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## Application for Planning

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### *S.57 Land Use Planning and Approvals Act 1993*

The following application has been received:

Application No.: **DA2025299**

Location: **55 Sice Avenue, Heybridge**

Proposal: **Residential - demolition of existing dwelling and construction of single dwelling and secondary residence**

The application may be inspected at the Administration Centre, 19 King Edward Street, Ulverstone during Office hours and on the council's website: [www.centralcoast.tas.gov.au](http://www.centralcoast.tas.gov.au) Any person may make representation in relation to the applications (in accordance with S.57(5) of the Act) by writing to the Chief Executive Officer, PO Box 220, Ulverstone 7315 or by email to [admin@centralcoast.tas.gov.au](mailto:admin@centralcoast.tas.gov.au) and quoting the Application No. Any representations received by the Council are classed as public documents and will be made available to the public where applicable under the *Local Government (Meeting Procedures) Regulations 2025*.

**The representation must be made on or before 13 April 2026**

Date of Notification: **25 March 2026**

**CENTRAL COAST COUNCIL**  
PO Box 220  
19 King Edward Street  
ULVERSTONE TASMANIA 7315  
Ph: (03) 6429 8900  
Email: [planning@centralcoast.tas.gov.au](mailto:planning@centralcoast.tas.gov.au)  
www: [centralcoast.tas.gov.au](http://centralcoast.tas.gov.au)



***Land Use Planning and Approvals Act 1993***  
***Tasmanian Planning Scheme – Central Coast***  
**PLANNING PERMIT APPLICATION**

**CENTRAL COAST COUNCIL**  
**LAND USE PLANNING**  
Received: 23/02/2026  
Application No: DA2025299  
Doc ID: 545871

*Office use only:*      *Zone:*      *Permit Pathway – NPR/Permitted/Discretionary*

**Use or Development Site:**

**Site Address**      55 SICE AVE, HEYBRIDGE, TASMANIA 7316

**Certificate of Title Reference**      138382/33

**Land Area**      596m2      **Heritage Listed Property**      NO  YES

**Applicant(s)**

**First Name(s)**      JACK      **Surname(s)**      ESTEPHAN

**Company name** (if applicable)      ENERGY EFFICIENT HOMES DESIGN & CONSTRUCTION PTY LTD      **Contact No:**      0412 536 353

**Postal Address:**      111 COBBITTY RD, COBBITTY NSW 2570

**Email address:**      jack@energyefficienthomes.com.au

Please tick box to receive correspondence and relevant information regarding your application via email.     

**Owner(s)** (note – if more than one owner, all names must be indicated)

**First Name(s)**      SUI      **Middle Names(s)**

**Surname(s)**      YU      **Company name** (if applicable)

**Postal Address:**      1 Wilaroo Avenue, Beaumont, SA, 5066

**PERMIT APPLICATION INFORMATION**

(If insufficient space for proposed use and development, please attach separate documents)

"USE" is the purpose or manner for which land is utilised.

**Proposed Use**

NEW PROPOSED RESIDENCE AND SECONDARY DWELLING

**Use Class**

Office use only

"Development" is the works required to facilitate the proposed use of the land, including the construction or alteration or demolition of buildings and structures, signs, any change in ground level and the clearing of vegetation.

**Proposed Development** (please submit all documentation in PDF format to [planning@centralcoast.tas.gov.au](mailto:planning@centralcoast.tas.gov.au) separating A4 documents & forms from A3 documents).

**Value of the development** – (to include all works on site such as outbuildings, sealed driveways and fencing)

\$.....706,250.00..... Estimate/ Actual

Total floor area of the development .....189.....m<sup>2</sup>

**Declaration of Notice to Landowner**

**If land is NOT in the applicant's ownership**

I Sui Yu , declare that the owner/each of the owners of the land has been notified of the intention to make this permit application under section 52(1) of the *Land Use Planning and Approvals Act 1993*.

Signature of Applicant

*Sui Yu*

Date

09/02/2026

**If the application involves land within a Strata Corporation**

I , declare that the owner/each of the owners of the body corporation has been notified of the intention to make this permit application.

Signature of Applicant

Date

**If the application involves land owned or administered by the CENTRAL COAST COUNCIL**


Central Coast Council consents to the making of this permit application.  
 General Managers Signature \_\_\_\_\_ Date \_\_\_\_\_

**If the permit application involves land owned or administered by the CROWN**

I, \_\_\_\_\_ the Minister  
 responsible for the land, consent to the making of this permit application.  
 Minister (Signature) \_\_\_\_\_ Date \_\_\_\_\_

*NB: If the site includes land owned or administered by the Central Coast Council or by a State government agency, the consent in writing (a letter) from the Council or the Minister responsible for Crown land must be provided at the time of making the application - and this application form must be signed by the Council or the Minister responsible.*

**Applicants Declaration**

I/ we JACK ESTEPHAN  
 \_\_\_\_\_ declare  
 that the information I have given in this permit application to be true and correct to the best of  
 my knowledge.  
  
 Signature of Applicant/s \_\_\_\_\_ Date 09/02/2026


<b>Office Use Only</b>	
Planning Permit Fee	\$ .....
Public Notice Fee	\$ .....
Permit Amendment / Extension Fee	\$ .....
No Permit Required Assessment Fee	\$ .....
<b>TOTAL</b>	<b>\$ .....</b>
Validity Date	

SEARCH OF TORRENS TITLE

VOLUME 138382	FOLIO 33
EDITION 5	DATE OF ISSUE 16-Dec-2025

SEARCH DATE : 07-Feb-2026

SEARCH TIME : 09.20 pm

 <b>CENTRAL COAST COUNCIL LAND USE PLANNING</b>	
Received:	11/02/2026
Application No:	DA2025299
Doc ID:	544736

DESCRIPTION OF LAND

Parish of STOWPORT Land District of DEVON

Town of HEYBRIDGE

City of BURNIE

Lot 33 on Plan [138382](#) (Section 27A of the Land Titles Act.)

Derivation : Whole of Lot 33 on Plan [138382](#) Gtd. to The Crown

SCHEDULE 1

[C635674](#) TRANSFER to SUI YU Registered 04-Aug-2005 at noon

SCHEDULE 2

[C373988](#) Land is limited in depth to 15 metres, excludes minerals and is subject to reservations relating to drains sewers and waterways in favour of the Crown

[C635674](#) TRANSFER - Land is limited in depth to 15 metres, excludes minerals and is subject to reservations relating to drains sewers and waterways in favour of the Crown

[C635674](#) FENCING PROVISION in Transfer

[C549025](#) NOTICE to Record Bar to Action Section 30 Crown Lands (Shack Sites) Act 1997 Registered 21-Apr-2004 at noon

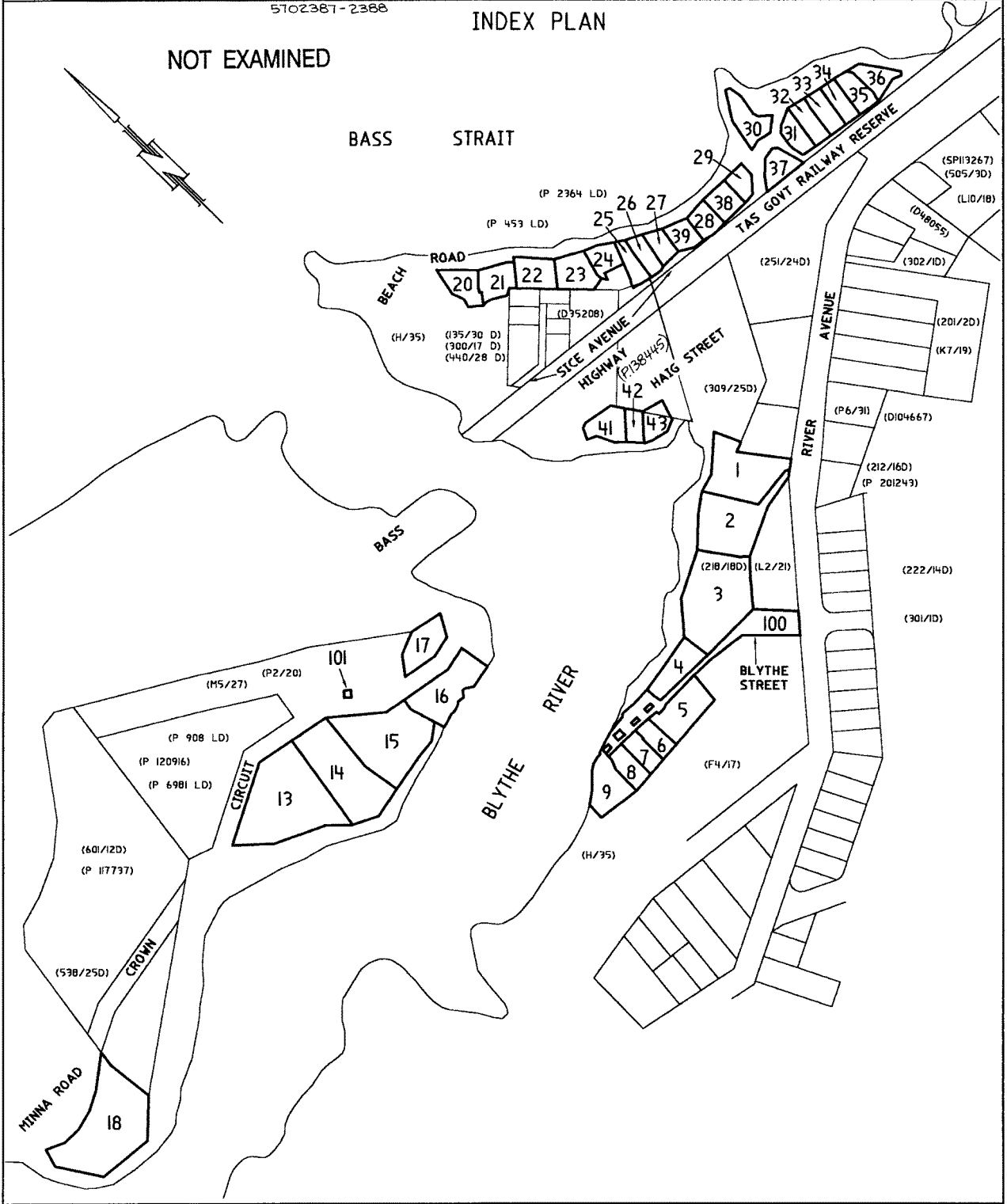
[C489984](#) Order setting forth Covenants Registered 26-Apr-2004 at noon

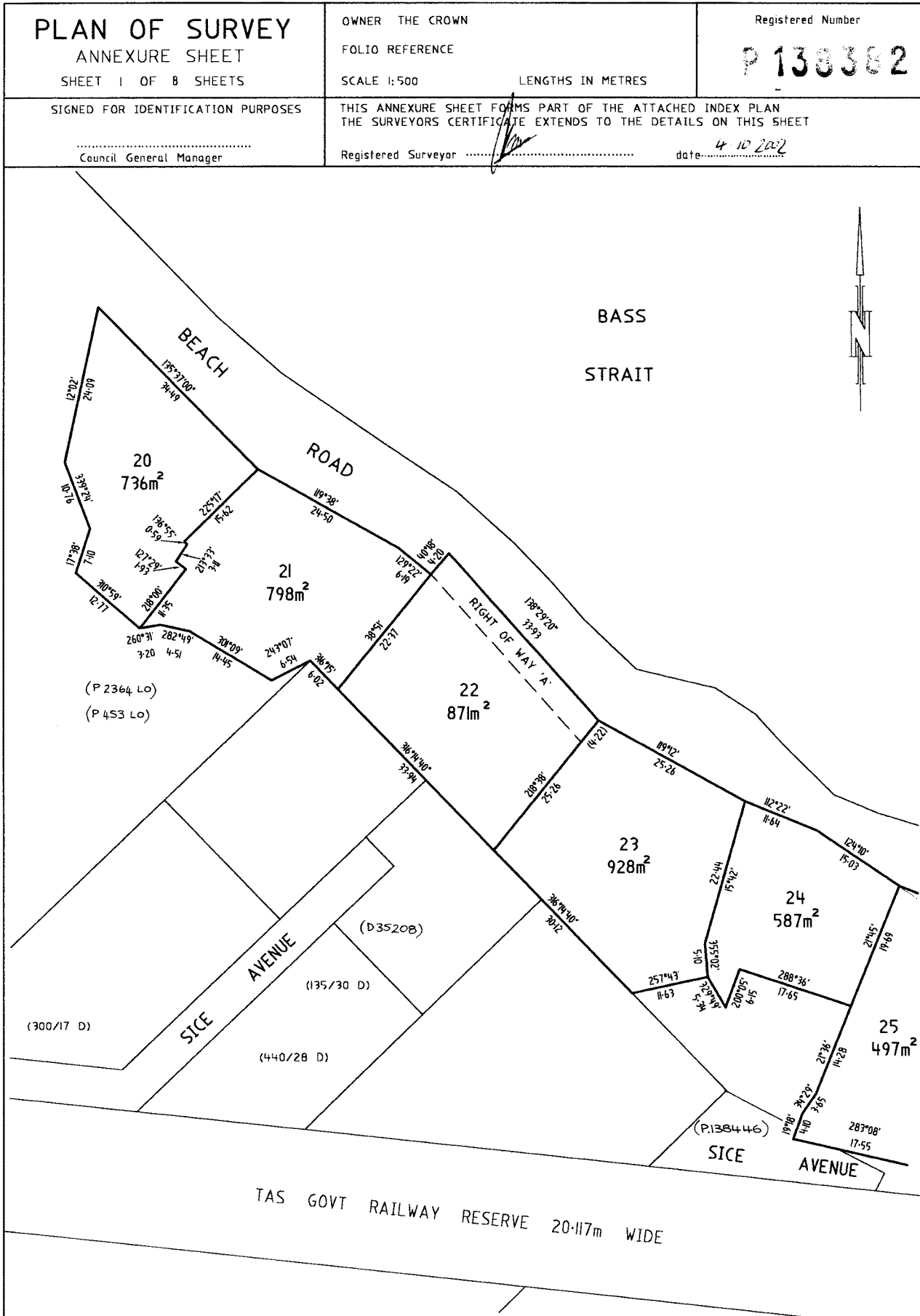
[E71123](#) MORTGAGE to Westpac Banking Corporation Registered 15-Nov-2016 at 12.01 pm

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

<p>OWNER THE CROWN</p> <p>FOLIO REFERENCE SECTION 27A C.373988</p> <p>F.R.224562/1 &amp; F.R.234758/1</p> <p>GRANTEE</p> <p>WHOLE OF LOTS 1-9, 13-18, 20-39, 41-43, 100 &amp; 101 THE CROWN.</p>	<p><b>PLAN OF SURVEY</b></p> <p>BY SURVEYOR CRAIG B ROGERSON FIRST FLOOR No 11 BAYFIELD STREET ROSNY PARK PH 6244-6256 FAX 6244-6221 MOB 0418-120-796</p> <p>LOCATION</p> <p><b>(TOWN OF HEYBRIDGE)</b> <b>CITY OF BURNIE &amp; DEVON-STOWPORT</b></p> <p>SCALE 1:3000 LENGTHS IN METRES</p>	<p>REGISTERED NUMBER</p> <p><b>P 138382</b></p> <p>APPROVED <b>08 OCT 2002</b> EFFECTIVE FROM</p> <p><i>Alice Kawa</i> Recorder of Titles</p>	
<p>MAPSHEET MUNICIPAL CODE No 103,104 (4045-44,54)</p>	<p>LAST UPI No 4203630, 4201331, 4201334-1345, 5102806, 5102189, 5102387-2388</p>	<p>LAST PLAN No</p>	<p>ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN</p>





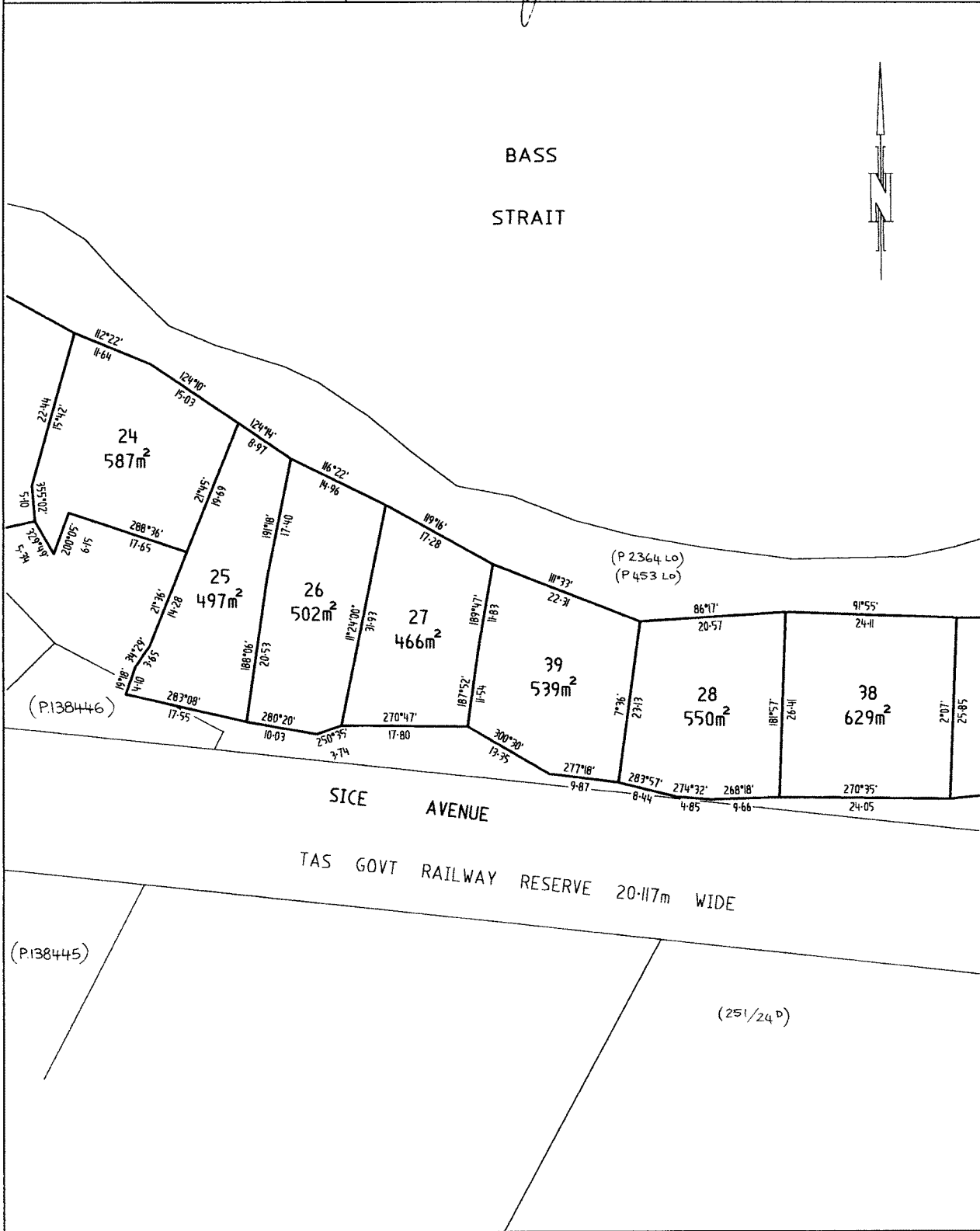
<p><b>PLAN OF SURVEY</b> ANNEXURE SHEET SHEET 2 OF 8 SHEETS</p>	OWNER THE CROWN	<p>Registered Number <b>P138382</b></p>
	FOLIO REFERENCE	
	SCALE 1:500	LENGTHS IN METRES

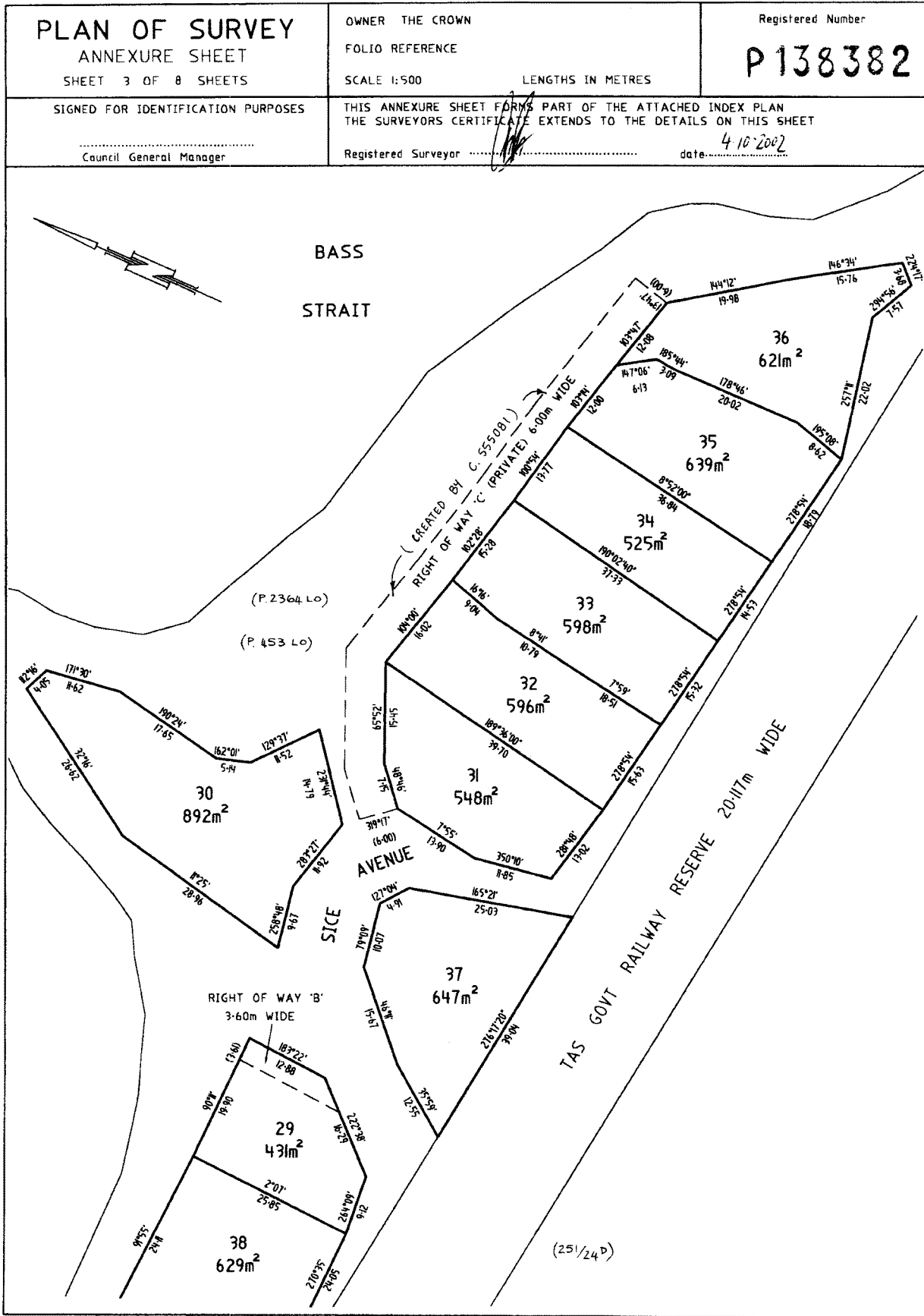
SIGNED FOR IDENTIFICATION PURPOSES

THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN  
THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET

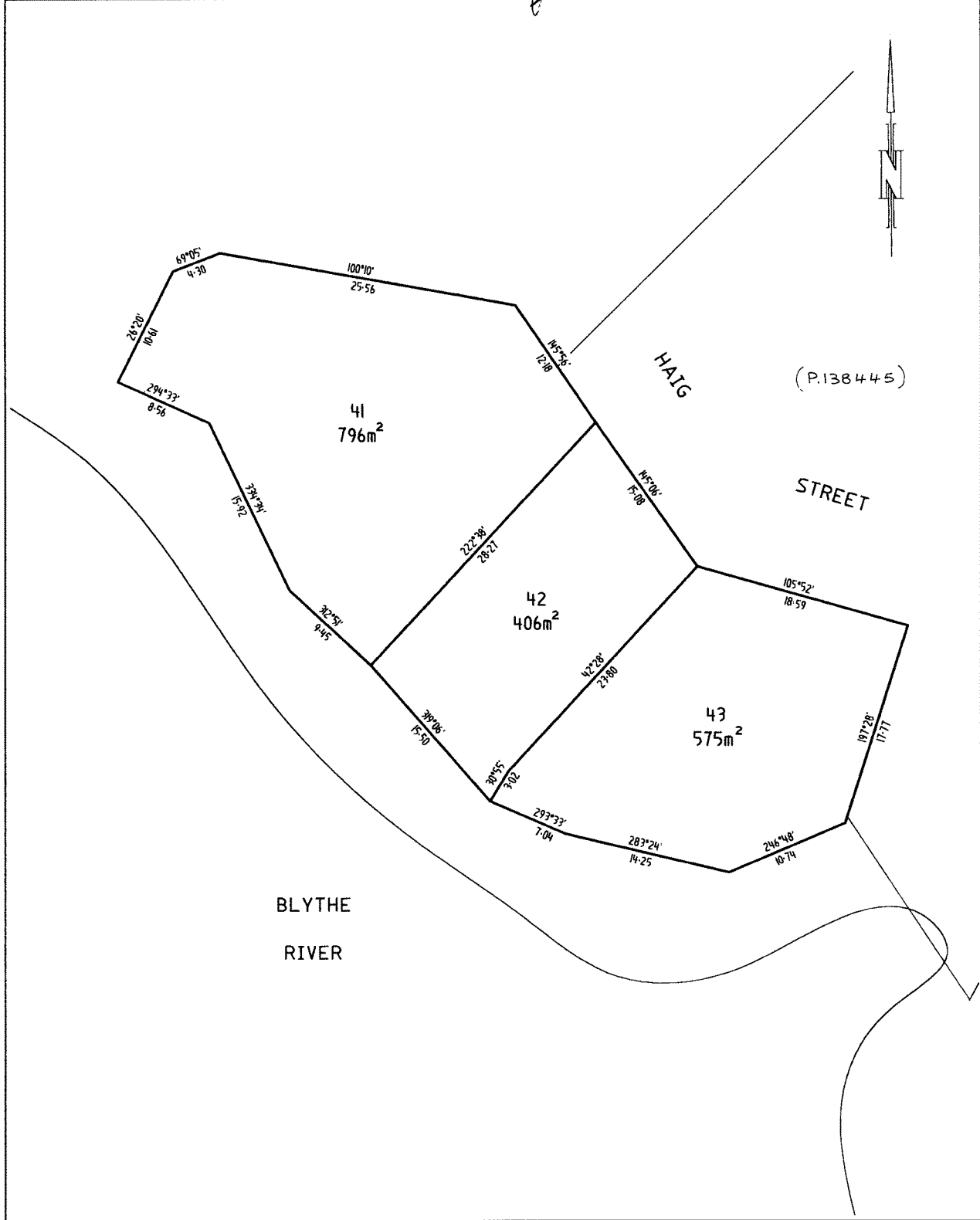
.....  
Council General Manager

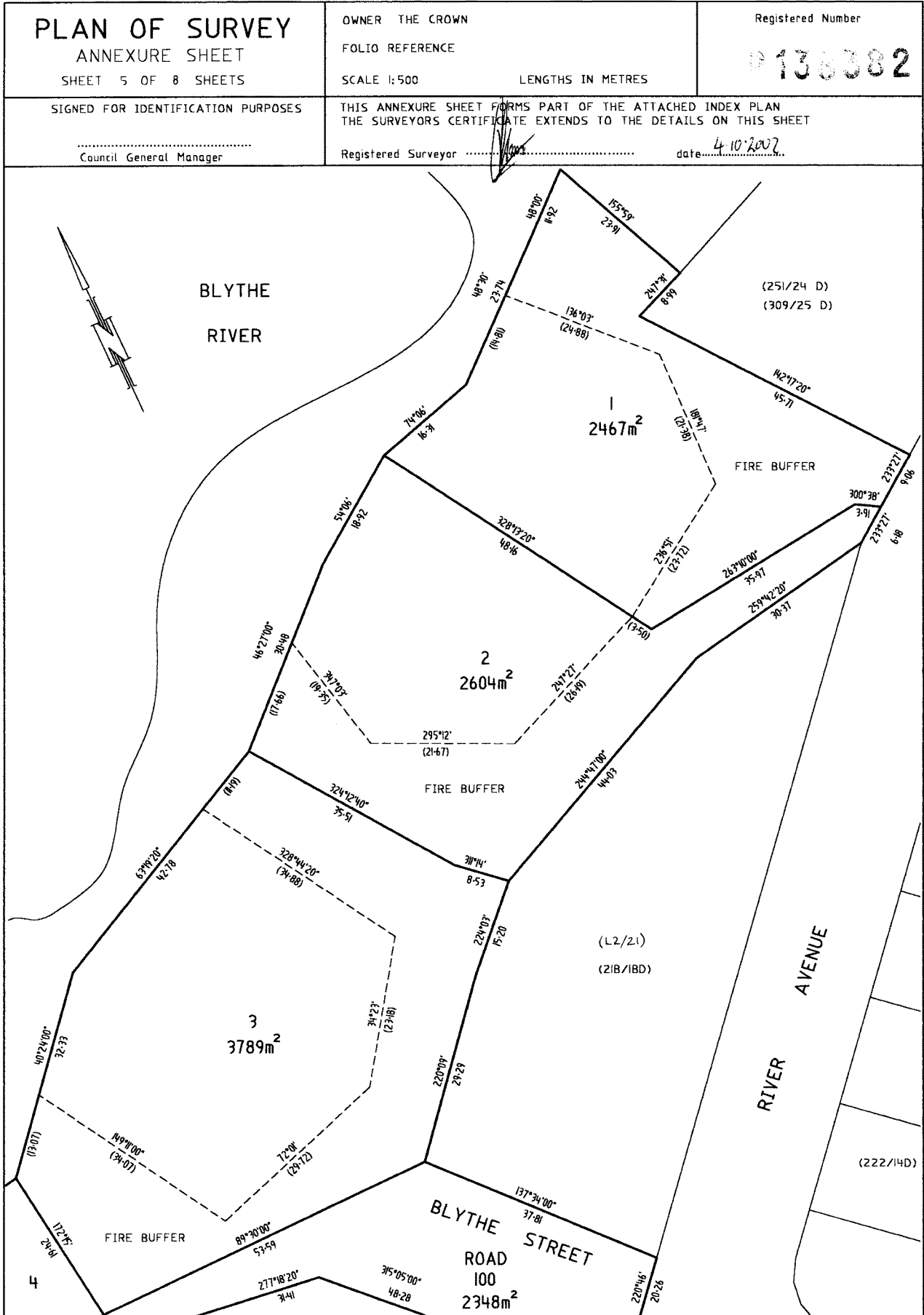
Registered Surveyor ..... date 4.10.2002

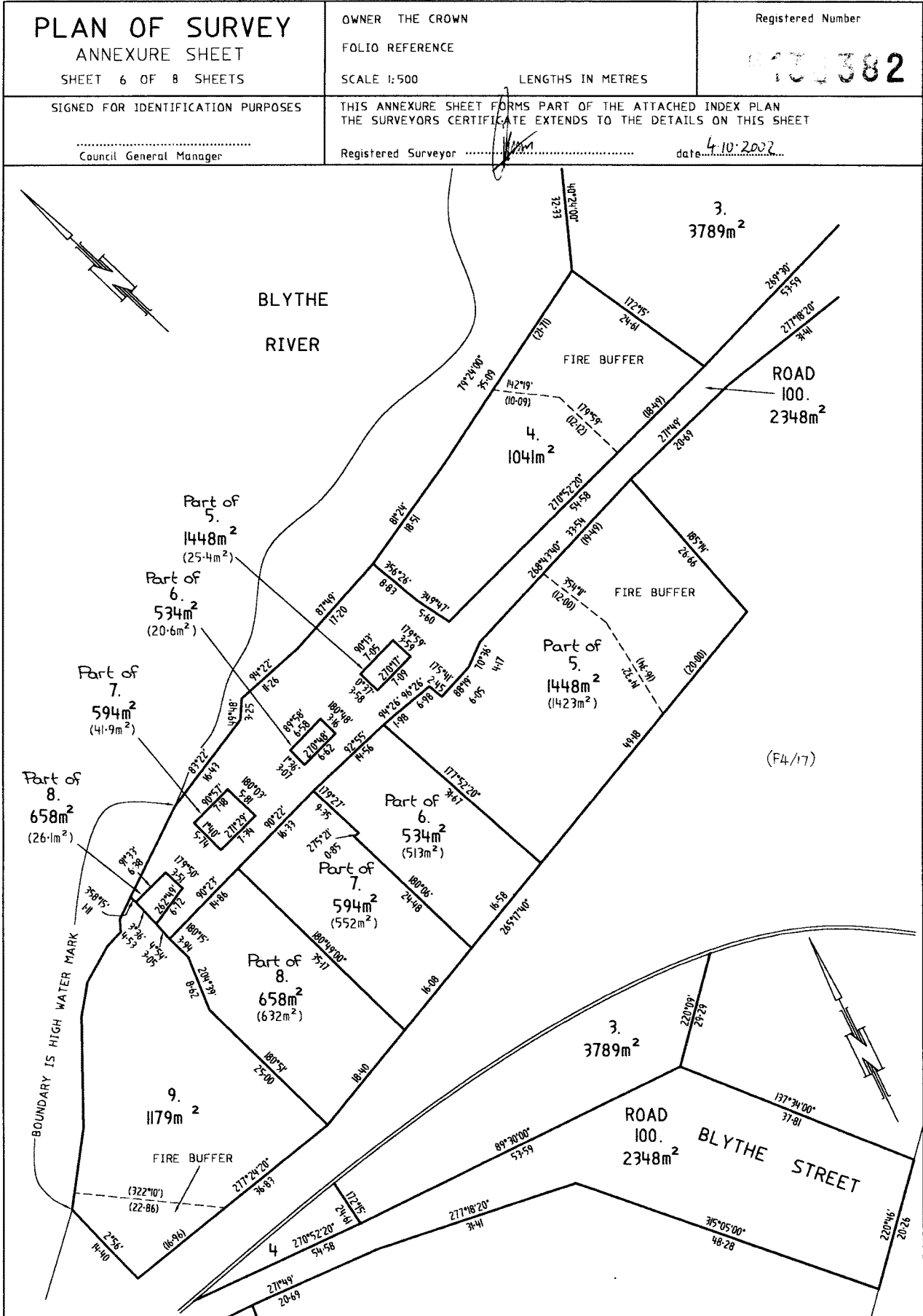


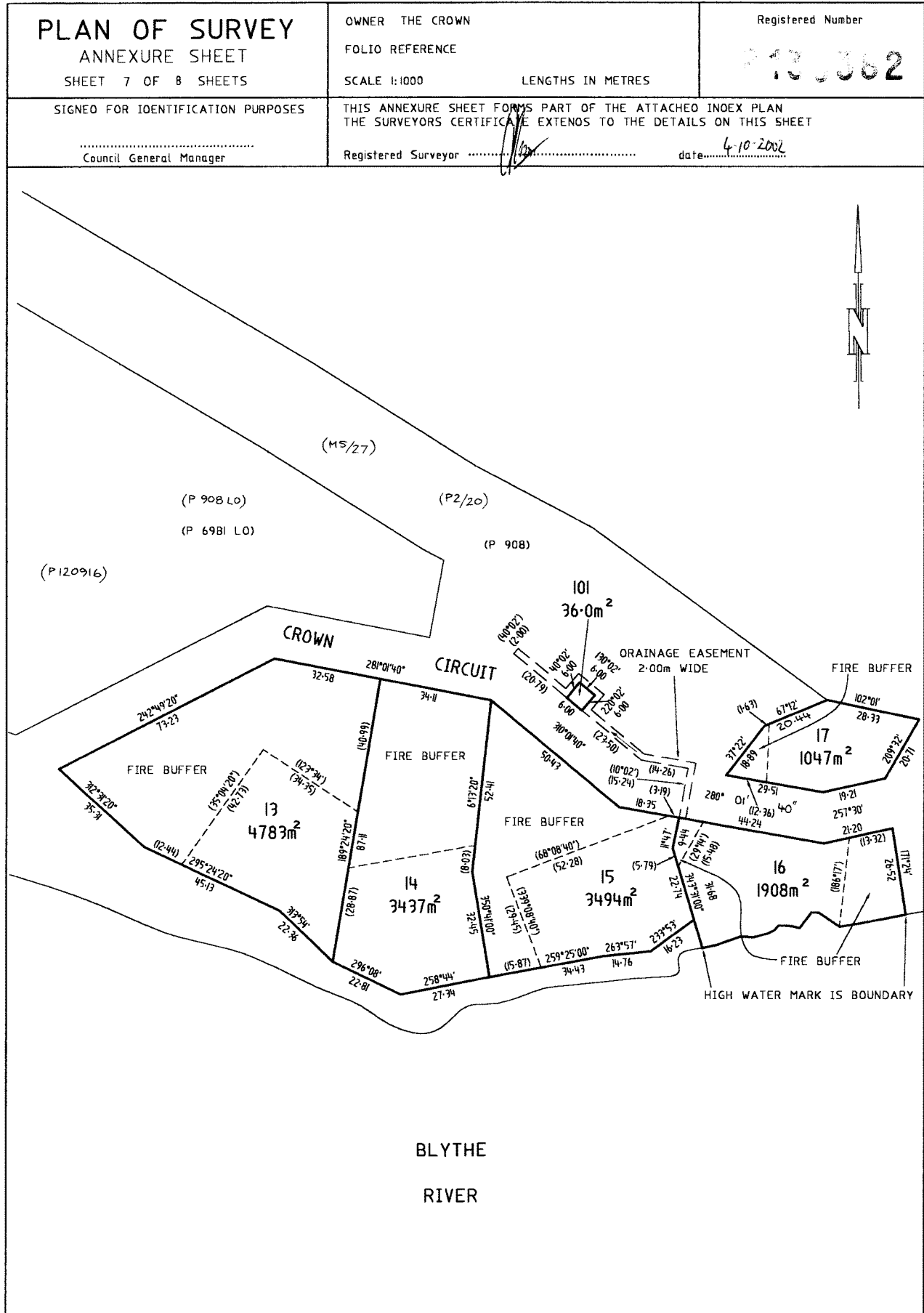


<p><b>PLAN OF SURVEY</b> ANNEXURE SHEET SHEET 4 OF 8 SHEETS</p>	<p>OWNER THE CROWN FOLIO REFERENCE SCALE 1:300                      LENGTHS IN METRES</p>	<p>Registered Number <b>P 138382</b></p>
<p>SIGNED FOR IDENTIFICATION PURPOSES  ..... Council General Manager</p>	<p>THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET  Registered Surveyor ..... date <u>4-10-2002</u></p>	

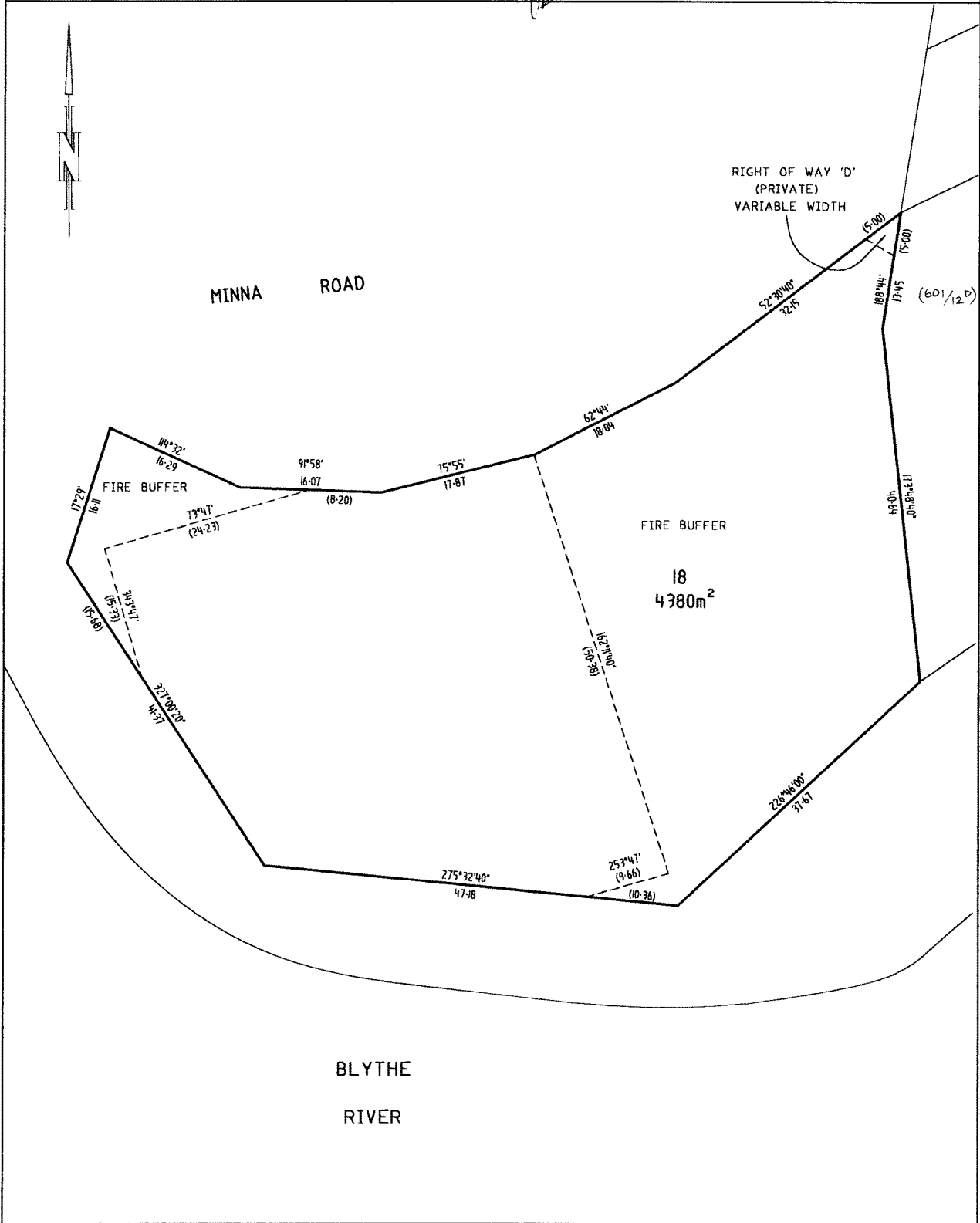


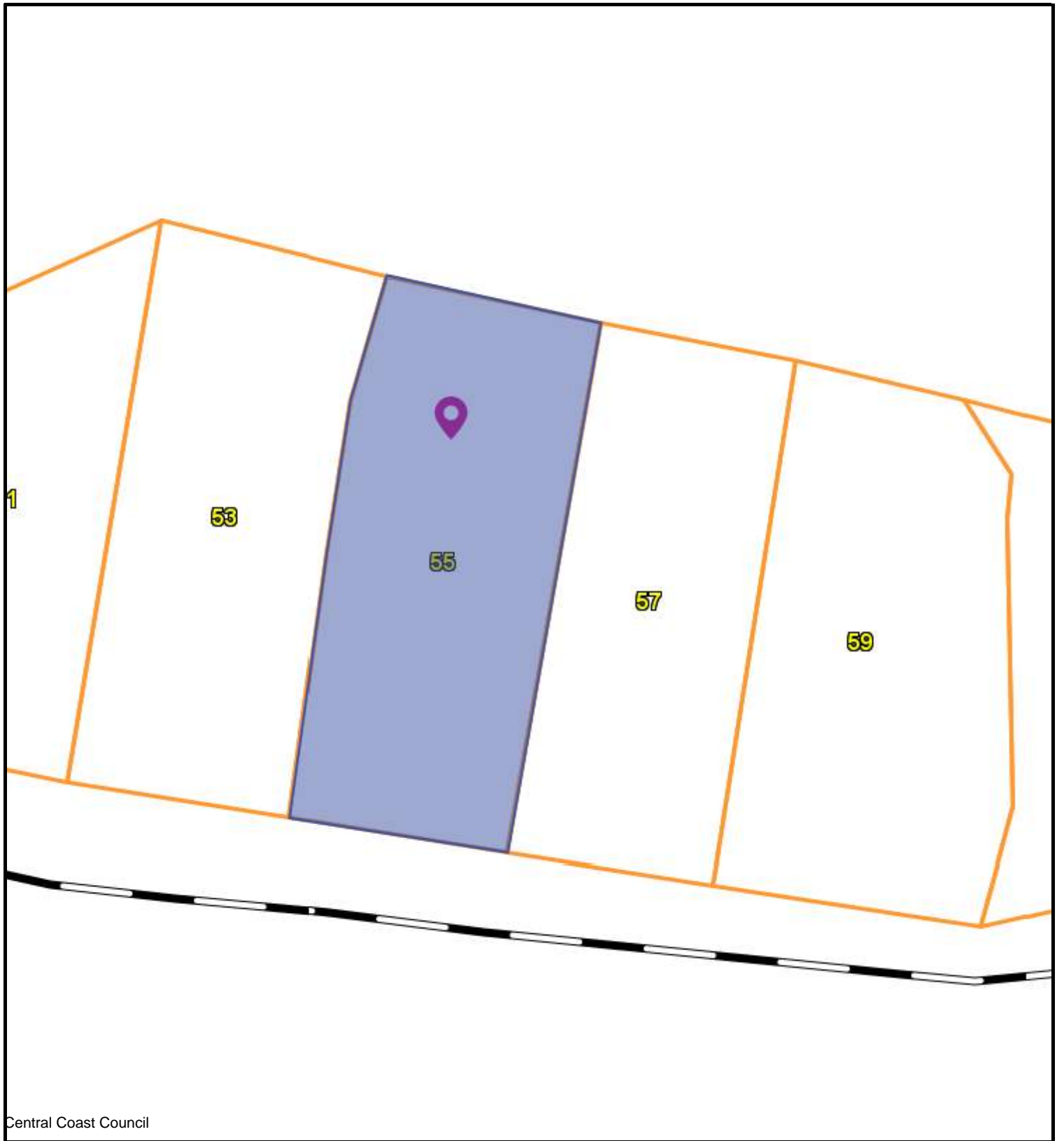






<p><b>PLAN OF SURVEY</b> ANNEXURE SHEET SHEET 8 OF 8 SHEETS</p>	<p>OWNER THE CROWN FOLIO REFERENCE SCALE 1:400      LENGTHS IN METRES</p>	<p>Registered Number <b>138382</b></p>
<p>SIGNED FOR IDENTIFICATION PURPOSES ..... Council General Manager</p>	<p>THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET Registered Surveyor ..... date <b>4-10-2002</b></p>	





Central Coast Council



CENTRAL COAST COUNCIL  
 19 King Edward St  
 Ulverstone  
 TAS 7315  
 Telephone: 03 6429 8900  
 admin@centralcoast.tas.gov.au



20-Mar-2026

**55 SICE AVENUE,  
 HEYBRIDGE  
 DA2025299**

**IMPORTANT**

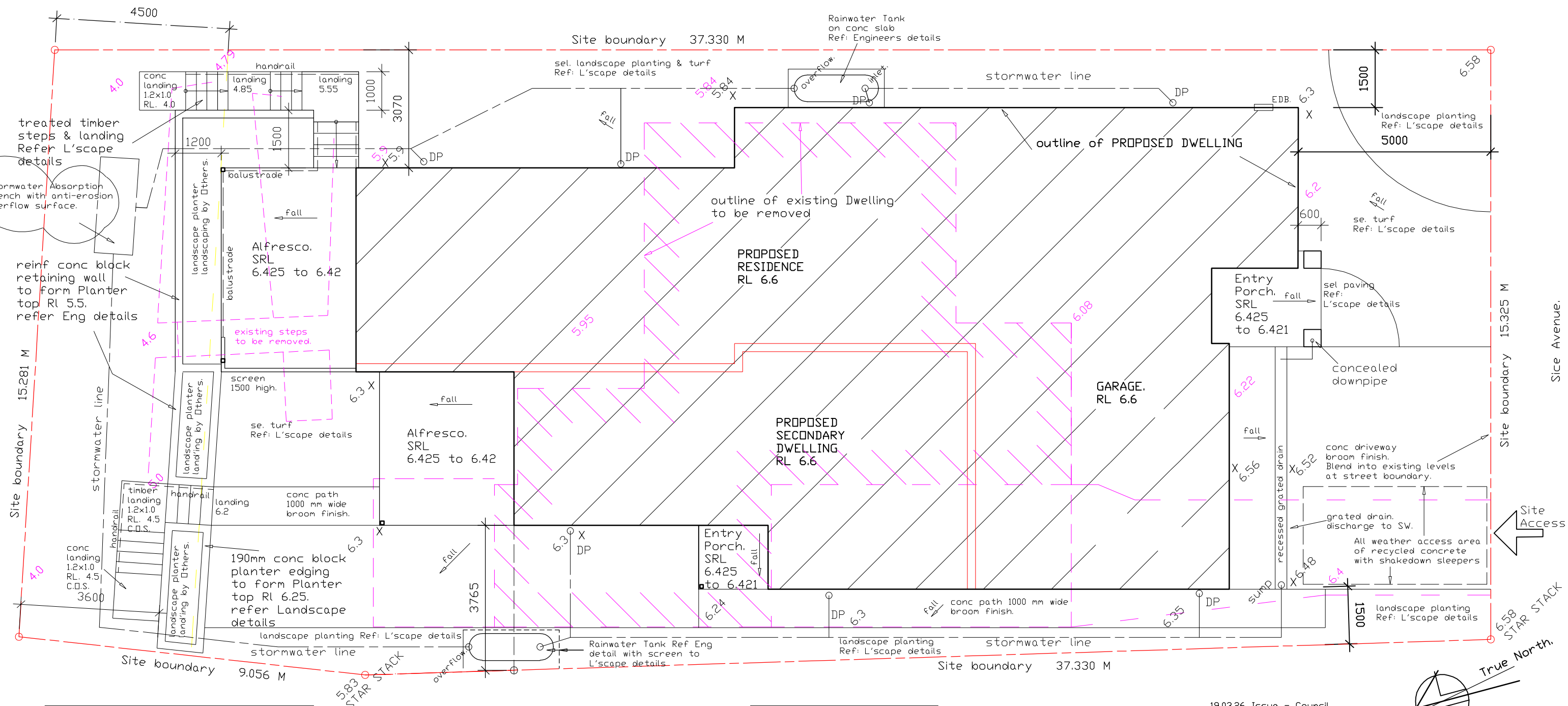
This map was produced on the GEOCENTRIC DATUM OF AUSTRALIA 1994 (GDA94), which has superseded the Australian Geographic Datum of 1984 (AGD66/84). Heights are referenced to the Australia Height Datum (AHD). For most practical purposes GDA94 coordinates, and satellite derived (GPS) coordinates based on the World Geodetic Datum 1984 (WGS84), are the same.

**Disclaimer**

This map is not a precise survey document  
 All care is taken in the preparation of this plan; however, Central Coast Council accepts no responsibility for any misprints, errors, omissions or inaccuracies. The information contained within this plan is for pictorial representation only. Do not scale. Accurate measurement should be undertaken by survey.  
 © The List 2025.  
 © Central Coast Council 2025.

**10 m**

Scale =  
**1:366.660**



**Site Erosion Control.**

Erect Erosion Control Barriers during construction period: form up Swales, Barriers, Berms, Diversion Drains, Holding Ponds etc. Maintain Controls throughout the building period. Barriers to be of Geofabric or Hay Bales secured with Star Stacks or approved metal spikes. Refer Environmental Report for detail.

**Site Preparation.** Carefully excavate the areas for new work to form the platforms & trenches required. Grade platforms to negate surface water flowing onto the construction area. Likewise fall surrounding areas away from the building area & Site Boundaries, grade to erosion controls etc. Provide pumps, covers etc to maintain the work area in a dry state.

**Services.** Soilwaste & stormwater line Layouts - Diagramic only, Refer to Environmental Report &/or Engineers details for clarification. Locate all Services prior to excavations and construction work. Any disturbance to a Service not required to be part of these works, shall be made good at no additional cost.

**Safety.** Provide all signs, lighting, barriers, hoarding, security fencing necessary & incidental to prevent any unauthorised entry to the building area.

**CENTRAL COAST COUNCIL LAND USE PLANNING**

Received: 20/03/2026  
 Application No: DA2025299  
 Doc ID: 547689

**NOTES.**

Confirm all dimensions on site before any and all works including, ordering of materials, letting of Contracts and construction generally.

Do NOT scale drawing. Use figured dimensions ONLY to be used.

**STATISTICS - Areas.**

Site Area: . . . 596 sm (approx)  
 Floor Areas:  
 Residence . . . . . 182.3 sm  
 (Inclusive of Garage & Partywall)  
 Secondary Dwelling . . . 58.7 sm

Areas measured inclusive of perimeter walls and exclude of Porches & Alfrescos.

Building footprint: . . . 282.5 sm  
 (Includes Entry Porches & Alfrescos)

**LEGEND & DRAFTING CLARIFICATION**

- 6.22 existing Levels taken from Surveyors details shown in Magenta coloured linework at 45° angle.
- Existing Site works EG Retaining walls & slabs shown in dotted Magenta coloured linework.
- Outline of existing Dwelling to be removed shown in Magenta coloured linework with perimeter hatched. (Refer Demolition Application)
- Proposed finished levels shown in Black Line work.
- C.O.S. Confirm On Site.

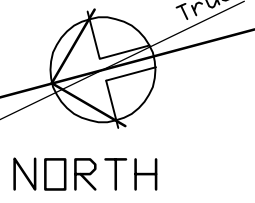
19.03.26 Issue - Council  
 Rev D 19.03.26 SW Absorption Pit Note revised to clarify detail.  
 29.01.26 Issue - Council  
 Rev C 27.01.26 Site Access Noted  
 29.01.26 Issue - Council  
 Rev B 27.01.26 Body setbacks/SW Diagram & Scale notation added statistics updated.  
 22.12.2025 Issue - Council  
 Rev A 22.12.2025 Dwg re-Titled & Garage revised.  
 1.12.2025 Application Issue.

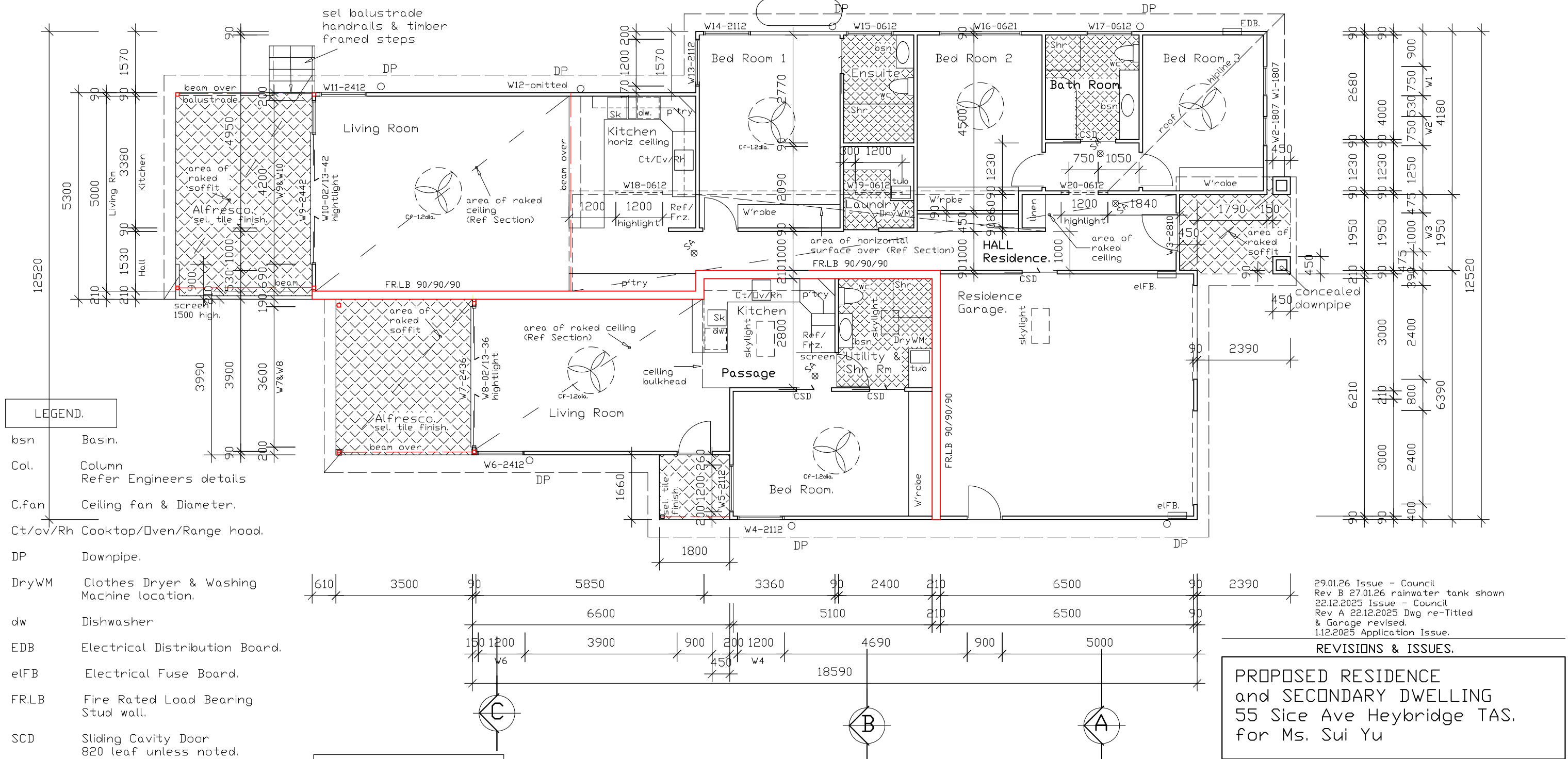
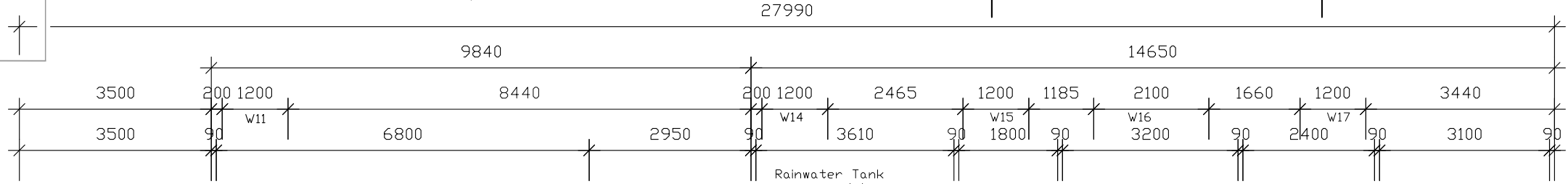
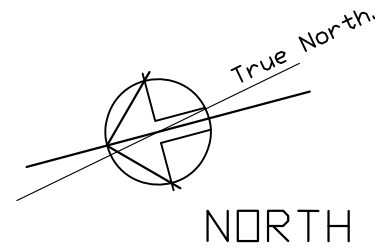
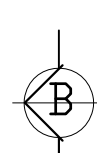
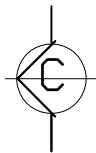
**REVISIONS & ISSUES.**

**PROPOSED RESIDENCE and SECONDARY DWELLING**  
 55 Sice Ave Heybridge TAS.  
 for Ms. Sui Yu  
 FR.13838/33

**SITE PLAN**

**ENERGY EFFICIENT HOMES**  
 Architects - Cobbity  
 Tel. 0412 536 353 Date: Oct 2025  
 Ref: 25 67 590 Dwg No:  
 Scale: 1 : 100 **A3-01.D**





- LEGEND.**
- bsn Basin.
  - Col. Column Refer Engineers details
  - C.fan Ceiling fan & Diameter.
  - Ct/ov/Rh Cooktop/Oven/Range hood.
  - DP Downpipe.
  - DryWM Clothes Dryer & Washing Machine location.
  - dw Dishwasher
  - EDB Electrical Distribution Board.
  - eIFB Electrical Fuse Board.
  - FR.LB Fire Rated Load Bearing Stud wall.
  - SCD Sliding Cavity Door 820 leaf unless noted.
  - sk Sink configuration as shown
  - T.B.C To Be Confirmed.
  - SA Smoke Alarm.
  - W.9 Window Number. Height / width.

**NOTES.**

Confirm all dimensions on site before any and all works including, ordering of materials, letting of Contracts and construction generally.

Do NOT scale drawing. Use figured dimensions ONLY to be used.

**Note: Exposure.**

All material, inclusive of basic structure, coatings, trims, fixing, sealants, capping etc is to of an approval exposure related standard with all to be inclusive of the Certification by the Manufacturer, Applicator etc of same.

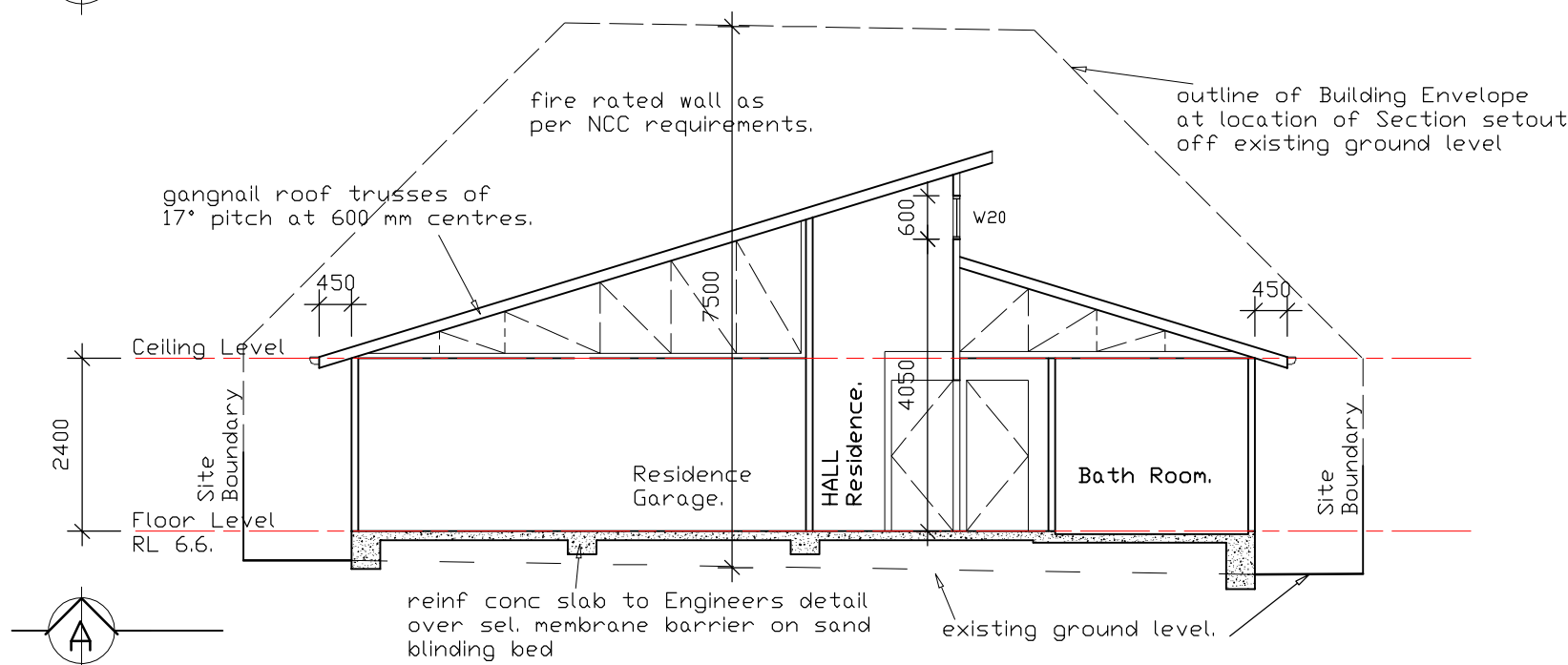
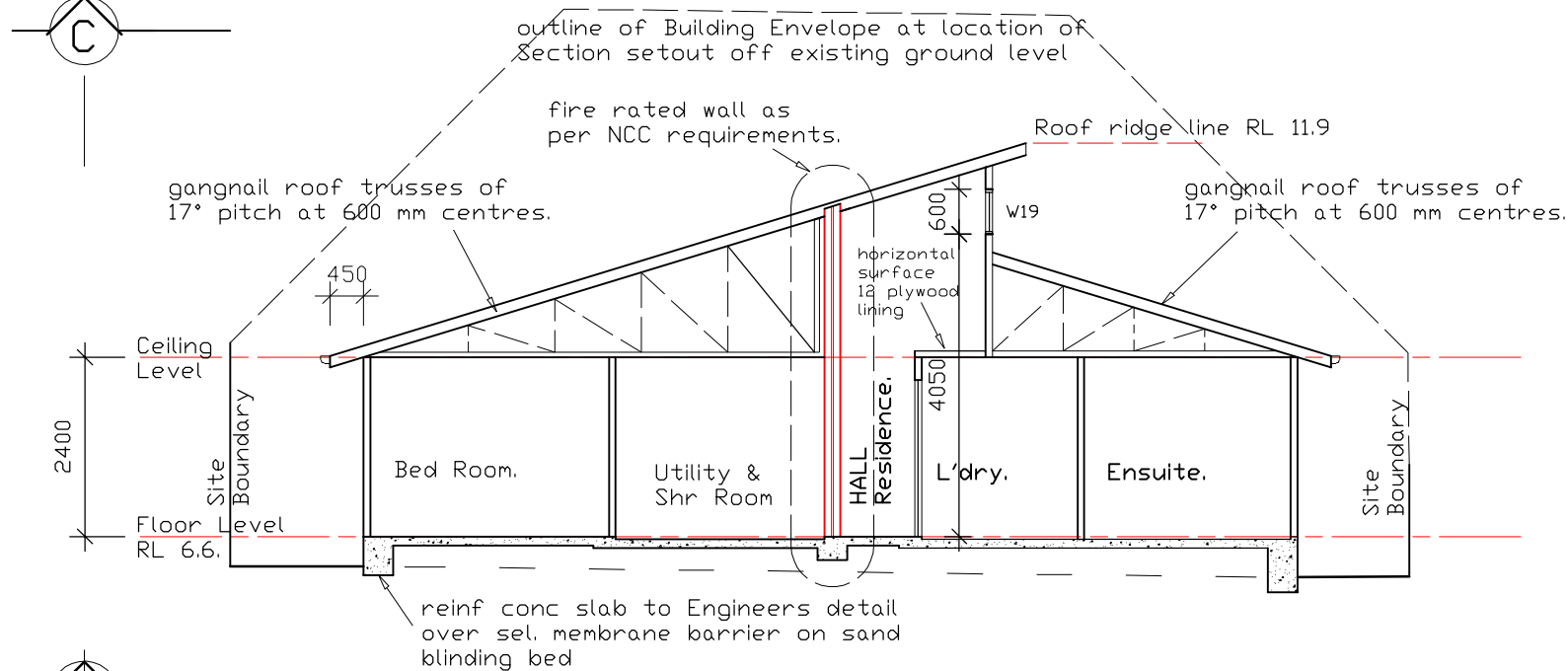
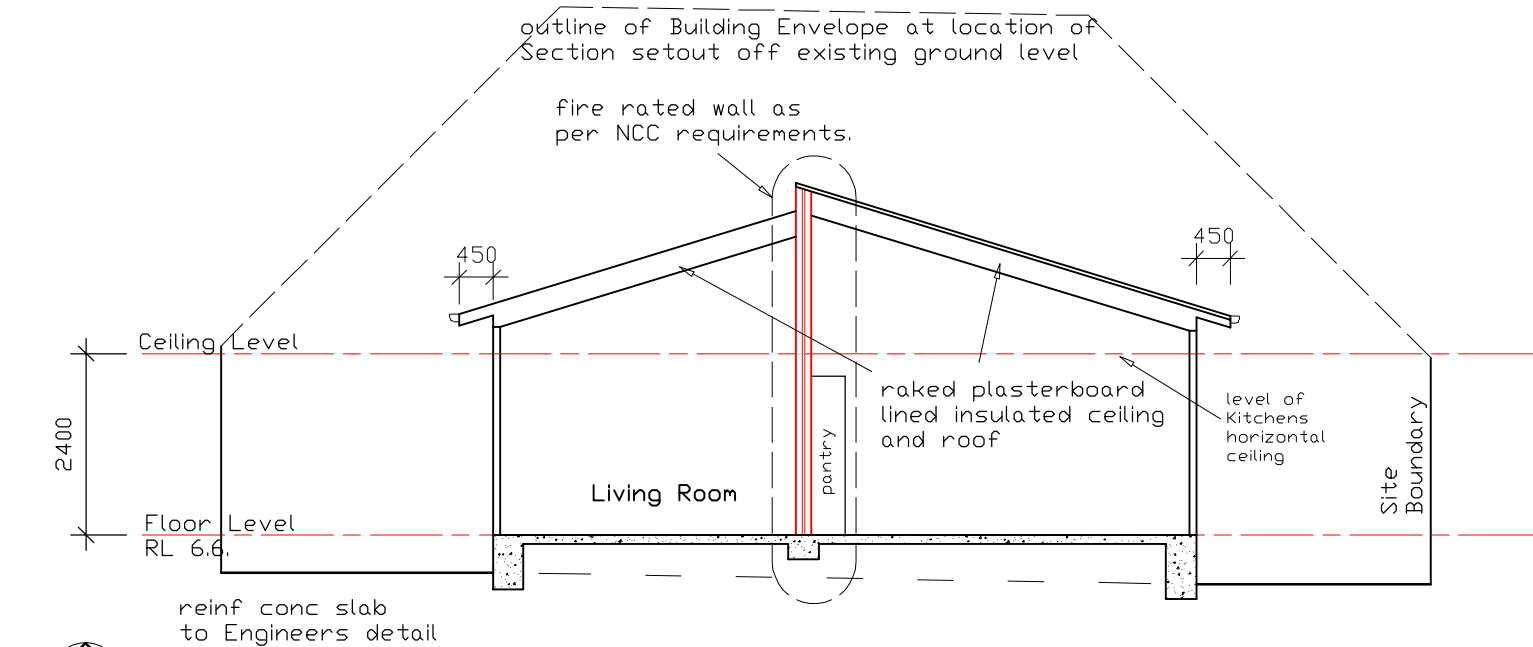
29.01.26 Issue - Council  
Rev B 27.01.26 rainwater tank shown  
22.12.2025 Issue - Council  
Rev A 22.12.2025 Dwg re-Titled & Garage revised.  
1.12.2025 Application Issue.

**REVISIONS & ISSUES.**

**PROPOSED RESIDENCE**  
and **SECONDARY DWELLING**  
55 Sice Ave Heybridge TAS.  
for Ms. Sui Yu

**FLOOR PLAN.**

**ENERGY EFFICIENT HOMES**  
Architects - Cobbity  
Tel. 0412 536 353 Date: Oct 2025  
Ref: 25 67 590 Dwg No:  
Scale: 1 : 100 @A3 **A3-02.A**



WINDOW SCHEDULE.		
Drawing Notation	Window Frame opening Dimension ( height X width )	Room
W1-1807	1800 X 750.	Bedroom 3.
W2-1807	1800 X 750.	Bedroom 3.
W3-2810	2800 X 1000.	Entry Hall (Ref door Schedule)
W4-2112	2100 X 1200.	Sec.Dwelling Bedroom.
W5-2112	2100 X 1200.	Sec.Dwelling Bedroom.
W6-2412	2400 X 1200.	Sec.Dwelling Living Room
W7-2436	2400 X 3600.	Sec.Dwelling Living Room
W8-02/13-36 Highlight	200 & 1300 X 3600. angled head	Sec.Dwelling Living Room
W9-2442	2400 X 4200.	Residence Living Room
W10-02/13-42 Highlight	200 & 1300 X 4200. angled head	Residence Living Room
W11-2412	2400 X 1200.	Residence Living Room omitted
W12-1809	-	
W13-2112	2100 X 1200.	Bedroom 1.
W14-2112	2100 X 1200.	Bedroom 1.
W15-0612	600 X 1200.	Ensuite.
W16-0621	600 X 2100.	Bedroom 2.
W17-0612	600 X 1200.	Bathroom.
W18-0612	600 X 1200.	Kitchen Highlight.
W19-0612	600 X 1200.	Laundry Highlight.
W20-0612	600 X 1200.	Entry Hall Highlight.

**DOOR SCHEDULE.**

Location & Door Leaf Dimension.

Generally:  
All internal doors: 2040 x 820 x 35 mm Profile / design as selected.

Cavity sliding doors 2040 x 820 x 35 mm noted as: 'csd'.

All external doors: 2040 x 820 x 45 mm external paint qualify. Profile / design as selected.

Entry doors.  
Residence 2040 x 970 x 45 mm external paint qualify Profile / design as selected.

Sec. Dwelling 2040 x 820x 45 mm external paint qualify. Profile / design as selected.

Garage  
2040 x 820 x 45 mm external paint qualify. gazed panel 900 high x 600 wide.

**CENTRAL COAST COUNCIL**  
LAND USE PLANNING

Received: **23/02/2026**

Application No: **DA2025299**

Doc ID: **545867**

**Note: Exposure.**

All material, inclusive of basic structure, coatings, trims, fixing, sealants, capping etc is to of an approval exposure related standard with all to be inclusive of the Certification by the Manufacturer, applicator etc of same.

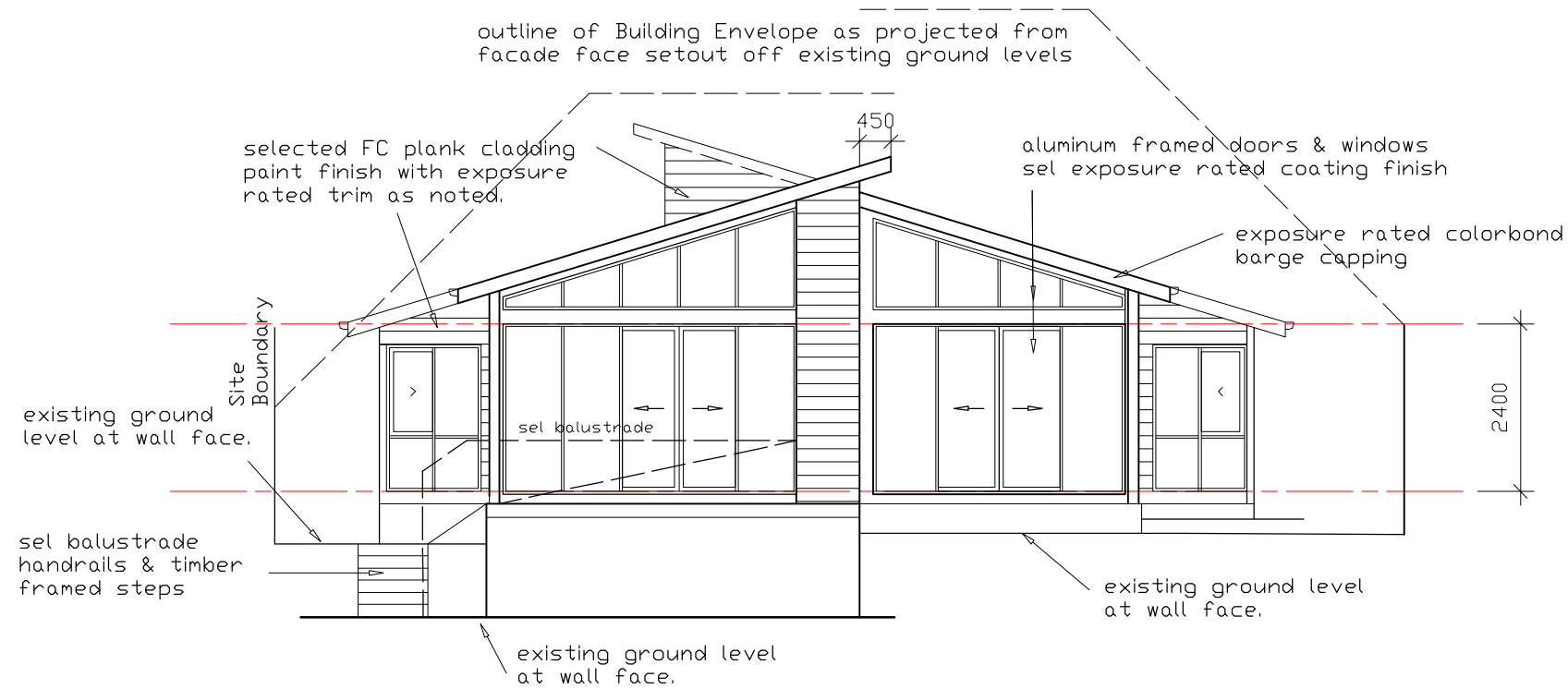
22.12.2025 Issue - Council  
Rev A 22.12.2025 Dwg re-Titled & Garage revised.  
1.12.2025 Application Issue.

**REVISIONS & ISSUES.**

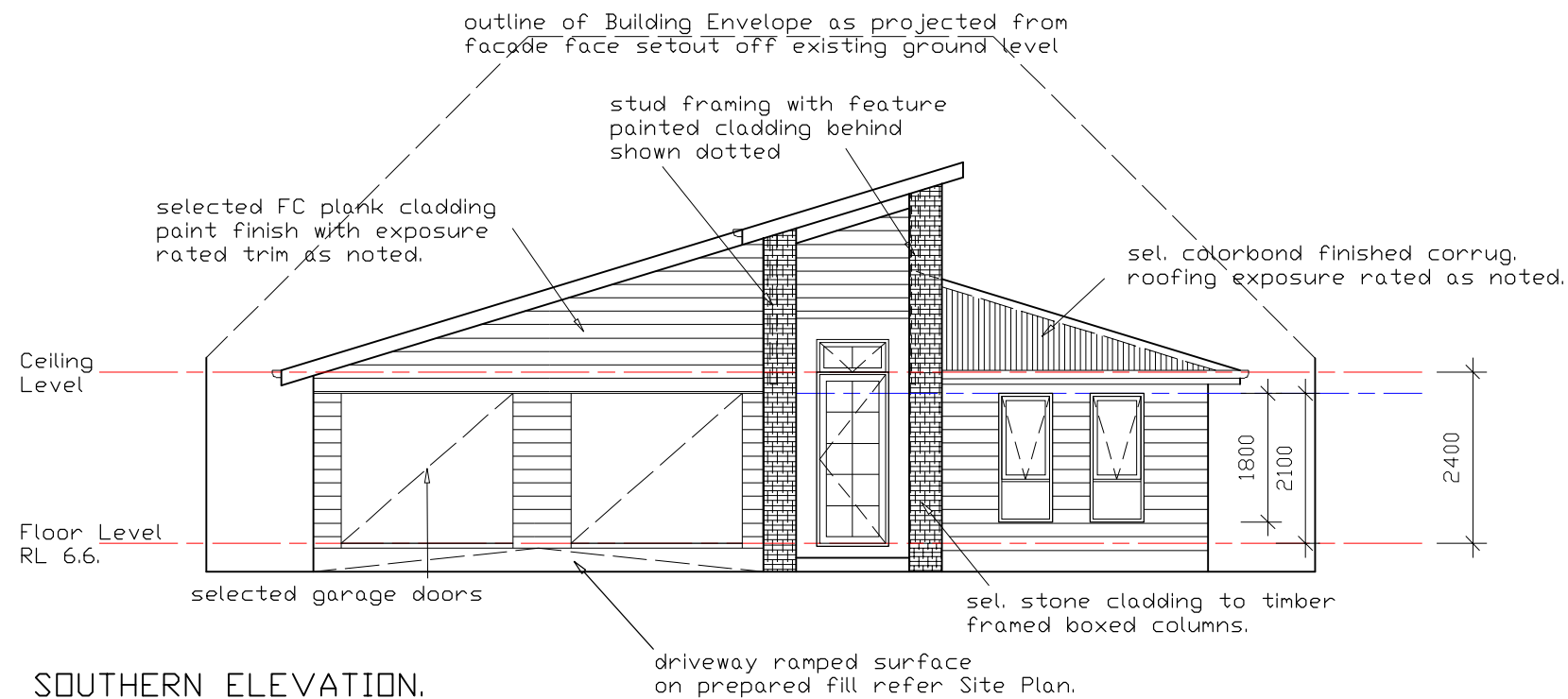
**PROPOSED RESIDENCE and SECONDARY DWELLING**  
55 Sice Ave Heybridge TAS.  
for Ms. Sui Yu  
FR.13838/33

**SECTIONS**

**ENERGY EFFICIENT HOMES**  
Architects - Cobbity  
Tel. 0412 536 353 Date: Oct 2025  
Ref: 25 67 590 Dwg No: **A3-03.A**



NORTHERN ELEVATION.



SOUTHERN ELEVATION.

22.12.2025 Issue - Council  
 Rev A 22.12.2025 Dwg re-Titled  
 & Garage revised.  
 1.12.2025 Application Issue.

REVISIONS & ISSUES.

PROPOSED RESIDENCE  
 and SECONDARY DWELLING  
 55 Sice Ave Heybridge TAS.  
 for Ms. Sui Yu  
 FR.13838/33

NORTH & SOUTH ELEVATIONS

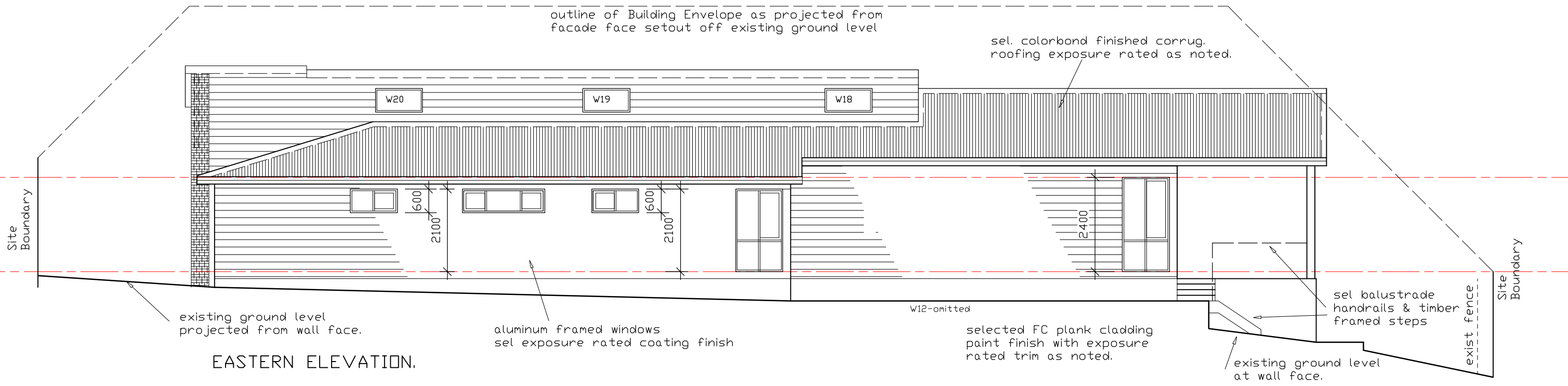
ENERGY EFFICIENT HOMES

Architects - Cobbity  
 Tel. 0412 536 353 Date: Oct 2025  
 Ref: 25 67 590 Dwg No:

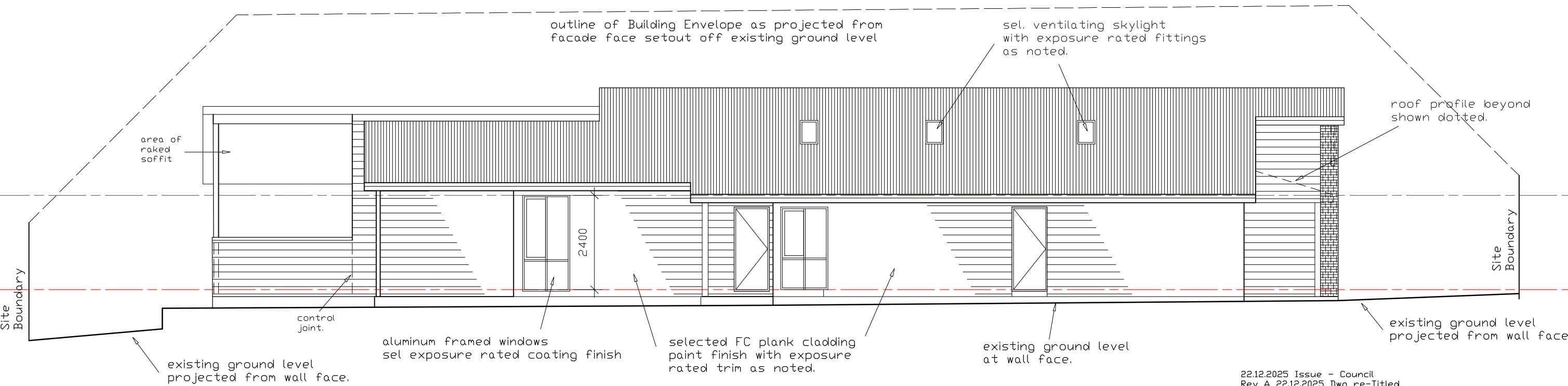
A3-04.A

Note: Exposure.

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EASTERN ELEVATION.



WESTERN ELEVATION.

**CENTRAL COAST COUNCIL**  
LAND USE PLANNING

Received: **23/02/2026**

Application No: **DA2025299**

Doc ID: **545869**

Note: Exposure.

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22.12.2025 Issue - Council  
Rev A 22.12.2025 Dwg re-Titled  
& Garage revised.  
1.12.2025 Application Issue.

REVISIONS & ISSUES.

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and **SECONDARY DWELLING**  
55 Sice Ave Heybridge TAS.  
for Ms. Sui Yu  
FR.13838/33

**EAST & WEST ELEVATIONS**

**ENERGY EFFICIENT HOMES**  
Architects - Cobbity  
Tel. 0412 536 353 Date: Oct 2025  
Ref: 25 67 590 Dwg No: **A3-05.A**



# HOTMANN SERVICES

- FOUNDATION SITE AND SOIL EVALUATION
  - WINDLOADING ASSESSMENT
- COASTAL VULNERABILITY ASSESSMENT



55 Sice Avenue, Heybridge, 7316, 3<sup>rd</sup> June 2025



## CORE SITE INFORMATION

**Address:** 55 SICE AVENUE, Heybridge (138382/33)

**Property ID:** 6769697

**Site Size:** Approximately 607.3m<sup>2</sup>

**Date of inspection:** 22/05/2025 to 04/06/2025

**Building type:** Extension to existing structure.

**Services:** Mains water and sewer.

**Mapped Geology** – As per Mineral Resources Tasmania 1:250 000 Hobart sheet: **CSS atop WT** = Quaternary sediments: stabilised aeolian coastal sand atop marine sands. Beneath this lithology lies Siliceous quartzwacke turbidites of the Neoproterozoic Undifferentiated Oonah Formation.

**Drainage lines / water courses:** Existing water and sewage main infrastructure.

### Soil Depth:

- Refusal at 0.3m (TH1 – 2) and at 1.8m (DCP #1)
- Refusal at 0.65m (TH3) and at 0.9m (DCP #2)
- Refusal at 0.9m (TH4) and 1.0m (DCP #3)
- Refusal at 0.6m (TH5) and 1.0m (DCP #4)
- Refusal at 0.6m (TH6) and 0.9m (DCP #5)

**Subsoil Drainage:** Sand dominated subsoil generally provides satisfactory drainage. Refer National Construction Code Vol 2, section 3.2.2 for class A, S, & M (sandy soils) building and plumbing requirements.

**Vegetation & Relief:** Grass. Gradual northern slope. Roadside extent of property 5.5m above sea level. Area of assessment DCP 1, 2 and 3 at similar elevation. DCP 4 positioned apx 1.0m lower than DCP 3. DCP 5 positioned apx 40cm lower than DCP 4.

**Rainfall in previous 7 days:** Negligible rainfall. 31mm between 24<sup>th</sup> and 27<sup>th</sup> May. 10mm recorded 3<sup>rd</sup> June.

### WIND CLASSIFICATION DETERMINATIONS

In accordance with **AS 4055-2021**:

Region: **A**  
Terrain category: **TC2**  
Shielding Classification: **PS-NS**  
Topographic Classification: **T0**  
Wind Classification: **N1**  
Design Wind Gust Speed (V<sub>h,u</sub>) **28 m/sec**

### LABORATORY RESULTS

In accordance with **AS 1289.3.1.1, AS 1289.3.2.1, AS 1289.3.3.1, AS 1289.3.4.1, AS 1289.3.6.1**

Liquid limit ranging from **16.1 – 27.7%**  
Plasticity index ranging from **1 – 2.7%**  
Linear shrinkage ranging from **0.8 – 2.4%**  
Testing determined USCS Soil classification as **Inorganic silt, fine sand and gravels.**

### SITE CLASSIFICATION DETERMINATIONS

In accordance with guidance provided by **AS2870 - 2011**

**Surface to 1.5m depth:** **Class S.** Silt and fine sands with slight ground movement potential.

As per directors determination: **Class P.**

In accordance with “Director’s Determination – Coastal Erosion Hazard Areas v 1.2” the AS2870 site classification of any land located within a coastal erosion hazard area must be **Class P**, due to the potential for to coastal erosion.

Acceptable solutions to Sections C10.1, C10.5.4, and C11.1 of the Tasmanian Planning Scheme (2025)

This study has identified that the shoreline, embankment, and council-maintained easement contribute fundamentally as a Naturally Resilient hard rock foreshore. Significant plant life assists in anchoring the softer soils and sands to the shoreline.

Therefore, the site is considered an acceptable coastal erosion hazard band and is **NOT CONSIDERED** to be vulnerable to coastal erosion by the year 2100.

The site is outside areas identified for projected permanent inundation and storm events by 2050 and 2100.

The site is **located partially within a high coastal erosion hazard band**. However, Geosciences Australia (2025) and Sharples (2013) refer to the coastline as a resilient hard rock shore with no observable erosion in over 50 years.

Therefore, the proposed development is identified as having an acceptable risk from sea level rise and permanent and temporary inundation. It is considered that the proposed **development does not require any mitigation or other control measures as no damage is likely to occur or will be manageable in the normal course of events were it to occur**. This is an acceptable solution under Sections C10.1, C10.5.4 and C11.1 of the Tasmanian Planning Scheme (2025). An Engineering Certificate addressing the **Coastal Erosion and Inundation Hazard Code** is provided in Appendix 4 (Form 55).

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**SITE ASSESSMENT, SAMPLE ACQUISITION AND TESTING**

Site investigation and soil classification, and recommendations are determined in accordance with:

- AS 4055-2012** *Wind load for Housing*
- AS 4360-2004** *Determination of Risk Management*
- AS 3798-2007** *Guidelines on earthworks for commercial and residential developments*
- AS 2870-2011** *Residential slabs and footings*
- AS 1726-2017** *Geotechnical Site Investigations.*
- AS 1289.3.1.1** *Determination of the liquid limit of a soil - four-point Casagrande Method*
- AS 1289.3.2.1** *Determination of the plastic limit of a soil - Standard Method*
- AS 1289.3.3.1** *Calculation of the plasticity index of a soil*
- AS 1289.3.4.1** *Determination of the linear shrinkage of a soil - Standard Method*
- AS 1289.3.6.1** *Determination of soil particle size - Standard method of analysis by sieving*

Seven drill cores sourced at site with effective refusal @ 0.3m (TH1 & 2), 0.65m (TH3), 0.9m (TH4), 0.6m (TH5), 0.6m (TH6) and 1.4m TH7 (immediately adjacent property)

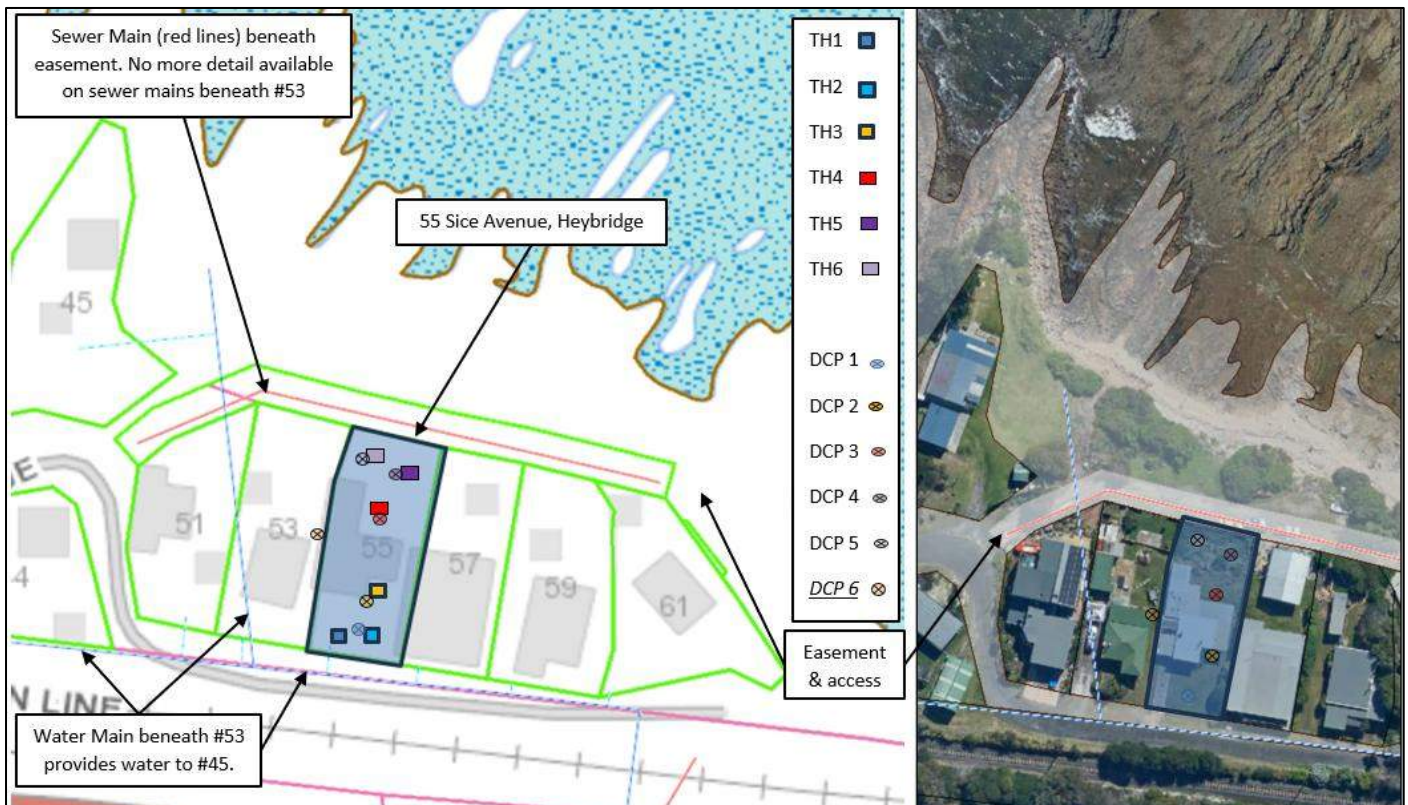
Dynamic Cone Penetrometer (DCP) test results:

- DCP #1 0.5m south of TH1. Refusal at 1.8m
- DCP #2 0.2m north of TH3. Refusal at 0.9m
- DCP #3 0.5m north of TH4. Refusal at 1.0m
- DCP #4 0.2m north of TH5. Refusal at 1.0m.
- DCP #5 0.2m north of TH6. Refusal at 0.9m
- DCP #6 0.5m north of TH7. Refusal at 0.7m.

Linear shrinkage tests on several test holes (TH3, TH4 and TH5) for 6 tests in total.

Liquid Limit, Plastic Limits and Plasticity Index assessments were made to determine the soil classification in accordance with the Unified Soil Classification System (USCS).

Test holes were dug using a Christie Post Driver Soil Sampling Kit, comprising CHPD78 Christie Post Driver with Soil Sampling Tube (38 mm OD x 1600 mm).



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**SOIL PROFILES 55 Sice Avenue, Heybridge**

Figure 1. TH1 (top) & TH2 (bottom)



Figure 2. TH1 lithology transitions at 0.15m, before refusal encountered at 0.3m. Stabilised aeolian coastal sand atop marine sands. Roots throughout. Hard rocks encountered.



TH1 Depth (m)	Horizon	Description and field texture grade	Observed soil class	Lab derived USCS Class
0.0 – 0.15m	A	Very Dark Grey 2.5YR 3/1, inorganic silts, silty sands, sandy loam, Strong structure, slightly moist. Fine texture. Very Soft. Roots throughout. Refusal at 0.3m.	SM	CL-ML
0.15 – 0.3m	A2 / B	Grey 2.5YR 5/1, inorganic silts, very fine clayey sands, Dry, loose. Very Soft.	SM	ML

TH2 Depth (m)	Horizon	Description and field texture grade	Observed soil class	Lab derived USCS Class
0.0 – 0.15m	A	Very Dark Grey 2.5YR 3/1, inorganic silts, silty sands, sandy loam, Weak structure, slightly moist. Fine texture. Very Soft. Roots throughout. Refusal at 0.3m.	SM	ML-CH
0.15 – 0.3m	A2 / B	Grey 2.5YR 5/1, inorganic silts, very fine clayey sands, Dry, loose	SM	ML

Figure 3. TH2 lithology transitions at 0.15m, before refusal encountered at 0.3m. Stabilised aeolian coastal sand atop marine sands. Roots throughout. Hard rocks encountered. TH 1 and TH2 located within 2m of each other. Samples retained and mentioned due to identical refusal.



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Figure 4. TH3



Figure 5. TH3 lithology transitions at 0.2m, 0.3m, 0.4m with refusal at 0.65m. Stabilised aeolian coastal sand atop marine sands. Base of core sample dominated by highly weathered rock that features a slight increase in clay alteration.



TH3 Depth (m)	Horizon	Description and field texture grade	Observed soil class	Lab derived USCS Class
0.0 – 0.2m	A	Very Dark Grey 2.5YR 3/1, inorganic silts, silty sands, sandy loam & peds, Strong structure, slightly moist. Fine texture. Very Soft. Roots throughout.	SM	CL-ML
0.2 – 0.3m	A2 / B	Light Olive Brown 2.5YR 5/3, inorganic silts, very fine clayey sands, Dry, loose. Very hard.	SM	CL-ML
0.3 – 0.65m	B / B2	Light Olive Brown 2.5YR 5/3, inorganic silts / sands, very fine clayey sands, Dry, loose. Hard. Decaying sediments. Gritty / Friable.	SM	ML

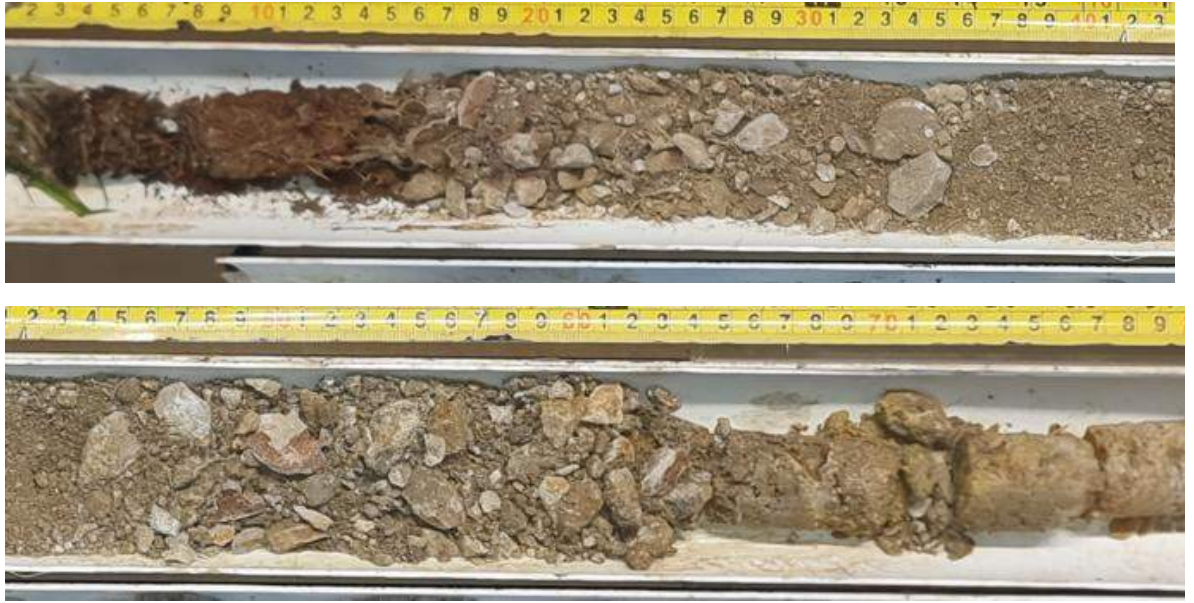


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**SOIL PROFILES 55 Sice Avenue, Heybridge**

Figure 6. TH4



Figure 7. TH4 lithology transitions at 0.2m, 0.3m, 0.4m with refusal at 0.65m. Stabilised aeolian coastal sand atop marine sands. Base of core sample dominated by highly weathered rock that features a slight increase in clay alteration.



TH4 Depth (m)	Horizon	Description and field texture grade	Observed soil class	Lab derived USCS Class
0.0 – 0.15m	A	Very Dark Grey 2.5YR 3/1, inorganic silts, silty sands, sandy loam & peds, Strong structure, slightly moist. Fine texture. Very Soft. Roots throughout.	SM	CL-ML
0.15 – 0.65m	B	Light Olive Brown 2.5YR 5/3, inorganic silts, very fine, clayey sands, Dry, loose. Very hard.	SM	CL-ML
0.65 – 0.69m	B / B2	Light Olive Brown 2.5YR 5/3, inorganic silts / sands & minor clay, very fine clayey sands, Dry, loose. Decaying sediments. Gritty / Friable, weathered sediments. Hard clayey texture.	SM	ML



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**SOIL PROFILES 55 Sice Avenue, Heybridge**

Figure 8. TH5 (below) & TH6 (bottom image).



Figure 9. TH5 lithology transitions at 0.2m, 0.3m, 0.4m with refusal at 0.6m. Stabilised aeolian coastal sand atop marine sands. Base of core sample dominated by highly weathered rock that features a slight increase in clay alteration. Coincident with each test hole a DCP was deployed. Bottom left image depicts test hole 6 in situ.



TH5 Depth (m)	Horizon	Description and field texture grade	Observed soil class	Lab derived USCS Class
0.0 – 0.2m	A	Black 2.5YR 2.5/1, inorganic silts, silty sands, fine, weak structure, slightly moist. Very Soft. Roots throughout.	SM	CL-ML
0.2 – 0.3m	B	Very Dark Grey 2.5YR 3/1, inorganic silty sands / sandy loam. Soft, slightly moist. Rocks throughout.	SM	CL-ML
0.3 – 0.6m	B / B2	Light Olive Brown 2.5YR 5/3, inorganic silts / sands & minor clay, very fine clayey sands, Dry, loose. Decaying sediments. Gritty / Friable, weathered sediments.	SM	ML
TH6 Depth (m)	Horizon	Description and field texture grade	Observed soil class	Lab derived USCS Class
0.0 – 0.23	A	Black 2.5YR 2.5/1, inorganic silts, silty sands, fine, weak structure, slightly moist to moist. Very Soft. Roots throughout.	SM	CL-ML
0.3 – 0.6m	B	Dark Grey 2.5YR 4/1, inorganic silts and very fine clayey sand. Weak structure. Slightly moist. Rocks throughout. Refusal.	SM	CL-ML



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The author of this report completed a similar report in 2023. In the two years between, there has been no degradation of the slope, or removal of biota. Figure .10a depicts a photograph of the area down dip of the property being assessed taken in 2023. Figure .10b depicts the same location nearly 24 months apart.

*Figure 10a. (Below) View from balcony of #45 Sice Avenue looking eastward (2023).*



*Figure 10b. (Below) View from balcony of #45 Sice Avenue looking eastward (2025).*



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Figure 11a. (Below) View from balcony of #45 Sice Avenue looking east, northeast. Resilient wave dampening quartzite, greywacke bedrock. Image at the base of the page depicts the reverse POV, with the balcony of #45 Sice Avenue depicted beneath established trees.



Figure 11b. (Below) Image at the base of the page depicts the reverse POV, with the balcony of #45 Sice Avenue depicted beneath established trees.



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**DCP TESTS AND ESTIMATED BEARING CAPACITY**

A minimum bearing capacity of 100 kPa is required for strip and pad footings and under the edge footings and associated slab foundations. The Dynamic Cone Penetrometer (DCP) test estimates bearing capacity with tests carried out within 0.5m north of each test hole. DCP bearing capacity test results can be influenced by moisture content, as such seasonal changes associated with heavier rains will have an impact; very noticeable in clay lithologies that can be dehydrated and made deceptively hard/stiff in drier seasons. In the week leading up to the site inspection, significant rain events occurred between the 24<sup>th</sup> and 27<sup>th</sup> of May with 31mm observed. A further 10mm was recorded on June 3<sup>rd</sup>. The horizons indicated no significant water retention with the 55 Sice Avenue soil examined being dry to slightly moist when tested. Note that this assessment occurred at the start of winter, as such the field DCP values are likely to be higher than in very moist to saturated soil conditions associated with deep winter and spring.

The yellow values for the following DCP tables indicate very low-capacity layers.

**DCP #1** data indicates that the bearing capacity of the soil is at a suitable strength at a depth of 0.1m. With the upper 10mm of material removed, footings can then be considered for the more competent ground.

**DCP #2** and **DCP #3** data indicate that the bearing capacity of the soil is at a suitable strength at a depth of 0.2m and 0.4m respectively. Beneath which the bearing capacity of the soil noticeably improves. Refusal occurs for both after 0.9m depth. Where test hole 3 depicts friable sedimentary basement intervals have been encountered.

**DCP #4** and **DCP #5** are similar, with the minor differences in refusal depth readily potentially attributed to their collar point offset (approximately 0.4m height and 1.0m down slope space between them).

This competence may reduce when the soil is moist to very moist, and the immediate layers below will decrease in strength; deep excavation is an option to capitalise upon the coherent basalts beneath the clay material (refer to DCP tables below and AS2870-2011 clause 2.4.5) however the core extracted indicates a significant amount of soil removal would be required to access the basalts. This report highlights areas of concern regarding lowest bearing below. Within these intervals the potential exists for bearing capability to fall below 100 kPa.

**DCP #1 Readings**

Depth (mm)	DCP n-number (Blows / 100mm)	DCP penetration index (mm/blow)	Estimated Bearing Capability (kPa = n x 30)	Likely Variance (+/-)
0 - 100	2	50.0	60	20
100 - 200	7	14.3	210	70
200 - 300	12	8.3	360	120
300 - 400	10	10.0	300	100
400 - 500	6	16.7	180	60
500 - 600	6	16.7	180	60
600 - 700	7	14.3	210	70
700 - 800	5	20.0	150	50
800 - 900	7	14.3	210	70
900 - 1000	4	25.0	120	40
1000 - 1100	5	20.0	150	50
1100 - 1200	5	20.0	150	50
1200 - 1300	4	25.0	120	40
1300 - 1400	6	16.7	180	60
1400 - 1500	8	12.5	240	80
1500 - 1600	11	9.1	330	110
1600 - 1700	15	6.7	450	150
1700 - 1800	REFUSAL			

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**DCP #2 Readings**

Depth (mm)	DCP n-number (Blows / 100mm)	DCP penetration index (mm/blow)	Estimated Bearing Capability (kPa = n x 30)	Likely Variance (+/-)
0 - 100	3	33.3	90	30
100 - 200	3	33.3	90	30
200 - 300	6	16.7	180	60
300 - 400	8	12.5	240	80
400 - 500	8	12.5	240	80
500 - 600	15	6.7	450	150
600 - 700	15	6.7	450	150
700 - 800	30	3.3	900	300
800 - 900	REFUSAL			

**DCP #3 Readings**

Depth (mm)	DCP n-number (Blows / 100mm)	DCP penetration index (mm/blow)	Estimated Bearing Capability (kPa = n x 30)	Likely Variance (+/-)
0 - 100	1	100.0	30	10
100 - 200	1	100.0	30	10
200 - 300	2	50.0	60	20
300 - 400	5	20.0	150	50
400 - 500	7	14.3	210	70
500 - 600	7	14.3	210	70
600 - 700	10	10.0	300	100
700 - 800	25	4.0	750	250
800 - 900	6	16.7	180	60
900 - 1000	REFUSAL			

**DCP #4 Readings**

Depth (mm)	DCP n-number (Blows / 100mm)	DCP penetration index (mm/blow)	Estimated Bearing Capability (kPa = n x 30)	Likely Variance (+/-)
0 - 100	1	100.0	30	10
100 - 200	1	100.0	30	10
200 - 300	1	100.0	30	10
300 - 400	4	25.0	120	40
400 - 500	5	20.0	150	50
500 - 600	8	12.5	240	80
600 - 700	10	10.0	300	100
700 - 800	10	10.0	300	100
800 - 900	19	5.3	570	190
900 - 1000	REFUSAL			

**DCP #5 Readings**

Depth (mm)	DCP n-number (Blows / 100mm)	DCP penetration index (mm/blow)	Estimated Bearing Capability (kPa = n x 30)	Likely Variance (+/-)
0 - 100	1	100.0	30	10
100 - 200	1	100.0	30	10
200 - 300	2	50.0	60	20
300 - 400	5	20.0	150	50
400 - 500	7	14.3	210	70
500 - 600	7	14.3	210	70
600 - 700	10	10.0	300	100
700 - 800	25	4.0	750	250
800 - 900	REFUSAL			

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DCP #6 Readings

Depth (mm)	DCP n-number (Blows / 100mm)	DCP penetration index (mm/blow)	Estimated Bearing Capacity (kPa = n x 30)	Likely Variance (+/-)
0 - 100	1	100.0	30	10
100 - 200	2	50.0	60	20
200 - 300	2	50.0	60	20
300 - 400	3	33.3	90	30
400 - 500	8	12.5	240	80
500 - 600	20	5.0	600	200
600 - 700	<b>REFUSAL</b>			

SOIL COMMENTARY

The soils are Neoproterozoic Undifferentiated Oonah formation quartzwacke turbidite sequences overlain by younger Quaternary sediments (sands). The profile is moderately deep with refusal occurring consistently between some DCP tests (0.9m, 1.0m, 1.0m, 1.0m, etc), and the results reflected similar values to results from DCP testing of adjacent lots. Field textures of the soil profile are dominated by sands which is weakly to moderately to strongly structured with moderate bearing capacity throughout.

LINEAR SHRINKAGE AND SOIL REACTIVITY

Samples of all test hole subsoils were tested for reactivity using the linear shrinkage (LS) test. Linear shrinkage provides guidance to soil classification of reactivity of clays for foundations. The tests suggest the soils are uniform in their shrinkage potential with **most results sitting at approximately 2%**. Fig. 13 depicts a contextualisation chart for these values.

Figure 12. (Below) Linear Shrinkage results.

Sample	Depth (m)	Length of mould (L) in mm	Longitudinal Shrinkage (LS) in mm	LS (%)
TH3 A	0.0m – 0.3m	124	0.8	1
TH3 B	0.3m – 0.65m	123	1.6	2
TH4 B	0.15m – 0.65m	123	1.6	2
TH4 C	0.65m – 0.9m	122	2.4	3
TH6 C	0.0m - 0.3m	123	1.6	2
TH6 D	0.3 – 0.6m	122	2.4	3

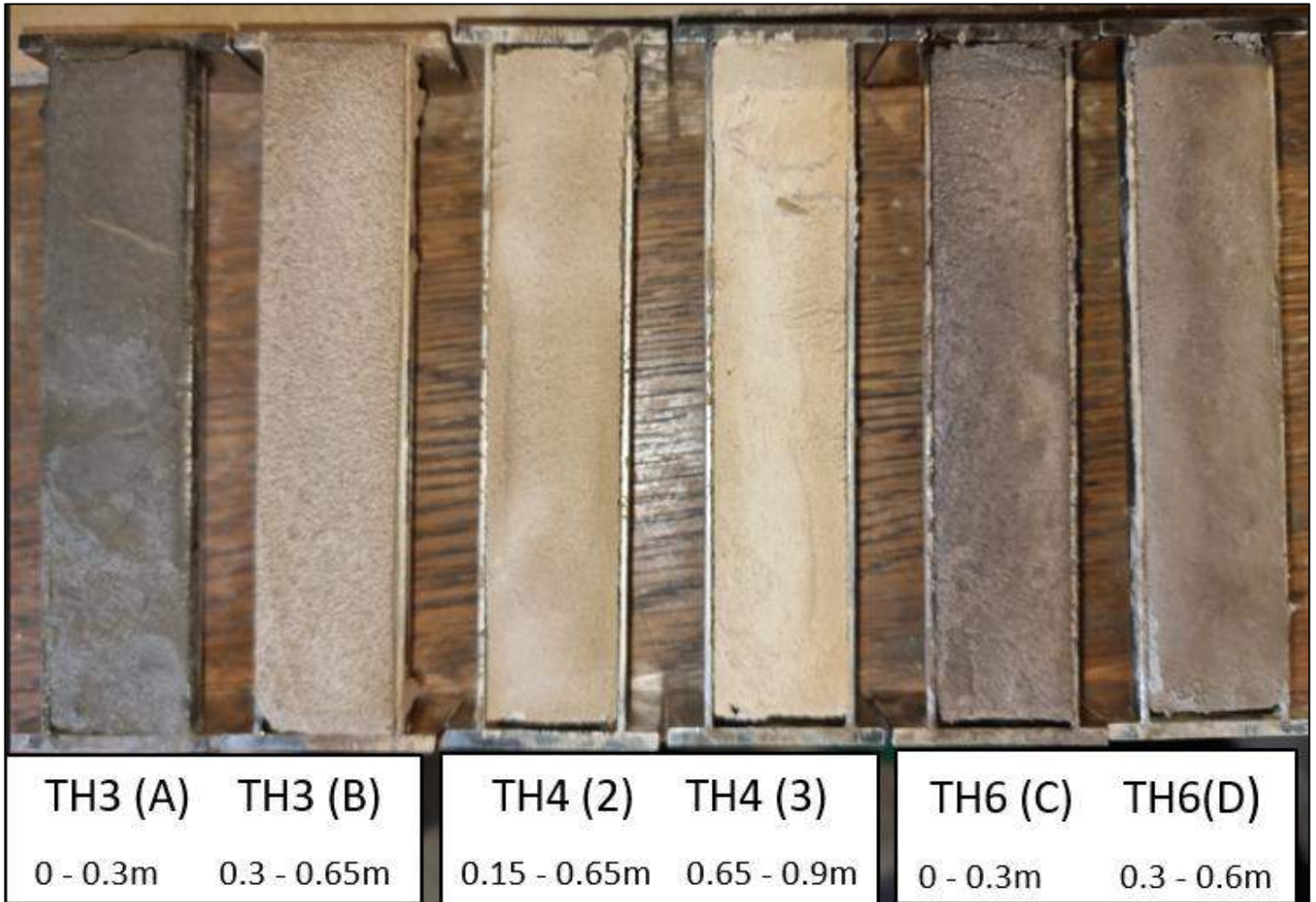
Figure 13. (Below) CSIRO definitions linear shrinkage, and plasticity index volume change potentials (relevant to Plasticity Testing results)

\*, specific design criteria need to be incorporated in building foundations to prevent movement problems.

Category	Linear shrinkage (%)	Expansive rating
Low	0–12	non-critical
Medium	12–17	marginal
High	17–22*	critical*
Very high	>22*	very critical*

Source: NSW Department of Natural Resources (2007); Mills *et al.* (1980); Hicks (2007).

Figure 14. (Below) Linear Shrinkage samples have between 1 and 3mm of shrinkage for a maximum LS of 3%. These values place the category of risk likelihood as "Low" with an Expansive rating of "non-critical"; see figure 13: CSIRO definitions of linear shrinkage.



#### PLASTICITY TESTING:

Plasticity testing is one measure of the fine particle content of a soil; this analysis involves the gradual removal of moisture from the system and applying Atterberg Limit tests. The moisture content of a soil dictates physical properties of a soil wherein the soil can exist as one of four states: liquid, plastic, semi solid and solid. The transition from a semi-solid to plastic state is termed the Plastic Limit (PL), with the transition from a plastic to liquid state termed the Liquid Limit (LL). The difference between the PL and LL is the Plasticity Index (PI).

The liquid state is achieved when enough water has been added that the soil behaves as a thick viscous liquid. The plastic state is achieved by gradual dehydration, the soil eventually begins to take on a dough texture that offers minimal deformation resistance. The semi solid state is achieved by further dehydration, resulting in clay shrinkage, and the overall stiffness of the material increases to the point of brittle deformation (no plasticity). The solid state is achieved at a point where the water loss is proportional to the amount of shrinkage.

The tests suggest the soils are low plasticity clays, gravels, and silts with multiple plasticity index readings between 0 and 6%. These values are indicative of a low PI which means the soils will generally have low clay content and exhibit less plastic behaviour. Implications for a low PI soil are:

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1. **Reduced shrink-swell potential:** Soils with low PI tend to have lower shrink-swell potential compared to high PI soils. This means they are less prone to significant volume changes with variations in moisture content. Consequently, structures built on low PI soils **may experience fewer issues related to soil movement and differential settlement**. There is a high correlation between the plasticity index can be a reliable parameter to estimate the characteristics of potential surface movement (Reynolds, 2013).
2. **Better drainage characteristics:** Low PI soils typically have higher permeability due to their lower clay content. This can result in improved drainage capabilities and reduced risk of water accumulation or poor drainage conditions. It can be beneficial for foundations, pavement, and other construction projects that require good drainage.
3. **Potential for erosion:** Soils with low PI and low clay content may have reduced cohesion and may be more susceptible to erosion, especially when exposed to heavy rainfall or water flow. Erosion can lead to the loss of topsoil, compromising the stability and fertility of the soil.

Figure 15. (Below) CSIRO definitions pertaining to plasticity index (PI) volume change potentials.

Potential volume change	Arid to semi-arid climate		Humid climate	
	Plasticity index (%)	Linear shrinkage (%)	Plasticity index (%)	Linear shrinkage (%)
Low	0–15	0–5	0–30	0–12
Medium	15–30	5–12	30–50	12–18
High	>30	>12	>50	>18

Source: NSW Department of Natural Resources (2007); Holland (1981).

Figure 16. (Below) CSIRO charts depicting potential ratings for shrink-swell & compressibility based upon both the PI % and LI %.

Rating	Plasticity index (%)
Low	<25
Medium	25–35
High	35–45
Very high	>45

Rating	Liquid limit (%)
Low	<45
Medium	45–55
High	55–75
Very high	>75

Source: Public Works Department (1977); Mills *et al.* (1980).

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Figure 17. Atterberg limits analysis data TH3, & TH4

**Project Name:** Heybridge Coastal Assessment  
**Location:** Heybridge, 55 Sice Ave  
**Boring No:** TH3  
**Sample Depth:** 0.15 - 0.65m

USCS Soil Classification: **ML**

TEST	Variable	NO		PLASTIC LIMIT				LIQUID LIMIT			
		Var.	Units	1	2	3	4	1	2	3	4
Number of Blows	N		blows					9	14		4
Can Number	---	---		B4	B5			B1	B2		B3
Mass of Empty Can	M <sub>C</sub>	(g)		66.45	61.39			67.38	58.81		67.85
Mass Can & Soil (Wet)	M <sub>CMS</sub>	(g)		69.35	63.07			77.26	68.36		82.09
Mass Can & Soil (Dry)	M <sub>CDS</sub>	(g)		68.84	62.61			75.33	66.49		79.25
Mass of Soil	M <sub>S</sub>	(g)		2.39	1.22			7.95	7.68		11.40
Mass of Water	M <sub>W</sub>	(g)		0.51	0.46			1.93	1.87		2.84
Water Content	w	(%)		17.6	27.4			19.5	19.6		19.9

Liquid Limit (LL or w <sub>L</sub> ) (%)	16.2
Plastic Limit (PL or w <sub>P</sub> ) (%)	22.5
Plasticity Index (PI) (%)	0.0
USCS Classification (initial):	MH
USCS Classification (Detailed):	ML
PI at "A" Line = 0.73(LL-20)	
One Point Liquid Limit Calculation: LL = w <sub>p</sub> (N/25) <sup>0.12</sup>	
USCS Classification (Close proximity to A-Line):	ML
Subsoil drainage from observation, LL, PL, PI & Linear Shrinkage.	Good drainage

**Final USCS Soil classification justification:**  
 Liquid Limit (LL) = 16.2 Low to moderate plasticity ∴ Low Shrink-swell potential.  
 Plastic Limit (PL) = 22.5 Moderate clay content.  
 Plasticity Index (PI) = 0.0 A non-plastic material ∴ Low Shrink-swell potential.  
 Using the Casagrande Plasticity Chart, we can plot the given LL and PI values and determine the soil classification as follows:  
 LL = 16.2 falls above the A-line & PI = 0.0 falls into the CL-ML inorganic silty clay.

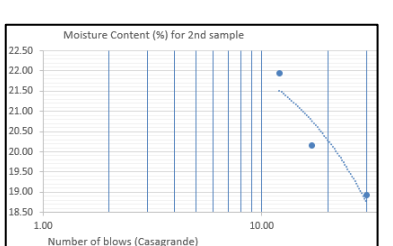
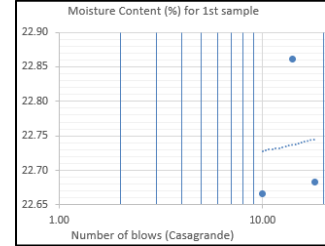
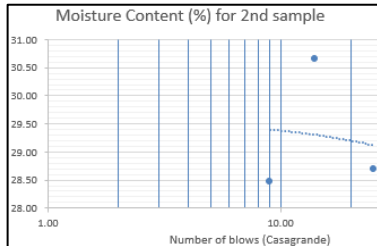
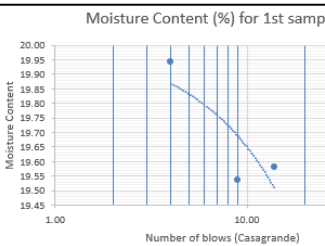
**Project Name:** Heybridge Coastal Assessment  
**Location:** Heybridge, 55 Sice Ave  
**Boring No:** TH3  
**Sample Depth:** 0.65 - 0.9m

USCS Soil Classification: **ML-CH**

TEST	Variable	NO		PLASTIC LIMIT				LIQUID LIMIT			
		Var.	Units	1	2	3	4	1	2	3	4
Number of Blows	N		blows					9	14		25
Can Number	---	---		A4	A5			A1	A2		A3
Mass of Empty Can	M <sub>C</sub>	(g)		66.89	63.81			68.00	67.43		59.17
Mass Can & Soil (Wet)	M <sub>CMS</sub>	(g)		69.66	65.76			75.80	80.80		77.26
Mass Can & Soil (Dry)	M <sub>CDS</sub>	(g)		68.93	65.25			73.58	76.70		72.07
Mass of Soil	M <sub>S</sub>	(g)		2.04	1.44			5.58	9.27		12.90
Mass of Water	M <sub>W</sub>	(g)		0.73	0.51			2.22	4.10		5.19
Water Content	w	(%)		26.4	26.2			28.5	30.7		28.7

Liquid Limit (LL or w <sub>L</sub> ) (%)	27.7
Plastic Limit (PL or w <sub>P</sub> ) (%)	26.3
Plasticity Index (PI) (%)	1.5
USCS Classification (initial):	MH
USCS Classification (Detailed):	CH
PI at "A" Line = 0.73(LL-20)	
One Point Liquid Limit Calculation: LL = w <sub>p</sub> (N/25) <sup>0.12</sup>	
USCS Classification (Close proximity to A-Line):	ML-CH
Subsoil drainage from observation, LL, PL, PI & Linear Shrinkage.	Good drainage

**Final USCS Soil classification justification:**  
 Liquid Limit (LL) = 27.7: Low to moderate plasticity ∴ Low Shrink-swell potential.  
 Plastic Limit (PL) = 26.3: A low to moderate clay content.  
 Plasticity Index (PI) = 0.5: A non-plastic material ∴ Low Shrink-swell potential.  
 Using the Casagrande Plasticity Chart, we can plot the given LL and PI values and determine the soil classification as follows:  
 LL = 27.7 sits below the A-Line & PI = 0.0 falls into the ML category of inorganic silt to fine sand.



**Project Name:** Heybridge Coastal Assessment  
**Location:** Heybridge, 55 Sice Ave  
**Boring No:** TH4  
**Sample Depth:** 0.15-0.65m

USCS Soil Classification: **CL-ML**

TEST	Variable	NO		PLASTIC LIMIT				LIQUID LIMIT			
		Var.	Units	1	2	3	4	1	2	3	4
Number of Blows	N		blows					10	14		18
Can Number	---	---		H4	H5			H3	H1		H2
Mass of Empty Can	M <sub>C</sub>	(g)		22.65	23.11			23.11	23.47		22.90
Mass Can & Soil (Wet)	M <sub>CMS</sub>	(g)		32.93	26.89			56.42	55.62		58.08
Mass Can & Soil (Dry)	M <sub>CDS</sub>	(g)		30.62	26.20			48.87	48.27		50.10
Mass of Soil	M <sub>S</sub>	(g)		7.97	3.09			25.76	24.80		27.20
Mass of Water	M <sub>W</sub>	(g)		2.31	0.69			7.55	7.35		7.98
Water Content	w	(%)		22.5	18.3			22.7	22.9		22.7

Liquid Limit (LL or w <sub>L</sub> ) (%)	18.9
Plastic Limit (PL or w <sub>P</sub> ) (%)	20.4
Plasticity Index (PI) (%)	0.0
USCS Classification (initial):	MH
USCS Classification (Detailed):	MH
PI at "A" Line = 0.73(LL-20)	
One Point Liquid Limit Calculation: LL = w <sub>p</sub> (N/25) <sup>0.12</sup>	
USCS Classification (Close proximity to A-Line):	CL-ML
Subsoil drainage from observation, LL, PL, PI & Linear Shrinkage.	Good drainage

**Final USCS Soil classification justification:**  
 Liquid Limit (LL) = 18.9 Low to moderate plasticity ∴ Low Shrink-swell potential.  
 Plastic Limit (PL) = 20.4 Moderate clay content.  
 Plasticity Index (PI) = 0.0 A non-plastic material ∴ Low Shrink-swell potential.  
 Using the Casagrande Plasticity Chart, we can plot the given LL and PI values and determine the soil classification as follows:  
 LL = 18.9 falls on the A-line & PI = 0.0 falls into the CL-ML inorganic silty clay.

**Project Name:** Heybridge Coastal Assessment  
**Location:** Heybridge, 55 Sice Ave  
**Boring No:** TH4  
**Sample Depth:** 0.65 - 0.9m

USCS Soil Classification: **CL-ML**

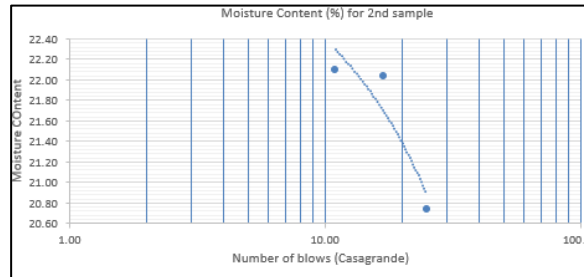
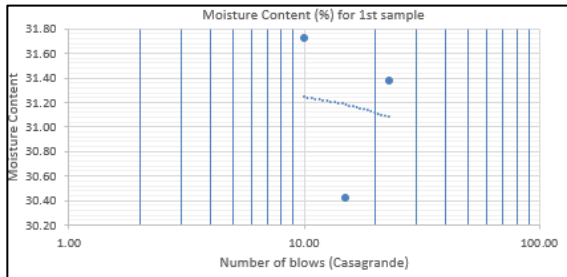
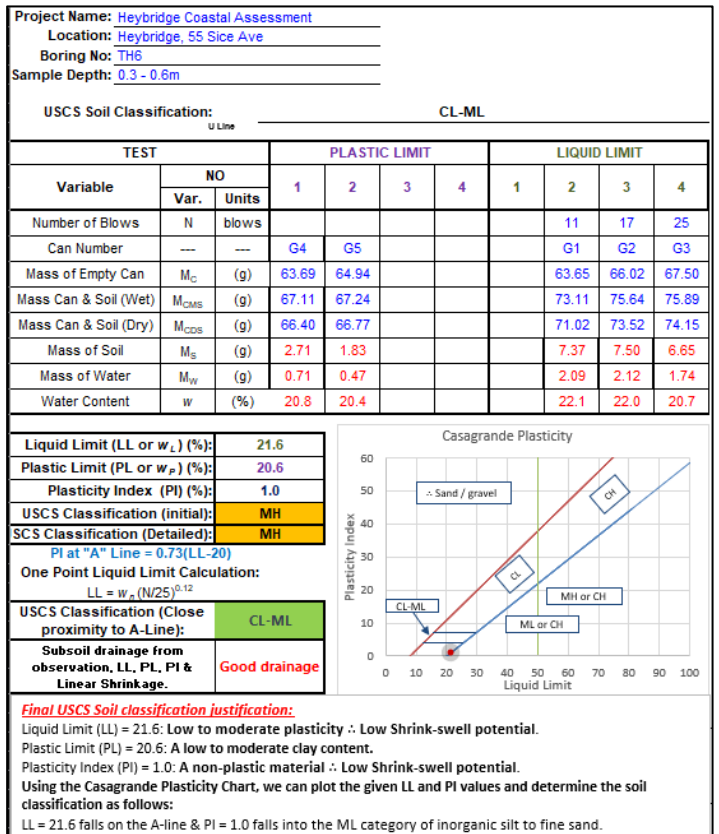
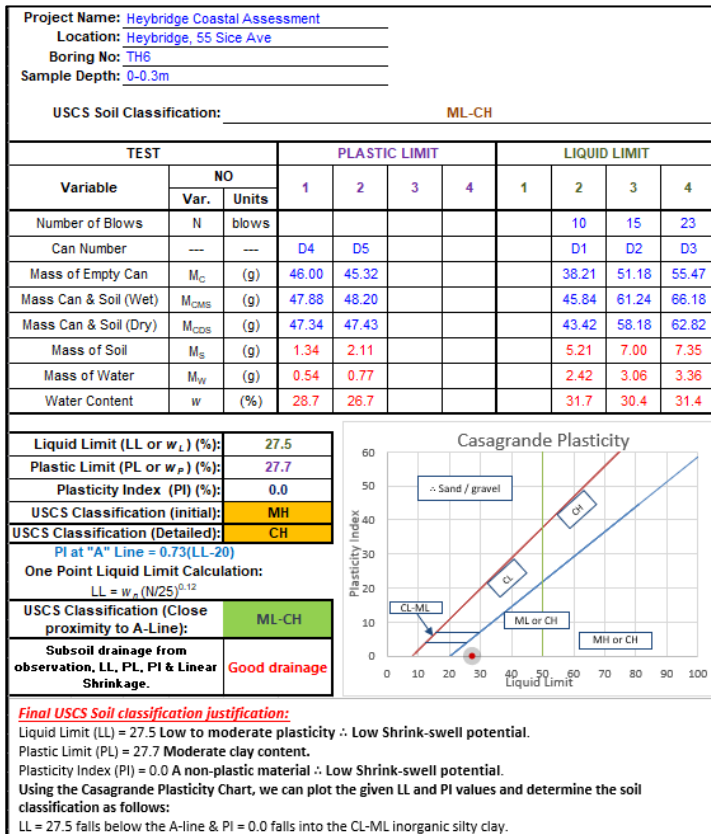
TEST	Variable	NO		PLASTIC LIMIT				LIQUID LIMIT			
		Var.	Units	1	2	3	4	1	2	3	4
Number of Blows	N		blows					12	17		30
Can Number	---	---		G4	G5			G1	G2		G3
Mass of Empty Can	M <sub>C</sub>	(g)		50.01	47.89			44.44	47.23		45.41
Mass Can & Soil (Wet)	M <sub>CMS</sub>	(g)		53.14	50.31			69.22	63.61		59.94
Mass Can & Soil (Dry)	M <sub>CDS</sub>	(g)		52.53	49.87			63.78	60.31		57.19
Mass of Soil	M <sub>S</sub>	(g)		2.52	1.98			19.34	13.08		11.78
Mass of Water	M <sub>W</sub>	(g)		0.61	0.44			5.44	3.30		2.75
Water Content	w	(%)		19.5	18.2			22.0	20.1		18.9

Liquid Limit (LL or w <sub>L</sub> ) (%)	21.6
Plastic Limit (PL or w <sub>P</sub> ) (%)	18.8
Plasticity Index (PI) (%)	2.7
USCS Classification (initial):	MH
USCS Classification (Detailed):	MH
PI at "A" Line = 0.73(LL-20)	
One Point Liquid Limit Calculation: LL = w <sub>p</sub> (N/25) <sup>0.12</sup>	
USCS Classification (Close proximity to A-Line):	CL-ML
Subsoil drainage from observation, LL, PL, PI & Linear Shrinkage.	Good drainage

**Final USCS Soil classification justification:**  
 Liquid Limit (LL) = 21.6: Low to moderate plasticity ∴ Low Shrink-swell potential.  
 Plastic Limit (PL) = 18.8: A low to moderate clay content.  
 Plasticity Index (PI) = 2.7: A non-plastic material ∴ Low Shrink-swell potential.  
 Using the Casagrande Plasticity Chart, we can plot the given LL and PI values and determine the soil classification as follows:  
 LL = 21.6 falls above the A-Line & PI = 2.7 falls into the ML category of inorganic silt to fine sand.

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Figure 18. Atterberg limits analysis data TH6



COASTAL VULNERABILITY ASSESSMENT:

The objectives of this analysis:

- Identify which local ordinances and codes need to be satisfied in terms of coastal vulnerability and identify the required criteria which needs be addressed.
- Compile a critique of site specific geomorphological and soil investigations.
- Assess site erosion vulnerability in terms of beach recession and erosion.
- Generate a site risk assessment for the proposed development.
- Where applicable, provide guidance on methods to reduce impacts of erosion, recession, and inundation.

55 Sice Avenue is located along the northern coastline (fig.22-fig.26) of Tasmania and is potentially exposed to:

- Coastal storm surge and tidal processes prevalent within Bass Strait.
- Sea level rise; and
- Wind wave conditions from the north and northwest.

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The site is proximal to, but not located within, Inundation Prone Areas Code (IPAC) zones as depicted below. The easement sits between the proposed extension site, and the “Low hazard band zone” (boundary is 8m from 55 Sice Avenue). The hazard exposure within the low zone dictates the area as vulnerable to a 1% Annual Exceedance Probability (AEP) storm event in 2100. Extending 22m north of the site the “High hazard band zone” is encountered, which dictates the area if vulnerable to the highest astronomical tide at present, and to inundation from mean high tide by 2050.

### Planning requirements:

This report provides an overview of the site's vulnerability to coastal erosion and inundation processes. The assessment focuses on the year 2073, which aligns with a 'normal' building design life category of 50 years based on a baseline established in by the Australian Building Code Board (ABCB). According to the ACBC (2015), it is essential to consider minimum design life requirements for buildings. It is recommended that the design life of buildings be considered as 'Normal' for all building importance categories, unless specified otherwise.

*Figure 19. Expected longevity of building, plumbing and components as per design life.*

Building design life category	Building design life in years	Planned life for components or sub systems readily accessible and economical to replace in years	Planned life for components or sub systems moderately accessible but difficult / costly to replace/repair in years	Planned life for components or sub systems inaccessible or impossible to replace/repair in years
Normal duration	50	5	15	50
Long duration	100+	10	25	100

The State Coastal Policy Validation Act 2003 was enacted on 16 April 2003, replacing the previous definition of a Coastal Zone. This Act also confirms the validity of all previous decisions made under the Policy. The clauses identified in fig.20 are relevant to the scope of this report.

In terms of building within a zone defined as a hazardous area, this development falls within the purview of the Tasmanian Building Regulations of 2016 (fig.21). These zones are outlined and are freely accessible via theList website: <https://maps.thelist.tas.gov.au/listmap/app/list/map> (fig.22-24).

*Figure 20. Excerpt from the State Coastal Policy Validation Act 2003*

### NATURAL RESOURCES AND ECOSYSTEMS

1.1.2. The coastal zone will be managed to protect ecological, geomorphological, and geological coastal features and aquatic environments of conservation value.

#### COASTAL HAZARDS

1.4.1. Areas subject to significant risk from natural coastal processes and hazards such as flooding, storms, erosion, landslip, littoral drift, dune mobility and sea-level rise will be identified and managed to minimise the need for engineering or remediation works to protect land, property, and human life.

1.4.2. Development on actively mobile landforms such as frontal dunes will not be permitted except for works consistent with Outcome 1.4.1.

1.4.3. Policies will be developed to respond to the potential effects of climate change (including sea-level rise) on use and development in the coastal zone.

**BUILDING IN HAZARDOUS AREAS**

Hazardous areas include areas which are bushfire prone, comprise reactive soils or substances, or are subject to coastal erosion, coastal flooding, riverine flooding, and landslip.

**Division 4 - Coastal erosion. Section 58. Works in coastal erosion hazard areas**

1. A person must not perform work in a coastal erosion hazard area unless he or she is authorised to do so under the Act.
2. If a person intends to perform work in an investigation area of a coastal erosion hazard area, the person must, before performing the work, ensure that the land is classified in accordance with the coastal erosion determination (a) as being an acceptable risk.
3. A responsible person for work being performed in a coastal erosion hazard area must ensure that the work is being performed in accordance with the Act and the coastal erosion determination.
4. A person performing work in a coastal erosion hazard area must ensure that the work complies with the Act and the coastal erosion determination.

The site is proximal to the Coastal Inundation Hazard Bands 20161001 (fig.22), the Coastal Projected Storm Tide 20161201 overlay (fig.23), the Coastal Projected Sea Level Rise 20161201 (fig.24) and is partially located within the Coastal Erosion Component and Hazard Bands 20161201 overlay (fig.25).

**Most of the proposed site developments fall within the Acceptable hazard zone, however the northernmost decking area is located within the S1 + S5 Storm bite hazard zone (fig.25). Special requirements may be required to meet, for example, footing any new foundations into the bedrock.**

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Figure 22. (Below) Coastal Inundation Hazard Bands overlay near site.

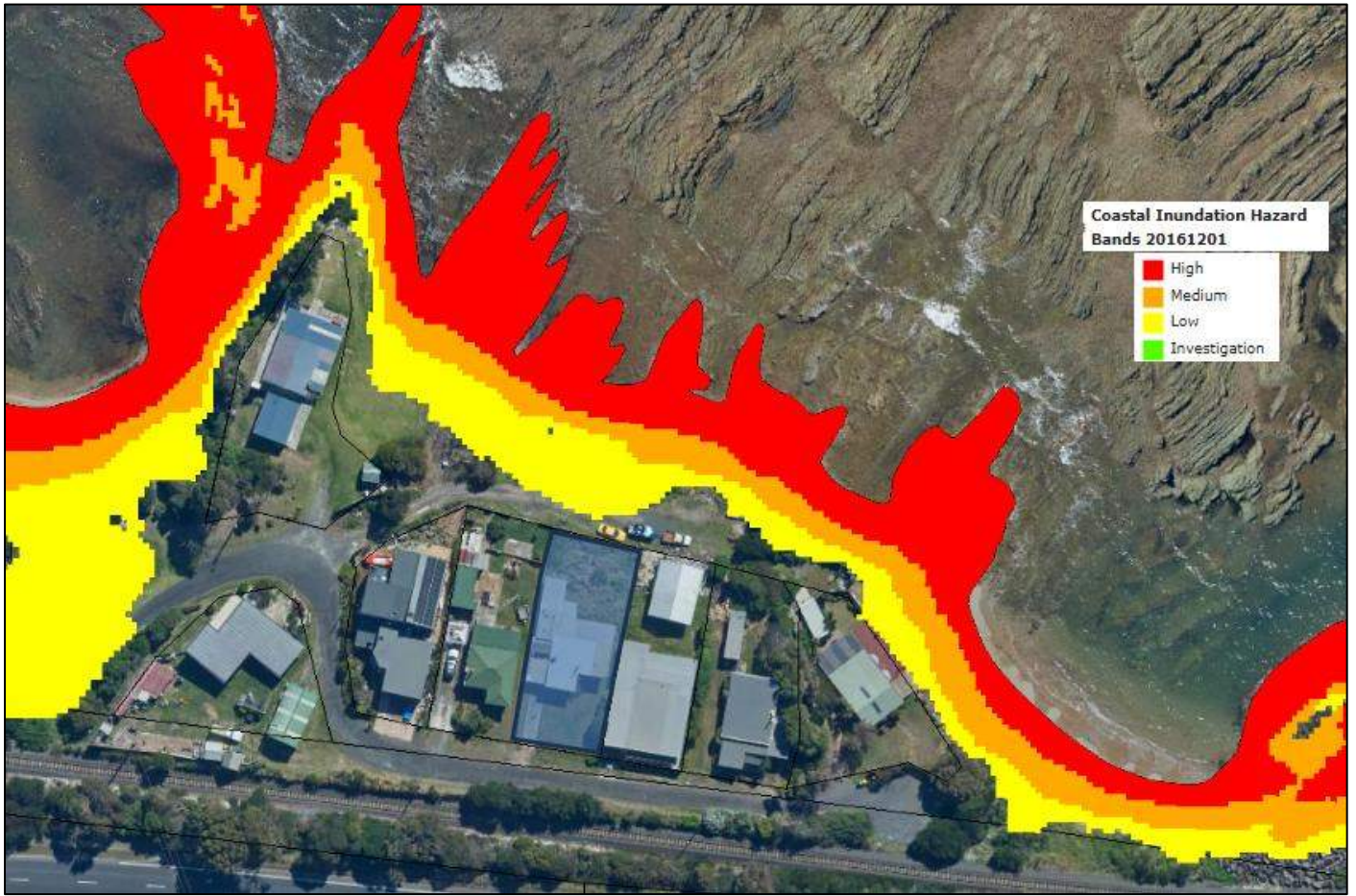
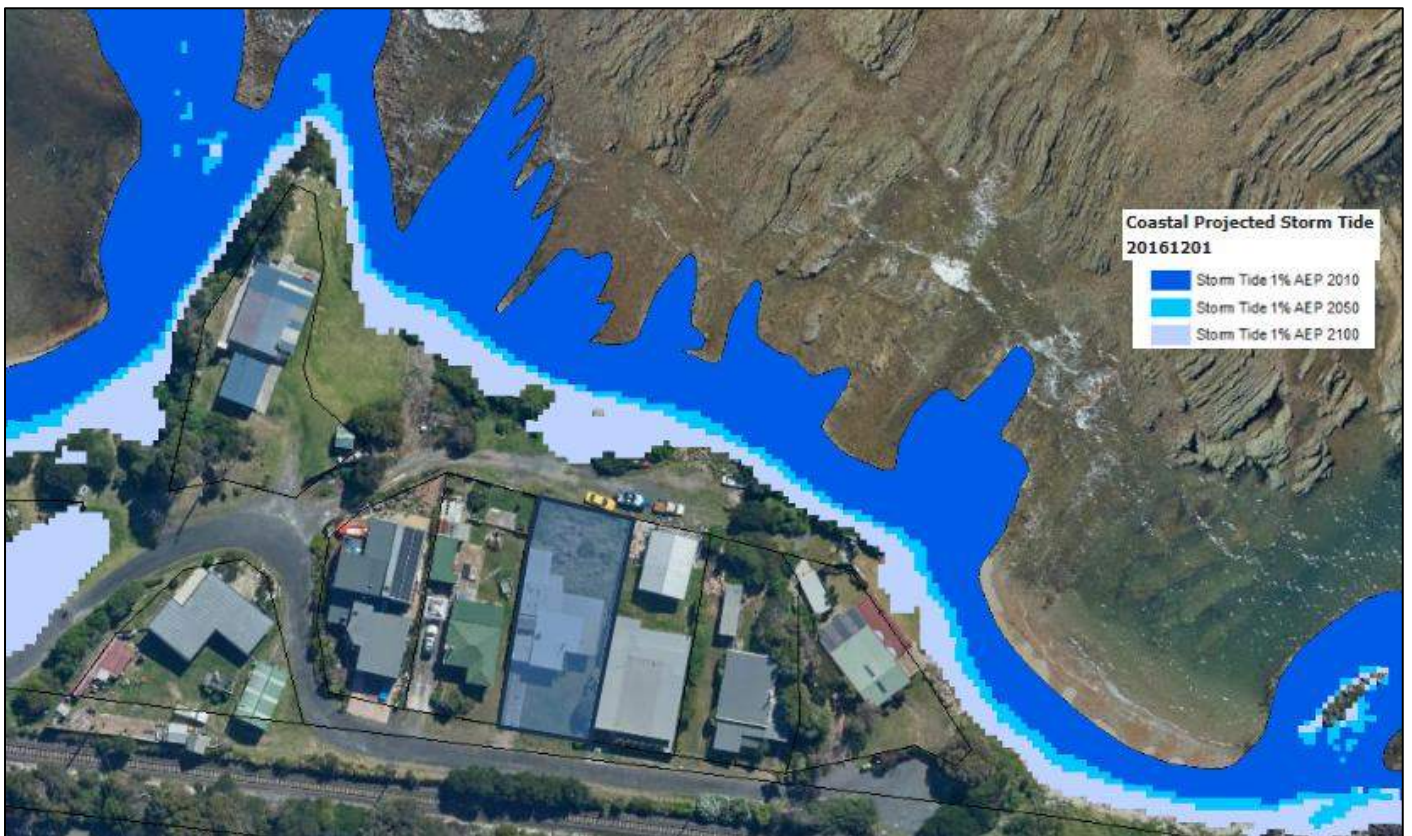


Figure 23. (Below) Coastal Projected Storm Tide overlay near site.



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Figure 24. (Below) Coastal projected sea level rise near site.



Figure 25. (Below) Storm bite High hazard zone apparent within footprint of proposed decking expansion.



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In the scenario where any proposed additional developments fall within the Coastal Erosion Hazard Code (CEHC) Area (fig.26), and there are **no acceptable solutions** for buildings and works in a CEHC Area, **E16.7.1 P1** performance criteria must be met (fig.27).

Figure 26. 55 Sice Ave (outlined in blue below) overlap with the CEHC Area (red bald below).



Figure 27. Excerpt from "APPLYING THE TASMANIAN COASTAL EROSION HAZARD CODE TO DEVELOPMENT APPLICATIONS"

### Essential performance criteria

Section E16.7.1 P1 states that for buildings and works in a Coastal Hazard Zone, there is **No Acceptable Solution**, and Performance Criteria P1 must satisfy all the following:

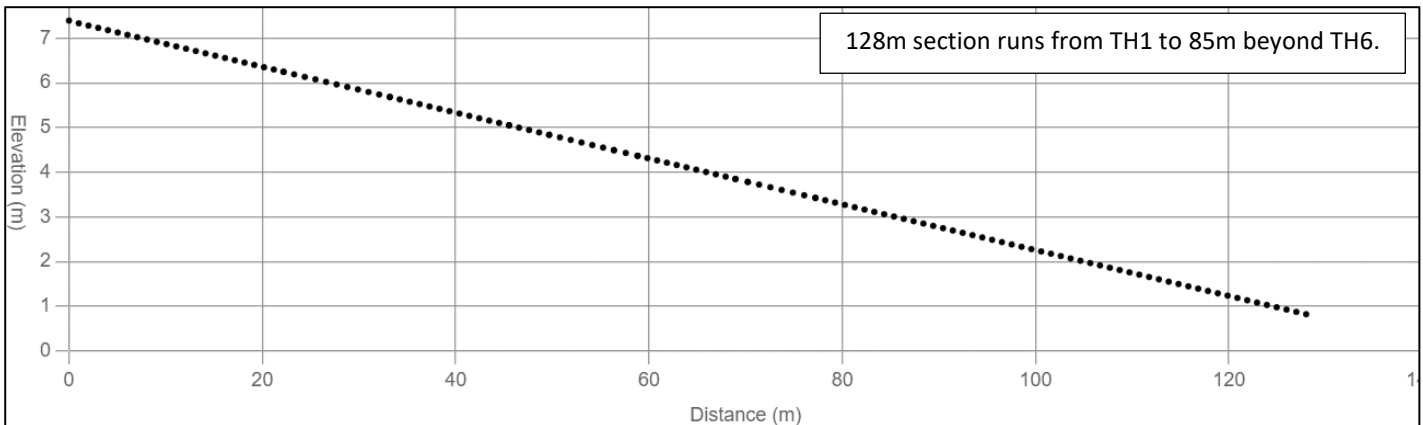
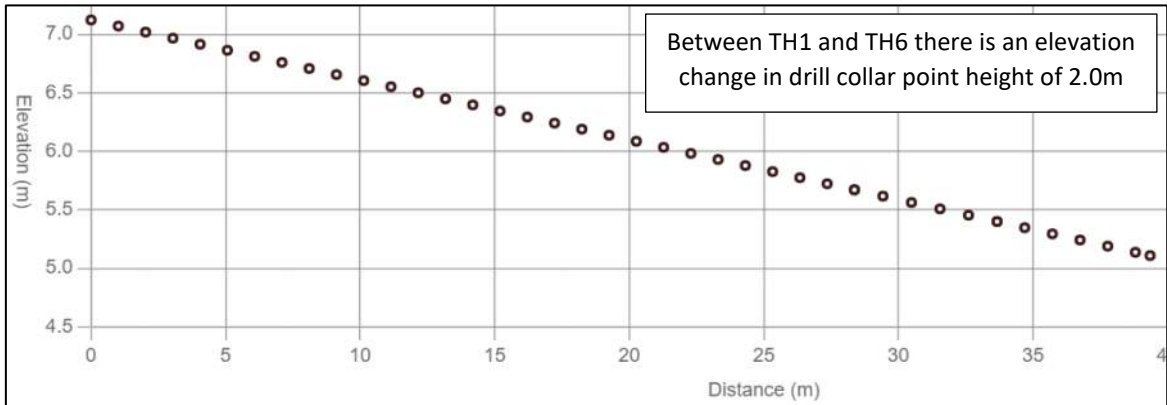
- (a) Not increase the level of risk to the life of the users of the site or of hazard for adjoining or nearby properties or public infrastructure
- (b) Erosion risk from wave run-up, including impact and material suitability, may be mitigated to an acceptable level through structural or design methods used to avoid damage to, or loss of, buildings or works
- (c) Erosion risk is mitigated to an acceptable level through measures to modify the hazard where these measures are designed and certified by an engineer with suitable experience in coastal, civil and/or hydraulic engineering
- (d) Need for future remediation works is minimised
- (e) Health and safety of people is not placed at risk
- (f) Important natural features are adequately protected
- (g) Public foreshore access is not obstructed where the managing public authority requires it to continue to exist
- (h) Access to the site will not be lost or substantially compromised by expected future erosion whether on the proposed site or off-site
- (i) Provision of a developer contribution for required mitigation works consistent with any adopted Council Policy, prior to commencement of works
- (j) Not be located on an actively mobile landform

Figure 28. Percentages of proposed site developments falling within potential coastal vulnerability zones

Site Location	CEHC (E16) Overlay	WCPA (E11) Overlay	IPAC (E15.7.3) Overlay Low Risk	IPAC (E15.7.2) Overlay Medium Risk	IPAC (E15.7.1) Overlay High Risk	Elevation Range (m AHD)
Proposed Granny-Flat	100%	-	-	-	-	6.5m
Proposed Decking	100%	-	-	-	-	6.5m
Proposed Extensions	50%	-	-	-	-	7m

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Figure 29. Cross section depicting the elevation change walking along the depicted transect lines. Note that the elevations are not provided by survey techniques, rather they incorporate GPS readings. The image atop depicts a linear distance between TH1 and TH6, with a recorded distance drop of approximately 2m over an approximately 40m long transect. The bottom figures depict a transect walked at 11:30 am, 04/06/2025 with the corresponding elevation drop recorded.



### Essential performance criteria

As per Sections C10.1 and C11.1 of the Tasmanian Planning Scheme, the Director's Determination – Coastal Erosion Hazard Areas, and the Director's Determination – Coastal Inundation Hazard Areas, developments within an area at risk of coastal erosion or subject to risk from coastal inundation are to be appropriately located and managed so that they meet Performance Criteria P1 to satisfy the following:

- People, property and infrastructure are not exposed to an unacceptable level of risk.
- Future costs associated with options for adaptation, protection, retreat or abandonment of property and infrastructure are minimised.
- The proposed work can achieve and maintain a tolerable risk for the intended life of the building without requiring any specific coastal erosion protection measures.
- The proposed work does not increase the risk from coastal inundation or coastal erosion to other land or public infrastructure.
- Works to protect land from coastal erosion or inundation are undertaken in a way that provides appropriate protection without increasing risks to other land; and
- The proposed work will not be located on actively mobile landforms, except where the work relates to protection measures or remediation works to protect land, property or human life.

The Tasmanian Government has developed a series of projected sea level rise planning allowances and coastal hazards maps based on research presented in Department of Premier and Cabinet Coastal Hazards Technical Report: Mitigating Natural Hazards through Land Use Planning and Building Control (2016).

The coastal hazard maps are accessible via the Land Information Systems Tasmania (the LIST) site. The Coastal Vulnerability mapping series provides a general geomorphic description of the shoreline type around Tasmania's coast, together with an indicative ('first pass') assessment of the vulnerability of each coastal segment to erosion and recession due to sea level rise.

The geology of the area has been previously mapped by Mineral Resources Tasmania (MRT), with the site immediately atop marine sands, and beneath this lithology lies Siliceous quartzwacke turbidites of the Neoproterozoic Undifferentiated Oonah Formation.

#### Coastal processes and erosion susceptibility:

Coastal modelling has not been conducted for this site as the proposed dwellings are considered a very low risk due to the shallow land gradient with steeply dipping, resilient sedimentary beds apparent as basement. These basement rocks extend a long way from the property to the north and are not uniform so will serve to attenuate wave action.

Sandy soils are susceptible to slumping due to wave scour and excessive steepening in the wave runup zone. Throughout the anticipated life of the proposed development, there is a minimal likelihood of sea level rise causing significant erosion and slumping. Although there may be occasional "once a century" severe storm, the associated erosion and slumping are not expected to exceed 4 meters by 2100. Consequently, the geotechnical stability in the vicinity of the proposed works is anticipated to remain intact.

In contrast to engineered or artificial shorelines, certain natural coastlines inherently exhibit high resistance to erosion over extended periods.

In the case of the shoreline surrounding 55 Sice Avenue, the coast displays features of a concordant coastline, with equally resilient Siliceous quartzwacke turbidites extending along the northern coastline. The adjacent headland is of the same material, and shows no indications of erosion upon site inspection, or assessment of sea level recording; in this the headland has characteristics of a discordant, erosion-resistant feature. This minimal morphological change due to the hardness of the substrate, which has become increasingly stabilised over time as pioneer vegetation colonises and secures accumulated sediment is reinforced through assessment of the aerial and satellite photography; depicting that neither the vegetation nor rock mass has receded, and the site remains **unlikely to suffer significant erosion under current environmental conditions.**

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Assessment of the shoreline via records maintained by Geoscience Australia: Digital Earth Australia (DEA, 2025) indicate the shoreline in the immediate vicinity to the site has not undergone any significant erosion in the past 50 years (fig.30b). Satellite and aerial images accessed via Google Earth, LISTMap and the Land Tasmania Aerial Photo Viewer (APV) were reviewed for historical evidence of coastal erosion. **No discernible shoreline erosion was indicated from this analysis of images dating back to 1975** (fig.31a-31i). Earlier images were assessed as far back as 1946, with suburban development comparisons available from images post-1960. Even in the relatively lower resolution images from 1960, no significant erosion events are discernible.

Figure 30b. 55 Sice Ave. Side-by-side images in similar orientations depicting aerial coastal comparison of the site in 1960 (L) and 2025 (R). Sourced from "Tasmanian Government Land Tasmania (2025). Aerial Photo Viewer". No noticeable erosion is apparent.



Assessment of aerial photography and shoreline tide averages indicate that the tide has been receding annually since 1992.

Figure 30c. 55 Sice Avenue marked with a blue indicator. DEA Coastlines website extract. 1992 Shoreline indicated by white arrow.



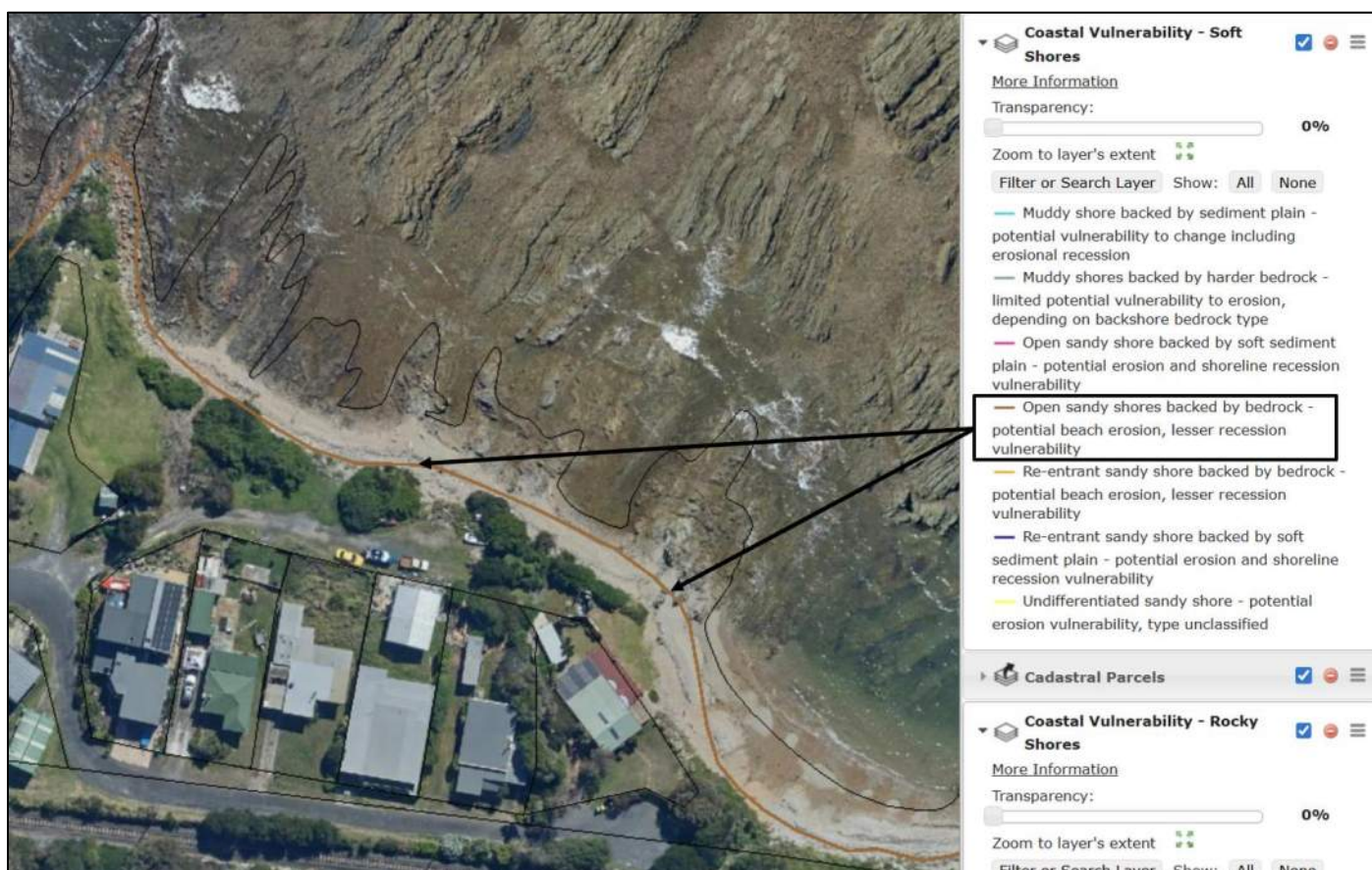
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The extent of inundation by 2050 and 2100 and coastal erosion hazards established in reports to Tasmania's DPAC (Lacey, 2016; Sharples et al., 2013) are baselines that can be expected under the current IPCC sea-level rise trajectory with difference in impact partially attributed to specific geographic and geological characteristics.

For the assessment of 55 Sice Avenue, the geological substrate directly influences susceptibility to erosion. Sharples et al (2013) p.p. 27 define the geomorphology of this coastline largely as *"...a hard rock foreshore that slopes at gentle angles to landwards are regarded as having acceptable (i.e. negligible) erosion susceptibility... these zones typically have developed over millennial time scales since the end of the last post-glacial marine transgression circa 6500 years ago and are eroding at very slow rates which in most cases can be expected to be virtually un-noticeable over human time frames"*. This erosion timeframe is given credence in the form of extensive aerial photography over several decades.

According to LISTmap charts, the Hard Rock foreshore is replaced with a "potential beach erosion" classification with emphasis on **"lesser recession vulnerability"** (fig. 30d) due to the hard rock nature of the shoreline. The beach may appear in some years to be "growing" within this partially sheltered zone within the protective influence of the nearby headland. Local observation of established plants assisting in combatting erosion of soft material, and the seemingly receding local tide over the past 34 years of recordings (fig 30c). Appendices 3 features a similar lineation to that in fig. 30d, where Geoscience Australia clarifies this to be a hard rock interval.

Figure 30d. 55 Sice Avenue LISTmap render with "lesser recession vulnerability" classification boundary applied.



A methodology for defining susceptibility of shores to erosion is outlined in "Coastal erosion susceptibility zone mapping for hazard band definition in Tasmania" report for the DPAC (Sharples et al., 2013). In this report Sharples et al describe in detail that among the most fundamental characteristics that define erosion susceptibility is the inherent "erodibility" of the geology, with a categorisation between soft sediment, soft-rock, and hard-rock shorelines defined. Sharples (2013) refines these 3 categories are further by four erosion susceptibility zones as follows:

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1. Storm bite erosion hazard (the amount of erosion and consequent scarp instability that could potentially occur at any time in response to “1 in 100 year” storms). **Locally applied in figure. 31.**
2. Shoreline recession to 2050 (the amount of shoreline recession that could potentially occur in response to projected sea-level rise to 2050, in addition to the storm bite erosion hazard). **Locally applied in figure. 30.**
3. Shoreline recession to 2100 (the amount of shoreline recession that could potentially occur in response to projected sea-level rise to 2100, in addition to the storm bite erosion hazard). **Locally applied in figure. 30.**
4. Shorelines beyond the limit of potential erosion or recession by 2100.

Between 55 Sice Avenue, and the coastline is an existing easement where vegetation is currently managed. Significant documentation over time shows that the average shoreline water level has decreased in past 30 years (fig. 30c). A detailed comparison of aerial photography dating back to 1960 affirming these observations follows.

*Figure 31a. Sice Ave. 1960 Sourced from “Tasmanian Government Land Tasmania (2025). Aerial Photo Viewer*



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Figure 31b. 55 Sice Ave. 1992 Sourced from "Tasmanian Government Land Tasmania (2025). Aerial Photo Viewer



Figure 31c. 55 Sice Ave. 2003 Sourced from "Tasmanian Government Land Tasmania (2025). Aerial Photo Viewer



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Figure 31d. 55 Sice Ave. 2006 Sourced from "Tasmanian Government Land Tasmania (2025). Aerial Photo Viewer



Figure 31e. 55 Sice Ave. 2011 Sourced from "Tasmanian Government Land Tasmania (2025). Aerial Photo Viewer



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*Figure 31f. 55 Sice Ave. 2016 Sourced from "Tasmanian Government Land Tasmania (2025). Aerial Photo Viewer"*



*Figure 31g. 55 Sice Ave. 2019 Sourced from "Tasmanian Government Land Tasmania (2025). Aerial Photo Viewer"*





The geology of the area has been previously mapped by Mineral Resources Tasmania (MRT), with the site immediately atop marine sands, and beneath this lithology lies Siliceous quartzwacke turbidites of the Neoproterozoic Undifferentiated Oonah Formation.

Coastal modelling has not been conducted for this site as the proposed dwellings are considered a very low risk due to the shallow land gradient with steeply dipping, resilient sedimentary beds apparent as basement. These basement rocks extend a long way from the property to the north and are not uniform so will serve to attenuate wave action.

Sandy soils are susceptible to slumping due to wave scour and excessive steepening in the wave runup zone. Throughout the anticipated life of the proposed development, there is a minimal likelihood of sea level rise causing significant erosion and slumping. Although there may be occasional “once a century” severe storm, the associated erosion and slumping are not expected to exceed 4 meters by 2073. Consequently, the geotechnical stability in the vicinity of the proposed works is anticipated to remain intact.

### **Risk Assessment**

The development of the qualitative risk assessment criteria aims to identify significant risks associated with construction activities in areas susceptible to erosion or inundation hazards. The assessment of risks is predicated on the projected lifespan of the building, extending up to 2073.

The criteria used in this evaluation adhere to a risk assessment matrix aligned with the Australian Standard AS4360 on Risk Management (AS4360). The qualitative assessment of risk severity and likelihood, as outlined in Appendix 2, was employed to facilitate a comprehensive qualitative risk assessment. This assessment was derived from the coastal vulnerability evaluation conducted specifically for the site.

A detailed risk assessment addressing the performance criteria is presented in Appendix 1. Based on the risk assessment conducted by Hotmann Services, it has been determined that the level of risk associated with the proposed development works is deemed acceptable throughout its expected lifespan. There are no identified medium or high-risk factors associated with the proposed development.

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The proposed development is interpreted to be within the stable foundation zone based on the modelled 1% AEP 2069 storm erosion and recession assessment and is adequately set back from coastline. The site is elevated well above the modelled 1% AEP 2100 wave runup levels.

**In accordance with Division 2 – Work in a Coastal Erosion Hazard Area: Section 4 sub-section C as defined within the “Director’s Determination – Coastal Erosion Hazard Areas v 1.2”, conclusions based on the consideration of the proposed work are as follows:**

- i) The works will not deleteriously cause or contribute to coastal erosion on the land or on adjacent land, and will act to prevent erosion potential by driving footings into the ground as land stabilisation.**
- ii) The works proposed are not on actively mobile landforms.**
- iii) The works proposed at 55 SICE AVENUE indicate the elevated nature of any development to the southern side of the property will maintain a tolerable risk for the intended life of the building.**

**HOTMANN SERVICES PTY LTD  
WIND CLASSIFICATION**

In accordance with AS 4055-2021 *Wind load for Housing* classification follows for the proposed houses situated upon 55 SICE AVENUE, Heybridge.

Region: **A**

Terrain category: **TC2.5**

Open terrain including grassland with well-scattered obstructions having heights generally from 1.5 m to 5 m with no more than two obstructions per hectare, e.g., farmland and cleared subdivisions with isolated trees and uncut grass.

Shielding Classification: **NS-PS** (property abutting against large coastal expanse and surrounded on all other sides by residential structures and established trees.)

No shielding shall apply where there are no permanent obstructions or where there are less than 2.5 obstructions per hectare, such as the row of houses or single houses abutting open parklands, open water or airfields. Partial shielding shall apply to intermediate situations where there are at least 2.5 houses or sheds per hectare, such as acreage type suburban development or wooded parkland.

Topographic Classification: **T0**

Area is a coastal setting 1 in 20m elevation drop. Located at an elevation of apx' 7m above sea level.

Wind Classification: **N1**

Design Wind Gust Speed (V<sub>h,u</sub>) **28 m/sec**

**SITE CLASSIFICATION DETERMINATIONS**

Acceptable solutions to Sections C10.1, C10.5.4, and C11.1 of the Tasmanian Planning Scheme (2025)

This study has identified that the shoreline, embankment, and council-maintained easement contribute fundamentally as a Naturally Resilient hard rock foreshore. Significant plant life assists in anchoring the softer soils and sands to the shoreline.

Therefore, the site is considered an acceptable coastal erosion hazard band and is **NOT CONSIDERED** to be vulnerable to coastal erosion by the year 2100.

The site is outside areas identified for projected permanent inundation and storm events by 2050 and 2100.

The site is **located partially within a high coastal erosion hazard band**. However, Geosciences Australia (2025) and Sharples (2013) refer to the coastline as a resilient hard rock shore with no observable erosion in over 50 years.

Therefore, the proposed development is identified as having an acceptable risk from sea level rise and permanent and temporary inundation. It is considered that the proposed development **does not require any mitigation or other control measures as no damage is likely to occur or will be manageable in the normal course of events were it to occur**. This is an acceptable solution under Sections C10.1, C10.5.4 and C11.1 of the Tasmanian Planning Scheme (2025). An Engineering Certificate addressing the **Coastal Erosion and Inundation Hazard Code** is provided in Appendix 4 (Form 55).

## SITE CLASSIFICATION OVERVIEW AND RECOMENDATIONS

In accordance with guidance provided by AS2870 - 2011 regarding moisture related seasonal ground movement, based upon the limited subsurface information collected in this analysis, the soil profiles observed bear a classification of ML (**inorganic silts to fine sand**).

Laboratory results indicated:

TH3) liquid limit ranging from 16.1 – 27.7%, plasticity index of 0 – 1.5% and linear shrinkage of 0.8 – 1.6%.

TH4) liquid limit ranging from 18.8 – 21.5%, plasticity index from 0 – 2.7% and linear shrinkage of 1.6 – 2.4%.

TH6) liquid limit ranging from 21.5 – 27.5%, plasticity index from 0 – 1.0% and linear shrinkage of 1.6 – 2.4%.

Site classification in accordance with AS2870 - 2011 (Ref 2) provides guidance on the patterns and magnitude of moisture related seasonal ground movements that must be considered in design.

Based on the current data the site classification is determined to be **Surface to 1.5m depth: Class S**. Mostly inorganic silt, fine sand & gravels with slight ground movement attributed to moisture changes indicate a Class S. **However, in accordance with “Director’s Determination – Coastal Erosion Hazard Areas v 1.2” the AS2870 site classification of any land located within a coastal erosion hazard area must be Class P, on the basis that it may be subject to coastal erosion.**

The site classification must be reassessed should the subsurface profile change by either cutting or filling and/or if the presence of service trenches, retaining walls or submerged structures within the zone of influence of the proposed footings. Refer to CSIRO foundation management BTF 18 sheets included with this report.

## GENERAL NOTES AND REPORT LIMITATIONS

This report relates to the soil and site conditions on the property at the time of the site assessment. Minor variability in subsurface conditions must be anticipated. Additional topsoils could foreseeably be deposited after this investigation. Moisture condition of site soils and/or the presence of groundwater may vary considerably from time of investigation compared to at the time of construction. Examples of abnormal moisture conditions developing after construction include the following:

- The effect of plants too close to the footings.
- Saturation watering of gardens adjacent to the footings.
- Failure to install or maintain site drainage affecting footings.
- Failure to repair plumbing leaks affecting footings.
- Loss of vegetation from near the building.
- Regional environmental events.

Other limitations of this report pertain to the assets used in assessing the risk of building in hazardous areas, relying upon the content of:

- Climate Futures Light Detection and Ranging (LIDAR) digital elevation model is used for the site modelling.
- ListMAP cadastral information.
- The estimations in this report assessing climate change impacts and in particular climate change induced sea level rise impacts are based on a collation of existing information and data, with some site-specific modelling for planning purposes.

## HOTMANN SERVICES PTY LTD

Details pertaining to mains water and sewer infrastructure comes from governmental sources (ListMAP) and word-of-mouth conversations with local stakeholders / neighbouring persons. Site preparation prior to the construction should include removal of all vegetation, topsoil and any uncontrolled filling.

This report is specific to the project at hand and should not be used or relied upon for other projects or purposes, whether on the same site or elsewhere, by any party. The author of this report strongly recommends that footing excavations be inspected by a geotechnical engineer.

It is important to note that any modifications or excavations on the site have the potential to alter the site classification. Therefore, all new fill materials must be placed under controlled conditions in accordance with AS 3798-2007. Failure to adhere to these controls may require assuming a subsequent classification of Class P.

All earthworks related to the findings presented in this report must comply with the guidelines outlined in AS 3798-2007, which provide guidance on earthworks for both commercial and residential developments. The longevity and performance of footings depend on ongoing maintenance by the property owner(s).

While every effort has been made to accurately describe the subsurface conditions, it is important to acknowledge that natural variations, as well as variations caused by intentional infrastructure works, may occur and cannot be fully determined or predicted through limited soil testing. Therefore, it is possible that unforeseen variations or discrepancies may arise between the results presented in this report and the actual observations made during construction.

The intention of the author is to provide the most probable soil conditions and categorization based on the area assessed. However, due to the focused nature of the sampling and the potential variations in lithological type, depth, and physical site conditions, some variations may occur.

**We accept no responsibility for any differences between what we have reported and actual site and soil conditions for regions we could not directly assess at the time of inspection.**

During construction, Hotmann Services PTY LTD and the design engineer should be notified of any major variation to the foundation conditions as determined within this report, and we invite the owner/s to commission a reclassification via updated report. This report requires certification via a form 55 certificate from Hotmann Services PTY LTD to validate its contents.

### Mark Hotson – Engineering Geologist

B.A.Sc. (Hons), GradDip.  
RP GEO 10291 (Certified Prof Geologist)

Membership:  
Australian Institute of Geoscientists #6560  
Soil Science Australia



A handwritten signature in blue ink, appearing to read "Mark Hotson", written on a light-colored rectangular piece of paper.

## HOTMANN SERVICES PTY LTD

### References:

**AS 4055-2012.** Australian and New Zealand Standard. *Wind load for Housing*

**AS 4360-2004.** Australian and New Zealand Standard. *Determination of Risk Management*

**AS 3798-2007.** Australian and New Zealand Standard. *Guidelines on earthworks for commercial and residential developments*

**AS 1726-2017.** Australian and New Zealand Standard. *Geotechnical Site Investigations.*

**AS 2870-2011.** Australian and New Zealand Standard. *Residential slabs and footings*

**AS 1289.3.1.1.** Australian and New Zealand Standard. *Determination of the liquid limit of a soil - four-point Casagrande Method*

**AS 1289.3.2.1.** Australian and New Zealand Standard. *Determination of the plastic limit of a soil - Standard Method*

**AS 1289.3.3.1.** Australian and New Zealand Standard. *Calculation of the plasticity index of a soil*

**AS 1289.3.4.1.** Australian and New Zealand Standard. *Determination of the linear shrinkage of a soil - Standard Method*

**AS 1289.3.6.1.** Australian and New Zealand Standard. *Determination of soil particle size - Standard method of analysis by sieving*

#### **Director's Determination – Coastal Erosion Hazard Areas v 1.2**

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## **HOTMANN SERVICES PTY LTD**

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DPAC (2016b) Tasmanian Local Council Sea Level Rise Planning Allowances, Department of Premier and Cabinet, accessed at [dpac.tas.gov.au/divisions/climatechange/climate\\_change\\_in\\_tasmania/impacts\\_of\\_climate\\_change/coastal\\_impacts](http://dpac.tas.gov.au/divisions/climatechange/climate_change_in_tasmania/impacts_of_climate_change/coastal_impacts)

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Appendices 1: Qualitative Risk Assessment Tables

Consequence	Details - Storm Erosion and Inundation	Details – Coastal Protection
Catastrophic	Loss of human life and irreparable damage to significant environmental values resulting from a pollution incident with no foreseeable possibility of recovery	Severe environmental impacts leading to the impairment of ecosystem function and causing long-term, extensive effects on significant environments such as RAMSAR Wetlands.
Major	Extensive damage including severe injuries, complete structural failure of development, destruction of significant property and infrastructure, significant environmental damage necessitating remediation efforts and a long-term recovery period.	Significant environmental impacts resulting in notable impairment of ecosystem function. Medium to long-term effects that extend across a relatively wide area.
Moderate	Necessary treatment needed due to notable damage to buildings or infrastructure, including the loss of minor outbuildings such as car ports and garages. Replacement of significant property components such as linings, hard paved surfaces, cladding, and flooring. Moderate environmental damage with a relatively short-term recovery period through natural processes or remedial actions.	Moderate impacts on the biological or physical environment, including air and water, without significant disruption to ecosystem function. Moderately widespread effects over the short term, such as notable spills or incidents.
Minor	Moderate level of loss - restoration of outbuildings and repair, along with minor replacement of building components. Replacement of floor/window coverings and some furniture. Minimal environmental damage that can be easily remedied.	Negligible impact on the biological or physical environment. Minor, short-term damage confined to a small area of limited importance.
Insignificant	No injuries, minimal losses - no need to replace essential building components, with some necessary maintenance of garden beds, gravel driveways, etc. The environment can naturally withstand and recover without requiring remediation. The site experiences inundation, but ground-based access remains easily accessible, and habitable buildings, including incorporated garages, are not affected by the inundation.	Limited impact to smallest area of limited significance.

Level	Descriptor	Description	Guideline
A	Almost Certain	Consequence is expected to occur in most circumstances.	Occurs more than once per month.
B	Likely	Consequence will probably occur in most circumstances.	Occurs once every 1 month – 1 year.
C	Occasionally	Consequence should occur at some time.	Occurs once every 1 year - 10 years.
D	Unlikely	Consequence could occur at some time.	Occurs once every 10 years – 100 years.
E	Rare	Consequence may only occur in exceptional circumstances.	Occurs less than once every 100 years.

Source: AS/NZS 4360:2004 Risk Management

Likelihood of the Consequence	Maximum Reasonable Consequence				
	(1) Insignificant	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
(A) Almost certain	11 High	16 High	20 Extreme	23 Extreme	25 Extreme
(B) Likely	7 Moderate	12 High	17 High	21 Extreme	24 Extreme
(C) Occasionally	4 Low	8 Moderate	13 High	18 Extreme	22 Extreme
(D) Unlikely	2 Low	5 Low	9 Moderate	14 High	19 Extreme
(E) Rare	1 Low	3 Low	6 Moderate	10 High	15 High

Source: AS/NZS 4360:2004 Risk Management

**HOTMANN SERVICES PTY LTD**

**Appendices 2: Qualitative assessment of risk severity and likelihood applied to the proposed 55 Sice Avenue development indicate there are no medium or high-risk concerns for this property development.**

Performance Criteria E16.7.1 P1 <b>Buildings and works must satisfy all of the following:</b>	Relevance	Management Options	Preliminary Risk Assessment			Further Assessment Required
			Consequence	Likelihood	Risk	
Do not increase the level of risk to the life of the users of the site or hazard for adjoining or nearby properties or public infrastructure;	No projected erosion in building areas based on 2073 1% AEP scenario		<b>Insignificant (1)</b>	<b>Rare (E)</b>	<b>Low (1)</b>	<b>No</b>
Account for erosion risk arising from wave run-up, including impact and material suitability, may be mitigated to an acceptable level through structural or design methods used to avoid damage to, or loss of, buildings or works;	Low wave runup erosion risk. Significant wave attenuation occurs through the extensive exposed basement rocks.		<b>Insignificant (1)</b>	<b>Rare (E)</b>	<b>Low (1)</b>	<b>No</b>
Ensure erosion risk is mitigated to an acceptable level through measures to modify the hazard where these measures are designed and certified by an engineer with suitable experience in coastal, civil and/or hydraulic engineering;	No mitigation required		-	-	-	<b>No</b>
The need for future remediation works	Negligible site erosion hazard		<b>Minor (2)</b>	<b>Unlikely (D)</b>	<b>Low (5)</b>	<b>No</b>
Health and safety of people is not placed at risk	Negligible site erosion hazard		<b>Minor (2)</b>	<b>Unlikely (D)</b>	<b>Low (5)</b>	<b>No</b>
Important natural features are adequately protected	No natural features of value at the site.		-	-	-	<b>No</b>
Public foreshore access is not obstructed where the managing public authority requires it to continue to exist	Not Applicable		-	-	-	<b>No</b>
Access to the site will not be lost or substantially compromised by expected future erosion whether on the proposed site or off-site	Negligible site erosion hazard		<b>Insignificant (1)</b>	<b>Rare (E)</b>	<b>Low (1)</b>	<b>No</b>
Provision of a developer contribution for required mitigation works consistent with any adopted Council Policy, prior to commencement of works.	No need for structural mitigation.		<b>Insignificant (1)</b>	<b>Rare (E)</b>	<b>Low (1)</b>	<b>No</b>
Not be located on an actively mobile landform	Not a mobile landform		<b>Insignificant (1)</b>	<b>Rare (E)</b>	<b>Low (1)</b>	<b>No</b>

**Appendices 3: Ancillary Hard Rock boundary definition sourced from Geoscience Australia (2025).** Digital Earth Australia. Retrieved from <https://maps.dea.ga.gov.au/>. Green Boundary indicates Hard Bedrock and Gentle Slope as indicated by the “Geology – primary substrate – Site Data” table to the right. The table is expanded below, and clarifies that the local geology is not defined as a soft rock shore.



MUDDY_V	Not identified as a muddy shore
MUDDY_L	Not a known muddy shore
SANDY_N	220
SANDY_V	Open coast sandy shore backed by bedrock rising above sea level
SANDY_L	Open sandy shore, rock-backed
DUNES_N	000
DUNES_V	Not identified as a coast having significant dune, beach-ridge or aeolian sand backshores
DUNES_L	Not a known dune coast
COARSE_N	000
COARSE_V	Not identified as a coarse sediment shore
COARSE_L	Not a known coarse sed shore
UNDIFF_N	000
UNDIFF_V	Not identified as an undifferentiated soft sediment shore
UNDIFF_L	Not a known undif soft sed shr
SOFTROCK_N	000
SOFTROCK_V	Not identified as a soft rock shore
SOFTROCK_L	Not a known soft rock shore
HARDROCK_N	200
HARDROCK_V	Hard gently to moderately sloping rocky shore
HARDROCK_L	Stable hard rocky shore
UNDFROCK_N	000
UNDFROCK_V	Not identified as an undifferentiated rock shore
UNDFROCK_L	Not a known undif rock shore
CORAL_N	000
CORAL_V	Not identified as a coral coast
CORAL_L	Not a known coral coast
UNCLASS_N	000
UNCLASS_V	Shoreline stability classified
UNCLASS_L	Stability classified
COMMENTS	
Shape	Polyline
st_lengthshape	0.001554

**HOTMANN SERVICES PTY LTD**  
**Appendices 4: Form 55 specific to 53 Sice avenue.**

**CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM**

**Section 321**

Form **55**

To:  *Owner /Agent*  
  
 *Address*  
  *Suburb/postcode*

**Qualified person details:**

Qualified person:   
Address:      
Phone No:   
Railton  Fax No:   
Licence No:  Email address:   
Qualifications and Insurance details:  *(Description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)*  
Speciality area of expertise:  *(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)*

**Details of work:**

Address:     
Lot No:   
Heybridge  Certificate of title No:   
The assessable item related to this certificate:  *(Description of the assessable item being certified)  
Assessable item includes –*  

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

**Certificate details:**

Certificate type:  *(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 items, 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

**HOTMANN SERVICES PTY LTD**

In issuing this certificate, the following matters are relevant –

Documents: The attached Geotechnical Assessment Report for the address detailed above in 'Details of Work'.

Relevant calculations: Refer to the above report.

References: AS 4055-2012 Wind load for Housing  
AS 3798-2007 Guidelines on earthworks for commercial and residential developments  
AS 2870-2011 Residential slabs and footings  
AS1726-2017 Geotechnical site investigations  
AS 1289.3.1.1 Determination of the liquid limit of a soil - four-point Casagrande Method  
AS 1289.3.2.1 Determination of the plastic limit of a soil - Standard Method  
AS 1289.3.3.1 Calculation of the plasticity index of a soil  
AS 1289.3.4.1 Determination of the linear shrinkage of a soil - Standard Method  
AS 1289.3.6.1 Determination of soil particle size - Standard method of analysis by sieving  
CSIRO Building Technology File -18

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

**Coastal Hazards assessment**

Site classification consistent with AS2870-2011

Site classification consistent with AS4055-2012

The site exists outside Coastal Inundation Hazard Bands. Inspection determined the site exists partially within the Coastal Erosion Hazard Band – (High). Follow-up investigations determine the shoreline to be a resilient entity with no significant erosion in the past 50 years and a mean annual shoreline of 0m above sea level observed to be receding at the site since 1992 grants the assessed site to be within an acceptable Coastal Erosion Hazard Band.

By the primary domicile modifications proposed, this variation:

1. Is unlikely to cause or contribute to coastal erosion or inundation.
2. Is not proposed on actively mobile landforms.
3. Will achieve and maintain a tolerable risk for the intended life of the building (100 years) with specific regard for:
  - The intensity and duration of use, or the type, form and duration of development.
  - The low potential change in risk across the intended building life, and the ability for the property to adapt to a change in risk.
  - The ability for maintaining access to utilities and services.
  - The need for specific coastal erosion or inundation hazard reduction or protective measures for the site, or such measures beyond the boundary of the assessed site.
  - Any coastal erosion or inundation management plan in place for the site including adjacent land.

Based upon the findings of the investigation into the proposed changes for 55 Sice Avenue, the proposed changes would not adversely impact the site, the immediate surroundings, or increase the current Coastal Erosion or Inundation risk.

This is an acceptable solution under the Tasmanian Planning Scheme, Sections C10.6.1 and C11.6.1

*Scope and/or Limitations*

The classification applies to the site as inspected and does not account for future alteration to foundation conditions as a result of earthworks, significant climate events, drainage condition changes or variations in site maintenance.

**I certify the matters described in this certificate.**

Qualified person: *Signed:* *Certificate No:* *Date:*

	010014	20/02/2026
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# CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

 **CENTRAL COAST COUNCIL**  
LAND USE PLANNING

Received: 23/02/2026  
Application No: DA2025299  
Doc ID: 545872

To:

Owner /Agent

Address

Suburb/postcode

Form **55**

## Qualified person details:

Qualified person:

Address:  Phone No:

Fax No:

Licence No:  Email address:

Qualifications and Insurance details:

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

Speciality area of expertise:

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

## Details of work:

Address:  Lot No:

Certificate of title No:

The assessable item related to this certificate:

*(Description of the assessable item being certified)*  
Assessable item includes –  
- a material;  
- a design  
- a form of construction  
- a document  
- testing of a component, building system or plumbing system  
- an inspection, or assessment, performed

## Certificate details:

Certificate type:

*(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 items, 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: The attached Geotechnical Assessment Report for the address detailed above in 'Details of Work'.

Relevant calculations: Refer to the above report.

References: AS 4055-2012 Wind load for Housing  
  
AS 3798-2007 Guidelines on earthworks for commercial and residential developments  
AS 2870-2011 Residential slabs and footings  
AS1726-2017 Geotechnical site investigations  
AS 1289.3.1.1 Determination of the liquid limit of a soil - four-point Casagrande Method  
AS 1289.3.2.1 Determination of the plastic limit of a soil - Standard Method  
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AS 1289.3.4.1 Determination of the linear shrinkage of a soil - Standard Method  
AS 1289.3.6.1 Determination of soil particle size - Standard method of analysis by sieving  
CSIRO Building Technology File -18

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

Coastal Hazards assessment

Site classification consistent with AS2870-2011

Site classification consistent with AS4055-2012

The site exists outside Coastal Inundation Hazard Bands. Inspection determined the site exists partially within the Coastal Erosion Hazard Band – (High). Follow-up investigations determine the shoreline to be a resilient entity with no significant erosion in the past 50 years and a mean annual shoreline of 0m above sea level observed to be receding at the site since 1992 grants the assessed site to be within an acceptable Coastal Erosion Hazard Band.

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  - The intensity and duration of use, or the type, form and duration of development.
  - The low potential change in risk across the intended building life, and the ability for the property to adapt to a change in risk.
  - The ability for maintaining access to utilities and services.
  - The need for specific coastal erosion or inundation hazard reduction or protective measures for the site, or such measures beyond the boundary of the assessed site.
  - Any coastal erosion or inundation management plan in place for the site including adjacent land.

Based upon the findings of the investigation into the proposed changes for 55 Sice Avenue, the proposed changes would not adversely impact the site, the immediate surroundings, or increase the current Coastal Erosion or Inundation risk.


This is an acceptable solution under the Tasmanian Planning Scheme, Sections C10.6.1 and C11.6.1

*Scope and/or Limitations*

The classification applies to the site as inspected and does not account for future alteration to foundation conditions as a result of earthworks, significant climate events, drainage condition changes or variations in site maintenance.

**I certify the matters described in this certificate.**

Qualified person: *Signed:* *Certificate No:* *Date:*

	010014	20/02/2026
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# Natural assets code assessment

55 Sice Avenue,  
Heybridge, TAS, 7316

PID: 6769697

September 2025

NATURAL STATE



**Prepared for:**

Sui Yu  
55 Sice Avenue, Heybridge, TAS, 7316

**Prepared by:**

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## Table of contents

Summary .....	2
<b>1. Introduction</b> .....	3-4
1.1 Background.....	3
Photo 1: Aerial view of the property.....	3
1.2 Description of study area .....	3
Figure 1: Landscape context map .....	4
<b>2. Methodology</b> .....	5
2.1 Background research .....	5
2.2 Natural values assessments.....	5
2.3 Limitations .....	5
<b>3. Site survey and observations</b> .....	6
Photo 2: The introduced ornamental vegetation growing in the front yard.....	6
<b>4. Conclusion</b> .....	7
<b>5. Recommendations</b> .....	7
<b>6. References</b> .....	8
<b>7. Appendices</b> .....	9-17
Appendix 1. Flora assessments .....	9
Table 1: Indigenous flora species observed .....	9
Table 2: Introduced flora species observed .....	9
Appendix 2. Fauna assessment .....	10
Table 3: Fauna observed .....	10
Appendix 3. Assessment of compliance with the Natural Assets Code C7.6.1 .....	11-14
Figure 2: Waterway & Coastal protection Area map .....	13
Photo 3: The shoreline near the Waterway & Coastal Protection Area .....	14
Photo 4: The northern boundary of the property.....	14
Photo 5: The Coastal Reserve from the northern boundary.....	14
Photo 6: The property as viewed from the Coastal Reserve .....	14
Assessment of the Tasmanian Planning Scheme – Natural Assets Code C7.6.2 .....	15-17
Figure 3: Priority Vegetation Area overlay map .....	16
Photo 7: The flowering Boneseed within the nearby rail corridor .....	17
Photo 8: A lone Coastal Wattle in the foreground .....	17

**Cover photo:** View of the existing house from the front garden. Facing NW, M.Rose, 24/09/25.

**Disclaimer:** To the extent permitted by law, Natural State excludes all liability to any person or organisation for any consequences, including but not limited to all losses, damages, costs, expenses and any other compensation, arising directly or indirectly from using information or material (in part or in whole) contained in this report.

## Summary

Natural State was engaged by the proponent to undertake a natural values assessment and prepare a report to assist with planning requirements with the Central Coast Council.

The proponent is seeking to apply for a discretionary building permit.

### Vegetation communities

No native vegetation was observed on the property.

### Threatened flora

No threatened flora species listed under the *Tasmanian Threatened Species Protection Act 1995* (TSP Act) or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) were observed during the survey.

### Threatened fauna

No threatened fauna species listed under the *TSP Act* and the *EPBC Act* were observed onsite during the survey, or are likely to inhabit the property.

Suitable foraging, nesting and hunting habitat exists nearby for a number of listed threatened fauna species amongst the Coastal Reserve.

### Weeds

Several declared and environmental weed species were observed on or near the property during the survey:

- *Chrysanthemoides monilifera* - Boneseed
- *Coprosma repens* - Mirror Bush
- *Delairea odorata* - Cape Ivy
- *Rubus fruticosus* spp. aggregate - Blackberry

### Waterways

The nearby Blythe Estuary is classified as being of high conservation value.

A 40m wide buffer extends from the coastline to form a Waterway & Coastal Protection Area buffer.

### Potential impacts from the proposed development

The mostly introduced vegetation within the adjoining Coastal Reserve has the potential to provide important breeding habitat for local shorebirds such as the Little Penguin - *Eudyptula minor*.

Although no native or littoral vegetation is expected to be cleared as a result of this project, care should be taken to prevent and minimise unnecessary ground disturbance particularly during the Little Penguin breeding season between 1<sup>st</sup> September – 31<sup>st</sup> March.

# 1. Introduction

## 1.1 Background

Natural State was engaged by the proponent to undertake a natural values assessment and prepare a report to assist with planning requirements with the Central Coast Council.

## 1.2 Description of the study area

The project site is located at 55 Sice Avenue, Heybridge, TAS, 7316 (PID:6769697). The property is private freehold land of approximately 588m<sup>2</sup> in total size.

The property is zoned General Residential, under the Tasmanian Planning Scheme - Central Coast.

The topography of the proposed building area is relatively flat with the site gently sloping towards the coast to the North. The property ranges in altitude from approximately 7.5m - 5m above sea level.

The annual average rainfall in nearby Ulverstone is approximately 985mm.

This site is located within the Tasmanian Northern Slopes IBRA bioregion (Interim Biogeographical Regionalisation for Australia), in the Blythe catchment area.

The site survey focussed on verifying on-ground the current status of the relevant aspects of the C7.0 *Natural Assets Code* in relation to the proposed development activities, which are:

- C7.6.1 - Buildings and works within a waterway & coastal protection area or a future coastal refugia area
- C7.6.2 - Clearance within a priority vegetation area.



**Photo 1:** Aerial view of the property at 55 Sice Avenue, Heybridge. Source: TheLIST.

## 55 Sice Avenue, Heybridge, TAS, 7316 - landscape context map



**Figure 1:** Landscape context map showing the location of the property in red. Map data: LISTmap, approximate scale 1:20,000.

## 2. Methodology

### 2.1 Background research

This report uses a simplified format of the Guidelines for Natural Values Surveys - Terrestrial Development Proposals (DPIPWE, 2015).

The initial desktop analysis involved, searching The Natural Values Atlas (NVA) to generate a Natural Values Report, searching The Land Information System Tasmania (LISTmap), the Forest Practices Authority Biodiversity Values database (BVD) and the Conservation of Freshwater Ecosystem Values database (CFEV).

Data was then exported from these databases to enable analysis and map production using ArcGIS v10.2 software, prior to the site assessment.

### 2.2 Natural values assessments

Field survey work was conducted by Matt Rose on 24<sup>th</sup> September 2025. The report was completed on 25<sup>th</sup> September 2025.

Natural State undertakes natural values assessments through the following permits:

- Listed Taxon Permit – Permit No. 2502795 issued by the Department of Natural Resources & Environment Tasmania.
- TASVEG VEGETATION CONDITION ASSESSMENT ACCREDITATION – issued by the Department of Primary Industries, Parks, Water & Environment.
- HERPETOLOGY PERMIT – Permit No. 1901864 issued by the Department of Primary Industries, Parks, Water & Environment.
- RPA OPERATOR ACCREDITATION (Drone) – issued by the Civil Aviation Safety Authority.

The survey equipment consisted of: a GPS unit, drone, mobile phone, camera & smartphone mapping Apps. The survey methodologies included:

a.) using the random meander technique with opportunistic recording & mapping of natural values observed during the site assessment.

b.) ground-truthing data collated during the background research phase e.g. threatened species, native vegetation communities and weeds.

Field data was collected using a handheld GPS units (Garmin GPSMAP64) in the UTM UPS position format and WGS84 map datum. The GPS accuracy for this field survey work was 3m.

Data was then imported into GIS software to enable further analysis and map production.

### 2.3 Limitations

The flora and fauna assessment was limited in time. Please note that once-off ground-based surveys are unlikely to record all species present. Some flora species are likely to be dormant. Some fauna species may have migrated from the search area. Other species may utilise the search area, but may not have been recorded within any database. Targeted flora & fauna surveys conducted several times throughout the year are likely to record additional species. Night surveys are likely to record additional nocturnal species. Night surveys were not conducted by Natural State for this project, but can be by request.

Bryophytes, fungi, lichens and insects were not included in this survey as the preliminary NVA Report and BVD search did not highlight any threatened species nearby.

The mapping in this report uses a combination of data collected onsite and exported from TheLIST, NVA & BVD. This data is displayed to assist with analysis and decision making and is a subjective interpretation based on experience, qualifications and knowledge to date.

### 3. Site survey & observations

Part of the property has been mapped as a Priority Vegetation Area under the C7.0 Natural Assets Code.

The Priority Vegetation overlay is not accurate in this instance as native vegetation is not present on the property. Several introduced ornamental garden plants have been planted near the existing house with the gardens also consisting of pasture grasses, perennial weeds and the Declared Weeds, Blackberry & Fennel.

Isolated Coastal Wattle – *Acacia sophorae* bushes are present in the adjoining Coastal Reserve which is covered in mostly introduced weeds such as Kikuyu, Blackberry, Cape Ivy, Cape Weed, Three-cornered Garlic & Mirror Bush.

Remnant native vegetation is well represented throughout the nearby railway corridor in close proximity to Sice Avenue. This area of Priority Vegetation has a dense infestation of the Declared Weed and Weed of National Significance (WoNS) Boneseed - *Chrysanthemoides monilifera*.

No threatened flora or fauna species were observed on the property or nearby. No threatened fauna species are likely to inhabit this property.



**Photo 2:** The introduced ornamental vegetation growing in the front yard. Facing NE, M.Rose, 24/09/25.

## 4. Conclusion

Part of the proposed building area is within the Waterway & Coastal Protection Area buffer. The proponent is seeking a discretionary building permit to build within this area. Minimal impacts are expected to natural ecological processes or to local biodiversity as a result of this project, over the course of the next 50 years.

The nearby Priority Vegetation Areas located within the Coastal Reserve & railway corridor should not be adversely impacted by the proposed development activities. The mostly introduced vegetation growing amongst the Coastal Reserve has the potential to be providing nesting habitat for shorebirds, such as the Little Penguin. No disturbance to this vegetation is expected from this development.

Any disturbed ground on the building site will need immediate and ongoing weed monitoring and control to prevent invasive weeds from establishing on the property.

The WoNS weed Boneseed (and other environmental weeds such as Sweet Pittosporum) is spreading within the rail reserve and is highly likely to spread further over time into the nearby properties unless something can be done to encourage TasRail to adequately address their responsibilities under the *Weed Management Act 1999*.

## 5. Recommendations

The following recommendations should be considered as permit conditions under a Section 71, Part 5 agreement of the Land Use Planning and Approvals Act 1993:

- Ensure all site preparation and construction follows the [Tasmanian Coastal Works Manual](#) (DPIPWE, 2010).
- Manage all declared and environmental weeds on the property ASAP to prevent seed set e.g. Blackberry, Fennel & Mirrorbush.
- Priority should be given to using local native vegetation in future landscaping around the buildings.
- Ensure that any cats kept onsite are microchipped, desexed & confined to the building/s or a purpose build cat enclosure to prevent roaming into nearby bushland or the coastal reserve to protect local wildlife e.g. Little Penguins.
- Manage introduced European Wasp - *Vespula germanica* nests if they colonise any newly cleared or disturbed ground.
- To prevent the spread of freshwater pests and pathogens such as *Phytophthora cinnamomi* and Chytrid fungus, the proponent should ensure that all contractors / earthworks machinery adhere to the following minimum standards:
  1. [Weed and Disease Planning and Hygiene Guidelines](#) (DPIPWE, 2015)
  2. [Keeping it Clean - A Tasmanian field hygiene manual](#) (DPIPWE, 2010)
  3. [Waterways & Wetlands Works Manual](#) (DPIWE, 2003)

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## 7. Appendices

### Appendix 1. Flora assessment

**Table 1: Indigenous flora species observed near rail line and coastal reserve during survey**

Scientific Name	Common Name	Endemic	TSP Act status	EPBC Act status
<i>Acacia sophoraea</i>	Coastal Wattle	-	-	-
<i>Lomandra longifolia</i>	Sagg	-	-	-

**Table 2: Introduced flora species observed during survey**

Scientific Name	Common Name	Declared weed in TAS	Weed of National Significance (WoNS)
<i>Aeonium</i> spp.	Tree House-leek	-	-
<i>Agapanthus praecox</i>	Agapanthus	-	-
<i>Allium triquetrum</i>	Three-cornered Garlic	-	-
<i>Anagallis arvensis</i>	Scarlet Pimpernel	-	-
<i>Arctotheca calendula</i>	Capeweed	-	-
<i>Camellia</i> spp.	Camellia	-	-
<i>Chrysanthemoides monilifera</i>	Boneseed	YES	YES
<i>Cirsium vulgare</i>	Spear Thistle	-	-
<i>Coprosma repens</i>	Mirror Bush	-	-
<i>Cynodon dactylon</i>	Couch Grass	-	-
<i>Dactylis glomerata</i>	Cocksfoot	-	-
<i>Delairea odorata</i>	Cape Ivy	-	-
<i>Eschscholzia californica</i>	Californian Poppy	-	-
<i>Euphorbia peplus</i>	Petty Spurge	-	-
<i>Foeniculum vulgare</i>	Fennel	YES	-
<i>Fumaria officinalis</i>	Fumitory	-	-
<i>Fuchsia</i> spp.	Fuchsia	-	-
<i>Hyacinthoides hispanica</i>	Bluebells	-	-
<i>Kniphofia uvaria</i>	Red Hot Pokers	-	-
<i>Lolium perenne</i>	Perennial Ryegrass	-	-
<i>Oxalis pes-caprae</i>	Soursob	-	-
<i>Pelargonium</i> spp.	Geranium	-	-
<i>Pennisetum clandestinum</i>	Kikuyu	-	-
<i>Psoralea pinnata</i>	Blue Butterfly Bush	-	-
<i>Raphanus raphanistrum</i>	Wild Radish	-	-
<i>Raphiolepis indica</i>	Indian Hawthorn	-	-
<i>Rhododendron</i> spp.	Rhododendron	-	-
<i>Rosa</i> spp.	Rose	-	-
<i>Rubus fruticosus</i> spp. aggregate	Blackberry	YES	YES
<i>Rumex acetosella</i>	Red Sorrel	-	-
<i>Silybum marianum</i>	Milk Thistle	-	-
<i>Solanum nigrum</i>	Black Nightshade	-	-
<i>Sonchus oleraceus</i>	Sow Thistle	-	-
<i>Taraxacum</i> spp.	Dandelion	-	-
<i>Yucca</i> spp.	Yucca	-	-

## Appendix 2. Fauna assessment

The fauna assessment was limited in sampling method and was based on opportunistic observations rather than targeted surveys.

**Table 3: Fauna observed**

Scientific Name	Common Name	Endemic	Evidence if not seen or heard
<i>Malurus cyaneus</i>	Superb Fairy Wren	-	-

## Appendix 3. Assessment of compliance with the Natural Assets Code C7.6.1

### C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area

Objective: That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:

Performance criteria P1	Assessment of compliance and explanation
(a) impacts caused by erosion, siltation, sedimentation and runoff;	Minimal impacts expected. A permanent grassed filter strip (Kikuyu and other introduced pasture grasses) already grows within the WCPA. Silt fencing may also be beneficial during the construction phase.
(b) impacts on riparian or littoral vegetation;	No littoral vegetation is expected to be impacted within the WCPA.
(c) maintaining natural streambank and streambed condition, where it exists;	N/A
(d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;	All littoral vegetation will be retained with no additional impacts expected to potential habitat.
(e) the need to avoid significantly impeding natural flow and drainage;	N/A.
(f) the need to maintain fish passage, where known to exist;	N/A
(g) the need to avoid land filling of wetlands;	N/A
(h) the need to group new facilities with existing facilities, where reasonably practical;	N/A
(i) minimising cut and fill;	N/A
(j) building design that responds to the particular size, shape, contours or slope of the land;	The proposed development utilises the topography of the site.
(k) minimising impacts on coastal processes, including sand movement and wave action;	The proposed development is unlikely to impact on coastal processes. The coastal reserve vegetation currently provides an erosion buffer. Part of the proposed building will be elevated.
(l) minimising the need for future works for the protection of natural assets, infrastructure and property;	The proponent will seek permission from the appropriate authority to continue to utilise the coastal reserve as required.
(m) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and	The proposed site preparation & construction work should follow these guidelines.
(n) the guidelines in the Tasmanian Coastal Works Manual.	The proposed site preparation & construction work should follow these guidelines.

## Appendix 3. Assessment of compliance with the Natural Assets Code C7.6.1

### C7.6.1 Buildings and works within a waterway and coastal protection area or a future coastal refugia area

Objective: That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

Development within a waterway and coastal protection area or a future coastal refugia area involving a new stormwater point discharge into a watercourse, wetland or lake must avoid or minimise adverse impacts on natural assets, having regard to:

Performance criteria P3	Assessment of compliance and explanation
(a) the need to minimise impacts on water quality; and	Stormwater will be harvested via a rainwater tank and is unlikely to discharge into a watercourse.
(b) the need to mitigate and manage any impacts likely to arise from erosion, sedimentation or runoff.	No littoral vegetation is expected to be cleared within the WCPA. The area surrounding the proposed building area already acts as a grassed filter strip which should assist with groundwater recharge and avoid and minimise potential erosion or runoff impacts.

Dredging or reclamation within a waterway and coastal protection area or a future coastal refugia area must minimise adverse impacts on natural coastal processes and natural assets, having regard to:

Performance criteria P4.1	Assessment of compliance and explanation
(a) impacts caused by erosion, siltation, sedimentation and runoff;	Although no impacts are expected, the grassed filter strip and silt fencing, if required, along the rear boundary should mitigate any potential issues.
(b) impacts on riparian or littoral vegetation;	No littoral vegetation is expected to be impacted within the WCPA.
(c) the need to avoid land filling of wetlands;	N/A
(d) impacts on sand movement and wave action; and	N/A
(e) the potential for increased risk to inundation of adjacent land.	N/A

Coastal protection works or watercourse erosion or inundation protection works within a waterway and coastal protection area or a future coastal refugia area must be designed by a suitably qualified person and minimise adverse impacts on natural coastal processes, having regard to:

Performance criteria P5	Assessment of compliance and explanation
(a) impacts on sand movement and wave action; and	No littoral vegetation is expected to be cleared within the WCPA. Maintenance of the grassed filter strip within the WCPA is recommended to avoid and minimise potential impacts. The coastal reserve appears to be quite stable with no impacts expected.
(b) the potential for increased risk of inundation to adjacent land.	No littoral vegetation is expected to be cleared within the WCPA. Maintenance of the grassed filter strip within the WCPA is recommended to avoid and minimise potential impacts. The coastal reserve appears to be quite stable with no impacts expected.

# Waterway and coastal protection area map



Project: Natural assets code assessment	Drawn by: Matt Rose	 <p>NATURAL STATE PO Box 139, Ulverstone TAS 7315 Mobile: 0437 971 144 E: matt@naturalstate.com.au www.naturalstate.com.au</p>	<p>Acknowledgements: Raster Data : Base image Copyright State of Tasmania. Vector Data : Copyright State of Tasmania &amp; Natural State.</p>  <p>Scale 1:1,000</p>	
Client: Sui Yu	Date: 25/09/2025			

Figure 2: Waterway & Coastal Protection Area overlay map.



**Photo 3:** The shoreline of the Waterway & Coastal Protection Area. Facing West, M.Rose, 26/06/23. **Photo 4:** The northern boundary of the property. Facing North, M.Rose, 24/09/25.



**Photo 5:** The Coastal Reserve from the northern boundary. Facing North, M.Rose, 26/06/23. **Photo 6:** The property as viewed from the Coastal Reserve. Facing South, M.Rose, 24/09/25.

## Appendix 3. Assessment of compliance with the Natural Assets Code C7.6.2

**C7.6.2 Clearance within a priority vegetation area**  
 Objective: That clearance of native vegetation within a priority vegetation area: (a) does not result in unreasonable loss of priority vegetation; (b) is appropriately managed to adequately protect identified priority vegetation; and (c) minimises and appropriately manages impacts from construction and development activities.

Clearance of native vegetation within a priority vegetation area must be for:

Performance criteria P1.1	Assessment of compliance and explanation
(a) an existing use on the site, provided any clearance is contained within the minimum area necessary to be cleared to provide adequate bushfire protection, as recommended by the Tasmanian Fire Service or an accredited person;	No native vegetation is present on this property.
(b) buildings and works associated with the construction of a single dwelling or an associated outbuilding;	N/A.
(c) subdivision in the General Residential Zone or Low Density Residential Zone	N/A.
(d) use or development that will result in significant long term social and economic benefits and there is no feasible alternative location or design;	N/A.
(e) clearance of native vegetation where it is demonstrated that on-going pre-existing management cannot ensure the survival of the priority vegetation and there is little potential for long-term persistence; or ;	N/A.
(f) the clearance of native vegetation that is of limited scale relative to the extent of priority vegetation on the site;	N/A.

Clearance of native vegetation within a priority vegetation area must minimise adverse impacts on priority vegetation, having regard to:

Performance criteria P1.2	Assessment of compliance and explanation
(a) the design and location of buildings and works and any constraints such as topography or land hazards	The proposed building envelope utilises the topography of the site. No native vegetation is present on this property.
(b) any particular requirements for the buildings and works	N/A.
(c) minimising impacts resulting from bushfire hazard management measures through siting and fire-resistant design of habitable buildings	N/A.
(d) any mitigation measures implemented to minimise the residual impacts on priority vegetation	Invasive weed and European Wasp management activities are recommended.
(e) any on-site biodiversity offsets; and	Local native species should be incorporated into the future site landscaping.
(f) any existing cleared areas on the site.	N/A.

# Priority vegetation area map



Project: Natural assets code assessment	Drawn by: Matt Rose		NATURAL STATE PO Box 139, Ulverstone TAS 7315 Mobile: 0437 971 144 E: matt@naturalstate.com.au www.naturalstate.com.au	Acknowledgements: Raster Data : Base image Copyright State of Tasmania. Vector Data : Copyright State of Tasmania & Natural State.	
Client: Sui Yu	Date: 25/09/2025				

Figure 3: Priority Vegetation overlay map.



**Photo 7:** The flowering Boneseed, Agapanthus and Sweet Pittosporum within the nearby rail corridor. Facing SE, M.Rose, 24/09/25.



**Photo 8:** A lone Coastal Wattle in the foreground surrounded by patches of introduced Mirror Bush within the adjoining Coastal Reserve. Facing East, M.Rose, 26/06/23.

**STATEMENT**

 <b>CENTRAL COAST COUNCIL</b> <b>LAND USE PLANNING</b>	
Received:	23/12/2025
Application No:	DA2025299
Doc ID:	541381

**OF**

**ENVIRONMENTAL EFFECTS**

**FOR**

**THE PROPOSED RESIDENCE**

**&**

**SECONDARY DWELLING**

**AT**

**55 SICE AVENUE**

**HEYBRIDGE**

**TASMANIA**

Prepared by:  
Architects.  
Energy Efficient Homes.  
Cobbity NSW

Mobile: 0412 536 353

Issue: DA Dec 2025  
REF 25 67 590  
Revision: A - 22/12/2025

# STATEMENT OF ENVIRONMENTAL EFFECTS

**Proposed Residence & Secondary Dwelling  
At 55 Sice Avenue Tasmania**

**Energy Efficient Homes  
Architects Cobbity NSW**

**E:** [jack@energyefficienthomes](mailto:jack@energyefficienthomes)

Mob: 0412 536 353

Ref: 25 67 590

December 2025

Page 2 of 5.

## **1.0 OUTLINE OF THE PROPOSAL.**

The Proposal will consist of the demolition of the existing dilapidated dwelling and the construction of a new dwelling with an attached secondary Dwelling.

### **1.1 FORMAT OF THE PROPOSAL.**

The Proposal will consist of a single storey structure with the Residence & Secondary Dwelling side by side with a shared fire rated wall separating.

## **2.0 DESCRIPTION OF THE SITE.**

### **2.1 Site Location.**

The site is located on the northern side of Sice Avenue it shares boundaries with two residential properties.

### **2.2 Site Format.**

The property is rectangular in shape with the opposite boundaries approximately parallel. The northern boundary has a slight change in angle otherwise the property is rectangular. The proposed structure occupies the same location as the existing dwelling, as does the proposed driveway.

### **2.3 Prior Use of the Property.**

The area and hence the property has been an urban usage since its original sub-division.

### **2.4 The Properties Topography.**

The Property is reasonably level with the ground level deviating near the rear or northern boundary where it falls away to the north.

### **2.5 Existing Vegetation.**

The property has a basic domestic cottage landscaping with areas of lawn areas and garden areas and specimen trees and shrubs. There appears to be no original or native vegetation remaining unless re-introduced.

### **2.6 Easements on the Site & Services.**

We are not aware of any easements burdening the property.

The property is serviced by all the normal services.

### **3.0 DETAILS OF THE PROPOSED CONSTRUCTION.**

#### **3.1 The Proposed Works.**

The proposed build will be of timber frame construction on a concrete floor structure. It will be clad in selected profile fibre cement cladding.

Detailing of external window trims or architraves, timber posts as indicated.

#### **3.2. Streetscape Presentation.**

The format of the construction will be in keeping with a typical residential streetscape, being of a single storey with two garage doors facing the street behind the line of the detailed Entry Porch.

The structure will be a positive addition to the existing streetscape

### **4.0 LANDSCAPING.**

#### **4.1 Current Vegetation.**

Refer clause 2.5 Existing Vegetation.

#### **4.2 Proposed Landscaping.**

The Property will be further landscaped with the street area landscape in keeping with the typical domestic neighbourhood.

### **5.0 PRIVACY.**

#### **5.1 Privacy within the Property.**

There are two areas relevant to privacy issues related to this Application, these being:

- i) Privacy to the Dwelling Occupants from 'outside' of the Property.
- ii) Privacy for the neighbouring property's occupants from this property.

**5.1(i)** The privacy for the Dwelling Occupants will be assured due to the property's

The location of the Private Spaces identified in the documents as an Alfresco.

Each Dwelling, the Residence & the Secondary Dwelling have separate Alfresco areas separated by a screen of sufficient height & size provides personal privacy to & from each.

**5.1(ii)** Privacy for the neighbouring property's occupants is likewise provided for the neighbouring properties with both Alfresco areas setback from the shared side boundaries.

Likewise, the from the Living Rooms face the water frontage northern boundary.

## **6. SUSTAINABILITY.**

### **6.1 Solar Aspect.**

With the property on a northern orientated, solar exposure is readily available to the occupants.

Both the residence & the Secondary Dwelling having wall, ceiling & roof insulation, along with ceiling fans to the Living & bedrooms along with the window orientations to gain eastern morning & western afternoon sun proportioned in co-ordination with the eaves overhangs.

### **6.2 Solar Impact.**

#### **Over-Shadowing.**

This Proposal, in its format & location within the normal Residential standards will not cause any over-shadowing onto any of its adjoining properties.

### **6.3 Built Environment for Sustainability.**

The Proposal's design will be in accordance with the 'sustainability' requirements of urban construction.

## **7.0 COUNCIL & BUILDING REGULATIONS.**

### **7.1 Statutory Regulations.**

This Application has been designed to comply with the Requirement & Objectives of the Central Coasts Standards & Objectives.

In relation to:

Tasmanian Planning Scheme for Single & Secondary Dwellings

Maximum Building height of: 7.5 metres.

Floor Space Ratio of: not applicable.

Boundary setbacks: 1.5 metre to the side boundaries, 4.5 metre to the street boundary & 4.5 to the rear boundary.

Building Envelope: the proposal is within the envelope required & identified on the drawings.

Other consideration & compliant with are:

Heritage (DCP) – not applicable.

Land Acquisition – not applicable.

### **7.2 The Building Code of Australia.**

The construction will also comply with the requirements of the Building Code of Australia, and the Nation construction Code in co-ordination with its ancillary Regulations.

### **7.3 Car Parking.**

Adequate parking accommodation will be provided by the garage with visitor parking available in the driveways of both the Residence & Secondary Dwelling to comply with the Tasmanian Planning Scheme Clause C2.0 Parking & Sustainable Transport Code & Table C2.1.

## **8.0 DETAILS OF THE PROPOSAL.**

### **Site Detail:**

Site Identification:

55 Sice Avenue Heybridge;

The Site Area is: 596 square metre approx.

### **Floor Areas.** (measured internal of perimeter walls)

Residence Floor area: . . . . . 181.4 sm.

Secondary Dwelling: . . . . . 58.7 sm.

Proposed:

Footprint. . . 282.5 square metre.

## **9.0 CONCLUSION.**

The proposal will be an appropriate addition to this residential neighbourhood.

The Building scale, design and set-back within the precinct will ensure that the project does not have any adverse impact on the neighbourhood.

It is in the opinion of the applicant that they have, in the design and the sitting of the proposal taken all reasonable measures to mitigate any adverse environmental effects.

Accordingly, it is requested that the application be approved as submitted.