PLEASE QUOTE
Your Ref:
Our Ref: DA 2025/70

Enquiries: Planning Department

80 Wilson Street, Burnie Tasmania
PO Box 973, Burnie TAS 7320

ABN: 29 846 979 690
Phone: (03) 6430 5700
Email: burnie@burnie.tas.gov.au
Web: www.burnie.tas.gov.au

We value your feedback on our service.
Tell us about it at www.burnie.tas.gov.au/feedback

NOTICE OF APPLICATION FOR LAND USE PERMIT

(Section 57(3) Land Use Planning and Approvals Act 1993)

Advice to Adjoining Land Owner or Occupier

Application No: -	**DA 2025/70**
Development Site: -	**7 Bower Circuit HEYBRIDGE** **CT: 179347/4**
Proposal: -	**Dwelling - Single**

Notice of the above application is served on you as an adjoining land owner or occupier.

The application may be viewed at -

Burnie City Council Customer Services Counter
Ground Floor, City Offices,
80 Wilson Street, Burnie

Between the hours of 8.45 am – 4.45 pm Monday to Friday inclusive (excluding public holidays) or on Council's website at www.burnie.tas.gov.au/permits

You are entitled to make representation in writing on any aspect of the proposal addressed to: -

General Manager,
Burnie City Council,
PO Box 973, Burnie 7320

or burnie@burnie.tas.gov.au by no later than 5.00 pm on **22 December 2025.** Council must have regard to any written representation received during the exhibition period when considering its decision on the application.

All persons who make representation will be notified within seven (7) days of the Council's decision. Any persons who made representation and is not satisfied with the Council decision may, under Section 61(5) of the *Land Use Planning and Approvals Act 1993*, lodge an appeal against that decision within fourteen (14) days of the date of that notice to: -

The Tasmanian Civil and Administrative Tribunal,
GPO Box 1311,
HOBART TAS 7001.

Should you have any enquiries regarding this development proposal, please do not hesitate to contact the Planning Department on (03) 6430 5700.

Troy McCarthy
PRINCIPAL PLANNER
Date of Notice**:** - **6 December 2025**

BURNIE CITY COUNCIL
PO Box 973, BURNIE, TASMANIA 7320.
Ph : (03) 6430 5700
Email :

BURNIE CITY COUNCIL

Land Use Planning and Approvals Act 1993

Tasmanian Planning Scheme

PERMIT APPLICATION

Office use only
Application No _____
Date Received _____
Permit Pathway - *Permitted/Discretionary*

Use or Development Site:

Street Address 7 Bower Circuit, Heybridge, 7321

Certificate of Title Reference SP179347

Applicant

First Name Tyler

Second Name

Surname Clarke

Postal Address:

Phone No:

Mobile:

Email Address:

I/we consent for all giving of information and the serving of notices in relation to this application to be delivered electronically to the above email address? **YES** (●) **NO** ( )

Applicants Signature:

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

First Name Alexandra

Second Name Grace

Surname Whiteley

Postal Address:

Phone No:

Instruction for making a permit application

a) ***Use or development?***

The application must provide a full description of the proposed use and/or development and of the manner in which the use and/or development is to operate.

"Use" is the purpose or manner for which land is utilised. "Development" is any site works (including any change in natural condition or topography of land and the clearing or conversion of vegetation), and the construction, alteration, or removal of buildings, structures and signs, required in order to prepare a site for use or to change existing conditions within a site. Subdivision is development.

Clause 6.2 Tasmanian Planning Scheme provides the use classes by which all use or development must be described. Development must be categorised by reference to the use class it is to serve.

b) ***Required Information***

Adequate statements, plans and specifications must be included within the permit application to address and demonstrate compliance with all applicable requirements of the planning scheme, including any site analysis, impact report and recommendation, and advice, consent or determination required from a State agency or utility entity.

The application must clearly identify the documents relied upon for determination.

Section 51(1AC) *Land Use Planning and Approvals Act 1993* provides that a permit application is not valid unless it includes all of the information required by a planning scheme. Clause 6.1 Tasmanian Planning Scheme prescribes the minimum information that is necessary in order to complete a valid permit application.

S54 *Land Use Planning and Approvals Act 1993* provides that the planning authority may require the applicant to supply further information before it considers a permit application. If the planning authority requires further information to more particularly address one or more of the applicable requirements of the Tasmanian Planning Scheme, the statutory period for determination of a permit application does not run until that information is answered to the satisfaction of the planning authority

c) ***Applicable Provisions and Standards***

The permit application must be assessed against the applicable provisions and standards of the Tasmanian Planning Scheme. The

application is to identify by reference the clauses it relies upon to demonstrate compliance. (eg *clause 8.4.3 (A1 – A4, and P5)*

d) ***Discretionary Permits***

If a permit is discretionary the permit application must be notified for a period of 14 days to allow opportunity for any interested person to consider the proposed use and/or development and to provide comment on the discretionary matter.

If a permit application relies on performance criteria to satisfy an applicable standard or is discretionary under another provision of the interim planning scheme, the permit is discretionary only with respect to that standard.

The Council must have regard to all representations received during the notification period on a discretionary matter when determining whether to grant or refuse a permit.

e) ***If the applicant is not the landowner***

If the applicant is not the owner of the land in the use or development site, the applicant is required to notify all of the owners either prior to or within 7 days from the date of making the permit application.

The permit application must identify all of the landowners; and the applicant must sign the application form to acknowledge the obligation to advise such landowners that the permit application has been made.

If the site includes land owned or administered by the Burnie City Council or by a State government agency, the consent in writing from the Council or the Minister responsible for Crown land must be provided at the time of making the application.

f) ***Applicant declaration***

It is an offence for a person to do any act that is contrary to a compliance requirement created under the section 63 *Land Use Planning and Approvals Act 1993*. The applicant is required to complete a declaration that the information given in the permit application is true and correct.

g) ***Payment of Fees***

The Council is not required to take any action on the permit application until all the relevant fees have been paid.

Permit Information (NB If insufficient space, please attach separate document)

Proposed Use:

Use Class 1A

Documents included with the permit application to describe the Use

New Building

Proposed Development

Use class to which the development applies 1A

Documents included with the permit application to describe the Development

Building Plans
Site Plan
Title Documentation
List of working drawings, shadow drawings
Waste Water Plan
Soil Classification Report

Provisions and Standards relied upon for grant of a Permit

Value of use and/or development

Notification of Landowner/s

If land is not in applicant's ownership

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

Signature of Applicant Date 7/10/25

If the permit application involves land owned or administered by the BURNIE CITY COUNCIL

Burnie City Council consents to the making of this permit application.

General Manager (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

Applicant Declaration

I, Tyler Clarke

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 Date 7/10/25

Office use only

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
179347	4
EDITION	DATE OF ISSUE
5	20-Jan-2025

SEARCH DATE : 22-Oct-2025
SEARCH TIME : 09.51 AM

DESCRIPTION OF LAND

City of BURNIE
Lot 4 on Sealed Plan 179347
Derivation : Part of Lot 22544, 496A-2R-12P Gtd. to L Bryant
Prior CT 179255/101

SCHEDULE 1

N225974 TRANSFER to ALEXANDRA GRACE WHITELEY Registered 20-Jan-2025 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP179347 EASEMENTS in Schedule of Easements
SP179347 COVENANTS in Schedule of Easements
SP179347 FENCING PROVISION in Schedule of Easements
SP160924 & SP179255 COVENANTS in Schedule of Easements
SP160924 & SP179255 FENCING PROVISION in Schedule of Easements
SP135405 FENCING COVENANT in Schedule of Easements
C811122 FENCING PROVISION in Transfer
C924601 AGREEMENT pursuant to Section 71 of the Land Use Planning and Approvals Act 1993 Registered 14-Jan-2011 at 12.03 PM
E221229 AGREEMENT pursuant to Section 78 of the Land Use Planning and Approvals Act 1993 Registered 07-Jul-2020 at noon
E400699 MORTGAGE to Commonwealth Bank of Australia Registered 20-Jan-2025 at 12.02 PM
C924602 APPLICATION for registration of a community development scheme including first by-laws of the body corporate Registered 14-Jan-2011 at 12.04 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP 179347

EASEMENTS AND PROFITS

Each lot on the plan is together with:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
(2) any easements or profits a prendre described hereunder.
Each lot on the plan is subject to:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
(2) any easements or profits a prendre described hereunder.
The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

Lots 3 to 6, 8 to 13, 19 and 20 on the Plan are each together with a right of carriageway over the Right of Way (Private) & Service Easement Variable Width shown on Sealed Plan 160924.

Lots 3 to 6, 8 to 13, 19 and 20 on the Plan are each together with a pipeline easement as hereinafter defined over the Pipeline & Service Easement Variable Width shown on Sealed Plan 160924 and more particularly described on SP153919.

Lots 3 to 6, 8 to 13, 19 and 20 on the Plan are each together with service easements as hereinafter defined over the Right of Way (Private) & Service Easement Variable Width and Pipeline & Service Easement Variable Width shown on Sealed Plan 160924 and more particularly described on SP153919.

Lots 3 to 6, 8 to 13, 19 and 20 on the Plan are each together with a service easement as hereinafter defined over the Emergency Evacuation Way (Private) & Service Easement 8.00 Wide shown on Sealed Plan 160924.

Lots 3 to 6, 8 to 13, 19 and 20 on the Plan are each together with a right of drainage over the Drainage Easement over the whole of Lot 1 on Sealed Plan 160924.

Lot 3 on the Plan is subject to a right of drainage in favour of the Burnie City Council over Drainage Easement Variable Width shown on ~~Sealed Plan 179255~~ (SP179255). the plan.

Lot 6 on the Plan is subject to a right of drainage in favour of the Burnie City Council over Drainage Easement 5.00 Wide shown on ~~Sealed Plan 179255~~ (SP179255). the plan.

.....
A Messieh

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: EAGLE SEA PTY LTD FOLIO REF: 179255/101 SOLICITOR & REFERENCE: Jo-anne McGrath 31192	PLAN SEALED BY: Burnie City Council DATE: 7-7-20 SD 2008/1113 REF NO. ..... Council Delegate

NOTE: The Council Delegate must sign the Certificate for the purposes of identification.

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 2 OF 3 PAGE/S	Registered Number SP 179347
SUBDIVIDER: EAGLE SEA PTY LTD FOLIO REFERENCE: 179255/101	

Lot 11 on the Plan is subject to a right of drainage in favour of the Burnie City Council over Drainage Easement 5.00 Wide shown on ~~Sealed Plan 179255~~ (SP179255) the plan.

Lots 3 to 6, 8 to 13, 19 and 20 on the Plan are each together with a right of footway over the Access Pathways (Private) shown as Lot 204, Lot 205 and Lot 212 on Sealed Plan 179255.

Lots 3 to 6, 8 to 13, 19 and 20 on the Plan are each together with a right of evacuation as hereinafter defined over the Fire Escape Way (Private) 8.00 Wide shown on Sealed Plan 160924 and more particularly described on SP 153919.

DEFINITIONS

"**Pipeline Easement**" means the full and free right and liberty for the proprietor of the dominant tenement at all times with others and machinery to enter upon the land marked "Pipeline Easement" on Sealed Plan 160924

(a) To lay and maintain water pipes, valves and fittings along through and under the said land for the purpose of providing a supply of water to the dominant tenement; and

(b) To inspect cleanse repair and maintain such pipes provided that the rights granted are exercised in a proper manner so as to cause as little inconvenience as possible and to do as little damage as practicable to the said land;

"Right of Evacuation" means the full and free right:-

(a) For the proprietor of the dominant tenement to enter upon the land marked "Fire Escape Way (Private) 8.00 wide on Sealed Plan 160924 to establish and maintain a trafficable 2WD access to George Street;

(b) For the owners occupiers and invitees of the dominant tenement to use the way only in the event of a bush fire, or other emergency that requires evacuation to George Street

"Service Easement" means the full and free right and liberty for the proprietor of the dominant tenement, the Burnie City Council, Telstra Corporation Limited, Aurora Energy Pty Ltd and the Crown its agents and contractors to enter upon the land marked "Service Easement" on Sealed Plan 160924 to lay, inspect, maintain, repair, and amend water mains, pipes, pumps, drains, mains, channels, gutters, sewers, wires, cables and other conducting media along and under the surface of the land provided that the rights granted are exercised in a proper manner so as to cause as little inconvenience as possible as to do as little damage as practicable to the said land

COVENANTS Lots 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 19 & 20 on the plan are each burdened by the restrictive covenants created by and more fully set forth in Sealed Plan 160924.

The owners of Lots 3 to 6, 8 to 13, 19 and 20 on the Plan covenant with Eagle Sea Pty Ltd

A Messieh

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 3 OF 3 PAGE/S	Registered Number SP 179347
SUBDIVIDER: EAGLE SEA PTY LTD FOLIO REFERENCE: 179255/101	

("the Subdivider") and the owners for the time being of every other lot shown on the Plan to the intent that the burden of this covenant may run with and bind the covenantor's lot and every part thereof, and that the benefit thereof may be annexed to and devolve with each and every part of every other lot shown on the Plan to observe the following stipulations.

1. Not to erect, construct or permit to remain on the lot any dwelling other than a single private dwelling;

2. Not to erect, construct or permit to remain on the lot any building for the purposes of a residential dwelling inside the areas denoted as Zone A on the plan;

3. Not to erect, construct or permit to remain on the lots a residential building without submitting to the Burnie City Council with a development application a waste water treatment scheme designed by an appropriately qualified person; and (without making arrangements satisfactory to the Burnie City Council for on-site disposal of sewerage within the boundaries of the lot; and)

4. Not to use or permit or suffer the use of the land marked Emergency Evacuation Way (Private) 8.00 wide on Sealed Plan 160924 unless it is in the event of a bush fire, or other emergency, that requires evacuation to George Street,

BUT nothing above contained or implied will prevent the Subdivider from:-

(a) Selling any lot free or exempt from one or more of the restrictive covenants and stipulations contained in the above covenants;
(b) Modifying, waiving or releasing or allowing any departure from any of the above covenants in relation to any lot or portion of any lot.

FENCING PROVISION

In respect of the Lots on the Plan the Vendor Eagle Sea Pty Ltd shall not be required to fence.

EXECUTED by **EAGLE SEA PTY LTD**)
(ACN 129 309 815) the registered proprietor)
of the land comprised in Folio of the Register)
Volume 160924 Folio 98 in accordance with)
Section 127 (1) of the Corporations Act 2001)

Alfonso Messieh
.....
ALFONSO MESSIEH
(Sole Director/Sole Secretary)

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

OWNERS: Eagle Sea Pty Ltd

FOLIO REFERENCE: 179255/101

GRANTEE: Part of Lot 22544, 496A-2R-12P Gtd.to L. Bryant.

PLAN OF SURVEY

BY SURVEYOR: JOHN E W MAGEE
PDA SURVEYORS

LOCATION: CITY OF BURNIE

SCALE 1: 2000 LENGTHS IN METRES

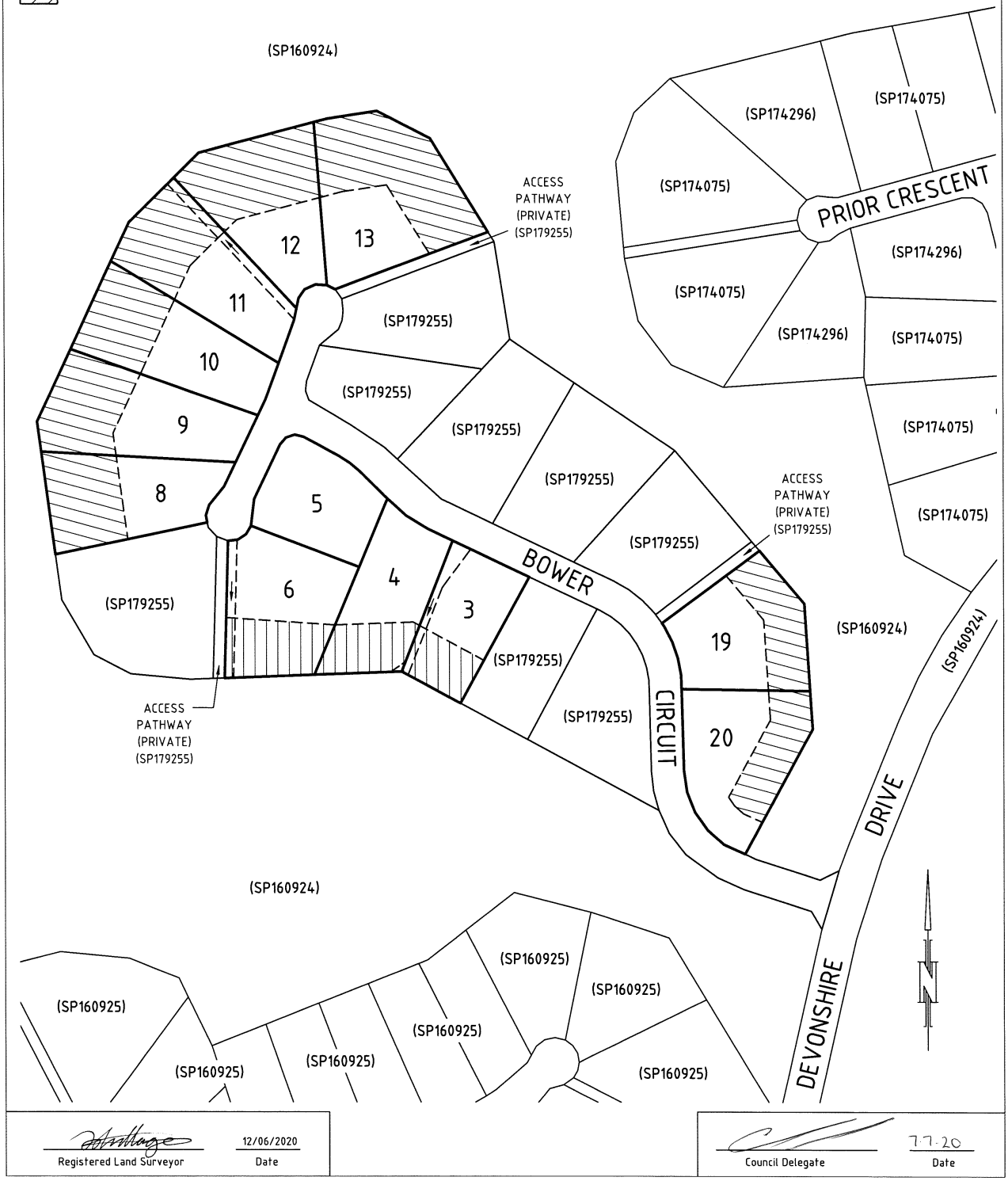
REGISTERED NUMBER

SP179347

APPROVED
EFFECTIVE FROM 27 JUL 2020

Recorder of Titles

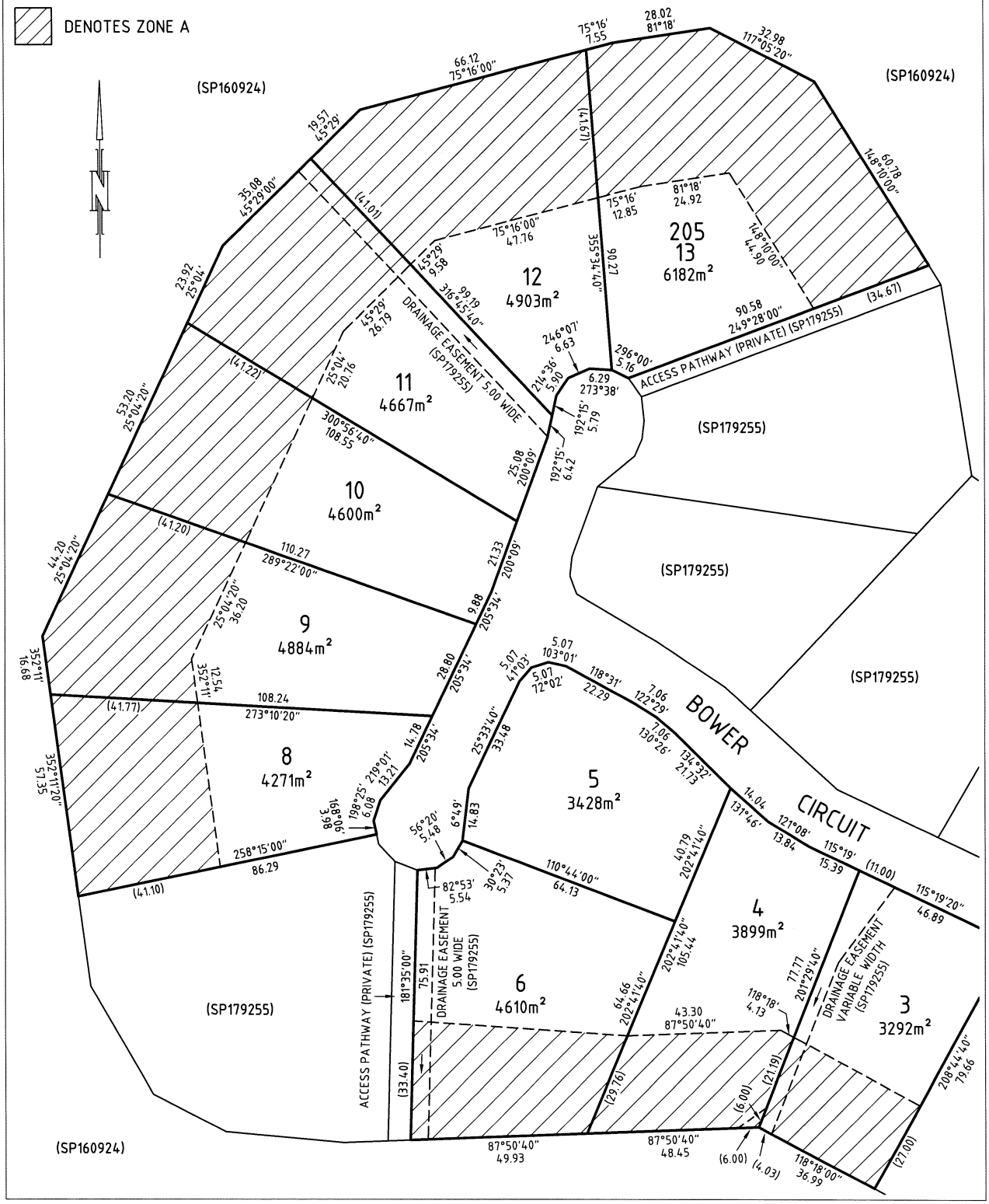
ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



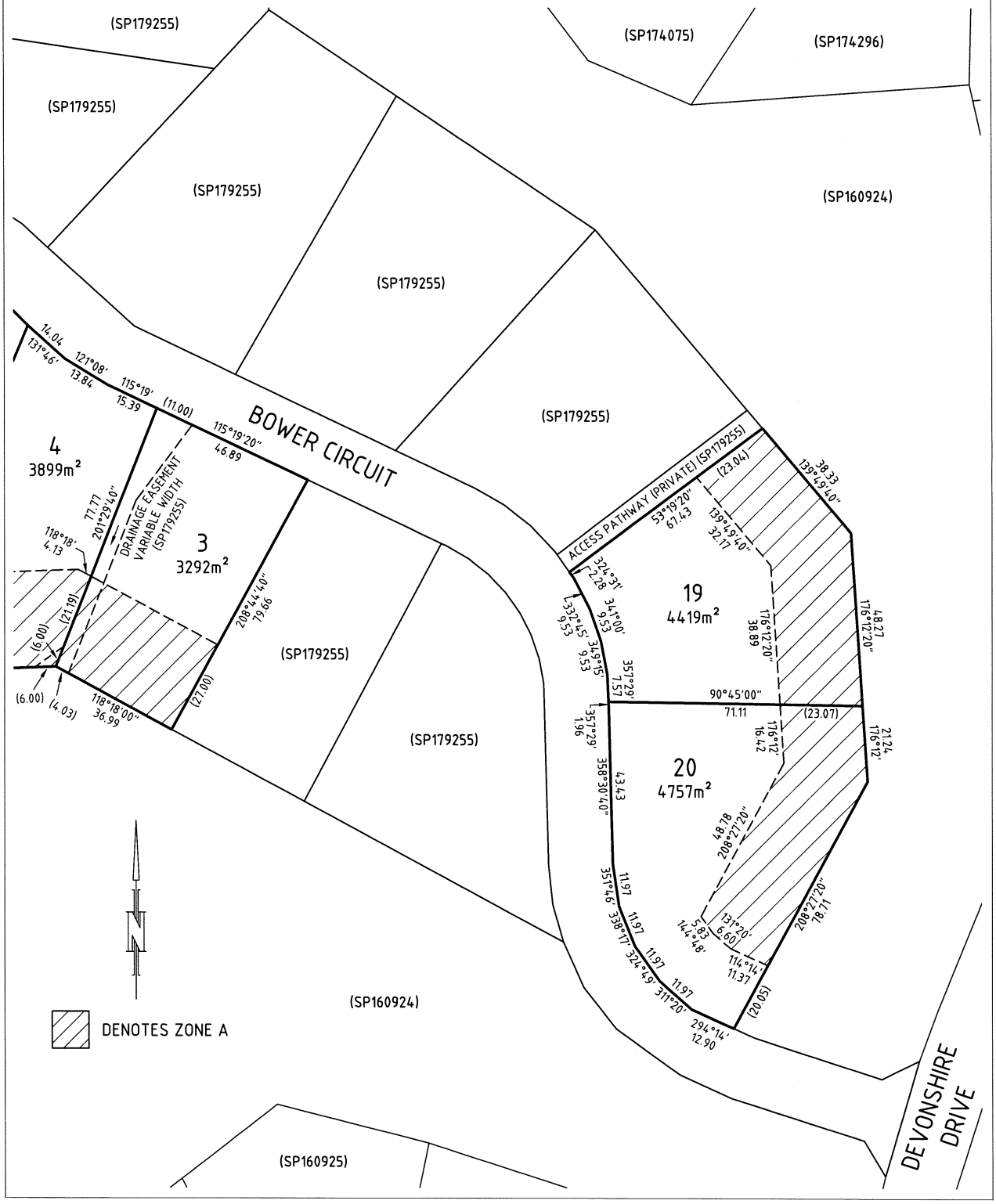
Registered Land Surveyor — 12/06/2020 Date

Council Delegate — 7.7.20 Date

PLAN OF SURVEY ANNEXURE SHEET SHEET 1 OF 2 SHEETS	OWNER: Eagle Sea Pty Ltd FOLIO REFERENCE: 179255/101 SCALE 1: 1000 LENGTH IN METRES	Registered Number SP 179347
SIGNED FOR IDENTIFICATION PURPOSES Council Delegate 7.7.20 Date	THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN. Registered Land Surveyor 12/06/2020 Date	APPROVED EFFECTIVE FROM 27 JUL 2020 Recorder of Titles



PLAN OF SURVEY ANNEXURE SHEET SHEET 2 OF 2 SHEETS	OWNER: Eagle Sea Pty Ltd FOLIO REFERENCE: 179255/101 SCALE 1: 1000 LENGTH IN METRES	Registered Number SP 179347
SIGNED FOR IDENTIFICATION PURPOSES Council Delegate 7.7.20 Date	THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN. Registered Land Surveyor 12/06/2020 Date	APPROVED 27 JUL 2020 EFFECTIVE FROM Recorder of Titles



Sarah Wales

From: Tyler Clarke <
Sent: Tuesday, 2 December 2025 10:00 PM
To: Planning
Cc: Alexandra Whiteley
Subject: Re: Request for Additional Information - DA 2025/70 - 7 Bower Circuit Heybridge
Attachments: Letter - Clarke - Council Advice to Developer - Proposed Dwelling Development - 7 Bower Circuit - DA 2025-70.pdf; FolioPlan-179347-4.pdf; FolioText-179347-4.pdf

Good evening Sarah,

Please find attached current Folio Text Title document with Alexandra Grace Whiteley listed as the owner.

Please also find the attached approved driveway change access plan we have received back from Jon Randall from the Road department at council.

Please see below comments from our draftsman in response to further information requested to gain DA Approval.

We would like to respond to the recent planning requirements for our property at 7 Bower Circuit Heybridge.

A1 – I have attached a long section drawing of the site to show the small impact our dwelling will have on the reserve to the west.

P1.1 (b) The block does drop off from the road and this we feel helps in the visual impact of the residence.

P1.1 (d,e) Also, the fact that we will be adding shrubs along the road side to minimise any visual impact.

P1.2 – An over shadowing drawing is attached to show no impact on neighbour to the south. Currently vacant.

The neighbour to the north will be at a higher level and have no visual impact.

We acknowledge the design is over 6 meters in height.

Upon looking at existing properties in the area we note several that would be near to the 6-meter height.

Eg- 2 Winforton Ave – Corner Devonshire Dr & Charlton Crt – Sunny Place with multiple two story dwellings.

A3 – (h) There are currently no adjacent buildings either side of the property.

(e) Landscape planting will be added to the north and south of the building to minimise visual impact.

Currently many houses are already visible on the site.

(f) The external finish on the building will be - Monument grey.

(c) Other than the new residence there will be no other structures to be added to the site to impact the reserve.

We have noticed that more than half the residences in the estate are closer than 10 meters to their boundaries eg 3 Bisset Place

P3 - Again there are many houses in the estate that have cuts greater than 1000. Our development will not be requiring anything larger that this

Except only in the driveway - if needed.

We see our property as being in a unique geographical location that would alleviate much of your planning requirements.

We are aware that everything is discretionary and would hope that you could see some of that being applied to our development.

Looking forward to your ideas and moving our development along.

Regards

On behalf of Alexandra Whiteley & Tyler Clarke

Paul Wood

Wood Drafting & Design Services

We are hoping the above can assist with the DA approval process, can you please advise?

Thanks heaps,

GEOTON Pty Ltd
Geotechnical Consultants

Geoton Pty Ltd ABN 81 129 764 629
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court
Invermay TAS 7248
Tel (+61) (3) 6326 5001
www.geoton.com.au

05 February 2024

Reference No. GL23750Ab

Dear Madam & Sir,

RE: Site Classification & On-site Wastewater & Stormwater Disposal Assessment and Design
7 Bower Circuit, Heybridge

We have pleasure in submitting herein our report detailing the results of the geotechnical investigation conducted at the above site.

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

For and on behalf of

Geoton Pty Ltd

Tony Barriera

Director – Principal Geotechnical Engineer

1 INTRODUCTION

A limited scope investigation has been conducted for Ms Caitlyn Logan & Mr Ethan Greene at the site of a proposed residential development at 7 Bower Circuit, Heybridge.

The investigation has been conducted to assess the following:

- The general subsurface conditions at the site and consequently assign a Site Classification in accordance with AS 2870 – 2011 "Residential Slabs and Footings";
- The surrounding topography and provide a Wind Classification in accordance with AS 4055 – 2021 "Wind Loads for Housing";
- The suitability of the site for disposal of domestic wastewater and the design of an on-site wastewater disposal system in accordance with AS/NZS 1547:2012 "On-site domestic wastewater management"; and
- The suitability of the site for disposal of stormwater and the design of an on-site stormwater disposal system in accordance with AS/NZS 3500.3 "Stormwater Drainage".

Site Plans for the proposed development were provided, prepared by n+b, Sheet Nos. A100 to A104, dated 16.10.2023, Rev. A. We understand that the proposed development will consist of a three-bedroom dwelling plus a study room (a total of four habitable rooms considered) and a non-habitable shed.

2 FIELD INVESTIGATION

The field investigation was conducted on 06 December 2023 and involved the drilling of 5 boreholes by 4WD mounted auger rig to the refusal or investigated depths of 0.9m to 2.0m.

Dynamic Cone Penetration (DCP) tests were conducted in the granular soils, and in-situ vane shear strength tests were conducted in the clay layers encountered in the investigation.

In addition, the permeability of the site was tested using a Constant Head Permeameter.

The results of the field tests are shown in the borehole logs.

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

3 SITE CONDITIONS

The proposed site is approximately 3,924m² in size and is currently undeveloped. The proposed residence is to be located within the middle portion, and the shed is within the southeastern corner of the site. The ground surface has a general slope angle of 5° to 7° towards the southwest, with a low patchy grass cover and shrubs.

The wastewater disposal field area is to be located south of the proposed dwelling.

Photographs of the site are attached as Plates 1 & 2.

The MRT Digital Geological Atlas, 1: 25,000 Series, indicates that the property is mapped as undifferentiated Oonah Formation, dominantly quartzwacke turbidites, with this being generally confirmed by our field investigation.

Examination of the LIST Landslide Planning Map indicates that the site is not within a mapped landslide hazard band.

The investigation indicated that the soil profile varies across the site. Borehole BH1 encountered gravelly sand fill to a depth of 0.2m, overlying gravelly sand to a depth of 0.6m, underlain by silty clay and gravelly sand to the investigated depth of 2.0m. Boreholes BH2 and BH3 encountered gravelly/silty sand fill to depths of 0.1m, overlying clayey silt to the depths of 0.5m to 0.7m, underlain by gravelly sand and silty to gravelly clay to the investigated depths of 2.0m. Borehole BH4 encountered silty sand fill to a depth of 0.1m, underlain by gravelly sand to the refusal depth of 0.9m. Borehole BH5 encountered silty sand fill to a depth of 0.2m, overlying silty sand to a depth of 0.6m, underlain by silty clay to the investigated depth of 2.0m.

Auger refusal within Borehole BH4 was inferred to be on rock or boulder.

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

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

An assessment of the plasticity characteristics of the materials encountered indicates that the clayey silt soils at this site possess a moderate shrink/swell potential.

4 SITE CLASSIFICATION

After allowing due consideration of the site geology, drainage and soil conditions, the site has been classified as follows:

CLASS M (AS 2870)

Foundation designs in accordance with this classification are to be subject to the overriding conditions of the Foundations section below.

This classification is applicable only for ground conditions encountered at the time of this investigation. If cut or fill earthworks are carried out, then the site classification will need to be re-assessed, and possibly changed.

5 FOUNDATIONS

Particular attention should be paid to the design of footings as required by AS 2870 – 2011.

In addition to normal founding requirements arising from the above classification, particular conditions at this site dictate that the founding medium for all footings would be as follows:

Gravelly SAND (SC) – medium dense or better, grey/brown

Or

Clayey SILT (MH) – high plasticity, brown/grey

encountered below 0.2 from the existing ground surface

An allowable bearing pressure of 100kPa is available for edge beams, strips, piers and pads founded as above, provided the site is prepared as follows:

- Earthworks should be carried out in accordance with AS3798-2007, Guidelines for earthworks for commercial and residential developments;
- All topsoil should be removed from the building footprint;
- The natural sand foundation should be proof rolled prior to slab on ground construction; and
- All sands disturbed in the base of footing excavations should be compacted.

No structure should be founded on fill without the footings extending through the fill to the natural soil.

The site classification presented assumes that the current natural drainage and infiltration conditions at the site will not be markedly affected by the proposed site development work. Care should therefore be taken to ensure that surface water is not permitted to collect adjacent to the structure and that significant changes to seasonal soil moisture equilibria do not develop as a result of service trench construction or tree root action.

Attention is drawn to Appendix B of AS 2870 and CSIRO Building Technical File BTF18 "Foundation Maintenance and Footing Performance: A Homeowner's Guide" as a guide to maintenance requirements for the proposed structure.

Although the borehole data provides an indication of subsurface conditions at the site, variations in soil conditions may occur in areas of the site not specifically covered by the field investigation. The base of all footing or beam excavations should therefore be inspected to ensure that the founding medium meets the requirements referenced herein with respect to type and strength of founding material.

The boreholes were backfilled shortly after being drilled, not allowing time for groundwater seepage flows to develop. Groundwater seepages or higher groundwater levels can occur during and/or after a prolonged period of wet weather or a heavy rainfall event.

6 WIND CLASSIFICATION

After allowing due consideration of the region, terrain, shielding and topography, the site has been classified as follows:

WIND CLASSIFICATION N3 (AS 4055-2021)

REGION	TERRAIN CATEGORY	SHIELDING	TOPOGRAPHY
A	TC2	PS	T2

7 EFFLUENT DISPOSAL

The AS/NZS 1547:2012 and the *Building Act 2016:* Director's Guidelines for On-site Wastewater Management Systems provide guidelines for typical wastewater flow allowances under a range of circumstances. The documents recommend a typical wastewater flow of 120L/person/day for households on tank water. As the proposed development is to be a four-bedroom dwelling, a population equivalent of 6 has been adopted. As such, a daily wastewater flow of **720L/day** is required.

7.1 Permeability of Soil and Soil Category

The soil has been classified as follows:

- Texture – Light Clay (Table E1 from AS/NZS 1547);
- Structure – Massive (Table E4 from AS/NZS 1547); and
- Category – 5 (Table E1 from AS/NZS 1547).

The permeability (K_{sat}) at the site was measured at <0.01m/day. For Massive Category 5 soils the indicative K_{sat} from AS/NZS1547 Table 5.1 is <0.06m/day. The soil at the site has very low permeability.

- Adopted Permeability – <0.01m/day.

7.2 Disposal and Treatment Method

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

As the site has Category 5 soils that have very low permeability, the site is not suitable for traditional absorption trenches or beds.

As such, the site is considered suitable for the disposal of domestic wastewater by way of an Aerated Wastewater Treatment System/Secondary Treated System (AWTS/STS) and sub-surface (near surface) irrigation.

7.3 Design Irrigation Rate

According to AS/NZS 1547 Table M1, the recommended design irrigation rate (DIR) for surface and sub-surface irrigation (drip irrigation) on Category 5 soils is 3mm/day.

7.4 AWTS/STS and Irrigation

The disposal area is calculated using the following equation:

$$A = Q/DIR,$$

where A is area in m^2;

Q is design daily flow in L/day; and

DIR is design irrigation rate in mm/day.

As the DIR has been set at 3mm/day and the Q at 720L/day, the area required for the effluent disposal field is **240m^2** as per the equation above.

There is adequate area for effluent disposal on site.

A reserve (back-up) area of 240m^2 is available if required.

The irrigation lines are to be installed as follows:

- The irrigation lines are to be installed on the ground surface and covered with a thick layer of mulch (at least 150mm thick);
- The irrigation lines are required to have a typical line spacing of 1m; and
- The irrigation area is not to be located through any poorly drained depressions. As such, minor filling/mounding of the irrigation area may be required to ensure there is no localised saturated area.

Guidelines for the design of surface irrigation are outlined in AS/NZS 1547 Appendix M.

The area of the disposal field shall be vegetated with grasses or other suitable vegetation. A list of Tasmanian plants suitable for treated wastewater from AWTS units is attached as Appendix B.

The risk management process is an inherent part of the on-site wastewater disposal design. The on-site wastewater disposal system has been designed by considering the site characteristics and with risk identification in accordance with AS1547:2012. The risk reduction measures are detailed in the report and form the basis of the system selection and design.

As part of the Building Act, the client must specify the STS model and provide the Certificate of Accreditation for that particular model before the proposed development gets approval. A list of accredited STS models can be found on the Tasmanian Consumer, Building and Occupational Services website. An 8EP or 10EP (8 or 10 equivalent persons) STS is appropriate.
https://www.cbos.tas.gov.au/topics/technical-regulation/plumbing-standards/wastewater/aerated-wastewater-treatment-systems

7.5 Setbacks

The minimum separation distances between the disposal area and downslope features are based on Appendix R from AS/NZS 1547 "Recommended Setback Distances for Land Application Systems" and Section 3.1 from the *Building Act 2016:* Director's Guidelines for On-site Wastewater Management Systems. The following minimum setbacks are required:

- 27.0m from downslope sensitive features such as watercourses;
- 1.5m from up-slope and cross-slope property boundaries;

- 7.5m from downslope property boundaries;
- 3.0m from up-slope and cross-slope buildings; and
- 4.5m from downslope buildings.

7.6 Wastewater Recommendations

It is recommended that the following actions are undertaken in looking after your system:

- Minimise domestic water use;
- Minimise the use of non-biodegradable detergents;
- Minimise the use of detergents containing phosphorous (e.g. Calgon or similar);
- Avoid discharging polluting chemicals into wastewater systems; and
- Monitor quality of groundwater.

8 ON-SITE STORMWATER DETENTION DESIGN

8.1 Rainfall and Runoff

The Intensity-Frequency-Design (IFD) rainfall curve and table for the site was generated from the Bureau of Meteorology IFD data website (BOM 2016).

In accordance with AS/NZS 3500.3 – Stormwater Drainage, Section 3.3.5, the design rainfall depth/intensity for anywhere in Australia shall be for a five-minute duration for a design rainfall with a 5% Annual Exceedance Probability (AEP).

The five-minute duration design rainfall depth for the design AEP event is as follows:

- **5% AEP = 10.8 mm**

The storage quantity is calculated using the following formula:

$$\boldsymbol{Q = CDA}$$

Where Q is quantity in m^3;

C is coefficient of runoff (taken as unity 1.0);

D is depth of the Storm in m; and

A is the area of the catchment (roof area) that rainfall will runoff in m^2.

The proposed dwelling will have an area of approximately 258.5m^2 (inclusive of a 10% safety factor). Therefore, the stormwater quantity and flowrate for a design event are calculated as follows:

The storage quantity:

Q= 1.0 x (10.8) / 1000 x (258.5.0) = **2.79m^3**.

The event flowrate (q_5) is calculated by dividing storage quantity by the storm duration of 5 minutes, i.e., 300 seconds, and thus:

q_5 = (2.79) / 300 = 0.0087m^3/s = **9.30L/s**

The shed will have an area of approximately 59.4m^2 (inclusive of a 10% safety factor). Therefore, the stormwater quantity and flowrate for a design event are calculated as follows:

The storage quantity:

Q= 1.0 x (10.8) / 1000 x (59.4) = **0.64m^3**.

The event flowrate (q_5) is calculated by dividing storage quantity by the storm duration of 5 minutes, i.e., 300 seconds, and thus:

q_5 = (1.85) / 300 = 0.00213m^3/s = **2.13L/s**

8.2 Detention Method

Suitable on-site detention will be provided through gravel-filled detention beds with the capacity to hold a 5% AEP event before overflowing via sheet flow across the property.

The stormwater quantity for a 5% AEP event from the roof area is calculated as (Q) 2.79m^3 (proposed dwelling) and 0.64m^3 (proposed shed).

Therefore, the required detention bed volume will be approximately 13.7m^3 (for proposed dwelling and shed) to store a 5% AEP event taking into consideration a porosity of 0.25 for the 20mm to 40mm nominal size gravel.

Suggested combined bed dimensions for the dwelling and the shed are as follows:

- Bed length = 13.7m
- Bed width = 2.0m
- Bed depth = 0.5m

The detention bed is to be connected to the overflow outlet of the proposed stormwater tank for the proposed dwelling.

The bed is to be constructed as per the cross-section provided on Figure 3 attached.

These dimensions may be modified to fit the site conditions, provided the total detention storage volume is maintained.

References:

AS 2870 - 2011 Residential Slabs and Footings

AS 4055 - 2021 Wind Loads for Housing

AS/NZS 1547 - 2012 On-site domestic wastewater management

Building Act 2016: Director's Guidelines for On-site Wastewater Management Systems

Bureau of Meteorology Rainfall

IFD Data System: http://www.bom.gov.au/water/designRainfalls/ifd/

AS/NZS 3500.3 – Stormwater Drainage

Attachments:

Limitations of report

Figure 1 – Site Plan

Figure 2 - Wastewater Plan

Figure 3 – Stormwater Detention Bed

Figure WW-01 – Cut off Drain

Figure WW-05 – Typical AWTS Section

Site Photographs

Appendix A: Borehole Logs & Explanation Sheets

Appendix B: List of AWTS Example Plants

Appendix C: Certificate Forms

GEOTON Pty Ltd

Geotechnical Consultants - Limitations of report

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

Project specific criteria

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

Subsurface variations with time

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

Interpretation of factual data

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

Report Recommendations

The report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until earthworks and/or foundation construction is almost complete and therefore the report recommendations can only be regarded as preliminary. Where variations in conditions are encountered, further advice should be sought.

Specific purposes

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

Interpretation by others

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

Report integrity

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

Geoenvironmental issues

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

7 BOWER CIRCUIT
HEYBRIDGE, TAS
AREA ≈ 3924m²

NOTES:

PLUMBING CONNECTIONS TO BE CARRIED OUT IN ACCORDANCE WITH PLUMBING CODES AND REGULATIONS

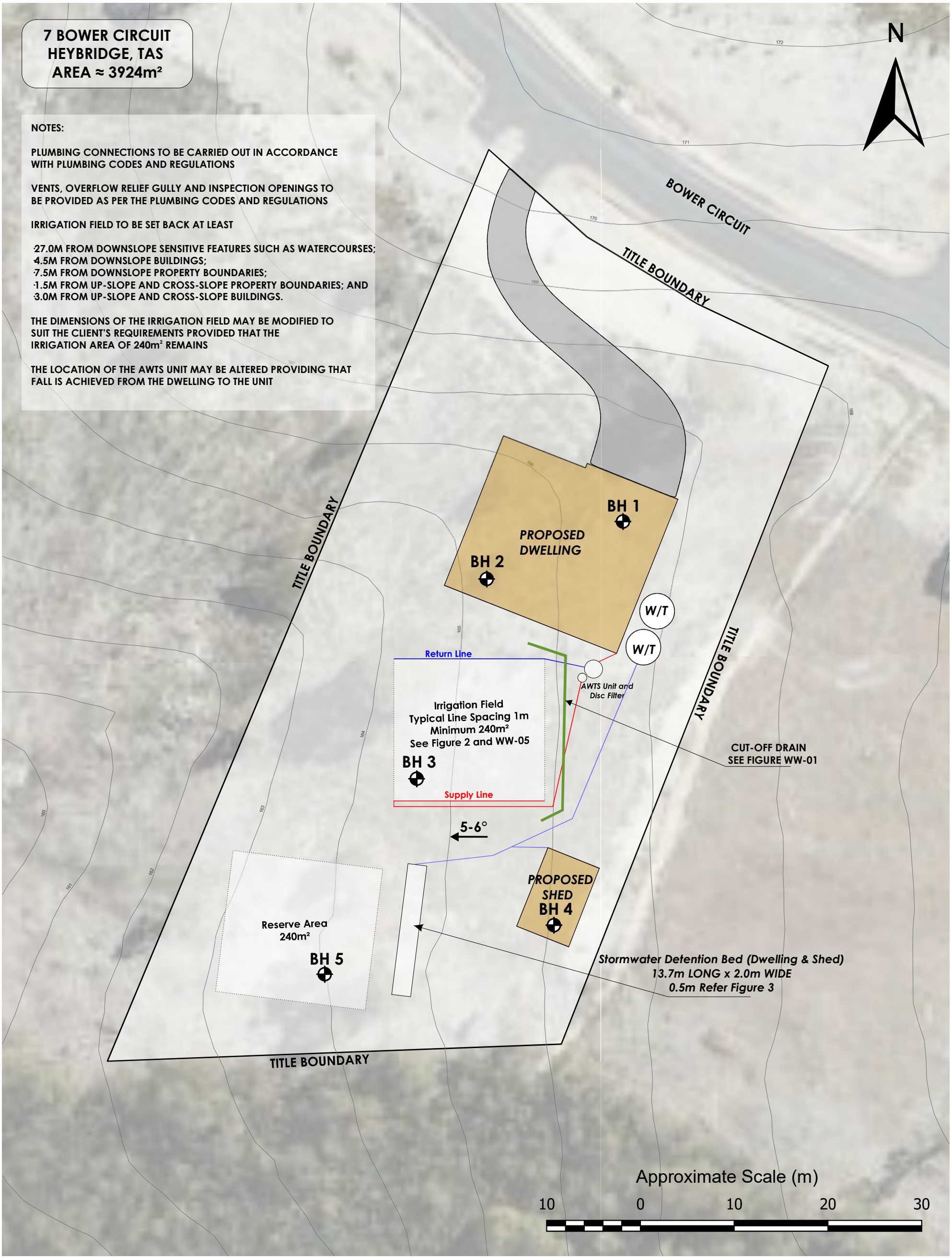
VENTS, OVERFLOW RELIEF GULLY AND INSPECTION OPENINGS TO BE PROVIDED AS PER THE PLUMBING CODES AND REGULATIONS

IRRIGATION FIELD TO BE SET BACK AT LEAST

- 27.0M FROM DOWNSLOPE SENSITIVE FEATURES SUCH AS WATERCOURSES;
- 4.5M FROM DOWNSLOPE BUILDINGS;
- 7.5M FROM DOWNSLOPE PROPERTY BOUNDARIES;
- 1.5M FROM UP-SLOPE AND CROSS-SLOPE PROPERTY BOUNDARIES; AND
- 3.0M FROM UP-SLOPE AND CROSS-SLOPE BUILDINGS.

THE DIMENSIONS OF THE IRRIGATION FIELD MAY BE MODIFIED TO SUIT THE CLIENT'S REQUIREMENTS PROVIDED THAT THE IRRIGATION AREA OF 240m² REMAINS

THE LOCATION OF THE AWTS UNIT MAY BE ALTERED PROVIDING THAT FALL IS ACHIEVED FROM THE DWELLING TO THE UNIT



Legend

BH 1 — Approximate Borehole Location

5° — Approximate Slope angle in Degrees

Contour in Metres (LiDAR Derived)

GEOTON Pty Ltd

Date	05/02/2024	Drawn	RS
Scale	As Shown	Approved	TB
Original size	A3	Rev	

Client: MS CAITLYN LOGAN & MR ETHAN GREENE

Project: 7 BOWER CIRCUIT HEYBRIDGE

Title: SITE PLAN

Project no: GL23750A

Figure no. 1

7 BOWER CIRCUIT
HEYBRIDGE, TAS
AREA ≈ 3924m²

TITLE BOUNDARY

PROPOSED DWELLING

W/T

W/T

N

165

164

163

Air/Vaccum Release Valves

Flush Valve at Lowest Point

Return Line

AWTS unit & Disc Filter

CUT-OFF DRAIN SEE FIGURE WW-01

Irrigation Field
Typical Line Spacing 1m
Minimum 240m²
See Figure WW-05

BH 3

Supply Line

TITLE BOUNDARY

Approximate Scale (m)

0 10 20

5-6°

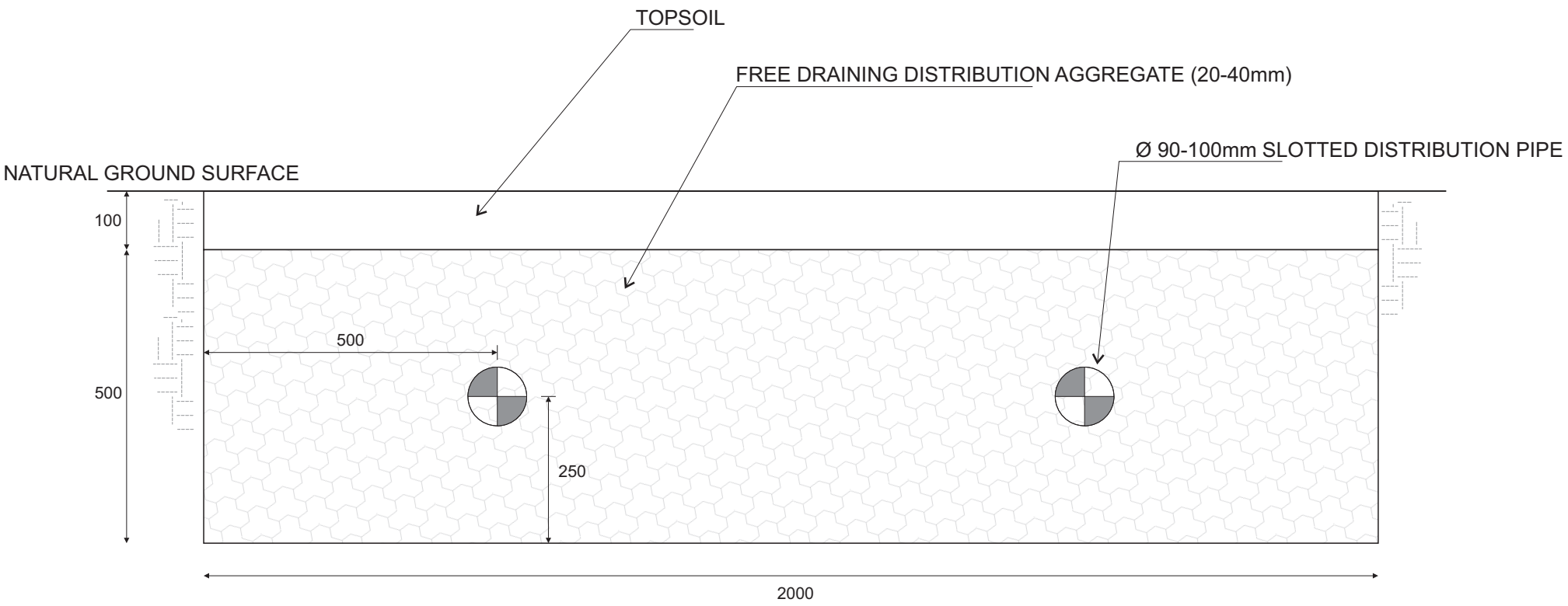
Legend

BH 1 — Approximate Borehole Location

5° — Approximate Slope angle in Degrees

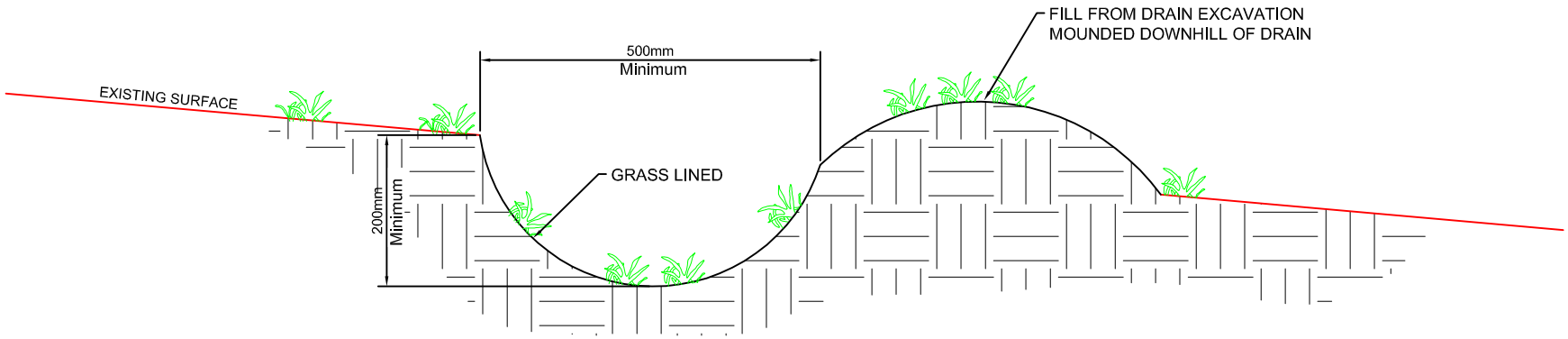
Contour in Metres (LiDAR Derived)

GEOTON Pty Ltd				Client:	MS CAITLYN LOGAN & MR ETHAN GREENE
				Project:	7 BOWER CIRCUIT HEYBRIDGE
Date	05/02/2024	Drawn	RS		
Scale	As Shown	Approved	TB	Title:	WASTEWATER PLAN
Original size	A3	Rev		Project no: GL23750A	Figure no. 2



STORMWATER DISCHARGE BED
SCALE 1:10

GEOTON Pty Ltd				client:	MS CAITLYN LOGAN & MR ETHAN GREENE
				project:	7 BOWER CIRCUIT HEYBRIDGE
date	05/02/2024	drawn	SS		
scale	1 : 10	approved	TB	title:	STORMWATER DISCHARGE BED
original size	A4	rev		project no: GL23750A	figure no. 3



TYPICAL CUT-OFF DRAIN SECTION

SCALE 1:10

SCALE

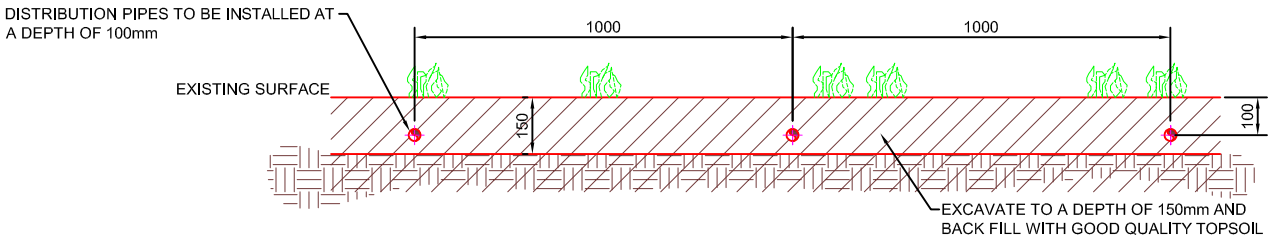
0mm 250mm 500mm

GEOTON Pty Ltd

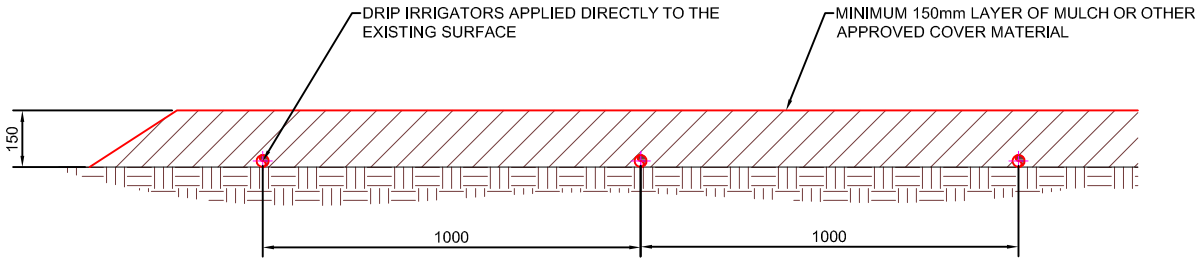
date	**20/09/2021**	drawn	**BS**
scale	**As Shown**	approved	**TB**
original size	**A4**	rev	

title: **TYPICAL CUT-OFF DRAIN SECTION**

figure no. **WW-01**



SHALLOW SUB-SURFACE DRIP IRRIGATION
CATEGORY 3,4 & 5 SOILS



COVERED SURFACE DRIP IRRIGATION
SCALE 1:20

SCALE
0mm 250mm 500mm 750mm 1000mm

GEOTON Pty Ltd			
date	**20/09/2021**	drawn	**BS**
scale	**As Shown**	approved	**TB**
original size	**A4**	rev	

title: **TYPICAL AWTS SECTION**

figure no. **WW-05**

PLATE 1 - View of the site looking to the northeast

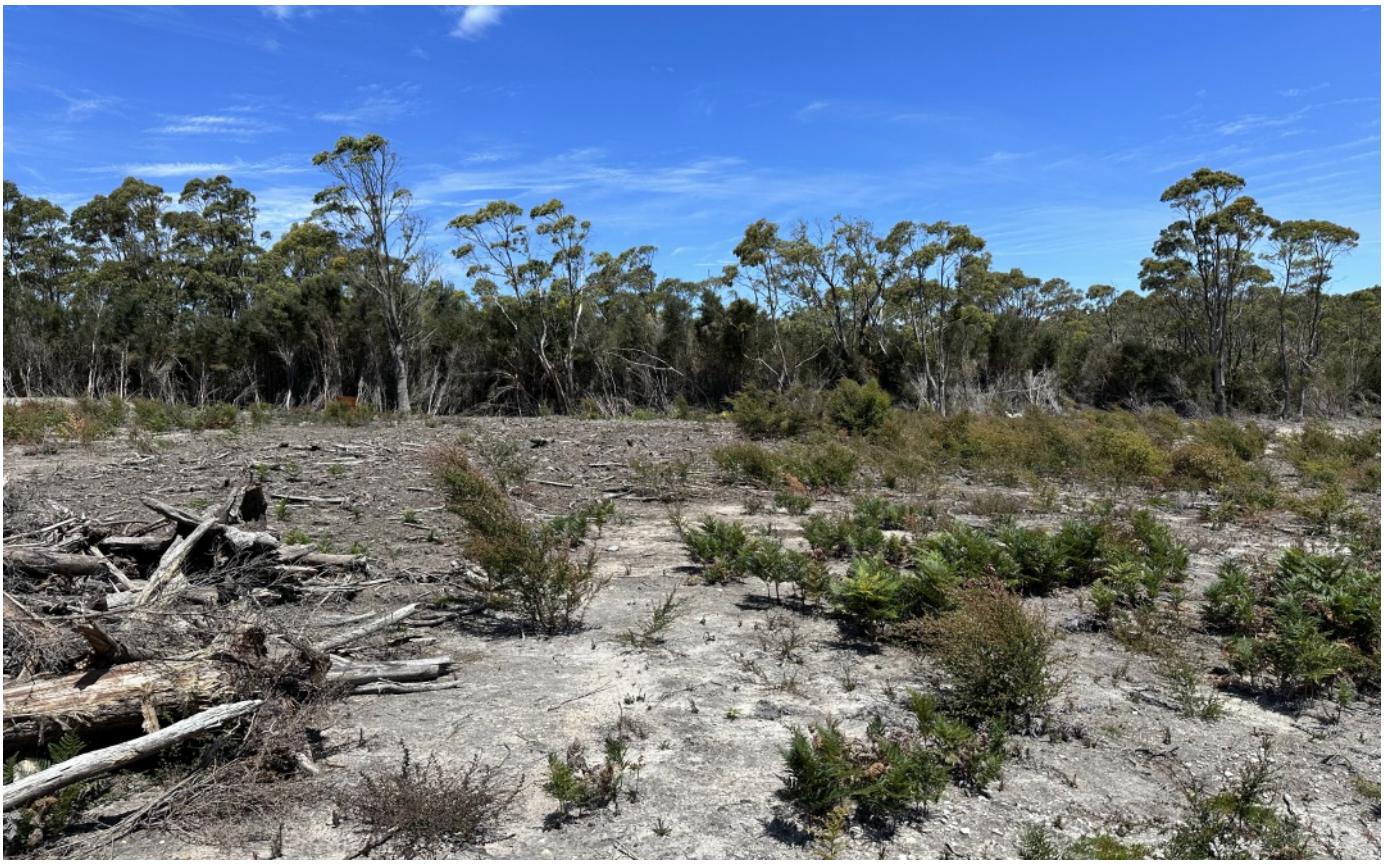


PLATE 2 - View of the site looking to the southwest

GEOTON Pty Ltd				Client:	MS CAITLYN LOGAN & MR ETHAN GREENE
Title:	PHOTOGRAPH			Project:	7 BOWER CIRCUIT HEYBRIDGE
Date:	06/12/2023	Original Size	A4	Project no: GL23750A	Figure no. PLATES 1 & 2

Appendix A

Borehole Logs

GEOTON Pty Ltd
Geotechnical Consultants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

ENGINEERING BOREHOLE LOG

Borehole no. BH1
Sheet no. 1 of 1
Job no. GL23750A

Client :	Ms Caitlyn Logan & Ms Ethan Greene	Date :	06/12/2023
Project :	Site Classification, On-site Wastewater and Stormwater Disposal	Logged By :	RS
Location :	7 Bower Circuit, Heybridge		
Drill model :	GDK-MK1	Easting:	Slope: 90° RL Surface :
Hole diameter :	95mm	Northing:	Bearing: - Datum :

Method	Support	Penetration	Water	DCP (Blows/ 100mm)	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N			3 3				FILL - Gravelly SAND, fine to coarse grained, grey/brown, fine to medium mix gravel	D	L/ MD	**FILL**
				15+	0.25 0.50		SC	Gravelly SAND - fine to coarse grained, grey/brown, fine angular gravel	D	MD	**NATURAL**
					0.75 1.00 1.25		CH	Silty CLAY - high plasticity, grey/ white	D	VSt	
					1.50 1.75 2.00		SC	Gravelly SAND - fine to medium grained, orange/brown, fine angular gravel	D	MD	
					2.25			Borehole BH1 terminated @ 2.0m			

ENGINEERING BOREHOLE LOG

GeoTon Pty Ltd
Geotechnical Consultants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

Borehole no. BH2
Sheet no. 1 of 1
Job no. GL23750A

Client : Ms Caitlyn Logan & Ms Ethan Greene
Project : Site Classification, On-site Wastewater and Stormwater Disposal
Location : 7 Bower Circuit, Heybridge
Date : 06/12/2023
Logged By : RS

Drill model : GDK-MK1 | Easting: | Slope: 90° | RL Surface :
Hole diameter : 95mm | Northing: | Bearing: - | Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N							FILL - Gravelly SAND, fine to coarse grained, grey/brown, fine to medium mix gravel	D	L/ MD	**FILL**
											NATURAL
							MH	Clayey SILT - high plasticity, brown/ grey, trace fine grained sand	D	VSt	
					0.25						
					0.50		SC	Gravelly SAND - fine to coarse grained, orange/brown, fine angular gravel	D	MD	
					0.75		CH	Silty CLAY - high plasticity, orange/ brown	D	VSt	
					1.00						
					1.25			Becoming grey/white			
					1.50						
					1.75						
					2.00						
								Borehole BH2 terminated @ 2.0m			
					2.25						

GEOTON Pty Ltd
Geotechnical Consultants
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Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

ENGINEERING BOREHOLE LOG

Borehole no. BH3
Sheet no. 1 of 1
Job no. GL23750A

Client : Ms Caitlyn Logan & Ms Ethan Greene — Date : 06/12/2023
Project : Site Classification, On-site Wastewater and Stormwater Disposal — Logged By : RS
Location : 7 Bower Circuit, Heybridge

Drill model : GDK-MK1 — Easting: — Slope: 90° — RL Surface :
Hole diameter : 95mm — Northing: — Bearing: - — Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N							FILL - Silty SAND, fine grained, dark grey	D	L	**FILL**
					0.25		MH	Clayey SILT - high plasticity, brown/ grey, trace fine grained sand	D	VSt	**NATURAL**
					0.50			trace fine gravel			
					0.75		SC	Gravelly SAND - fine to coarse grained, orange/brown, fine angular gravel	D	MD	
					1.00						
							CI	Gravelly/Sandy CLAY - medium plasticity, orange/brown, fine to medium grained sand	D	VSt	
					1.25						
					1.50						
					1.75						
					2.00						
								Borehole BH3 terminated @ 2.0m			
					2.25						

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Unit 24, 16-18 Goodman Court, Invermay TAS
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ENGINEERING BOREHOLE LOG

Borehole no. BH4
Sheet no. 1 of 1
Job no. GL23750A

Client : Ms Caitlyn Logan & Ms Ethan Greene — Date : 06/12/2023
Project : Site Classification, On-site Wastewater and Stormwater Disposal — Logged By : RS
Location : 7 Bower Circuit, Heybridge

Drill model : GDK-MK1 — Easting: — Slope: 90° — RL Surface :
Hole diameter : 95mm — Northing: — Bearing: - — Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N							FILL - Silty SAND, fine grained, dark grey	D	L	**FILL**
					0.25		SC	Gravelly SAND - fine to coarse grained, grey/brown, fine angular gravel	D	MD	**NATURAL**
					0.50			becoming pale brown			
					0.75						
					1.00			Borehole BH4 refusal @ 0.9m on inferred rock or boulder			
					1.25						
					1.50						
					1.75						
					2.00						
					2.25						

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Unit 24, 16-18 Goodman Court, Invermay TAS
Tel (03) 6326 5001

ENGINEERING BOREHOLE LOG

Borehole no. BH5
Sheet no. 1 of 1
Job no. GL23750A

Client : Ms Caitlyn Logan & Ms Ethan Greene — Date : 06/12/2023
Project : Site Classification, On-site Wastewater and Stormwater Disposal — Logged By : RS
Location : 7 Bower Circuit, Heybridge

Drill model : GDK-MK1 — Easting: — Slope: 90° — RL Surface :
Hole diameter : 95mm — Northing: — Bearing: - — Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N				0.00			FILL - Silty SAND, fine grained, dark grey	D	L	**FILL**
					0.25		SM	Silty SAND - fine grained, dark grey with fine mix gravel	D	MD/D	**NATURAL**
					0.50						
					0.75		Cl	Silty CLAY - medium plasticity, pale brown, trace fine mix gravel	D	VSt	
					1.00			Becoming orange/brown			
					1.25						
					1.50						
					1.75						
					2.00						
					2.25			Borehole BH5 terminated @ 2.0m			

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Investigation Log Explanation Sheet

METHOD – BOREHOLE

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

* Bit shown by suffix e.g. ADT

METHOD – EXCAVATION

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

SUPPORT

TERM	Description
M	Mud
N	Nil
C	Casing
S	Shoring

PENETRATION

1	2	3	4	
				No resistance ranging to Refusal

WATER

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

NOTES, SAMPLES, TESTS

TERM	Description
U_{50}	Undisturbed sample 50 mm diameter
U_{63}	Undisturbed sample 63 mm diameter
D	Disturbed sample
N	Standard Penetration Test (SPT)
N*	SPT – sample recovered
N_C	SPT with solid cone
V	Vane Shear
PP	Pocket Penetrometer
P	Pressumeter
B_S	Bulk sample
E	Environmental Sample
R	Refusal
DCP	Dynamic Cone Penetrometer (blows/100mm)
PL	Plastic Limit
LL	Liquid Limit
LS	Linear Shrinkage

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION

Based on AS 1726:2017

MOISTURE

TERM	Description
D	Dry
M	Moist
W	Wet

CONSISTENCY/DENSITY INDEX

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

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Soil Description Explanation Sheet (1of 2)

DEFINITION

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

CLASSIFICATION SYMBOL AND SOIL NAME

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

PARTICLE SIZE DEFINITIONS

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

MOISTURE CONDITION

Coarse Grained Soils

Dry Non-cohesive and free running.

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

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

Fine Grained Soils

Moist, dry of Plastic Limited – w < PL
Hard and friable or powdery.

Moist, near Plastic Limit – w ≈ PL
Soils can be moulded at a moisture content approximately equal to the plastic limit.

Moist, wet of Plastic Limit – w > PL
Soils usually weakened and free water forms on hands when handling.

Wet, near Liquid Limit - w ≈ LL

Wet, wet of Liquid Limit - w > LL

CONSISTENCY TERMS FOR COHESIVE SOILS

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

RELATIVE DENSITY OF NON-COHESIVE SOILS

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

DESCRIPTIVE TERMS FOR ACCESSORY SOIL COMPONENTS

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

SOIL STRUCTURE

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

GEOLOGICAL ORIGIN

WEATHERED IN PLACE SOILS

Extremely weathered material	Structure and/or fabric of parent rock material retained and visible.
Residual soil	Structure and/or fabric of parent rock material not retained and visible.

TRANSPORTED SOILS

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

GEOTON Pty Ltd

Soil Description Explanation Sheet (2 of 2)

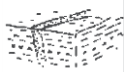
SOIL CLASSIFICATION INCLUDING IDENTIFICATION AND DESCRIPTION

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

● LL – Liquid Limit.

COMMON DEFECTS IN SOILS

TERM	**DEFINITION**	**DIAGRAM**
PARTING	A surface or crack across which the soil has little or no tensile strength. Parallel or sub parallel to layering (e.g. bedding). May be open or closed.	
FISSURE	A surface or crack across which the soil has little or no tensile strength, but which is not parallel or sub parallel to layering. May be open or closed. May include desiccation cracks.	
SHEARED SEAM	Zone in clayey soil with roughly parallel near planar, curved or undulating boundaries containing closely spaced, smooth or slickensided, curved intersecting fissures which divide the mass into lenticular or wedge-shaped blocks.	
SHEARED SURFACE	A near planar curved or undulating, smooth, polished or slickensided surface in clayey soil. The polished or slickensided surface indicates that movement (in many cases very little) has occurred along the defect.	

TERM	**DEFINITION**	**DIAGRAM**
SOFTENED ZONE	A zone in clayey soil, usually adjacent to a defect in which the soil has a higher moisture content than elsewhere.	
TUBE	Tubular cavity. May occur singly or as one of a large number of separate or inter-connected tubes. Walls often coated with clay or strengthened by denser packing of grains. May contain organic matter.	
TUBE CAST	An infilled tube. The infill may be uncemented or weakly cemented soil or have rock properties.	
INFILLED SEAM	Sheet or wall like body of soil substance or mass with roughly planar to irregular near parallel boundaries which cuts through a soil mass. Formed by infilling of open defects.	

Appendix B

Example Plants

Taz Wild Plants

Phone: (03) 6384 2165
Fax: (03) 6384 2165
Web site: www.tazwild.com

Wastewater Treatment Units

Tasmanian Plants suitable for Water from Wastewater Treatment Units

Water from septic tanks and aerated wastewater treatment units such as Biocycle, Envirocycle or other may contain salts, boron and disease bearing microbes. The major ingredients of most cleaning fluids are various salts, of which common kitchen salt (sodium chloride) is the least common. These salts may have large concentrations in wastewater, which can have a detrimental effect on plants. The survival of plants will depend on the concentrations of salts. Long-term build up of chemicals and salts in the soil will adversely affect any plantings.

We can't guarantee these plants will survive but they are tolerant to reasonable amounts of the main offenders and will tolerate wet conditions.

Below is a list of plants to help make an attractive garden bed for your wastewater treatment area.

PLANTS 1 – 6m

Acacia mucronata
Variable sallow wattle, Narrow leaf wattle
An upright or spreading, medium to tall shrub 3-4m X 2-3m. Quick growing. Profuse cream to yellow flowers in spring, showy. Attracts seed eating birds. Drought tolerant.

Acacia verticillata
Prickly Moses
Prickly shrub to 2m. Useful habitat plant and very attractive in flower.

Banksia marginata
Honeysuckle, Silver banksia
Evergreen shrub or small tree with attractive narrow, smooth edged leaves which are square or notched at the end and silvery beneath. Greenish yellow cones of flowers that last as cut flowers. Grows well in sandy soil. Strong upright growth.

Bauera rubioides
Dog Rose
Hardy small to medium dense shrub. 1-2m X 1-2m wide with masses of dainty pink flowers, flowering most of year, attracting butterflies. Grows well in wet or moist soils, prefers acid soils. Likes full or filtered sun. Good coastal pant. Frost tolerant. Prune regularly. Good erosion control.

Callistemon pallidus
Lemon Bottlebrush
Evergreen medium shrub, very upright with silky leaves that become smooth with age. Lovely lemon yellow bottlebrushes in spring and summer. Likes a dry or moist position. Tolerates full or filtered sunlight. Attracts nectar eating birds.

Callitris oblonga
Cypress pine, South esk pine
This is one of Australia's native conifers. It has an attractive shrubby shape and is suitable for use in the garden as a fast growing hedge, since it can be pruned to shape. It is also useful for gardens where the soil is rocky and sandy but will tolerate a range of soils, providing the drainage is good.

Correa backhousiana
Velvet correa
A dense, bushy, spreading shrub to 1.5m high by 2m wide. Leaves are glossy green on top, rusty coloured underneath. Greenish cream bell flowers in winter. Spring bird attracting. Tolerates lime and coastal plantings. Usually frost resistant.

Leptospermum lanigerum
Woolley tea-tree
Hardy medium to large shrub 2.5 to 5m high x 1.2-3m wide, massed with white flowers during spring. Soft grey foliage. Prefers moist to wet soils with good drainage and will grow well in full or filtered sun. Attracts butterflies and seed eating birds. Tolerates light snow, smog and frost.

Melaleuca ericifolia
A very hard, fast growing small evergreen tree suited to most soils and aspects. Suitable for poorly drained or saline soils and withstands coastal exposure. Needle-like leaves and 2-3cm long cream flower spikes, in spring and early summer. Ideal for planting as a screen.

Melaleuca gibbosa
Fine leafed paperbark, Slender honey-myrtle
Evergreen small shrub with mauve/purple ball shaped flowers in late spring and summer. Suitable for most soils, tolerating lime and salt soil. Frost resistant.

Melaleuca squarrosa
Tall, bushy shrub, good foliage. Scented, yellow brush flowers, in spring-summer. Suitable for most soils, tolerating very wet conditions, lime, saline and frost.

Micrantheum hexandrum
River box
Attractive foliage plant with new growth showing red stems. Cream flowers in spring. Grows up to 2m high. Prune to form a dense screen plant.

Notelaea ligustrina
Native Olive, Mock olive, Privet mock olive
Tall shrub with smooth, dark green leaves. Small yellow flowers and purple fruit. Prefers a moist, semi-shaded position but grows well in a wide range of conditions.

Pomaderris apetala
Dogwood
Medium to tall shrub 3 to 15 m. This shrub grows in a wide variety of sites from very dry to very wet but will grow larger with moisture. Looks good planted in copses.

SHRUBS TO 1m

Amperea xiphoclada
Upright or arching stems. Attractive foliage sculpturesque in appearance to 60cm. Useful for basket weaving. Dry to moist sites.

Blechnum penna-marina
Alpine Water Fern
Attractive, low growing, matted ground cover. Leathery dark green fronds to 15cm long, tinged pink when young. Ideal hanging baskets. Rockeries and moist positions in the open ground.

Blechnum wattsii
Hard Water Fern
Hardy and vigorous fern with dark green leathery fronds to 1m tall. Very easily grown in large pot or a moist, shady position in the ground.

Callistemon viridiflorus
Green Bottlebrush
Erect shrub with pale green bottlebrushes. Good in damp conditions. 1-2m X 1m. Frost resistant.

Carex appressa
Tall sedge, Tussock sedge
A tall perennial to 1.8m high. Stems acutely 3 angled and leaves 3-6mm broard. Occurs in winter wet depressions that can dry out completely in summer. Flowers in spring.

Carex inyx
Tassell Sedge
Evergreen clump forming sedge with green foliage and gorgeous golden brown pendulous tassels 1m x 1m.

Carex tasmanica
Curley Sedge
An upright sedge to 30cm. Attractive tight curls on tips of leaves. Wet sites but will tolerate long dry spells.

Dianella tasmanica
Flax Lily
An evergreen perennial plant with arching, strap-like leaves which can be up to 1.2m long. During spring and summer this plant bears clusters of nodding, star shaped, bright blue to purple flowers which are followed by glossy deep blue berries. Thrives in a sunny to partly shaded position in humus rich, well drained soil. Ideal for rockeries, poolside planting and containers.

Ficinea nodosa (syn isolepis nodosa)
Knobby club rush
Dense tufted native rush with stiff stems. Rounded brown flower knobs in summer. Suit damp or moist sandy soil. 60cm X 1m wide.

Ficinea nodosa (syn isolepis nodosa)
Knobby club rush (syn. Isolepis nododa)
Ideal for planting around pond margins, this fast growing perennial plant forms clumps of upright, often arching, dark green stems. Brownish, globular flower heads are produced throughout the year. A tough hardy plant which thrives in full sun in a range of soils. Tolerates salt spray, waterlogged and saline soils. Adds texture and colour to seaside gardens and water features, useful for general garden planting.

Goodenia elongata
Lanky Goodenia
Suckering ground cover 10cm tall X 50cm. Glossy green leaves, rich yellow flowers on tall stems spring-summer, prefers moist soils in full sun or part shade.

Isolepis inundata
Knobby club rush, Swamp club rush
Handy aquatic for waters edge or general planting (eg. shrub beds, dry creek beds).

Lomandra longifolia
Long leaf mat bush, Sagg
A popular plant for use as accent in gardens, where the rush like foliage contrasts well with broad leafed plants. Use it next to ponds or as a boarder plant. Flowers in spring, bearing clusters of cream, strongly perfumed flowers - great for use in flora arrangements. A very adaptable plant that will grow well in a range of soils but does best in a moist position.

Mazus pumilio
Mauve carpet
Low growing creeping plant. Ideal ground cover, with mauve flowers, spring and summer. Semi shade or sun.

Melaleuca squamea
A bushy shrub to 1m with stunning mauve flowers in spring-summer. Grows well in a damp spot. Frost hardy.

Poa labillardieri
A popular native grass grown for its soft blue foliage. In the warmer months this clumping plant produces an attractive flower head with a purple tint. Thrives in a sunny to partly shaded position and grows in a range of soils. Suitable for planting under trees, embankments and mass plantings. Cut to just above ground level in late winter for fresh new spring growth.

Polystichum proliferum
Mother Shield Fern
An easy to grow fern with attractive green fronds. New fronds are covered with eye catching brownish scales. An ideal plant for ferneries and shaded garden positions but will perform equally well when planted in a container. Plant in humus rich, moist, well drained soil in part shade. Fertilise with a good organic fertilizer. When planting in containers use a premium potting mix.

Polystichum proliferum
Mother Shield Fern
Attractive native fern with arching fronds to 1m long forming plantlets near the tip. Very easily grown in a moist position in morning or filtered sun. Suitable for tubs.

Pratia pedunculata
Blue pratia, Common pratia, White pratia
This dainty, spreading plant forms a carpet of tiny green leaves which from spring to early summer is smothered in a mass of tiny, white flowers. This carpeting plant is ideal for filling in spaces near rocks and sleepers and makes an attractive groundcover. Thrives in a sunny to semi-shaded position in moist soil. Keep moist at all times.

Pratia pedunculata
Blue pratia, Common pratia, White pratia
This dainty, spreading plant forms a carpet of tiny, green leaves, which from spring to early summer is smothered in a mass of tiny blue flowers. This carpeting plant is ideal for filling in spaces near rocks and sleepers, and makes an attractive groundcover, thrives in a sunny to semi-shaded position in moist soil. Keep moist at all times.

Scaevola hookeri
Creeping fan flower, Mat fan flower
A very densely matting, evergreen groundcover with glossy, dark green leaves and small, white fan-shaped flowers in flushes, during spring, summer and autumn. An excellent soil binding plant for average to moist positions. Frost hardy.

Velleia paradoxa
Spur valleia
Wild flower 20cm X 20cm with large yellow flowers spring and summer. Prefers moist soils which are well drained and part shade to full sun.

Viola fuscoviolacea
A spreading, matting violet with attractive dense foliage and tiny deep purple-blue flowers in spring and summer. Prefers a moist position. Withstands frosts and snow.

Viola hederacea
Native violet
An attractive creeping evergreen perennial with fan shaped leaves. This plant produces beautiful mauve flowers over a long flowering period. An ideal ground cover for full sun to part shade in well drained soils.

TREES

Acacia dealbata
Silver Wattle
A tall tree with a smooth trunk, often decorated with silvery, mottled patches contrasting with the greyish-green leaves. In spring, clusters of golden-yellow, fluffy ball like flowers almost cover the whole tree.

Acacia melanoxylon
Blackwood
A beautiful formal tree that produces one of Australia's most sought after woods for cabinet making. Light yellow flowers occur in winter and early spring. A useful tree for a windbreak or screen as it grows densely. It is also tolerant of a wine range of positions, however its height and width will be greatest if the soil is moist and fertile.

Eucalyptus ovata
Black gum, Swamp gum
Evergreen medium to tall moisture loving tree, good for poorly drained soils. Smooth white trunk. Masses of white flowers in autumn which attract birds. Frost hardy. Good tree for cool districts. Water absorber. Drought tolerant. Excellent shade and windbreak tree.

Eucalyptus rodwayi
Swamp Peppermint
This tree is suitable for a wide range of conditions, from very dry sandy soils to river banks. Grows 15 to 20m.

Eucalyptus viminalis
White Gum
A magnificent tree with a lovely white trunk. This tree is suitable for very dry to very wet sites. Its height is 20 to 40m depending on availability of moisture.

Pomaderris apetala
Dogwood
Medium to tall shrub 3 to 15 m. This shrub grows in a wide variety of sites from very dry to very wet but will grow larger with moisture. Looks good planted in copses.

Prostanthera lasianthos
Christmas bush, Tasmanian Christmas bush
The Tasmanian Christmas bush comes into flower around Christmas with masses of mint scented foliage. A rapid growth in a range of soils but for best results grow in a well drained soil and mulch to retain moisture in the drier months. An attractive plant that will grow in a range of positions in the garden.

Tasmannia lanceolata
Mountain pepper, Native pepper
Small leafed mountain form. Handsome foliage shrub with bright green leaves and red stems. Creamy-yellow flowers in spring. Slow growing to 1.5m, hardy in a cool moist well drained position in sun or shade.

Appendix C

Certificate Forms

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: *Owner /Agent*

Address

Suburb/postcode

Form **55**

Qualified person details:

Qualified person: Tony Barriera - Geoton Pty. Ltd.

Address: PO Box 522 Phone No: 03 6326 5001

Prospect Tas 7250 Fax No:

Licence No: CC6220 P Email address: tbarriera@geoton.com.au

Qualifications and Insurance details: Tony Barriera – BEng, MSc CPEng, NER – IEAust 471929 Civil, Geotechnical Certain Underwriters at Lloyd's- ENG 22 000330

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

Speciality area of expertise: Geotechnical Engineering

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

Details of work:

Address: 7 Bower Circuit Lot No: 4

Heybridge Tas 7316 Certificate of title No: 179347/4

The assessable item related to this certificate: Classification of foundation conditions according to AS2870 - 2011

(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: Foundation Site Classification – AS2870

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

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

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

or

a building, temporary structure or plumbing installation: X

In issuing this certificate the following matters are relevant –

Documents:	Geoton Pty Ltd, Report Reference No. GL23750Ab, dated 05/02/2024
Relevant calculations:	Refer to report
References:	AS 2870 – 2011 Residential Slabs and Footings Construction AS 4055 – 2021 Wind Loads for Housing CSIRO Building Technical File 18

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

Site Classification in accordance with AS2870 - 2011
Wind Loading in accordance with AS 4055 - 2021
Findings and recommendations of report

Scope and/or Limitations

The classification applies to the site as investigated at the time and does not account for any future alteration to foundation conditions resulting from earthworks, drainage condition changes or site maintenance variations.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		GL23750Ab	05/02/2024

GEOTON Pty Ltd
Geotechnical Consultants

LOADING CERTIFICATE

To: [redacted] *Owner /Agent*
[redacted] *Address*
[redacted] *Suburb/postcode*

Certificate Ref:
AS/NZS 1547:2012
Section 7.4.2

Details of work:

Address: 7 Bower Circuit
Heybridge, Tas 7316

Lot No: 4
Certificate of title No: 179347/4

The work related to this certificate: On-site domestic-wastewater management

(description of the work or part work being certified)

Certificate details:

In issuing this certificate the following matters are relevant –

Documents:
Report GL23750A dated 05/02/2024
Figure 1 – Site Plan
Figure 2 – Wastewater Plan
Figure 3 – Stormwater Discharge Bed
Figure WW-01 – Typical Cut-off Drain Section
Figure WW-05 – Typical AWTS Section

Relevant calculations: Contained in the above

References: AS/NZS1547:2012 On-site domestic-wastewater management

Substance of Certificate:

This certificate sets out the design criteria and the limitations associated with use of the system.

Wastewater Characteristics

Population equivalent used for this assessment = 6(3 Bedrooms & Study room)
Wastewater volume (L/day) used for this assessment = 720 (120 Litres per person)
Approximate blackwater volume (L/day) = 288
Approximate greywater volume (L/day) = 432

Soil Characteristics/Design Criteria

Texture (Table E1 from AS/NZS 1547) = Light Clay
*Soil category (Table E1 from AS/*NZS 1547) = 5
Soil structure (Table E4 from AS/NZS 1547) = Massive
Indicative permeability (Table 5.1 from AS/NZS 1547) = <0.06m/day
Adopted permeability =<0.01 m/day
Adopted Design Irrigation Rate = 3mm/day
Soil thickness for disposal = >1.0m
Minimum depth (m) to water = >2.0m

Dimensions for On-Site Treatment System

Disposal and treatment methods = Aerated Wastewater Treatment System (AWTS) and sub-surface irrigation
Site modification and specific design = None
Primary disposal area required = 240m^2
Reserve disposal area required = 240m^2
Location and use of Reserve area = Reserve area is located southwest of the site and is currently vacant

Is there sufficient area available on site for disposal (including reserve) = Yes

Notes

The purpose of the reserve area is to allow for future extention of the land application system to allow a factor of safety against unforseen malfunction or failure, perhaps following increased household occupancy or inadvertent misuse of the system.

The land application area may be reduced to account for flow reductions by water-saving devices, provided the organic loading rate is not higher than it would have been without the flow reduction.

Allowable Variation from Design Flow

Based on an approved AWTS 8EP system (8 equivalent persons) rated at 1,200 litres per day and a wastewater design volume of 720L/day the allowable variation from design flow (peak loading events) would be an additional 480L/day.

System Limitations

Consequences of overloading the system:

(A) Adverse effects on soil properties and plant growth through excess salt accumulation in the root zone during extended dry periods;
(B) Harmful long-term environmental effects to the soil of land application system or the adjacent surface water and groundwater; or
(C) Increased risk to public heath from surface ponding in the land application area or channelling or seepage beyond the land application area.

Consequences of underloading the system:

Not applicaple to this type of system.

Operation Requirements

Refer to operation manual of preferred aerated waterwater treatment system.
Adverse effects of not operating the system correctly may include:

(A) Odour; and
(B) Disease.

Maintenance Requirements

Refer to operation manual of preferred aerated waterwater treatment system.
Adverse effects of not maintaining and monitoring the system correctly may include:

(A) Odour;
(B) Pump failure;
(C) Air blower failure or filter blockage;
(D) Alarm failure;
(E) Irrigation field failure; and
(F) Poor water quality, lack of disinfection.

I certify the matters described in this certificate.

	Signed:	*Date:*	*Certificate No.*
Certifier:		05/02/2024	GL23750Ab

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: *Owner name*

Address

Suburb/postcode

Designer details:

Name:	Tony Barriera	Category:	Civil Engineer Hydraulic - Domestic
Business name:	Geoton Pty Ltd	Phone No:	03 6326 5001
Business address:	P O Box 522		
	Prospect TAS 7250	Fax No:	
Licence No:	IEAust 471929, CC6220 P	Email address:	tbarriera@geoton.com.au

Details of the proposed work:

Owner/Applicant		Designer's project reference No.	GL23750Ab
Address:	7 Bower Circuit	Lot No:	179347/4
	Heybridge, Tas 7316		

Type of work: Building work ☐ Plumbing work ☒ *(X all applicable)*

Description of work:

New building
on-site wastewater management system

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): *(X all applicable certificates)*

Certificate Type:	Certificate	Responsible Practitioner
	☐ Building design	Architect or Building Designer
	☐ Structural design	Engineer or Civil Designer
	☐ Fire Safety design	Fire Engineer
	☒ Civil design	Civil Engineer or Civil Designer
	☐ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Service Designer
	☐ Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐ Other (specify)	

Deemed-to-Satisfy: ☒ Performance Solution: ☐ (*X the appropriate box*)

Other details:
All design documents provided in Report GL23750Ab, dated 05/02/2024

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by:	Date:
Schedules:	Prepared by:	Date:
Specifications:	Prepared by:	Date:
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by:	Date:

Standards, codes or guidelines relied on in design process:

All design documents are contained within report

AS/NZS1547:2012 On-site domestic-wastewater management

Any other relevant documentation:

Attribution as designer:

I Tony Barriera of Geoton Pty Ltd am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

	Name: (print)	*Signed*	*Date*
Designer:	Tony Barriera		05/02/2024
Licence No:	CC6220P		

Assessment of Certifiable Works: (TasWater)

Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.

If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.

TasWater must then be contacted to determine if the proposed works are Certifiable Works.

I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- ☐ The works will not increase the demand for water supplied by TasWater
- ☐ The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- ☐ The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- ☐ The works will not damage or interfere with TasWater's works
- ☐ The works will not adversely affect TasWater's operations
- ☐ The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- ☐ I have checked the LISTMap to confirm the location of TasWater infrastructure
- ☐ If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

Certification:

I Tony Barriera of Geoton Pty Ltd being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008,* that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.

Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	Name: (print)	*Signed*	*Date*
Designer:	Tony Barriera		05/02/2024

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: *Owner name*

Address

Suburb/postcode

Designer details:

Name: Tony Barriera

Category: Civil Engineer
Hydraulic - Domestic

Business name: Geoton Pty Ltd

Phone No: 03 6326 5001

Business address: P O Box 522

Prospect TAS 7250

Fax No:

Licence No: IEAust 471929, CC6220 P

Email address: tbarriera@geoton.com.au

Details of the proposed work:

Owner/Applicant

Designer's project reference No. GL23750Ab

Address: 7 Bower Circuit

Lot No: 179347/4

Heybridge, Tas 7316

Type of work: Building work ☐ Plumbing work ☒ *(X all applicable)*

Description of work:

New building
on-site stormwater management system

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): *(X all applicable certificates)*

Certificate Type:	**Certificate**	**Responsible Practitioner**
	☐ Building design	Architect or Building Designer
	☐ Structural design	Engineer or Civil Designer
	☐ Fire Safety design	Fire Engineer
	☒ Civil design	Civil Engineer or Civil Designer
	☐ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Service Designer
	☐ Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐ Other (specify)	

Deemed-to-Satisfy: ☐ Performance Solution: ☒ (*X the appropriate box*)

Other details:
All design documents provided in Report GL23750Ab, dated 05/02/2024

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by:	Date:
Schedules:	Prepared by:	Date:
Specifications:	Prepared by:	Date:
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by:	Date:

Standards, codes or guidelines relied on in design process:

All design documents are contained within report

AS/NZS 3500.3 – Stormwater Drainage

Any other relevant documentation:

Attribution as designer:

I Tony Barriera of Geoton Pty Ltd am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

	Name: (print)	*Signed*	*Date*
Designer:	Tony Barriera		05/02/2024
Licence No:	CC6220P		

Assessment of Certifiable Works: (TasWater)

Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.

If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.

TasWater must then be contacted to determine if the proposed works are Certifiable Works.

I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- ☐ The works will not increase the demand for water supplied by TasWater
- ☐ The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- ☐ The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- ☐ The works will not damage or interfere with TasWater's works
- ☐ The works will not adversely affect TasWater's operations
- ☐ The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- ☐ I have checked the LISTMap to confirm the location of TasWater infrastructure
- ☐ If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

Certification:

I Tony Barriera of Geoton Pty Ltd being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008,* that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.

Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	Name: (print)	*Signed*	*Date*
Designer:	Tony Barriera		05/02/2024

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE

bower circuit

Lot 4
Area- 3899 m2
Vol- 179547
Folio- 4

14040 131°46'00"
13840 121°08'00"
15390 115°19'00"
(40790)
5700
31000
6000
25000
105440 202°41'40"
77770 201°29'40"
DRAINAGE EASEMENET VARIABLE WIDTH

5 BOWER CRT

NEW RESIDENCE

POSSIBLE PROPOSED DWELLING

POSSIBLE PROPOSED DWELLING

CUT-OFF DRAIN
SEE FIGURE WW-01

Return Line

AWTS Unit
Disc Filter

Irrigation Field
Typoical Line Spacing 1m
Minimum 240 m2

5-°6

Supply Line

Reserved Area
240 m2

(29760)
(21190)
(6000)
(6000)

W.T W.T

Stormwater Detention Bed (Dwelling & Shed)
13.7m LONG x 2.0m WIDE
0.5m Refer Figure 3

TITLE BOUNDARY

62 63 64 65 66 67 68 69 70 71

SITE PLAN

A3

MASTER BUILDERS TASMANIA
PREFERRED SUPPLIER

HIA MEMBER

WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
MOBILE:- 0408 583 646
ACCREDITED DESIGNER: RAQUEL INNIS
ACCREDITATION NUMBER 539021287

PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

SITE PLAN					SHEET
SCALE	DRAWN	DATE	REV	DRAW NUMB	01 OF 17
1:400	PGW	22.05.25	A	AW–2083	

WOOD DRAFTING & DESIGN SERVICE
2/6 WASHINGTON DVE, DEVONPORT, TAS 7310
0408583646

ACCREDITED DESIGNER: Raquel Innis
Accreditation Number 539021287

PROJECT:

NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

Drawing Number - AW-2083 01 to 17

Drawings

01	Site Plan
02	Drainage Plan
03	Ground Floor Plan
04	Ground Floor Plan
05	Sections
06	Elevations 1 of 2
07	Elevations 2 of 2
08	Window Schedule
09	Door Schedule
10	Sections
11	Set-Out Plan
12	Drainage Plan
13	Reflected Ceiling Plan
14	Electrical Plan
15	Roof Plan
16	Waterproofing Details 1 of 2
17	Waterproofing Details 2 of 2
15	Typical Wall Detail
16	Construction Notes
17	OH&S Notes

FLOOR AREAS -	
GROUND FLOOR	224.4 m²
FIRST FLOOR	136.5 m²
VERANDAH	57.6 m²
PORCH	14.4 m²
GARAGE	302.6 m²
TOTAL	735.5 m²

NOTE:-
FOR FOUNDATION DETAILS, BRACING, RETAINER WALL REFER TO ENGINEERS DRAWINGS & SPECIFICATIONS

A	Development Application	22.05.25
N°	DESCRIPTION	DATE
	REVISIONS	

CLIMATE ZONE - 7

WIND SPEED DESIGN - N1

SITE SOIL CLASSIFICATION - CLASS M

Volume 179457 Folio 4

BAL 12.5

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE

DRAINAGE PLAN LEGEND

— · — · —	SEWER LINE (100mm DIA UPVC PIPE)
-·-·-·-·-·-	STORMWATER LINE (100mm DIA UPVC PIPE)
IO	INSPECTION OPENING
RE	RODDING END
ORG	OVERFLOW RELIEF GULLY
EV	EDUCT VENT
AAV	AIR ADMITTANCE VALVE
SJ	SWIVEL EXPANSION JOINT
AWTS	AERATED WASTEWATER TREATMENT SYSTEM
DP	DOWNPIPE (90mm)

WET AREA (REFER TO WATERPROOFING NOTES)

DRAINAGE PLAN NOTES

INSTALL INSPECTION OPENINGS AT MAJOR BENDS FOR STORMWATER AND ALL LOW POINTS OF DOWNPIPES.

ALL PLUMBING & DRAINAGE TO BE IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS.

PROVIDE SURFACE DRAIN TO BACK OF BULK EXCAVATION TO DRAIN LEVELED PAD PRIOR TO COMMENCING FOOTING EXCAVATION.

SERVICES

THE HEATED WATER SYSTEM MUST BE DESIGNED AND INSTALLED WITH PART B2 OF NCC VOLUME THREE - PLUMBING CODE OF AUSTRALIA.

THERMAL INSULATION FOR HEATED WATER PIPING MUST:

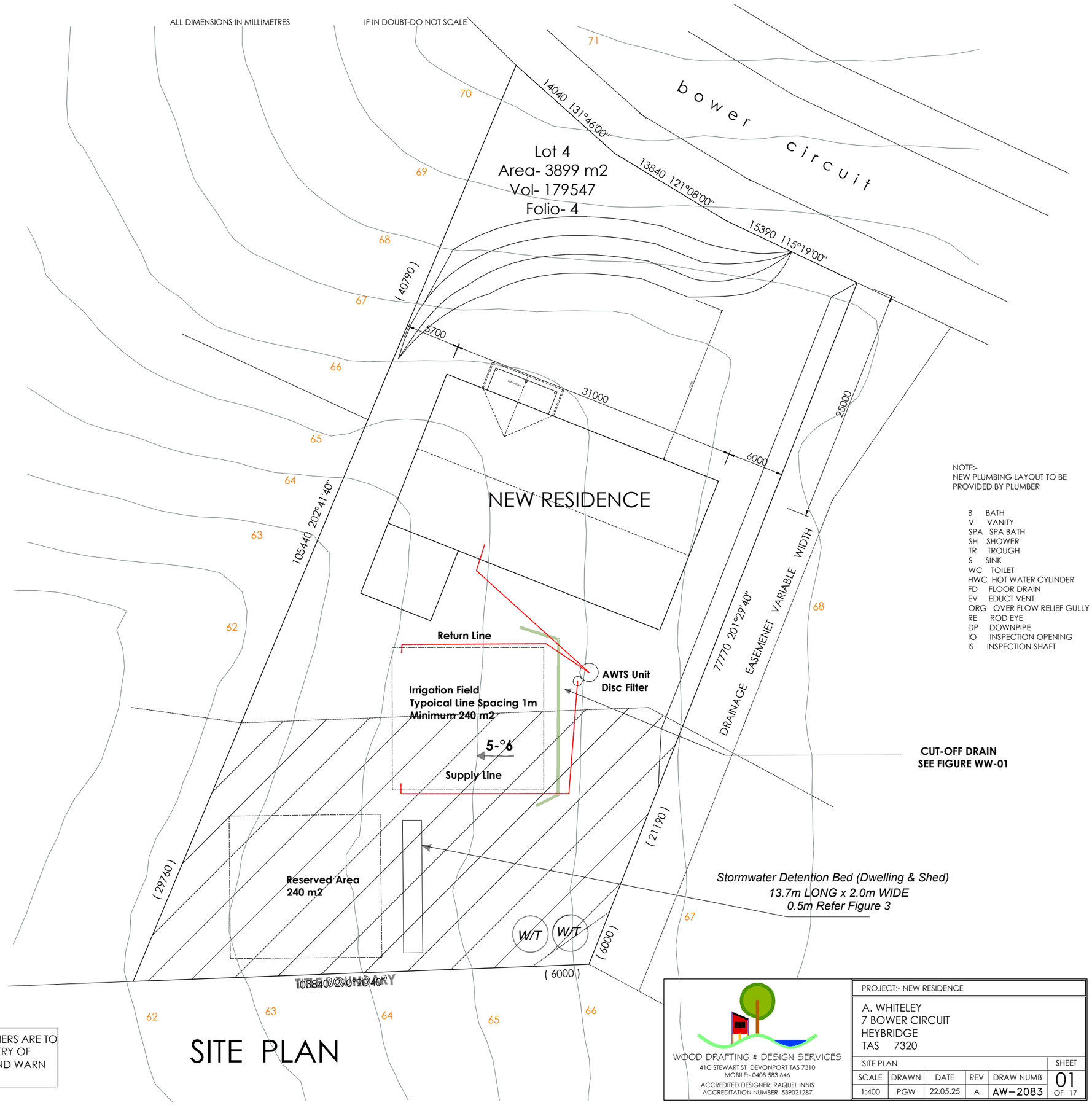
A) BE PROTECTED AGAINST THE EFFECTS OF WEATHER AND SUNLIGHT; AND
B) BE ABLE TO WITHSTAND THE TEMPERATURES WITHIN THE PIPING; AND
C) USE THERMAL INSULATION IN ACCORDANCE WITH AS/NZS 4859.1

HEATED WATER PIPING THAT IS NOT WITHIN A CONDITIONED SPACE MUST BE THERMALLY INSULATED AS FOLLOWS:

1. INTERNAL PIPING
   A) ALL FLOW AND RETURN INTERNAL PIPING THAT IS -
   I) WITHIN AN UNVENTILATED WALL SPACE
   II) WITHIN AN INTERNAL FLOOR BETWEEN STOREYS; OR
   III) BETWEEN CEILING INSULATION AND A CEILING MUST HAVE A MINIMUM R-VALUE OF 0.2 (ie, 9mm OF CLOSED CELL POLYMER INSULATION)
2. PIPING LOCATED WITHIN A VENTILATED WALL SPACE, AN ENCLOSED BUILDING SUBFLOOR OR A ROOF SPACE
   A) ALL FLOW AND RETURN PIPING
   B) COLD WATER SUPPLY PIPING AND RELIEF VALVE PIPING WITHIN 500mm OF THE CONNECTION TO CENTRAL WATER HEATING SYSTEM MUST HAVE A MINIMUM R-VALUE OF 0.45 (ie, 19mm OF CLOSED CELL POLYMER INSULATION)
3. PIPING LOCATED OUTSIDE THE BUILDING OR IN AN UNENCLOSED BUILDING SUB-FLOOR OR ROOF SPACE
   A) ALL FLOW AND RETURN PIPING
   B) COLD WATER SUPPLY PIPING AND RELIEF VALVE PIPING WITHIN 500mm OF THE CONNECTION TO CENTRAL WATER HEATING SYSTEM MUST HAVE A MINIMUM R-VALUE OF 0.6 (ie, 25mm OF CLOSED CELL POLYMER INSULATION)

PIPING WITHIN AN INSULATED TIMBER FRAMED WALL, SUCH AS THAT PASSING THROUGH A WALL STUD, IS CONSIDERED TO COMPLY WITH THE ABOVE INSULATION REQUIREMENTS.

DOWNPIPES MUST NOT SERVE MORE THAN 12m GUTTER LENGTH FOR EACH DOWNPIPE. AS PER ABCB HOUSING PROVISIONS 7.4.5. DOWNPIPES MUST BE LOCATED AS CLOSE AS POSSIBLE TO VALLEY GUTTERS AND, IF THE DOWNPIPE IS MORE THAN 1.2m FROM A VALLEY, PROVISION FOR OVERFLOW MUST BE MADE TO THE GUTTER.



NOTE:-
NEW PLUMBING LAYOUT TO BE PROVIDED BY PLUMBER

B	BATH
V	VANITY
SPA	SPA BATH
SH	SHOWER
TR	TROUGH
S	SINK
WC	TOILET
HWC	HOT WATER CYLINDER
FD	FLOOR DRAIN
EV	EDUCT VENT
ORG	OVER FLOW RELIEF GULLY
RE	ROD EYE
DP	DOWNPIPE
IO	INSPECTION OPENING
IS	INSPECTION SHAFT

SITE PLAN

A3

MASTER BUILDERS TASMANIA PREFERRED SUPPLIER

HIA MEMBER

WARNING SIGNS AND BARRIERS ARE TO BE ERECTED TO PREVENT ENTRY OF UNAUTHORISED PERSONS AND WARN OF DANGERS ON SITE

WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
MOBILE:- 0408 583 646
ACCREDITED DESIGNER: RAQUEL INNIS
ACCREDITATION NUMBER 539021287

PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

SITE PLAN					SHEET
SCALE	DRAWN	DATE	REV	DRAW NUMB	01 OF 17
1:400	PGW	22.05.25	A	AW–2083	

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE

67
66
65
64
63
62
68

5700

31000

6000

25000

VERANDAH

NEW RESIDENCE

105440 202°41'40"

77770 201°29'40"

DRAINAGE EASEMENET VARIABLE WIDTH

Return Line

AWTS Unit
Disc Filter

Irrigation Field
Typoical Line Spacing 1m
Minimum 240 m2

5-°6

Supply Line

A3

MASTER BUILDERS
TASMANIA
PREFERRED SUPPLIER

HIA
MEMBER

WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
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ACCREDITATION NUMBER 539021287

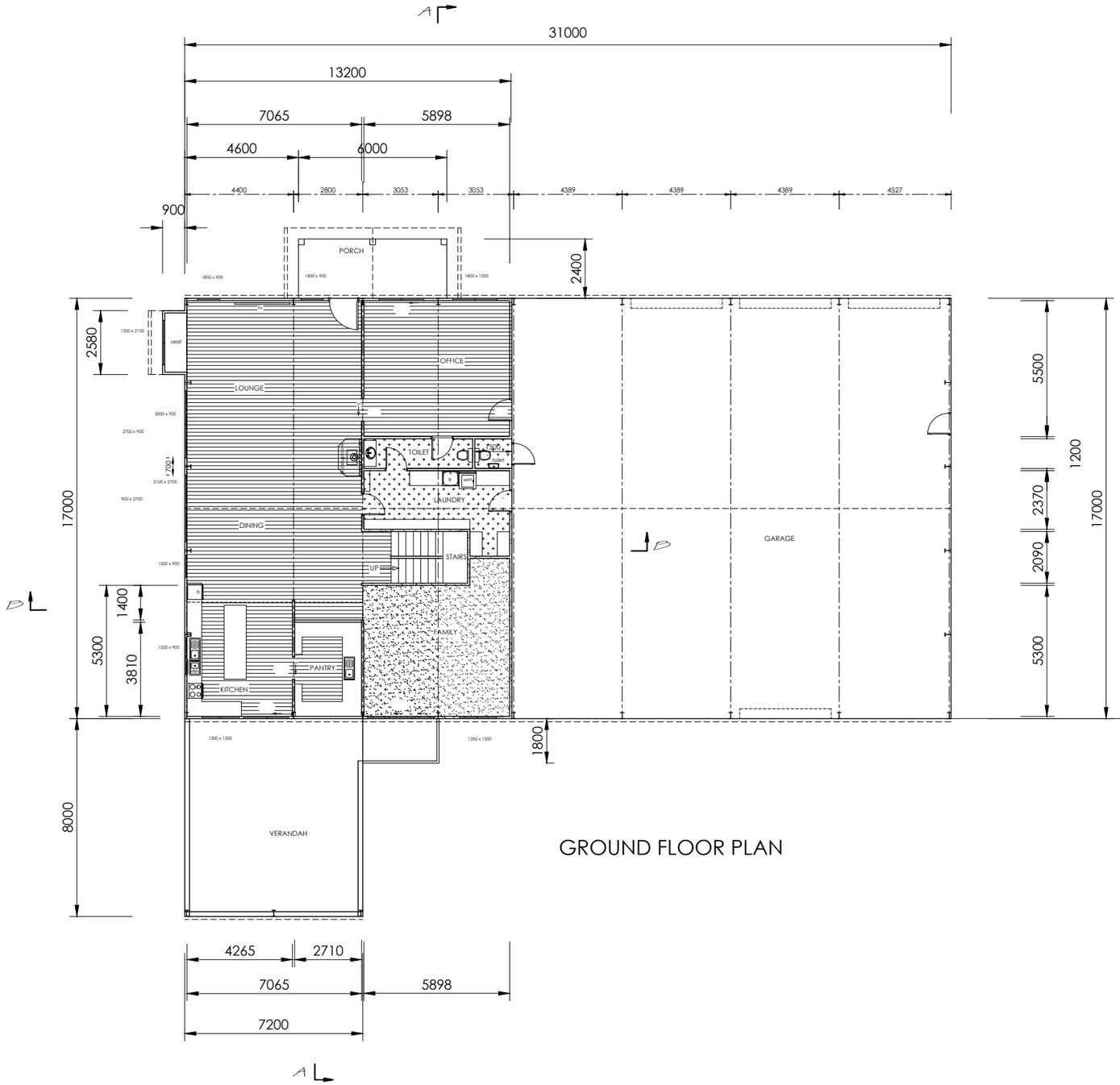
PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

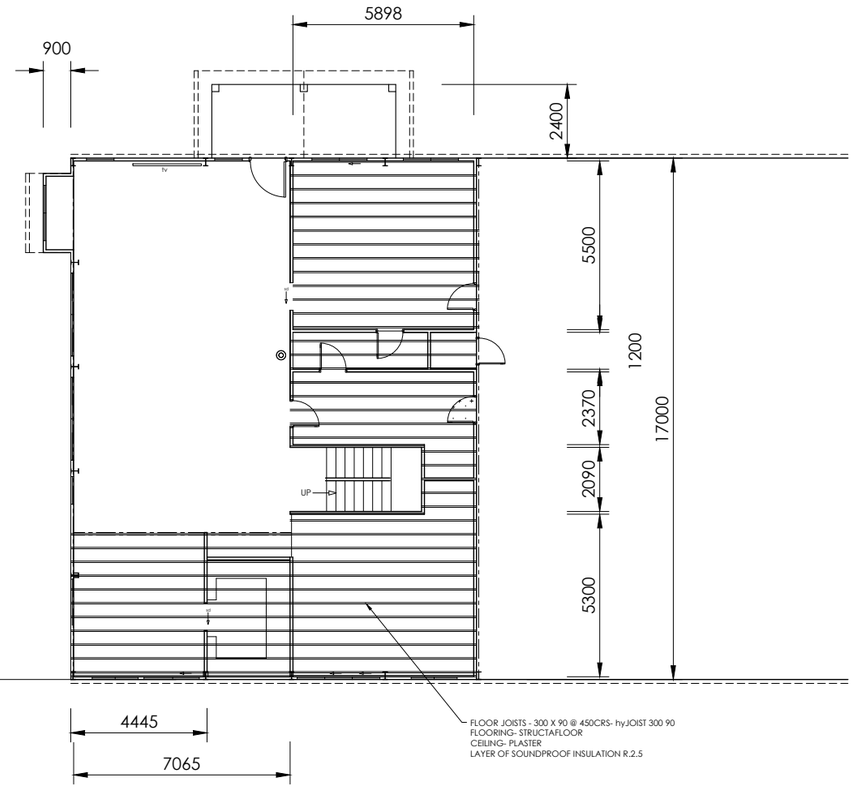
DRAINAGE PLAN

SCALE	DRAWN	DATE	REV	DRAW NUMB	SHEET
1:100	PGW	22.05.25	A	AW–2083	02 OF 17

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE



GROUND FLOOR PLAN



UPPER FLOOR JOIST PLAN

TILES

CARPET

VINYL

H/W TIMBER FLOOR BOARDS

FLOOR AREAS -	
GROUND FLOOR	224.4 m²
FIRST FLOOR	136.5 m²
VERANDAH	57.6 m²
PORCH	14.4 m²
GARAGE	302.6 m²
TOTAL	735.5 m²

A3

MASTER BUILDERS TASMANIA PREFERRED SUPPLIER

HIA MEMBER

WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
MOBILE:- 0408 583 646
ACCREDITED DESIGNER: RAQUEL INNIS
ACCREDITATION NUMBER 539021287

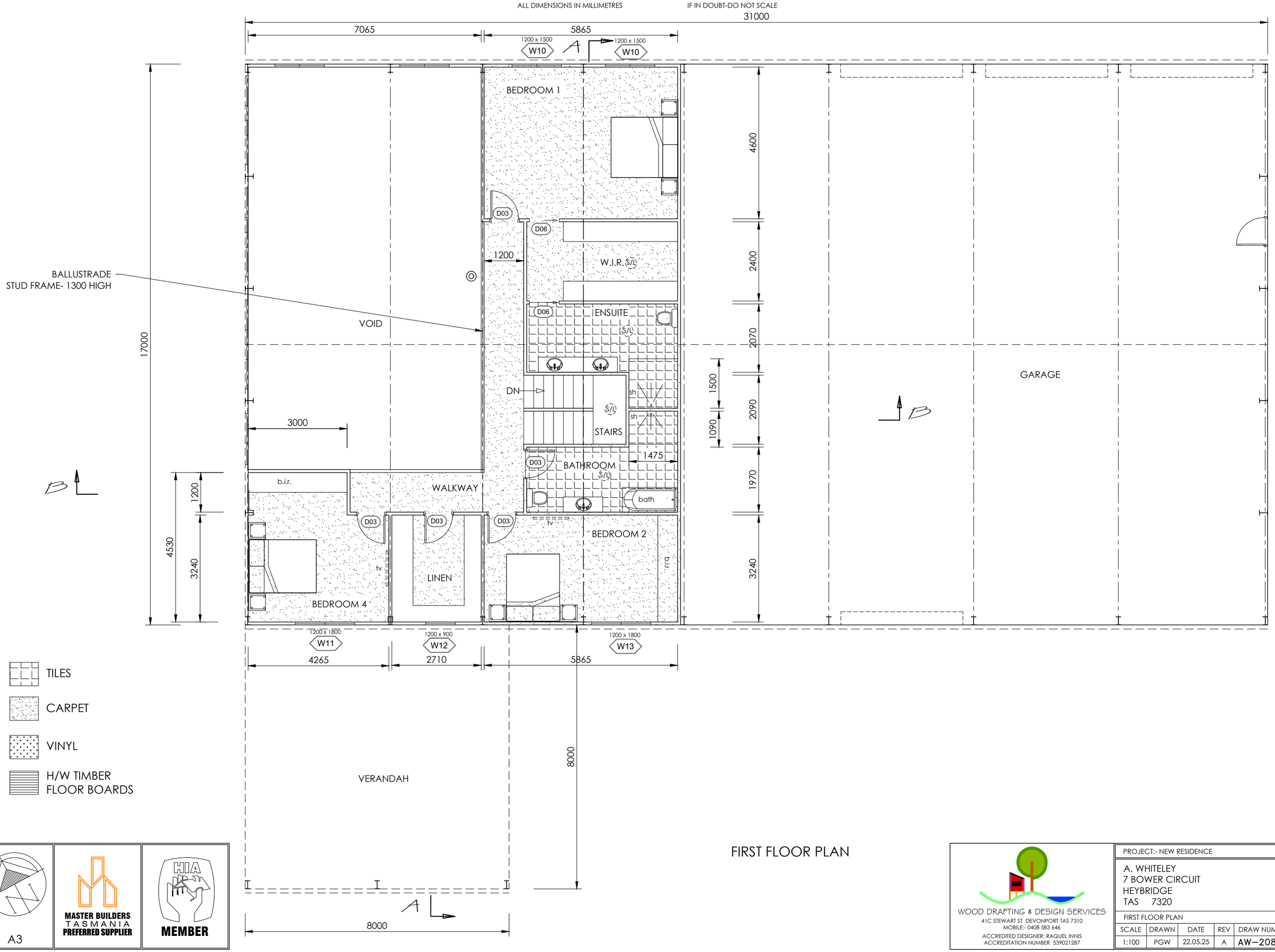
PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

GROUND FLOOR PLAN — SHEET 02 OF 17

SCALE	DRAWN	DATE	REV	DRAW NUMB
1:200	PGW	22.05.25	A	AW–2083

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE



TILES

CARPET

VINYL

H/W TIMBER FLOOR BOARDS

FIRST FLOOR PLAN

A3

MASTER BUILDERS TASMANIA PREFERRED SUPPLIER

HIA MEMBER

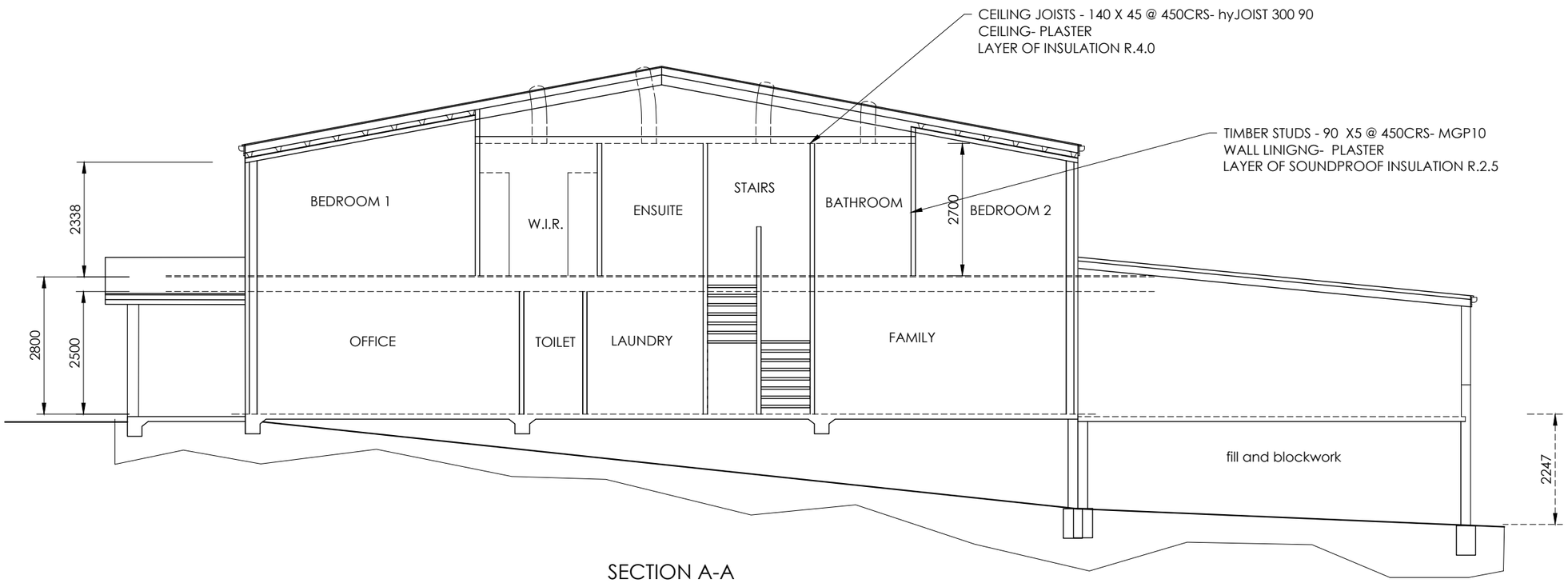
WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
MOBILE:- 0408 583 646
ACCREDITED DESIGNER: RAQUEL INNIS
ACCREDITATION NUMBER 539021287

PROJECT:- NEW RESIDENCE

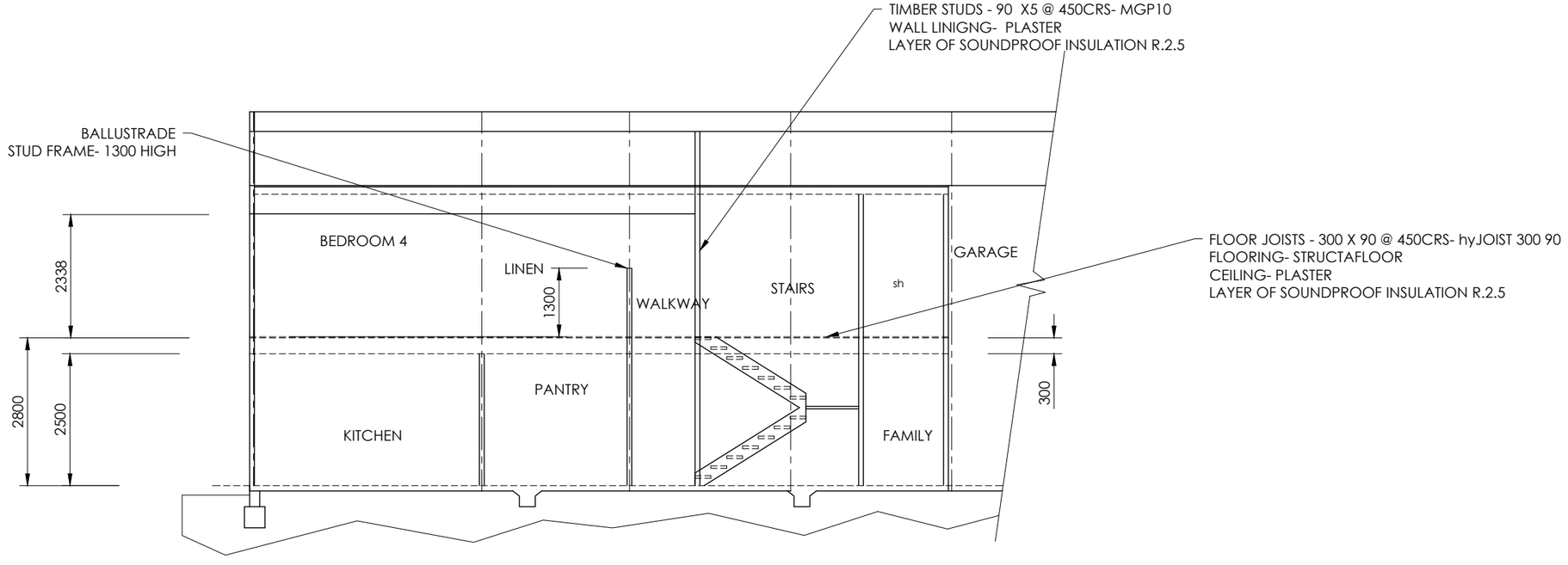
A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

FIRST FLOOR PLAN					SHEET
SCALE	DRAWN	DATE	REV	DRAW NUMB	03 OF 17
1:100	PGW	22.05.25	A	AW–2083	

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE



SECTION A-A



SECTION B-B

A3

MASTER BUILDERS TASMANIA PREFERRED SUPPLIER

HIA MEMBER

WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
MOBILE:- 0408 583 646
ACCREDITED DESIGNER: RAQUEL INNIS
ACCREDITATION NUMBER 539021287

PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

SECOND FLOOR PLAN — SHEET 04 OF 17

SCALE	DRAWN	DATE	REV	DRAW NUMB
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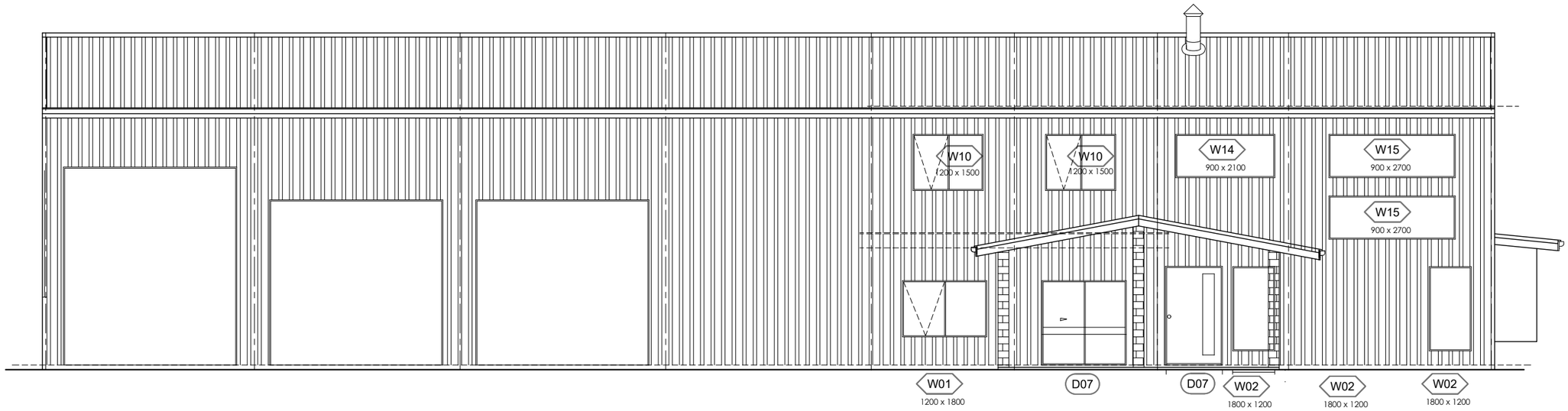
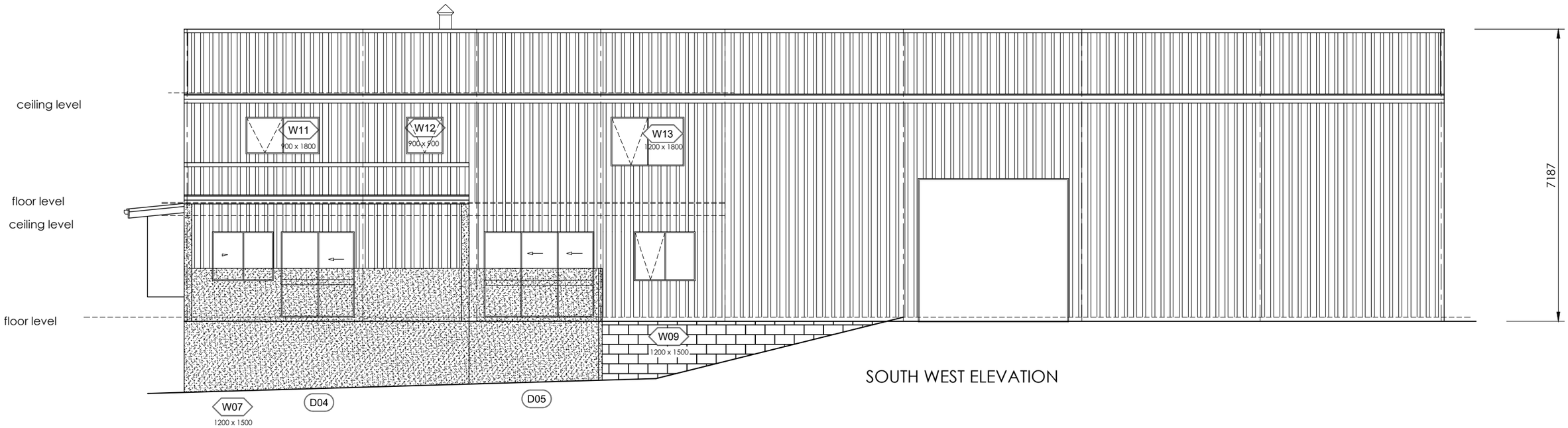
ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE



NORTH EAST ELEVATION



SOUTH WEST ELEVATION

FIRST FLOOR PLAN

A3

MASTER BUILDERS TASMANIA PREFERRED SUPPLIER

HIA MEMBER

WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
MOBILE:- 0408 583 646
ACCREDITED DESIGNER: RAQUEL INNIS
ACCREDITATION NUMBER 539021287

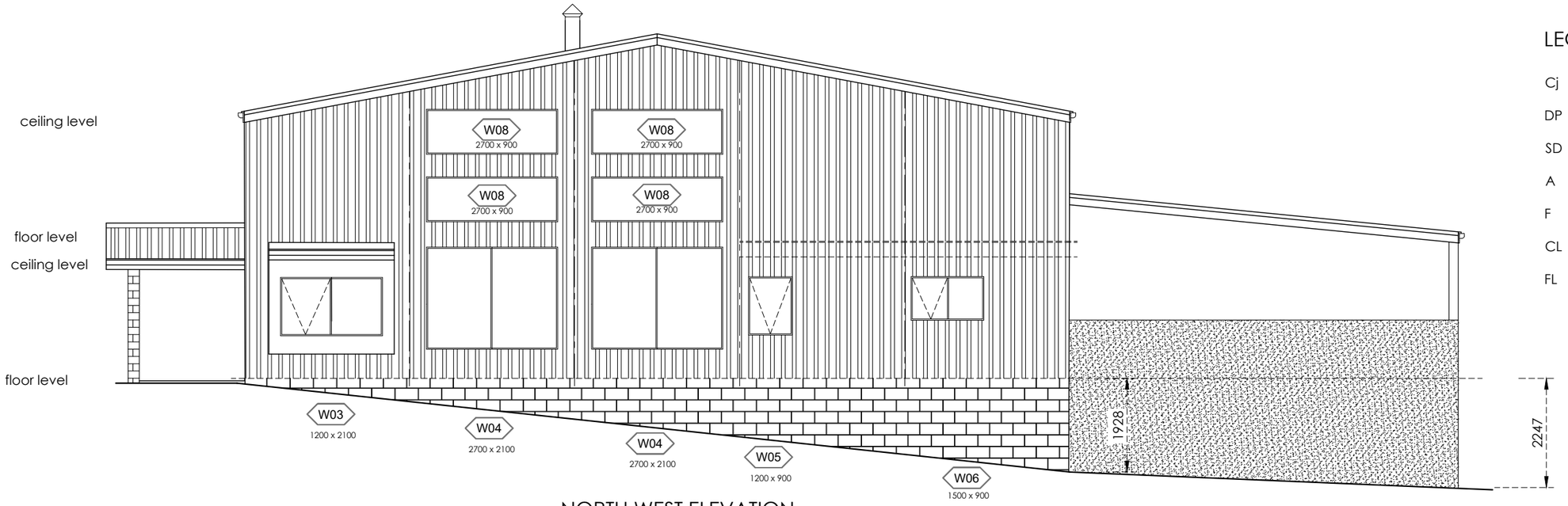
PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

ELEVATIONS — SHEET 05 OF 17

SCALE	DRAWN	DATE	REV	DRAW NUMB
1:100	PGW	22.05.25	A	AW–2083

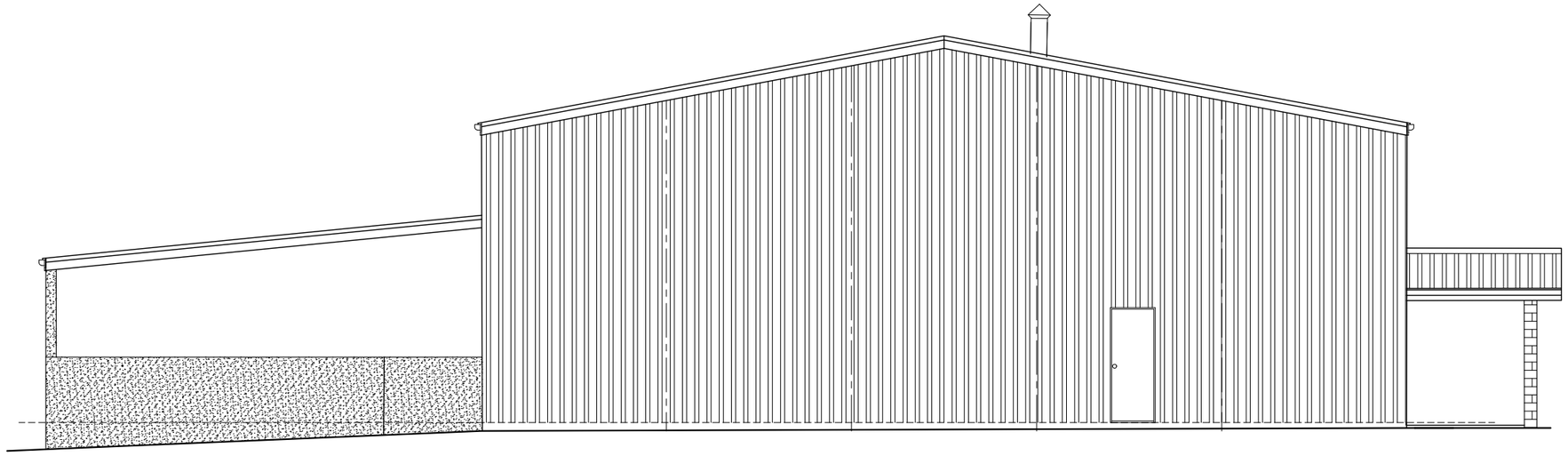
ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE



NORTH WEST ELEVATION

LEGEND & NOTES - Elevations

Cj	Control joint
DP	Downpipe
SD	Sliding door
A	Awning window
F	Fixed window
CL	Cieling level
FL	Floor level



SOUTH EAST ELEVATION

A3

MASTER BUILDERS TASMANIA PREFERRED SUPPLIER

HIA MEMBER

WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
MOBILE:- 0408 583 646
ACCREDITED DESIGNER: RAQUEL INNIS
ACCREDITATION NUMBER 539021287

PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

ELEVATIONS — SHEET 06 OF 17

SCALE	DRAWN	DATE	REV	DRAW NUMB
1:100	PGW	22.05.25	A	AW–2083

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE

WINDOW SCHEDULE

WHITELEY – 2083
RLW – 5800
WIND RATING N2 – BAL12.5

NUMBER	HEIGHT	WIDTH	QTY	U Value	SHG	OPENING	TYPE	GLAZING	LINTEL	STUD	WALL	ORIENTATION
W1	1.2	1.8	1	4.8	0.51	1.080	ALUMINIUM AWNING	Double	190 x 45 – F17 HARDWOOD	Single	B/V	NORTH WEST
							Grade A glass min – 4mm					
W2	1.8	0.9	2	4.8	0.51	0.810	ALUMINIUM FIXED	Double	90 x 45 – F17 HARDWOOD	Single	B/V	NORTH EAST
							Grade A glass min – 4mm					
W3	1.2	2.1	1	4.8	0.51	1.638	ALUMINIUM AWNING	Double	190 x 45 – F17 HARDWOOD	Single	B/V	NORTH WEST
							Grade A glass min – 4mm					
W4	2.1	2.7	2	4.8	0.51	1.985	ALUMINIUM FIXED	Double	190 x 45 – F17 HARDWOOD	Single	B/V	NORTH WEST
							Grade A glass min – 4mm					
W5	1.2	0.9	1	4.8	0.51	0.000	ALUMINIUM PICTURE	Double	90 x 45 – F17 HARDWOOD	Double	B/V	SOUTH WEST
							Grade A glass min – 4mm					
W6	0.9	1.5	1	4.8	0.51	0.675	ALUMINIUM AWNING	Double	90 x 45 – F17 HARDWOOD	Double	B/V	SOUTH WEST
							Grade A glass min – 4mm					
W7	1.2	1.5	1	4.8	0.51	0.630	ALUMINIUM AWNING	Double	90 x 45 – F17 HARDWOOD	Single	B/V	NORTH WEST
							Grade A glass min – 4mm					
W8	0.9	0.9	1	4.8	0.51	0.284	ALUMINIUM FIXED	Double	90 x 45 – F17 HARDWOOD	Double	B/V	SOUTH WEST
							Grade A glass min – 4mm					
W9	1.2	1.5	1	4.8	0.51	0.630	ALUMINIUM AWNING	Double	90 x 45 – F17 HARDWOOD	Double	B/V	SOUTH EAST
							Grade A glass min – 4mm					
W10	1.2	1.5	2	4.8	0.51	1.800	ALUMINIUM AWNING	Double	90 x 45 – F17 HARDWOOD	Single	B/V	SOUTH EAST
							Grade A glass min – 4mm					
W11	0.9	1.8	1	4.8	0.51	1.053	ALUMINIUM AWNING	Double	190 x 45 – F17 HARDWOOD	Single	B/V	SOUTH EAST
							Grade A glass min – 4mm					
W12	0.9	0.9	1	4.8	0.51	0.405	ALUMINIUM AWNING	Double	90 x 45 – F17 HARDWOOD	Double	B/V	SOUTH EAST
							Grade A glass min – 4mm					
W13	1.2	1.8	1	4.8	0.51	0.756	ALUMINIUM AWNING	Double	190 x 45 – F17 HARDWOOD	Double	B/V	SOUTH WEST
							Grade A glass min – 4mm					
W14	0.9	2.1	1	4.8	0.51	0.945	ALUMINIUM FIXED	Double	190 x 45 – F17 HARDWOOD	Double	B/V	SOUTH EAST
							Grade A glass min – 4mm					
W15	0.9	2.7	2	4.8	0.51	1.215	ALUMINIUM FIXED	Double	190 x 45 – F17 HARDWOOD	Double	B/V	NORTH EAST
							Grade A glass min – 4mm					

DOOR SCHEDULE

WHITELEY – 2083
RLW – 5800
WIND RATING N2 – BAL12.5

NUMBER	HEIGHT	WIDTH	QTY	U Value	SHG	OPENING	TYPE	GLAZING	LINTEL	STUD	WALL	ORIENTATION
D1	2.1	1.2	1				TIMBER FEATURE	Double	190 x 45 – F17 HARDWOOD	Single	STUD	NORTH EAST
D2	2.1	1.8	1	4.8	0.55	1.890	ALUMINIUM SLIDING	Double	190 x 45 – F17 HARDWOOD	Double	STUD	NORTH EAST
D3	2.04	0.87	9				TIMBER PANEL		90 x 45 – F17 HARDWOOD	Single	STUD	
D4	2.04	0.92	2	4.8	0.55	0.938	ALUMINIUM SLIDING	Double	90 x 45 – F17 HARDWOOD	Single	STUD	NORTH WEST
D5	2.1	2.7	1	4.8	0.55	2.835	ALUMINIUM SLIDING	Double	190 x 45 – F17 HARDWOOD	Double	STUD	NORTH WEST
D6	2.04	0.87	3				CAVITY SLIDING		90 x 45 – F17 HARDWOOD	Single	STUD	
D7	2.04	0.87	2				TIMBER PANEL SOILD		90 x 45 – F17 HARDWOOD	Single	STUD	
D8	2.04	0.9	1				TIMBER BARN DOOR		90 x 45 – F17 HARDWOOD	Single	STUD	

WINDOW & DOOR SCHEDULE NOTES

FLYSCREENS TO BE FITTED TO ALL OPENABLE WINDOWS AND DOORS (ENTRY EXEMPT).
GLAZING TYPES AVAILABLE IN TASMANIA CAN BE ACCESSED AT WWW.WERS.NET.

SHOWER SCREENS

1800H SEMI-FRAMELESS SHOWER SCREENS TO COMPLY WITH ABCB HOUSING PROVISIONS TABLE 8.4.2 & AS1288. MINIMUM 4mm THICK GRADE A TOUGHENED SAFETY GLASS, LABELLED TO COMPLY WITH INDUSTRY STANDARDS.

OPAQUE BANDS

WHERE GLAZED DOORS OR SIDE PANELS ARE CAPABLE OF BEING MISTAKEN FOR A DOORWAY OR OPENING, THE GLASS MUST BE MARKED TO MAKE IT READILY VISIBLE AS FOLLOWS:
- MARKING IN THE FORM OF AN OPAQUE BAND NOT LESS THAN 20mm IN HEIGHT;
- THE UPPER EDGE IS NOT LESS THAN 700mm ABOVE THE FLOOR;
- THE LOWER EDGE IS NOT MORE THAN 1200mm ABOVE THE FLOOR.

FLASHINGS TO WALL OPENINGS

ALL OPENINGS MUST BE ADEQUATELY FLASHED USING MATERIALS THAT COMPLY WITH AS/NZS2904. REFER TO DRAWING A15 FOR WINDOW HEAD AND SILL DETAILS. FLASHING TO BE INSTALLED WITH GLAZING MANUFACTURER'S SPECIFICATIONS FOR BRICK VENEER CONSTRUCTION.

PROTECTION OF OPENABLE WINDOWS

A WINDOW OPENING MUST BE PROVIDED WITH PROTECTION, IF THE FLOOR BELOW THE WINDOW IN A BEDROOM IS 2m OR MORE ABOVE THE SURFACE BENEATH.

SANITARY COMPARTMENT (WC OR TOILET) DOORS

SANITARY COMPARTMENT DOORS TO COMPLY WITH PART 10.4.2 OF ABCB HOUSING PROVISION. "CONSTRUCTION OF SANITARY COMPARTMENTS". SANITARY COMPARTMENT DOORS MUST BE FITTED WITH "LIFT OFF" HINGES (EXCLUDING SLIDING & OUTWARD OPENING DOORS), UNLESS THERE IS A CLEAR SPACE OF AT LEAST 1.2m, MEASURED IN ACCORDANCE WITH BCA FIGURE 10.4.2, BETWEEN THE CLOSEST PAN WITHIN THE SANITARY COMPARTMENT AND THE DOORWAY. PROTECT THE WINDOWS BY ONE OF THE FOLLOWING METHODS:
A) A DEVICE CAPABLE OF RESTRICTING THE WINDOW OPENING; OR
B) A SCREEN WITH SECURE FITTINGS.

NOTE:
ALL WINDOWS & DOORS ARE SHOWN AS REPRESENTATIONAL ONLY. IT IS THE RESPONSIBILITY OF THE BUILDER AND CLIENT TO REVIEW ALL WINDOW & DOOR STYLE'S PRIOR TO ORDERING. THIS INCLUDES DOOR MATERIAL (I.E. ALUMINUM/TIMBER) & COLOUR, FRAME COLOUR, AWNING/SLIDING OPERATION (INCLUDING SLIDING DOORS), GLASS TINT & TRANSOM & MULLION LAYOUT.

THE DEVICE OR SCREEN MUST:

A) NOT PERMIT A 125mm SPHERE TO PASS THROUGH THE WINDOW OPENING OR SCREEN; AND
B) RESIST AN OUTWARD HORIZONTAL ACTION OF 250N AGAINST THE:
WINDOW RESTRAINED BY A DEVICE; OR
SCREEN PROTECTING THE OPENING; AND
C) HAVE A CHILD RESISTANT RELEASE MECHANISM IF THE SCREEN OR DEVICE IS ABLE TO BE REMOVED, UNLOCKED OR OVERRIDDEN.

BAL COMPLIANCE
ALL WINDOWS TO BE ALUMINIUM FRAMED. SCREENS TO BE MADE FROM ALUMINIUM FRAME WITH MESH OF 2mm MAX APERTURE. MESH TO BE MADE FROM CORROSION RESISTANT STEEL, BRONZE OR ALUMINIUM. WHEN FITTED THE GAP FROM THE EDGE OF THE WINDOW FRAME TO THE EDGE OF THE SCREEN FRAME SHALL NOT BE GREATER THAN 3mm. AS PER AS-3595:2018 5.5.1A

SAFETY GLAZING NOTE
WINDOWS AND GLASS MARKED WITH THIS SYMBOL ARE WITHIN 400mm OR CLOSER TO THE GROUND AND AS SUCH THE GLAZING PANEL MARKED WITH THIS SYMBOL SHALL BE 4mm THICK MIN SAFETY GLASS ALL AS PER AS-3959:2018 5.5.2 (c) (iii).

A3

MASTER BUILDERS TASMANIA PREFERRED SUPPLIER

HIA MEMBER

WINDOW SCHEDULE

WOOD DRAFTING & DESIGN SERVICES
41C STEWART ST DEVONPORT TAS 7310
MOBILE:- 0408 583 646
ACCREDITED DESIGNER: RAQUEL INNIS
ACCREDITATION NUMBER 539021287

PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

WINDOW & DOOR SCHEDULE					SHEET
SCALE	DRAWN	DATE	REV	DRAW NUMB	07 OF 17
1:100	PGW	22.05.25	A	AW–2083	

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE

ROOF PLAN LEGEND & NOTES

DP - 90mm UPVC STORMWATER DOWNPIPES

— —— — - BUILDING ENVELOPE OUTLINE

——————— - ROOF & GUTTER OUTLINE

[ex] - EXHAUST VENT - 400 X 200 (x 00)

[sv] - SUPPLY VENT - 400 X 200 (x 00)

ALL EXHAUST/EXTRACTION FANS TO BE DUCTED TO EAVE VENT

[Ex.] - BATHROOM HEATER/EXHAUST/LIGHT

(F) - EXHAUST FAN ONLY

[R/H.] - KITCHEN RANGEHOOD

REFER TO ENGINEER DRAWINGS AND SPECIFICATIONS

ROOF CLADDING - ABCB HOUSING PROVISIONS PART 7.2
METAL SHEETING INSTALLED IN ACCORDANCE WITH PART AS1562.1 AND MANUFACTURERS SPECIFICATIONS REFER TO LYSAGHT ROOFING & WALLING MANUAL FOR FULL DETAILS ON SHEET INSTALLATION, FIXINGS & FLASHINGS.

CORROSION PROTECTION IN ACCORDANCE WITH ABCB HOUSING PROVISIONS TABLE 7.2.2a.

END LAP OF SHEETS 5 -15 DEGREES - MINIMUM 200mm
ABOVE 15 DEGREES - MINIMUM 150mm

1) RIDGE LINE VALLEY TO BE TURNED UP (STOP ENDED)
2) FASTENERS TO BE MADE OF COMPATIBLE MATERIAL WITH ROOFING MATERIAL.
3) CREST FIXINGS OF END SPAN @ EVERY SECOND RIB AND INTERNAL SPANS AT EVERY THIRD RIB.
4) WHERE POSSIBLE SHEETS TO BE LAID WITH SIDE LAPS FACING AWAY FROM PREVAILING WEATHER.
5) REFLECTIVE FOIL INSULATION TO BE FITTED TO UNDERSIDE OF SHEETS.

RECOMMENDED FIXINGS FOR SEVERE WEATHER EXPOSURE TO AS 3566. USE CLASS 4 MATERIALS FOR SEVERE WEATHER EXPOSURE & STAINLESS STEEL FOR VERY SEVERE COASTAL ENVIRONMENTS.

BATTENS TYPICALLY 70x35 DEEP MGP10 AT 450 CRS SEE ABCB HOUSING PROVISIONS FIGURE 7.2.4 FOR DEFINITION OF INTERNAL AND END SPANS.

VAPOUR PERMEABLE SARKING INSTALLED AS PER MANUFACTURER'S INSTRUCTIONS. ENSURE THERE IS A CLEAR UNIMPEDED PATH OF TRAVEL FOR WATER TO ESCAPE FROM SARKING INTO THE EAVES GUTTER. ADDITIONAL BATTENS OR BLOCKING PIECES MAY BE REQUIRED.

SARKING MUST COMPLY WITH AS/NZS 4200 PARTS 1 AND 2.

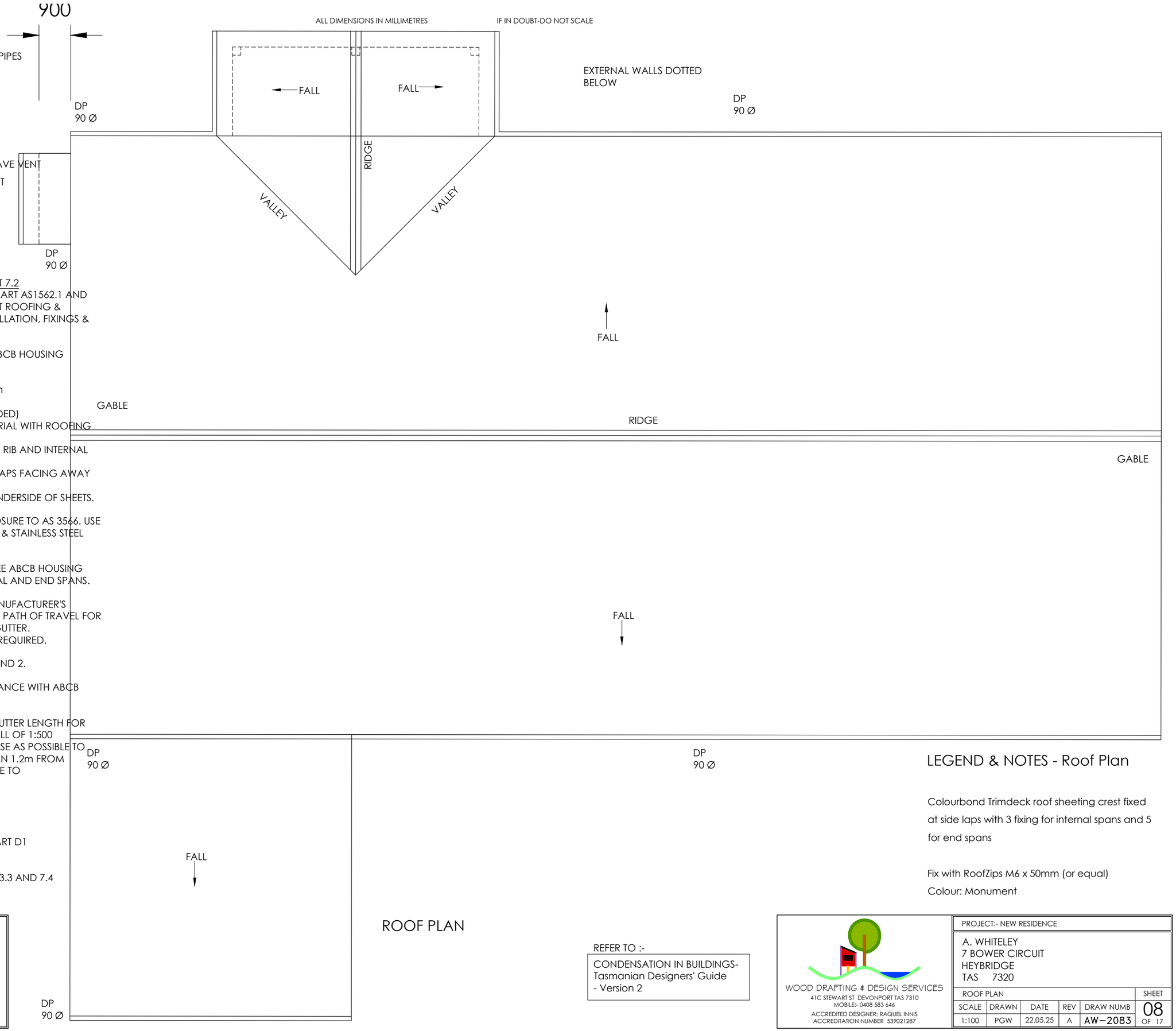
GUTTERS & DOWNPIPES TO BE SELECTED IN ACCORDANCE WITH ABCB HOUSING PROVISION PART 7.4 & TABLE 7.4.3

DOWNPIPES MUST NOT SERVE MORE THAN 12m OF GUTTER LENGTH FOR EACH DOWNPIPE. EAVE GUTTER INSTALLED WITH A FALL OF 1:500 (NORMALLY). DOWNPIPES MUST BE LOCATED AS CLOSE AS POSSIBLE TO VALLEY GUTTERS AND, IF THE DOWNPIPE IS MORE THAN 1.2m FROM A VALLEY, PROVISION FOR OVERFLOW MUST BE MADE TO THE GUTTER.

ROOF CLADDING TO COMPLY WITH AS 1562.1.

ROOF DRAINAGE MUST COMPLY WITH:

- PLUMBING CODE OF AUSTRALIA PART D1
- AS/NZS 3500.3
- ABCB HOUSING PROVISION PARTS 3.3 AND 7.4 (DEEMED TO SATISFY PROVISIONS)



ROOF PLAN

LEGEND & NOTES - Roof Plan

Colourbond Trimdeck roof sheeting crest fixed at side laps with 3 fixing for internal spans and 5 for end spans

Fix with RoofZips M6 x 50mm (or equal)
Colour: Monument

REFER TO :-

CONDENSATION IN BUILDINGS- Tasmanian Designers' Guide - Version 2

A3

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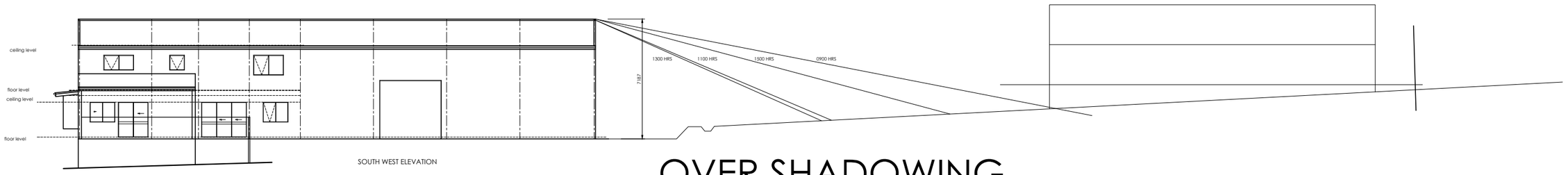
PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

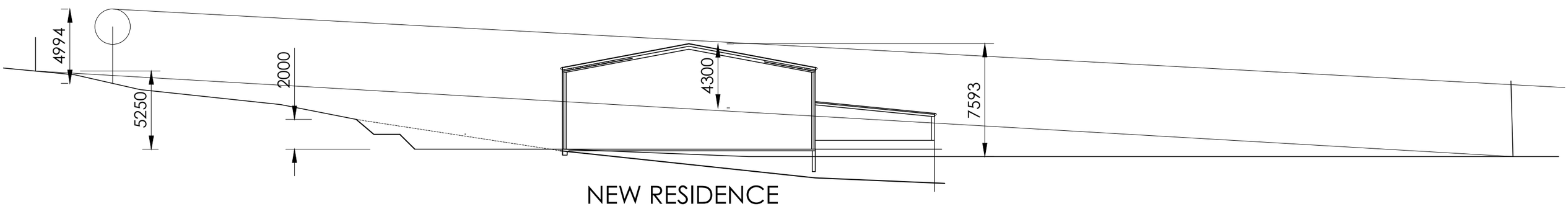
ROOF PLAN					SHEET
SCALE	DRAWN	DATE	REV	DRAW NUMB	08 OF 17
1:100	PGW	22.05.25	A	AW–2083	

ALL DIMENSIONS IN MILLIMETRES IF IN DOUBT-DO NOT SCALE



OVER SHADOWING

STREET



LONG SECTION

A3

MASTER BUILDERS TASMANIA PREFERRED SUPPLIER

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WOOD DRAFTING & DESIGN SERVICES
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PROJECT:- NEW RESIDENCE

A. WHITELEY
7 BOWER CIRCUIT
HEYBRIDGE
TAS 7320

FOUNDATION PLAN — SHEET 10 OF 17

SCALE	DRAWN	DATE	REV	DRAW NUMB
1:100	PGW	22.05.25	A	AW–2083