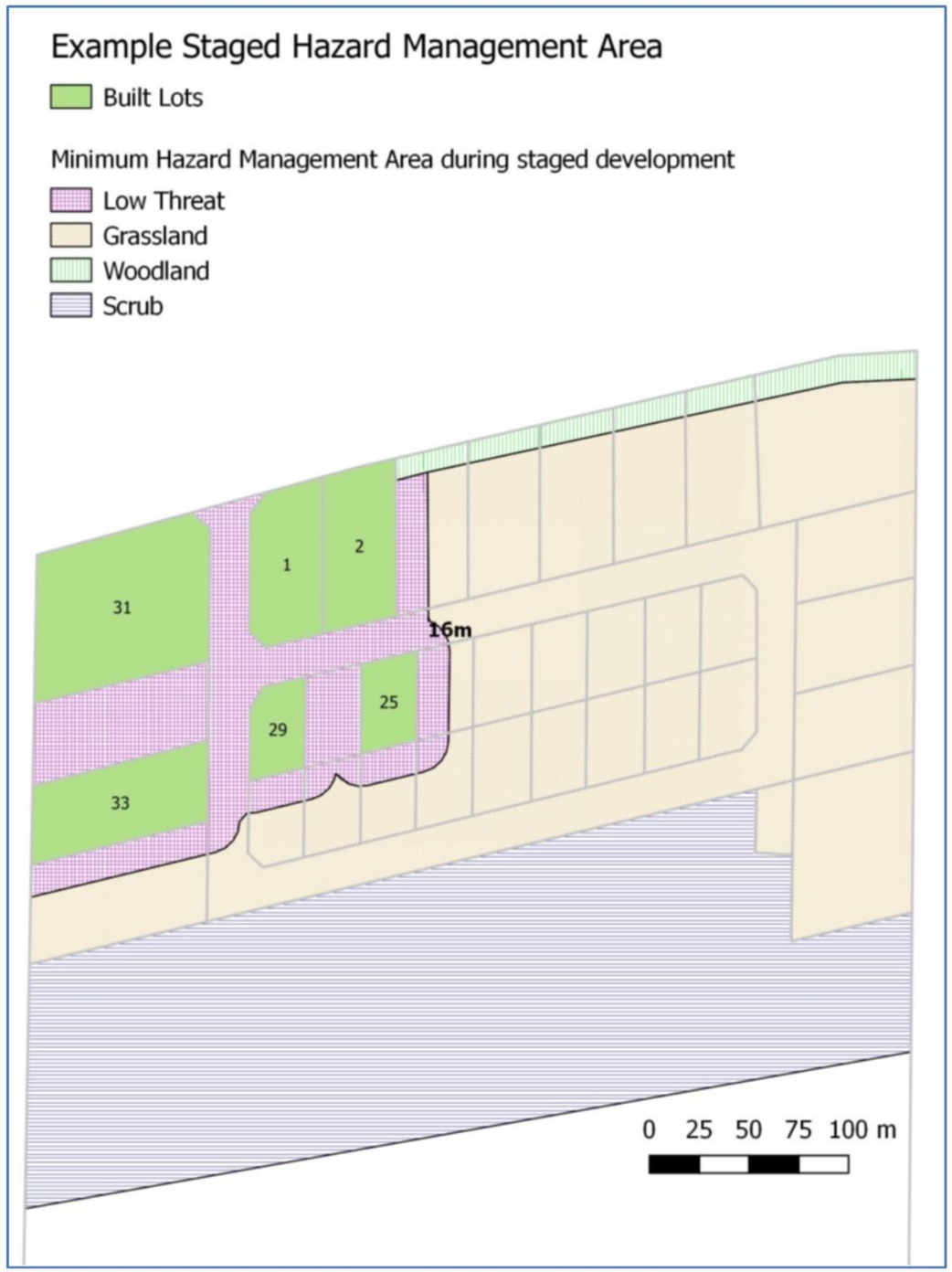
Bushfire Hazard Management Plan: Subdivision of CT 206455/1 , Tasman Hwy, Bicheno



Hazard Management Areas (HMA)

All land within lot development area (lots 1-34) must be maintained as no higher level than grassland with the exception of the 10m landscape buffer strip. During development land within the development area must be managed as low threat within 16m of any lot from commencement of construction on that lot.

Low threat vegetation includes gardens and lawns maintained to less than 100mm in height.

It is **important** to prepare your Bushfire Survival Plan, read your Community Protection Plan and know your Nearby Safer Place. These can be obtained from your Council or the Tasmanian Fire Service. For

Note:
It should be borne in mind that the measures contained in this Bushfire Management Plan cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire and extreme weather conditions.

Scott Livingston
Accreditation: BFP – 105: 1, 2, 3A, 3B, 3C
Date 26/6/2018

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Bushfire Hazard Management Plan: Subdivision of CT 206455/1 , Tasman Hwy, Bicheno

Water Supply

The following requirements apply:

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 10,000l 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 compliant 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

ROADS

All future roads within the subdivision must comply with the following:

a. two-wheel drive, all-weather construction;
b. load capacity of at least 20t, including for bridges and culverts;
c. minimum carriageway width is 7m for a through road, or 5.5m for a dead-end or cul-de-sac road;
d. minimum vertical clearance of 4m;
e. minimum horizontal clearance of 2m from the edge of the carriageway;
f. cross falls of less than 3 degrees (1:20 or 5%);
g. maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads;
h. curves have a minimum inner radius of 10m;
i. dead-end or cul-de-sac roads are not more than 200m in length unless the carriageway is 7 metres in width;

Access

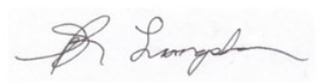
If access exceeds 30m to a to a habitable building or water supply point it must be constructed to the following standards:

The following design and construction requirements apply to property access:

a. All-weather construction;
b. Load capacity of at least 20 tonnes, including for bridges and culverts;
c. Minimum carriageway width of 4 metres;
d. Minimum vertical clearance of 4 metres;
e. Minimum horizontal clearance of 0.5 metres from the edge of the carriageway;
f. Cross falls of less than 3 degrees (1:20 or 5%);
g. Dips less than 7 degrees (1:8 or 12.5%) entry and exit angle;
h. Curves with a minimum inner radius of 10 metres;
i. 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
j. Terminate with a turning area for fire appliances provided by one of the following:
    i) A turning circle with a minimum inner radius of 10 metres; or
    ii) A property access encircling the building; or a hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.

Scott Livingston
Accreditation: BFP – 105: 1, 2, 3A, 3B, 3C
Date 26/6/2018

SRL18/42S



BUSHFIRE-PRONE AREAS CODE

CERTIFICATE[1] UNDER S51(2)(d) LAND USE PLANNING AND APPROVALS ACT 1993

1. Land to which certificate applies[2]

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

Name of planning scheme or instrument:	Glamorgan Spring Bay Interim Planning Scheme 2015
Street address:	206455/1 Tasman Hwy, Bicheno
Certificate of Title / PID:	CT 206455/1 PID 2976736

Land that <u>is not</u> 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:

35 lot subdivision from 1 existing title

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:	Proposed Subdivision		
Author:	Andy Hamilton & Associates		
Date:	6/6/2018	**Version:**	6116-10

Bushfire Hazard Report

Title:	Bushfire Hazard Management Report, CT 206455/1 Tasman Hwy		
Author:	Scott Livingston		
Date:	26/6/2018	**Version:**	1

Bushfire Hazard Management Plan

Title:	Bushfire Hazard Management Plan, CT 206455/1 Tasman Hwy
Author:	Scott Livingston
Date:	26/6/2018
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)**
❑	E1.4 (a)	Insufficient increase in risk	

❑	**E1.5.1 – Vulnerable Uses**		
	Assessment Criteria	**Compliance Requirement**	**Reference to Applicable Document(s)**
❑	E1.5.1 P1	Residual risk is tolerable	
❑	E1.5.1 A2	Emergency management strategy	

❑	E1.5.1 A3	Bushfire hazard management plan	

❑	**E1.5.2 – Hazardous Uses**		
	Assessment Criteria	**Compliance Requirement**	**Reference to Applicable Document(s)**
❑	E1.5.2 P1	Residual risk is tolerable	
❑	E1.5.2 A2	Emergency management strategy	
❑	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)**
❑	E1.6.1 P1	Hazard Management Areas are sufficient to achieve tolerable risk	
❑	E1.6.1 A1 (a)	Insufficient increase in risk	
☒	E1.6.1 A1 (b)	Provides BAL 19 for all lots	Bushfire Hazard Management Plan, CT 206455/1 Tasman Hwy
❑	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)**

❑	E1.6.2 P1	Access is sufficient to mitigate risk	
❑	E1.6.2 A1 (a)	Insufficient increase in risk	
☒	E1.6.2 A1 (b)	Access complies with Tables E1, E2 & E3	Bushfire Hazard Management Plan, CT 206455/1 Tasman Hwy

	E1.6.3 Subdivision: Provision of water supply for fire fighting purposes		
	Assessment Criteria	**Compliance Requirement**	**Reference to Applicable Document(s)**
❑	E1.6.3 A1 (a)	Insufficient increase in risk	
❑	E1.6.3 A1 (b)	Reticulated water supply complies with Table E4	
❑	E1.6.3 A1 (c)	Water supply consistent with the objective	
❑	E1.6.3 A2 (a)	Insufficient increase in risk	
☒	E1.6.3 A2 (b)	Static water supply complies with Table E5	Bushfire Hazard Management Plan, CT 206455/1 Tasman Hwy
❑	E1.6.3 A2 (c)	Static water supply is consistent with the objective	

5. Bushfire Hazard Practitioner[3]

Name:	Scott Livingston	**Phone No:**	0438 951 021
Address:	12 Powers Road	**Fax No:**	
	Underwood	**Email Address:**	scottlivingston.lnra@gmail.com
	Tasmania 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.	❑

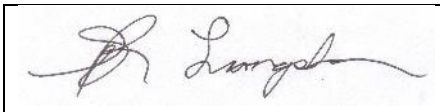
or

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: 26/6/2018	**Certificate No:** SRL18/42S

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: RBMJ Trading *Owner /Agent*

17010 Tasman Hwy *Address*

Deloraine | Bicheno | 7215 *Suburb/postcode*

Qualified person details:

Qualified person: Scott Livingston

Address: 12 Powers Road

Phone No: 0438 951 021

Underwood | 7268

Fax No:

Licence No: BFP-105

Email address: scottlivingston.lnrs@gmail.com

Qualifications and Insurance details:

Accredited Bushfire Assessor

BFP 105, 1,2,3A,3B, 3C

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

Speciality area of expertise: Bushfire Assessment

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

Details of work:

Address:	CT 206455/1 Tasman Hwy		Lot No:	1-35
	Bicheno	7215	Certificate of title No:	206455/1

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: X

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

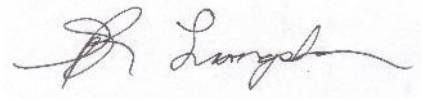
- Interim Planning Directive No.1.1
- Building Amendment Regulations 2016
- Director of Building Control, Determination
  - Application of Requirements for Building in Bushfire Prone Areas. (Aug 2017)
- Guidelines for development in bushfire prone areas of Tasmania

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

Scope and/or Limitations

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		SRL18/42S	26/6/2018

SUBDIVISION WASTEWATER ASSESSMENT

Lot 1 Tasman Highway

Bicheno

August 2018

GES

GEO-ENVIRONMENTAL

SOLUTIONS

Geo-Environmental Solutions P/L 29 Kirksway Place, Battery Point 7004. Ph 6223 1839

Introduction

Client: RBMJ Trading Trust

Date of inspection: 3/08/18

Location: Lot 1 Tasman Highway, Bicheno

Land description: Existing block approx. 48.3 ha, zoned light industrial Proposed subdivision into 34 lots varying from 1200m^2 to 6500m^2 in size.

Building type: Proposed light industrial

Investigation: GeoProbe 540UD

Inspected by: G McDonald

Background information

Map: Mineral Resources Tasmania – South East Sheet 1:250 000

Rock type: Devonian granite

Soil depth: Variable 1.10 – 2.0m+

Planning overlays: Waterway and Coastal Protection Area. Attenuation Area.

Local meteorology: Annual rainfall approx 700 mm

Local services: Tank water and on-site waste water disposal required

Site conditions

Slope and aspect: Approx. 3% to the West

Site drainage: Good surface infiltration, with imperfectly drained subsoil.

Vegetation: Mixed pasture grasses in cleared areas, with areas of native and introduced trees and coastal shrubs and scrub.

Weather conditions: Cloudy, approx. 10 mm rainfall received in preceding 7 days.

Ground surface: slightly moist sandy surface conditions

Investigation

A number of auger holes were completed to identify the distribution of, and variation in soil materials on the site. Representative excavations at the approximate location indicated on the site plan were chosen for testing and classification according to AS1547-2012 (see profile summaries).

Profile Summary 1 – Test holes 1-4 – lots 8-12

Depth (m)	Horizon	Description
0 – 0.20	A1	Greyish Brown **SAND (SW)**, trace of clay, single grain, slightly moist, medium dense consistency, clear boundary to
0.20 – 0.60	B2	Yellowish Brown **CLAY (CL)**, moderate polyhedral structure, slightly moist, soft consistency, medium plasticity, gradual boundary to
0.60 – 0.90	B3	Brownish Yellow and Pale Yellow **CLAY (CL)**, weak polyhedral structure, slightly moist, hard consistency, low to medium plasticity, ~30% coarse sand, gradual boundary to
0.90 – 1.70	BC	Pale Yellow **Clayey GRAVEL (GC)**, ~10% clay, weak polyhedral structure, slightly moist, hard consistency, ~80% coarse sand, refusal on granite.

Profile Summary 2 – Test holes 5-8 – lots 13-20

Hole 2 Depth (m)	Horizon	Description
0 – 0.10	A1	Greyish Brown **SAND (SP)**, single grain, slightly moist, loose consistency, gradual boundary to
0.10 – 0.30	A3	Brown and Pale Brown **SAND (SW)**, trace of clay, single grain, slightly moist, medium dense consistency, gradual boundary to
0.30 – 1.10	BC	Pale Yellow and Light Grey **Clayey GRAVEL (GC)**, ~10% clay, weak polyhedral structure, slightly moist, hard consistency, ~60% coarse sand, refusal

Profile Summary 3 – Test holes 9-12 – lots 21-30

Depth (m)	Horizon	Description
0 – 0.20	A1	Greyish Brown **SAND (SW)**, trace of clay, single grain, slightly moist, medium dense consistency, clear boundary to
0.20 – 0.60	B2	Yellowish Brown **CLAY (CL)**, moderate polyhedral structure, slightly moist, soft consistency, medium plasticity, gradual boundary to
0.60 – 0.90	B3	Brownish Yellow and Pale Yellow **CLAY (CL)**, weak polyhedral structure, slightly moist, hard consistency, low to medium plasticity, ~30% coarse sand, gradual boundary to
0.90 – 1.70	BC	Pale Yellow **Clayey GRAVEL (GC)**, ~10% clay, weak polyhedral structure, slightly moist, hard consistency, ~80% coarse sand, refusal on granite.

Profile Summary 4 – Test holes 13-16 – lots 1-7

Depth (m)	Horizon	Description
0 – 0.10	A1	Greyish Brown **SAND (SW)**, trace of clay, single grain, slightly moist, medium dense consistency, clear boundary to
0.10 – 0.50	B2	Yellowish Brown **CLAY (CL)**, moderate polyhedral structure, slightly moist, soft consistency, medium plasticity, gradual boundary to
0.50 – 1.40	B3	Brownish Yellow and Pale Yellow **CLAY (CL)**, weak polyhedral structure, slightly moist, hard consistency, low to medium plasticity, ~30% coarse sand, gradual boundary to
1.40 – 1.70	BC	Pale Yellow **Clayey GRAVEL (GC)**, ~10% clay, weak polyhedral structure, slightly moist, hard consistency, ~80% coarse sand, refusal on granite.

Profile Summary 5 – Test holes 17 & 18 – lots 31-34

Depth (m)	Horizon	Description
0 – 0.10	A1	Greyish Brown **SAND (SW)**, trace of clay, single grain, slightly moist, medium dense consistency, clear boundary to
0.10 – 0.50	B2	Yellowish Brown **CLAY (CL)**, moderate polyhedral structure, slightly moist, soft consistency, medium plasticity, gradual boundary to
0.50 – 1.20	B3	Brownish Yellow and Pale Yellow **CLAY (CL)**, weak polyhedral structure, slightly moist, hard consistency, low to medium plasticity, ~30% coarse sand, gradual boundary to
1.20 – 1.60	BC	Pale Yellow **Clayey GRAVEL (GC)**, ~10% clay, weak polyhedral structure, slightly moist, hard consistency, ~80% coarse sand, refusal on granite.

Soil Profile Notes

The soil profiles above have been taken across the proposed subdivision area. The soils on the site are developing on Devonian granite and exhibit windblown sands overlying yellow and brown clays, which tend sandy and gravelly with depth towards the underlying bedrock.

The soils are weakly to moderately structured and posses a moderate to high CEC for retention of nutrients. The soils across the site area classified according to AS1547-2012 as **Category 5 – Light Clay.**

Site Summary

The current development application is for the subdivision into 34 industrial lots with areas between 1200m^2 and 6500m^2, with the balance lot of 38.8ha. The balance lot has no existing infrastructure. The geological maps indicate Quaternary sand deposits on the North eastern corner of the block, suggesting that the sandy topsoil may be deeper, and consequently wastewater infiltration will be higher, and CEC lower in this area.

Nutrient Balance and Sustainable Wastewater Application

The soils across the entire site are developed from Devonian granite with a moderate to high estimated Cation Exchange Capacity (CEC). The soils returned negative results to all Emerson dispersion tests. Therefore, the soils have a good capacity to retain nutrients in applied wastewater.

Hydrological Balance and Wastewater Disposal

Modelling of wastewater application on the proposed lot was undertaken utilising the Trench program, long term weather average for Bicheno, and the observed soil profile characteristics.

Assuming the construction of a typical industrial building with kitchen and bathroom facilities and tank water supply, the expected loading under AS1547-2012 is 120L/day. This is based on an average daily use of 6 people at 20L/person/day. Using the DLR of 7L/m^2/day, an absorption area of 18m^2 would be required. This could be accommodated by one x 15m x 1.2m x 0.6m absorption trench connected to a dual purpose septic tank.

However, a traditional septic tank and absorption trenches are only suitable in areas with a minimum depth to bedrock of more than 1m. On blocks with less than this, a secondary treated system e.g. AWTS with irrigation would need to be installed. Given the loading rate of 120L/day and using the DIR of 3mm/day a minimum subsurface irrigation area of 100m^2 would be required. The wastewater area should be excluded from traffic or any future building works and it is recommended a 100% reserve area be set aside for future wastewater requirements.

It is recommended the final decision of wastewater system approval rest with the permit authority at the time of site specific design to ensure the most compatible environmental and economic outcomes. Therefore, it is not warranted to restrict the lot to a single wastewater system type at the subdivision approvals stage, as each dwelling will have individual nuances which may be more suited to any one of a range of designs allowable within AS1547-2012.

Setbacks distances to boundaries and sensitive features

A number of indicative minimum boundary setbacks applicable to the development have been modelled utilising the Trench program and with reference to the Building Act 2016 wastewater guidelines;

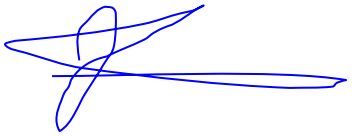
- Boundaries (upslope/across slope) – 1.5m
- Boundaries down slope – 6m (slope 3^o), 7.5m (3^0) – for secondary treated effluent
- Down slope surface water – 36m (slope 3^o), 21m (3^0) – for secondary treated effluent

These setbacks comply with AS1547-2011 and the Glamorgan-Spring Bay Interim Planning Scheme 2015. Wastewater disposal on all lots will take into account the existing dam and drainage lines, however based upon the current assessment sufficient area is available on the proposed lot for wastewater disposal.

Conclusions

The current subdivision proposal allows for significant space on the proposed lot to be created for the installation and successful operation of a wastewater treatment system, with adequate setbacks in regards boundaries and sensitive features. The actual down slope

boundary setbacks applied will require fine tuning at the special plumbing permit stage as access, parking, and building footprints are finalised in conjunction with wastewater disposal areas. Modelling at this planning stage does however suggest that sufficient room is available on the proposed lot to accommodate the required setbacks. The wastewater system for the existing dwelling on the balance lot is also considered to be operating adequately, and there is more than sufficient room if the system should require upgrading on the future.



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

Trench File – Septic system

GES

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report

Site assessment for on-site waste water disposal

Assessment for	RBMJ Trading Trust	Assess. Date	28-Aug-18
		Ref. No.	
Assessed site(s)	Lot 1 Tasman Highway, Bicheno	Site(s) inspected	3-Aug-18
Local authority	Glamorgan-Spring Bay	Assessed by	John Paul Cumming

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

Wastewater Characteristics

'astewater volume (L/day) used for this assessment = 120 (using a method independent of the no. of bedrooms)

Septic tank wastewater volume (L/day) = 40

Sullage volume (L/day) = 80

Total nitrogen (kg/year) generated by wastewater = 0.4

'otal phosphorus (kg/year) generated by wastewater = 0.3

Climatic assumptions for site

(Evapotranspiration calculated using the crop factor method)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	54	57	57	59	56	62	52	50	48	55	62	67
Adopted rainfall (R, mm)	54	57	57	59	56	62	52	50	48	55	62	67
Retained rain (Rr, mm)	49	51	51	53	50	56	47	45	43	50	56	60
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	29	32	42	63	84	105	126
Evapotr. less rain (mm)	**82**	**59**	**40**	**10**	**-8**	**-26**	**-15**	**-3**	**20**	**35**	**49**	**66**

Annual evapotranspiration less retained rain (mm) = 306

Soil characterisitics

Texture = light clay Category = 5 Thick. (m) = 1.4

Adopted permeability (m/day) = 0.24 Adopted LTAR (L/sq m/day) = 7 Min depth (m) to water = 4

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site:	All wastewater will be disposed of on the site
The preferred method of on-site primary treatment:	In dual purpose septic tank(s)
The preferred method of on-site secondary treatment:	In-ground
The preferred type of in-ground secondary treatment:	Trench(es)
The preferred type of above-ground secondary treatment:	None
Site modifications or specific designs:	Are needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	12
Width (m) =	1.5
Depth (m) =	0.6
Total disposal area (sq m) required =	18
comprising a Primary Area (sq m) of:	18
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

Due to the permeability of the soils on site the DLR is 7L/sq m/day and an absorption area of 18m2 is required..

GES

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Site Capability Report

Site assessment for on-site waste water disposal

Assessment for	RBMJ Trading Trust	Assess. Date	28-Aug-18
		Ref. No.	
Assessed site(s)	Lot 1 Tasman Highway, Bicheno	Site(s) inspected	3-Aug-18
Local authority	Glamorgan-Spring Bay	Assessed by	John Paul Cumming

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

Alert	Factor	Units	Value	Confid level	Limitation Trench	Limitation Amended	Remarks
	Expected design area	sq m	1,000	V. high	Moderate	No change	
	Density of disposal systems	/sq km	5	Mod.	Very low		
	Slope angle	degrees	3	High	Very low		
	Slope form	Straight simple		High	Low		
	Surface drainage	Imperfect		High	Moderate		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Rare		High	Low		
	Aspect (Southern hemi.)	Faces E or W		V. high	Moderate		
	Frequency of strong winds	Common		High	Low		
	Wastewater volume	L/day	120	High	Very low	Moderate	
	SAR of septic tank effluent		1.7	High	Low		
	SAR of sullage		2.6	High	Moderate		
	Soil thickness	m	1.4	V. high	Very low		
	Depth to bedrock	m	1.4	V. high	Moderate		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		5.5	High	Low		
	Soil bulk density	gm/cub. cm	1.4	High	Very low		
	Soil dispersion	Emerson No.	7	V. high	Very low		
	Adopted permeability	m/day	0.24	Mod.	Very low	Moderate	
	Long Term Accept. Rate	L/day/sq m	7	High	Moderate	No change	

To enter comments, click on the line below 'Comments' . (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

The site has good capacity for onsite wastewater disposal.

GES

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Environmental Sensitivity Report

Site assessment for on-site waste water disposal

Assessment for	RBMJ Trading Trust	Assess. Date	28-Aug-18
		Ref. No.	
Assessed site(s)	Lot 1 Tasman Highway, Bicheno	Site(s) inspected	3-Aug-18
Local authority	Glamorgan-Spring Bay	Assessed by	John Paul Cumming

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

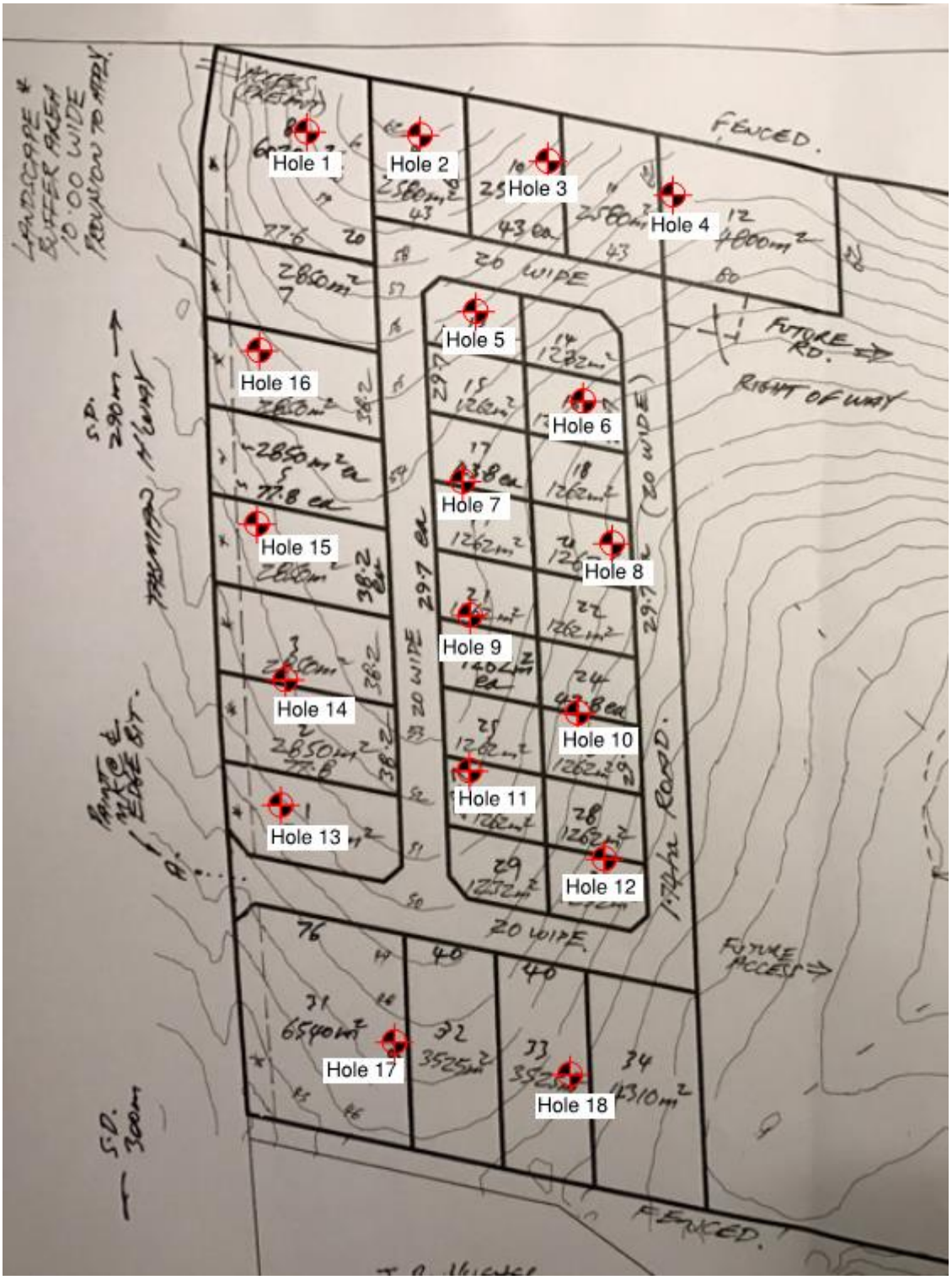
Alert	Factor	Units	Value	Confid level	Limitation Trench	Limitation Amended	Remarks
	Cation exchange capacity	mmol/100g	85	High	Low		
	Phos. adsorp. capacity	kg/cub m	0.7	High	Moderate		
	Annual rainfall excess	mm	-306	High	Very low		
	Min. depth to water table	m	4	High	Very low		
	Annual nutrient load	kg	0.7	High	Very low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	5	High	Very low		
	Risk to adjacent bores		Very low	V. high	Very low		
	Surf. water env. value	Agric sensit/dom drink		V. high	Moderate		
	Dist. to nearest surface water	m	200	V. high	Moderate		
	Dist. to nearest other feature	m	40	V. high	Moderate	No change	
	Risk of slope instability		Low	V. high	Low		
	Distance to landslip	m	400	V. high	Very low		

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

There is low environmental risk associated with onsite wastewater disposal

Site Plan


Hole 1
Hole 2
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Hole 4
Hole 5
Hole 6
Hole 7
Hole 8
Hole 9
Hole 10
Hole 11
Hole 12
Hole 13
Hole 14
Hole 15
Hole 16
Hole 17
Hole 18
FENCED.
20 WIDE
FUTURE RD.
RIGHT OF WAY
20 WIDE
FUTURE ACCESS
FENCED.

Traffic Assessment

Proposed Light Industrial Subdivision
17010 Tasman Highway, Bicheno

FOR

RBMJ Trading Trust

SUBMITTED BY:

TERRY EATON
Traffic Engineer
29 Carey's Road
Bridgenorth TAS 7277
TEL / FAX: (03) 6330 1510

OCTOBER 2018

CONTENTS

1. Introduction

A proposal is being advanced to subdivide land just south of Bicheno in proximity to the local waste transfer station.

As a pre-requisite to the acceptance of a planning application for the development by the Glamorgan Spring Bay Council a traffic assessment (TIA) to the acceptance of the road authority (Department of State Growth – DSG) is required.

This report, provided by Terry Eaton, an experienced traffic engineer, is provided for that purpose.

Preparation of the report has included discussions with the applicant and a site visit.

2. The Site

The site is an area of some 10.5 hectares which is part of Wallaroo Farm with frontage of some 500 metres to the Tasman Highway some 1.0 kilometre south of the Harvey's Farm Road junction at the southern edge of the Bicheno residential area.

The land generally falls from north to south at a grade of some 4% with a ridge line some 100 metres back from the highway frontage. An embankment some 1.0 metre high is at the Tasman Highway frontage with screen trees and shrubs at the boundary.

To the north of the site is a forested lot and to the south the local waste transfer station with access to this facility is at the southern boundary for the site. The land opposite the site is pasture in use for grazing.

3. The Proposal

The proposal is to subdivide the land as a light industrial precinct to provide a 34 lot subdivision, lot sizes to vary from some 1,260 m^2 to some 6,540 m^2. Lot sizes generally provide for some 18 smaller lots of some 1,260 m^2 with 10 lots in area of some 2,580 m^2 to 2,850 m^2 and the remaining 6 as larger lots of some 3,500 m^2 to some 6,500 m^2.

The subdivision layout to provide a looped access road with a connecting link to junction with the Tasman Highway some 107 metres north of the access to the waste transfer station.

The layout provides for further development of the subdivision by extension to the east by continuing the northern and southern legs of the internal loop road.

4. Tasman Highway

The Tasman Highway at this location is classified as a Category 4 road in the State Highway Classification System, these roads provide for local, commercial, freight, passenger and tourist movements.

In the vicinity of the site the road is constructed with a 5.6 metre sealed pavement, gravel shoulders 1.6 metres wide, grass verges on both sides some 7.5 metres wide. Side drains are located within the verges, nearest edge some 1.7 metres from the edge of seal. The verges slope down from the edge of shoulder to the table drains at some 10% grade.

The road alignment at the frontage is straight from a 400 metre radius curve toward the east at the northern edge of the site to a large 700 metre radius curve toward the west close to the southern boundary of the site.

Looking north from proposed access location

Some 150 metres south of the southern boundary of the site there is a combined left / right curves, advisory signed at 45 km/h.

The road profile is a downgrade of some 4% from a flat crest some 50 metres south of the northern boundary of the site to the combined curves beyond the waste transfer station access.

5. Traffic Data

- ***Tasman Highway***

  The estimated Average Daily Traffic (ADT) at this location is some 2,800 vehicles with some 17% as heavy vehicles.

  DSG traffic data indicates an average daily traffic (ADT) value at up to some 900 vehicles with indicative peak hour at 90 vehicles per hour distributed 50/50 by direction. Allowing for traffic growth at some 2% per annum suggests a plus 20 year ADT value at 1,300 vehicles.

- ***Proposed Development***

  Regional land use indications suggest a low demand for light industrial lots in the vicinity of Bicheno suggesting this proposal as a longer term planning initiative. Annual development at up to some 2% is seen as realistic, i.e. full development over a plus 25 year period. Based on this land demand forecast the suggestion is that the development be staged to say provide for an initial 7 lots, some 2 hectares, with further development staging relative to the uptake of the lots.

  Traffic generation data indicates a value of 4 two-way traffic movements per $100m^2$ gross floor area for light industrial land uses. Assuming an average site building area at 20% lot coverage suggests for an initial 7 lot development the traffic demand at up to some 160 vehicles per day. The traffic demand for the total subdivision at up to some 800 vehicles per day.

6. Assessment

Assessment in accord with Section E5.6.2 of the Glamorgan Spring Bay Interim Planning Scheme 2015 indicates:

P1 The junction with the Tasman Highway is within a 100 km/h speed zone accordingly the predicted traffic using the proposed junction must be safe and not unreasonably impact on the efficiency of the highway.

6.1 Traffic Safety

DSG Crash Data indicates one reported property damage accident in the proximity to the proposed site access in the last 5 years suggesting a relatively safe section of highway.

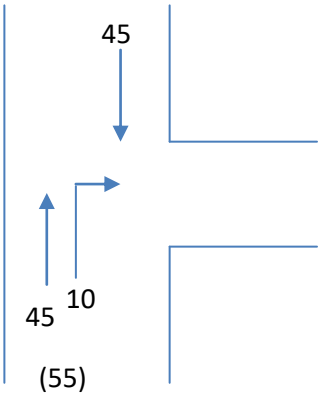
6.1.1 Sight Distance at the proposed access junction is in excess of 300 metres to the north and some 270 metres to the south. These distances are in excess of the safe intersection sight distance (SISD) requirements for a 100 km/h speed zone of 250 metres.

View to north

View to south

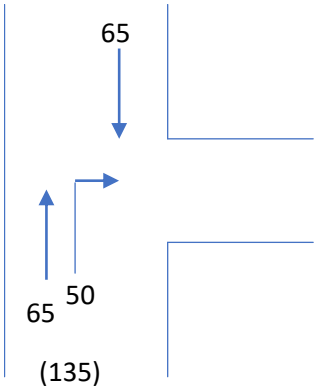
6.1.2 Right turn vehicles; assessment for right turns based on the predicted traffic data:

i) Initial 7 lot stage



Plotting these values on Fig 4.9(a) Austroads Guide to Road Design – Part 4A indicates a value in the low range for a type BA facility.

ii) Total subdivision



The plot of this data indicates marginal for a BAR/CHRS facility.

Having regard to the length of time indicative as in excess of 20 years with possible reduction in the growth in demand for light industrial land and lower traffic growth a type BA junction is considered “fit for purpose”.

Calculations for a Basic Right (BAR) treatment on a two lane rural road (fig 7.5) Austroads Part 4A indicates total approach length to the centre line of the proposed junctioning road at 95 metres.

The approach distance from the southern boundary to the centre line of the proposed junction is 116 metres suggesting a type BA junction can be installed within the frontage of the subdivision.

6.2 Traffic Efficiency

This assessment suggests that the 20 year traffic volume on this section of the Tasman Highway within the subdivision in place, worst situation 1,300 through vehicles plus 800 subdivision generated vehicles, total 2,100, is well short of the capacity of the Highway at this location of some 4,500 vehicles per day at a high level of traffic service.

This traffic assessment, including parts 6.1 and 6.2, are considered to cover the requirements of E5.6.2 P1 (a), (b) and (c).

(d) This land has frontage to the Tasman Highway with no reasonable alternative access to another road.

(e) The access junction is required to permit the development of the land with the land zoning permitting the proposed land use.

It is noted that access to Council's Waste Transfer Station is in close proximity. However, this access is considered as private and not of an adequate standard to service the proposed development.

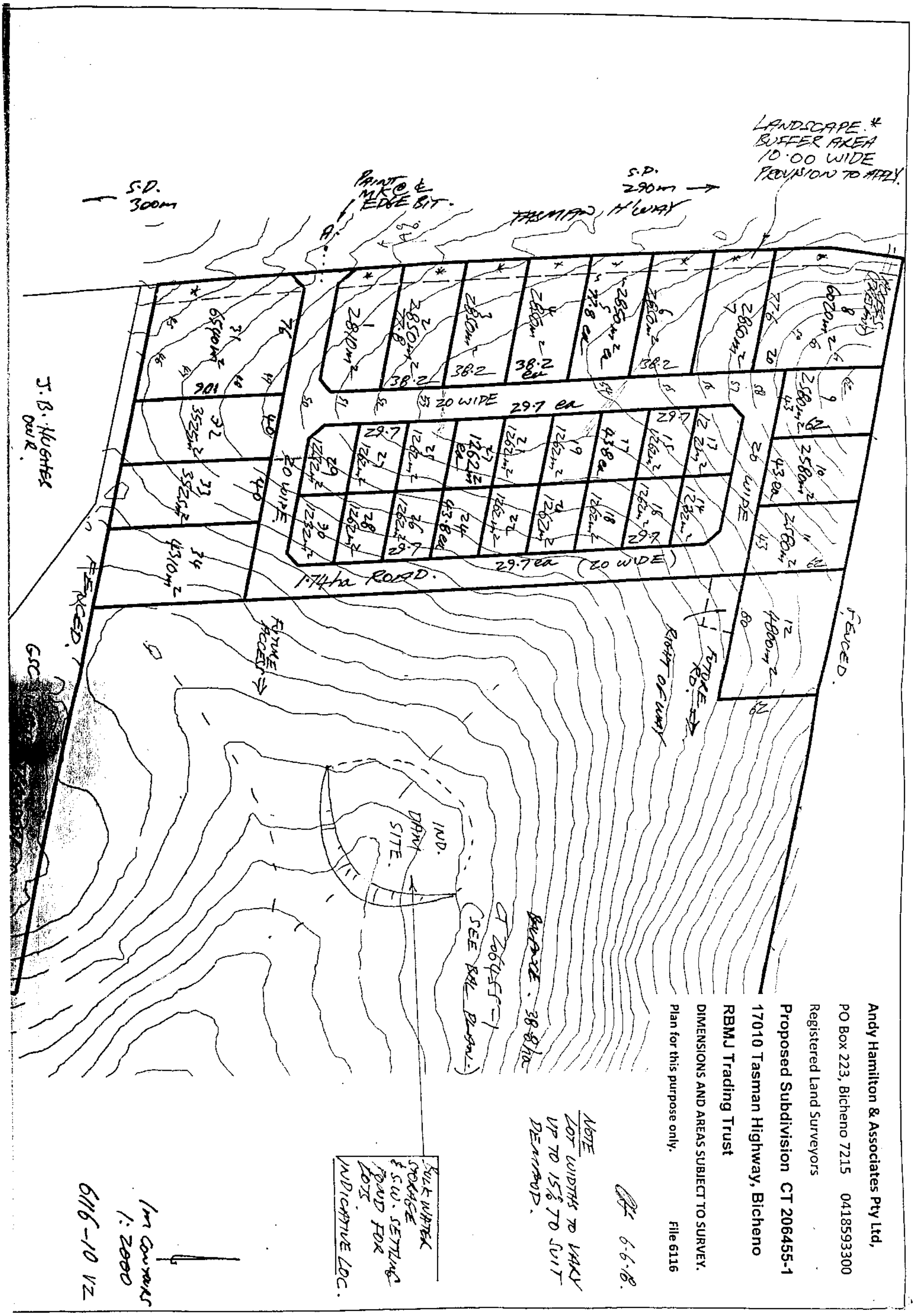
(f) This report is provided as the TIA

(g) This report to be provided to DSG, the road authority, for their consideration.

7. Conclusion

A traffic assessment for a proposed 34 lot subdivision with access from the Tasman Highway just south of Bicheno indicates that access to the development can be achieved safely and not unreasonably impact on the efficiency of the Tasman Highway in this vicinity provided the access is constructed to DSG junction standards with the provision of a type BAR turning bay.

Terry Eaton


Andy Hamilton & Associates Pty Ltd,
PO Box 223, Bicheno 7215 0418593300
Registered Land Surveyors
Proposed Subdivision CT 206455-1
17010 Tasman Highway, Bicheno
RBMJ Trading Trust
DIMENSIONS AND AREAS SUBJECT TO SURVEY.
Plan for this purpose only. File 6116

NOTES

Cadastre courtesy of LIST (TASMAP) - State of Tasmania
Orthophoto base image prepared by Another Perspective Pty Ltd from drone aerial photography flown on 05/02/2018 (Aerial Vision Australia).
Contours derived from photogrammetric model created from aerial photography with six (6) GCP points using BENTLEY ContextCapture software.

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PO Box 12, KINGSTON BEACH 7050
M: 0418 593 300
E: ashassoc@bigpond.com

Scale 1:1250 (A1) File No: TBA
Datum: Horizontal - GDA94
Vertical - AHD
Contour Interval: 0.2m

Registered Surveyor ..... 23 February 20`8 (V1)

Lot 1 Tasman Highway BICHENO

Contours / Orthophoto
CT206455/1 - R.J. & B.D. Lyne Owners

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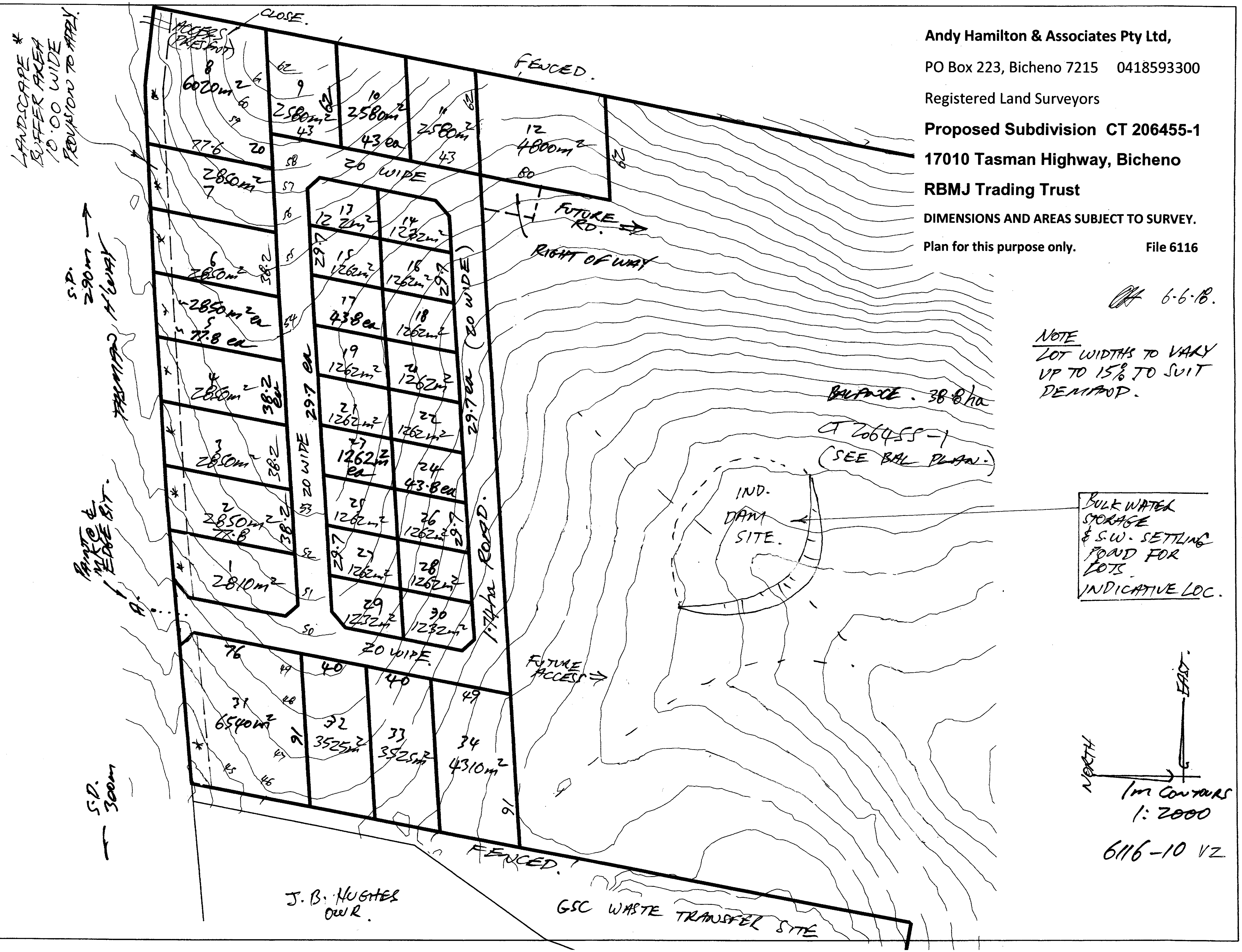
LANDSCAPE * BUFFER AREA 10.00 WIDE PROVISION TO APPLY.
S.D. 290m
TASMAN H'WAY
PAINT @ MKC & EDGE BIT.
S.D. 300m
CLOSE.
ACCESS (PREVENT)
FENCED.
8 6020m²
9 2580m²
10 2580m²
11 2580m²
12 4800m²
7 2850m²
6 2850m²
5 2850m² ea
4 2850m²
3 2850m²
2 2850m²
1 2810m²
20 WIDE
29.7 ea
FUTURE RD.
RIGHT OF WAY
13 1232m²
14 1232m²
15 1262m²
16 1262m²
17 43.8 ea
18 1262m²
19 1262m²
20 1262m²
21 1262m²
22 1262m²
23 1262m² ea
24 43.8 ea
25 1262m²
26 1262m²
27 1262m²
28 1262m²
29 1232m²
30 1232m²
29.7 ea (20 WIDE)
1.74ha ROAD.
FUTURE ACCESS
31 6540m²
32 3525m²
33 3525m²
34 4310m²
J.B. HUGHES OWR.
GSC WASTE TRANSFER SITE
FENCED.
BALANCE. 38.8ha
CT 206455-1 (SEE BAL PLAN.)
IND. DAM SITE.
BULK WATER STORAGE & S.W. SETTLING POND FOR LOTS. INDICATIVE LOC.
6.6.18.
NOTE
LOT WIDTHS TO VARY UP TO 15% TO SUIT DEMAND.
NORTH
EAST.
1m CONTOURS
1: 2000
6116-10 VZ

Andy Hamilton & Associates Pty Ltd,

PO Box 223, Bicheno 7215 0418593300

Registered Land Surveyors

Proposed Subdivision CT 206455-1

17010 Tasman Highway, Bicheno

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Plan for this purpose only. **File 6116**

6-6-18.

INDICATIVE S.W. SUBJECT TO ENG DESIGN

NOTE
LOT WIDTHS TO VARY UP TO 15% TO SUIT TERRAIN.

BULK WATER STORAGE & S.W. SETTLING POND FOR LOTS. INDICATIVE LOC.

1m CONTOURS
1:2000

6116-10 VZ

NOTES

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Registered Surveyor ..... 23 February 2018 (V1)

Lot 1 Tasman Highway BICHENO
Contours / Orthophoto
CT206455/1 - R.J. & B.D. Lyne Owners

N

BALANCE OF LAND.
@ 1:2500

119.3.12 = 48.49