32-34 Georges Bay Esplanade St Helens Tasmania 7216 T: 03 6376 7900 ABN 96 017 131 248



# **Development Applications**

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

DA Number	DA 2025 / 00051
Applicant	Prime Design
Proposal	Residential - Construction of a Single Dwelling, Retrospective Approval of Two
	Existing Garden Sheds and Demolition of One Garden Shed
Location	33 Penelope Street, St Helens

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

Representations must be submitted in writing to the General Manager, Break O'Day Council, 32 -34 Georges Bay Esplanade, St Helens 7216 or emailed to <u>admin@bodc.tas.gov.au</u>, and referenced with the Application Number in accordance with section 57(5) of the abovementioned Act during the fourteen (14) day advertised period commencing on Saturday 28<sup>th</sup> June, 2025 **until 5pm Friday 11<sup>th</sup> July, 2025.** 

John Brown GENERAL MANAGER

# PROPOSED NEW RESIDENCE 33 PENELOPE STREET ST HELENS L.K. & T.J. BROWN PDH24091

# **BUILDING DRAWINGS**

- No DRAWING
- 01 SITE PLAN
- 02 PART SITE PLAN
- 03 SITE DRAINAGE PLAN
- 04 LOCALITY PLAN
- 05 FLOOR PLAN
- 06 DOOR AND WINDOW SCHEDULES
- 07 ELEVATIONS
- 08 ELEVATIONS
- 09 ROOF PLAN
- 10 PERSPECTIVES

FLOOR AREA	104.81	m2	(11.28	SQUARES )
DECK AREA	14.99	m2	(1.61	SQUARES )
TOTAL AREA	119.80		12.90	



GENERAL PROJECT INFORMATION TITLE REFERENCE: 122828/2 SITE AREA: 1757m<sup>2</sup> DESIGN WIND SPEED: N3 SOIL CLASSIFICATION: M CLIMATE ZONE: 7 ALPINE AREA: NO CORROSIVE ENVIRONMENT:MEDIUM/MODERATE BAL RATING: N/A OTHER KNOWN HAZARDS: AIRPORT OBSTACLE LIMITATION AREA, PRIORITY VEGETATION AREA



# PLANNING

# Prime Design your build, your way

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# JUNE 2025

- GENERAL NOTES

- ALLOW FOR WALL LININGS • CONFIRM ALL FLOOR AREAS
- SEWER BEFORE CONSTRUCTION COMMENCES
- STRUCTURAL DRAWINGS
- CONSTRUCTION
- CONDITIONS

SETBACKS

REFER TO DIMENSIONS AND ELEVATIONS FOR FURTHER DETAILS.

SITE COVERAGE BUILDING FOOTPRINT 196 /SITE AREA 1757 = 0.1115 TOTAL SITE COVERAGE 11.15%

PRIVATE OPEN SPACE 24m<sup>2</sup> MINIMUM WITH A MINIMUM DIMENSION OF 4m GRADIENT NO STEEPER THAN 1:10

### DEMOLITION NOTE:

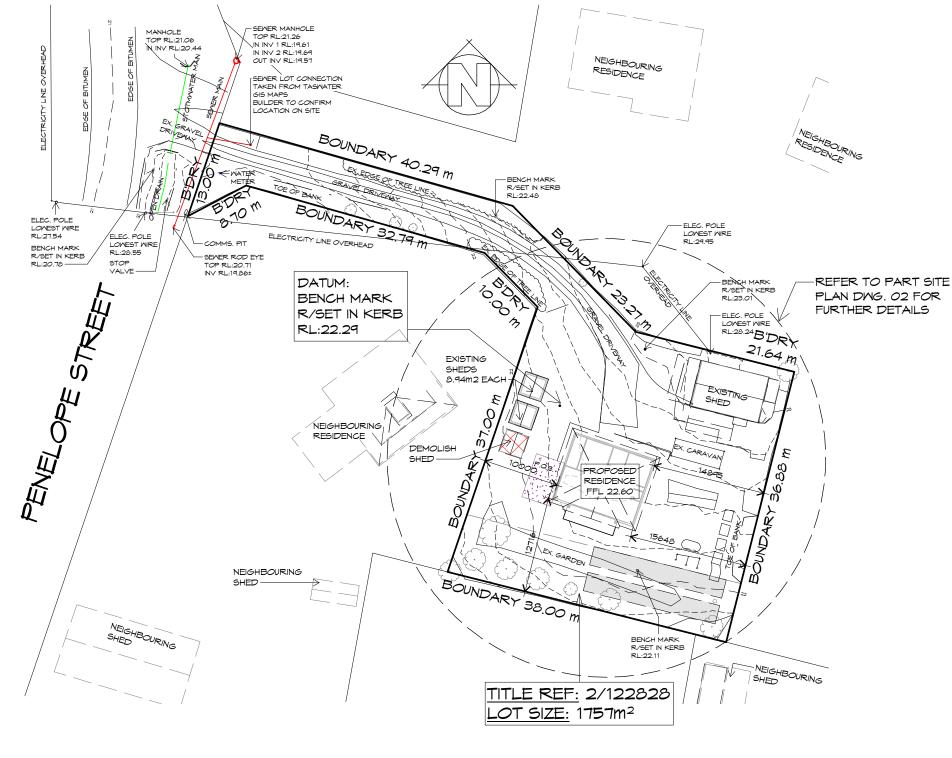
- BE DONE IN A SAFE MANNER
- BUILDER TO PROP WHERE REQUIRED. IF UNSURE CONTACT ENGINEER OR DESIGNER.
- · CAP ALL PLUMBING.
- BOARD/STREET 1 OF FEED INTO SITE.
- ENSURE NO CONTAMINATES GO INTO STORM WATER/SEWER WATER LINES.
- ASBESTOS PRIOR TO ANY WORKS

Project:

**PROPOSED NEW RESIDENCE 33 PENELOPE STREET** ST HELENS

Client name: L.K. & T.J. BROWN

Drafted by: S.P.	Approved by: F.G.



# SITE PLAN

1:500





# Prime Design

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 CHECK & VERIFY ALL DIMENSIONS & LEVELS ON SITE • WRITTEN DIMENSIONS TO TAKE PREFERENCE OVER SCALED • ALL WORK TO BE STRICTLY IN ACCORDANCE WITH NCC 2022, ALL S.A.A.. CODES & LOCAL AUTHORITY BY-LAWS • ALL DIMENSIONS INDICATED ARE FRAME TO FRAME AND DO NOT

• ALL PLUMBING WORKS TO BE STRICTLY IN ACCORDANCE WITH A.S. 3500, NCC 2022 & APPROVED BY COUNCIL INSPECTOR BUILDER/PLUMBER TO ENSURE ADEQUATE FALL TO SITE CONNECTION POINTS IN ACCORDANCE WITH A.S. 3500 FOR STORMWATER AND • THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEER'S

• ALL WINDOWS AND GLAZING TO COMPLY WITH A.S. 1288 & A.S. 2047 • ALL SET OUT OF BUILDINGS & STRUCTURES TO BE CARRIED OUT BY A REGISTERED LAND SURVEYOR AND CHECKED PRIOR TO

. IF CONSTRUCTION OF THE DESIGN IN THIS SET OF DRAWINGS DIFFER FROM THE DESIGN AND DETAIL IN THESE AND ANY ASSOCIATED DOCUMENTS BUILDER AND OWNER ARE TO NOTIFY DESIGNER • BUILDER'S RESPONSIBILITY TO COMPLY WITH ALL PLANNING

 BUILDER TO HAVE STAMPED BUILDING APPROVAL DRAWINGS AND PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION

• IT IS THE BUILDERS RESPONSIBILITY THAT ALL WORKS TO

• ALL ELECTRICAL TO BE DISCONNECTED AT MAINS • BUILDERS RESPONSIBILITY TO KEEP SITE CLEAN TO · BUILDER TO HAVE SITE INSPECTED/TESTED FOR

Date:

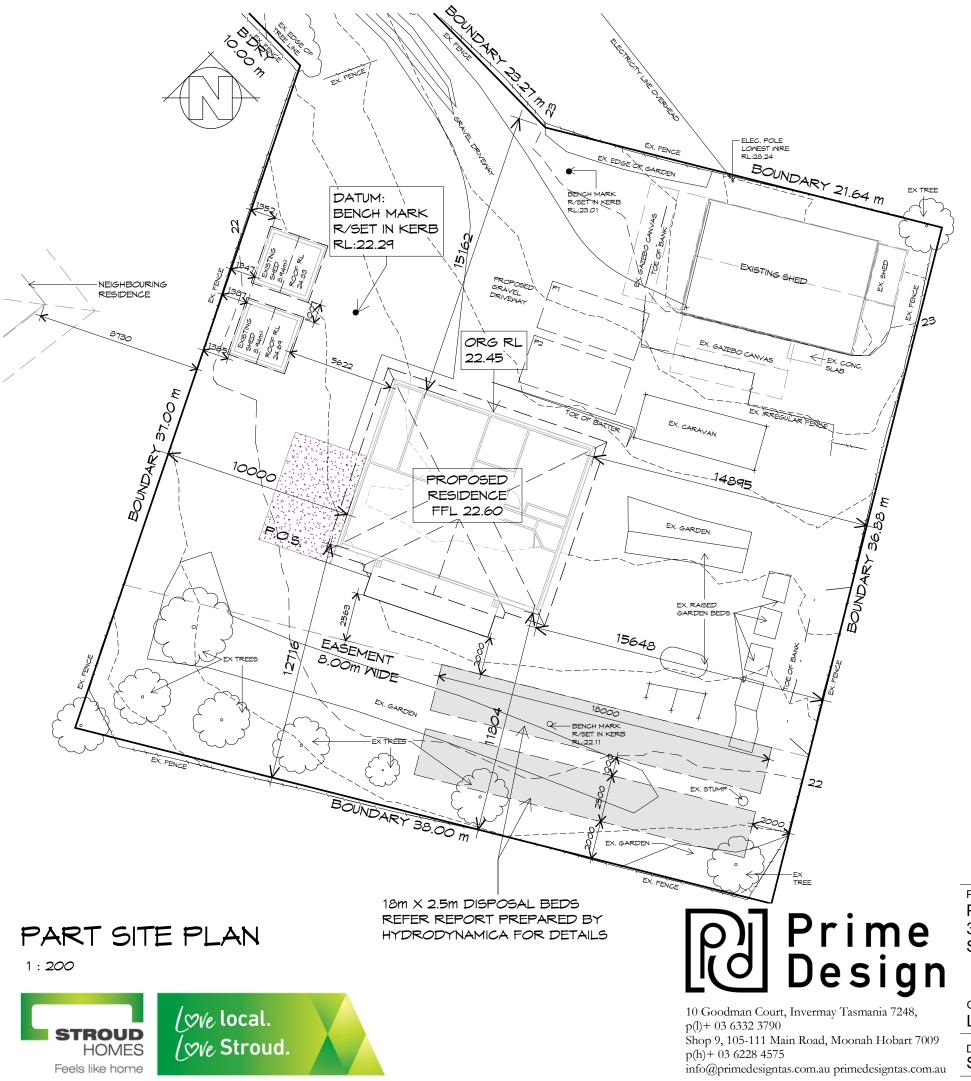
Drawing: SITE PLAN



12.06.2025 1:500 Project/Drawing no: Revision: PDH24091 -01 04 Accredited building practitioner: Frank Geskus -No CC246A

Scale:

**DNIN** DRA ō SCALE NOT 00 ш NOT



### SURVEYOR'S NOTES:

- LOCATED THROUGH FIELD SURVEY.
- SURVEY PLUS.
- HORIZONTAL DATUM IS MGA (GDA94). •
- VERTICAL DATUM IS AHD.

- AND/OR SERVICES.
- SURVEY.
- WITH TOTAL STATION
- 3D TIN
  - MAJOR CONTOUR 3D
  - MINOR CONTOUR 3D

Project:

**PROPOSED NEW RESIDENCE 33 PENELOPE STREET** ST HELENS

Client name: L.K. & T.J. BROWN

Approved by: F.G.	
	- ' - '



daa	
	5

Accredited building practitioner: Frank Geskus -No CC246A

Revision:

04

Scale

12.06.2025	1	: 200
Project/Drawing no:		
PDH24091 -02		

3D DATA TURNED OFF IN LAYER CONTROL.

Drawing:

Date:

ALL WINDOWS WERE NOT ABLE TO BE LOCATED DUE TO OBSTRUCTION OF LINE OF SIGHT FROM TOTAL STATION. WINDOW LOCATIONS ARE APPROXIMATE ONLY DUE TO BEING UNABLE TO BE PERPENDICULAR TO WINDOWS WHEN LOCATING

PART SITE PLAN

BOUNDARIES ARE COMPILED ONLY FROM SP183423 SP122828 AND RELEVANT SURVEY INFORMATION OBTAINED FROM LAND TITLES OFFICE AND ARE APPROXIMATE AND SUBJECT TO

CONTOUR INTERVAL IS 0.2 METRE, INDEX IS 1.0 METRE. SURVEY BY ROBOTIC TOTAL STATION AND GPS. DUE TO THE AGE OF TITLE SURVEY IF ANY CONSTRUCTION WORKS ARE TO BE UNDERTAKEN ON OR NEAR THE TITLE BOUNDARY OR PRESCRIBED SETBACKS A RE-MARK SURVEY BY A REGISTERED LAND SURVEYOR WILL BE REQUIRED. IMPORTED DATA SHOWN ON THIS PLAN WAS OBTAINED FOR PUBLIC AVAILABLE DATA FROM VARIOUS GOVERNMENT AUTHORITIES. THIS INFORMATION IS PROVIDED FOR GUIDANCE ONLY. THE ACCURACY OF ANY IMPORTED DATA IS PER THE ACCURACY QUOTED BY THE SOURCE AND IS IN NO WAY GUARANTEED BY SURVEY PLUS. USERS MUST NOT RELY ON THIS DATA FOR ON-GROUND LOCATION OF BOUNDARIES

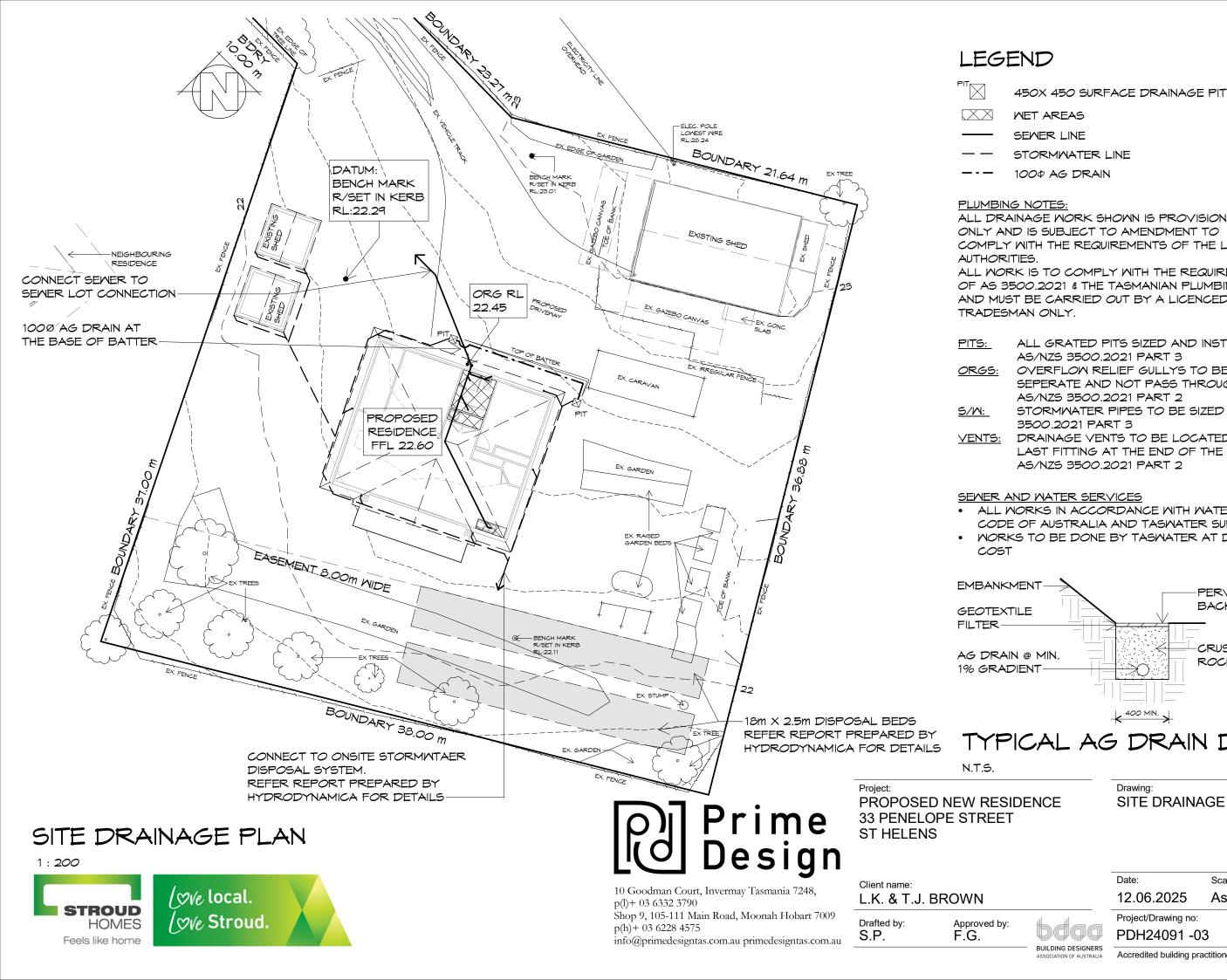
LOSS OR DAMAGE CAUSED TO ANY UNDERGROUND SERVICE WHETHER SHOWN BY OUR SURVEY OR NOT. THIS NOTE IS AN INTEGRAL PART OF THIS PLAN/DATA. REPRODUCTION OF THIS PLAN OR ANY PART OF IT WITHOUT THIS NOTE BEING INCLUDED IN FULL WILL RENDER THE INFORMATION SHOWN ON SUCH A REPRODUCTION INVALID AND NOT SUITABLE FOR USE WITHOUT PRIOR AUTHORITY OF

• SURVEY PLUS CAN NOT ACCEPT LIABILITY WHATSOEVER FOR

BY SURVEY PLUS AT THE TIME OF THIS SURVEY. SERVICES SHOWN ON THIS PLAN WERE LOCATED WHERE POSSIBLE BY FIELD SURVEY. THEY ARE NOT A COMPLETE PICTURE OF SERVICES ON SITE. ALL SERVICE LOCATIONS ARE TO BE VERIFIED BEFORE COMMENCEMENT OF ANY WORK ON SITE. IN PARTICULAR THOSE SERVICES NOT PREVIOUSLY

THIS PLAN HAS BEEN PREPARED BY SURVEY PLUS FROM A COMBINATION OF EXISTING RECORDS AND FIELD SURVEY FOR THE PURPOSES OF SHOWING THE PHYSICAL FEATURES OF THE LAND AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE. TITLE BOUNDARIES SHOWN WERE NOT VERIFIED OR MARKED

NOT 00 ш б



) <u>TES:</u> je work shown is provisional
SUBJECT TO AMENDMENT TO
TO COMPLY WITH THE REQUIREMENTS 2021 & THE TASMANIAN PLUMBING CODE. : CARRIED OUT BY A LICENCED ONLY.
GRATED PITS SIZED AND INSTALLED PER NZS 3500.2021 PART 3 ERFLOW RELIEF GULLYS TO BE BRANCHED ERATE AND NOT PASS THROUGH. REFER NZS 3500.2021 PART 2 ORMWATER PIPES TO BE SIZED PER ASNZS 00.2021 PART 3 AINAGE VENTS TO BE LOCATED BEFORE IT FITTING AT THE END OF THE LINE PER NZS 3500.2021 PART 2
<u>VATER SERVICES</u> (S IN ACCORDANCE WITH WATER SUPPLY AUSTRALIA AND TASWATER SUPPLEMENTS () BE DONE BY TASWATER AT DEVELOPERS
PERVIOUS BACKFILL
AL AG DRAIN DETAIL
Drawing: ICE SITE DRAINAGE PLAN

DRAWINGS

В

SCALE

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00

NOTE:

Project/Drawing no: Revision: PDH24091 -03 04 Accredited building practitioner: Frank Geskus -No CC246A

Scale:

As indicated

Date:

12.06.2025



PROPOSED RESIDENCE, 33 PENELOPE STREET, ST HELENS

LOCALITY PLAN

THIS SITE IS ZONED **GENERAL RESIDENTIAL** AND **DOES NOT** FALL WITHIN A BUSHFIRE PRONE AREAS OVERLAY, THEREFORE **DOES NOT REQUIRE** A BUSHFIRE ASSESSMENT.

1 : 2000





# **PLANNING** NOTE: DO NOT SCALE OFF DRAWINGS

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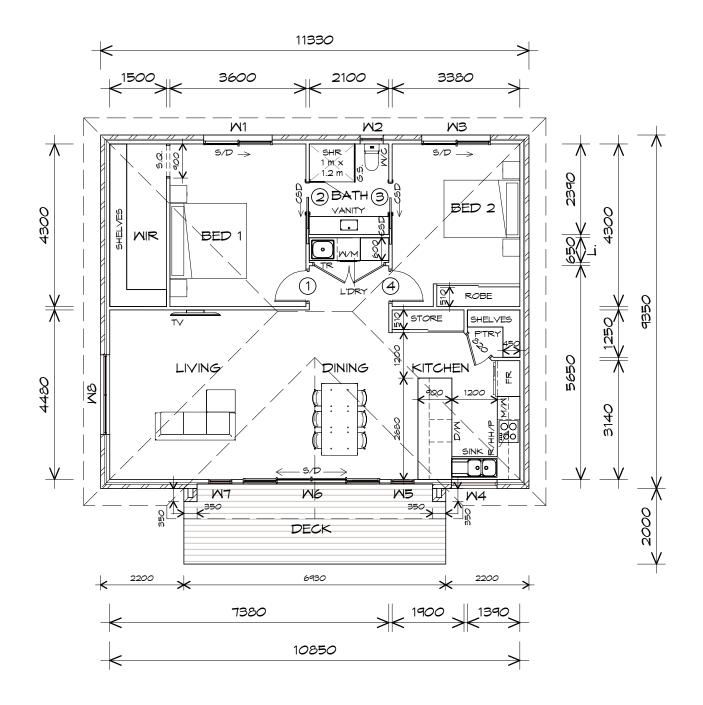
Project: PROPOSED NEW RESIDENCE 33 PENELOPE STREET ST HELENS

Client name: L.K. & T.J. BROWN Drawing: LOCALITY PLAN

Drafted by: S.P.	Approved by: F.G.			
Date:	Scale:			
12.06.2025	1 : 2000			
Project/Drawing no:		Re	vision:	
PDH24091 -04		0	4	



ASSOCIATION OF AUSTRALIA



# FLOOR PLAN

1 : 100

FLOOR AREA	104.81	m2	(11.28	SQUARES )
DECK AREA	14.99	m2	(1.61	SQUARES )
TOTAL AREA	119.80		12.90	

### NOTE:

FLOOR AREAS INCLUDE TO EXTERNAL FACE OF BUILDING AND GARAGE, UNLESS OTHERWISE STATED. DECKS AND OUTDOOR AREAS ARE CALCULATED SEPARATELY.



# LEGEND

- S/D SLIDING DOOR
  GLASS SCREEN
  S.Q. SQUARE STOP
- CSD CAVITY SLIDING DOOR

# NOTE: DO NOT SCALE OFF DRAWINGS

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Project: PROPOSED NEW RESIDENCE 33 PENELOPE STREET ST HELENS

Client name: L.K. & T.J. BROWN Drawing:

FLOOR PLAN

Drafted by: S.P.	Approved by: F.G.	
Date:	Scale:	
12.06.2025	1 : 100	
Project/Drawing no:		Revision:
PDH24091 -05	<b>)</b>	04



DOOR SCHEDULE					
MARK	WIDTH	TYPE	REMARKS		
1	820	INTERNAL TIMBER DOOR			
2	820	CAVITY SLIDING DOOR			
З	820	CAVITY SLIDING DOOR			
4	820	INTERNAL TIMBER DOOR			

	WINDOW SCHEDULE						
MARK	HEIGHT	MIDTH	TYPE	REMARKS			
M1	2100	1810	SLIDING DOOR				
M2	900	610	AMNING MINDOM	OPAQUE			
MЗ	2100	1810	SLIDING DOOR				
M4	900	1210	FIXED WINDOW				
M5	2100	610	AMNING MINDOM				
M6	2100	3610	DOUBLE SLIDING DOOR				
M7	2100	610	AMNING MINDOM				
MB	1800	2110	AMNING MINDOM				

ALUMINIUM WINDOWS DOUBLE GLAZING COMPLETE WITH FLY SCREENS. ALL WINDOW MEASUREMENTS TO BE VERIFIED ON SITE PRIOR TO ORDERING

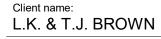


Project: PROPOSED NEW RESIDENCE 33 PENELOPE STREET ST HELENS

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info@primedesigntas.com.au primedesigntas.com.au



Drafted by:	Approved by:
S.P.	F.G.





# OFF DRAWINGS SCALE NOT DO NOTE:



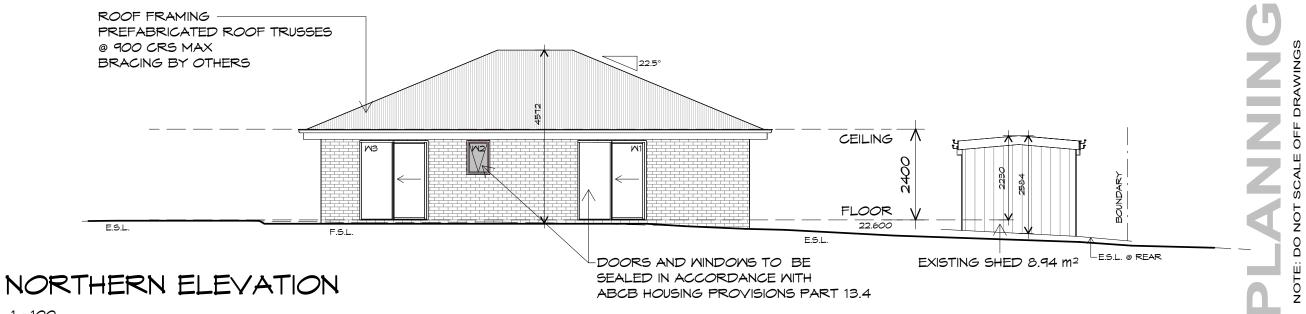




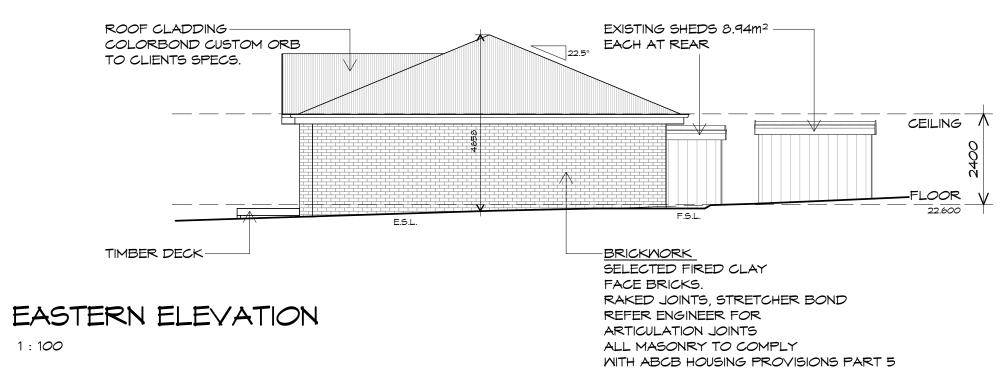
Date:

12.06.2025 Project/Drawing no: Revision: PDH24091 -06 04

Scale:



1 : 100





# Prime Design

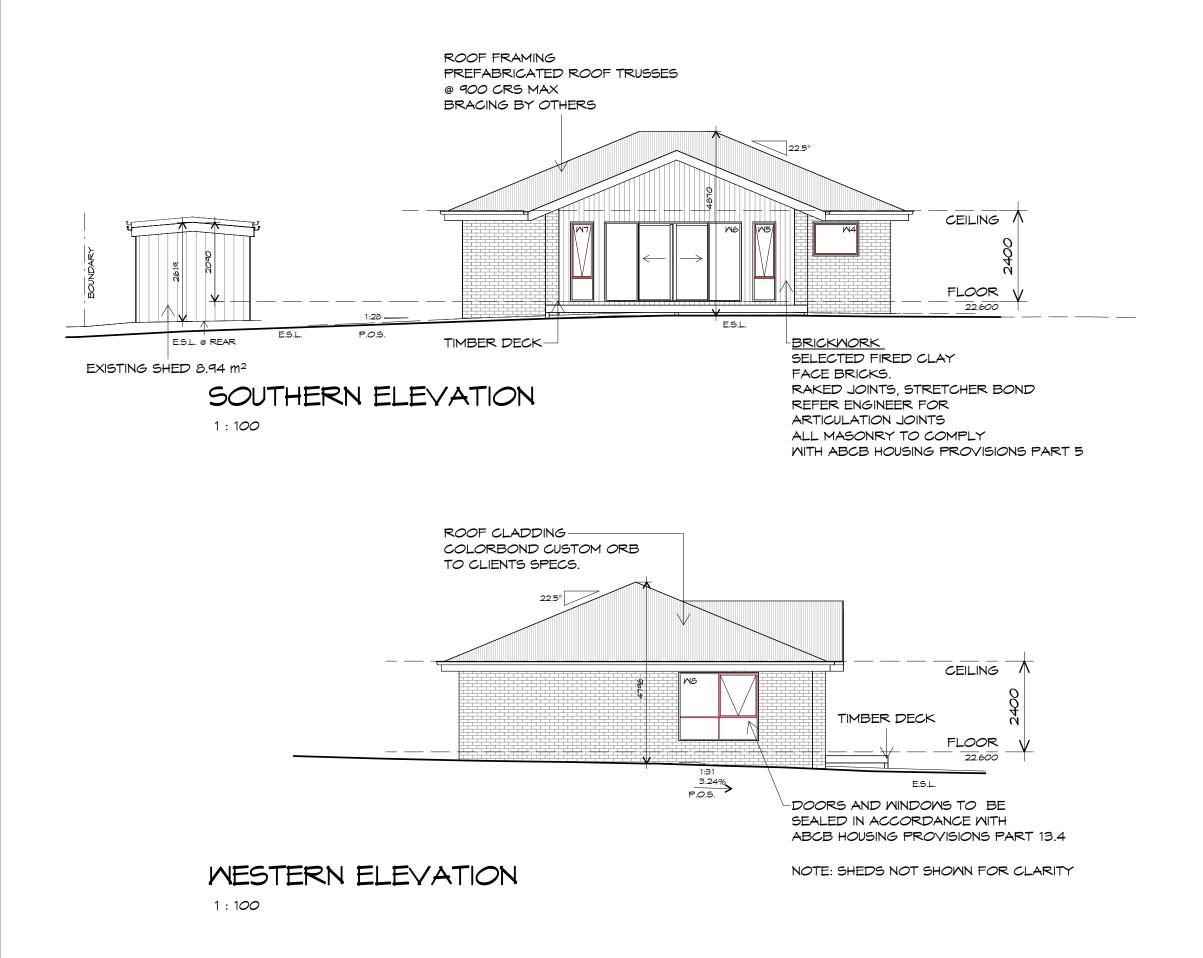
10 Goodman Court, Invermay Tasmania 7248, p(l)+ 03 6332 3790 Shop 9, 105-111 Main Road, Moonah Hobart 7009 p(h)+ 03 6228 4575 info@primedesigntas.com.au primedesigntas.com.au

Project: **PROPOSED NEW RESIDENCE 33 PENELOPE STREET** ST HELENS

Client name: L.K. & T.J. BROWN Drawing:

**ELEVATIONS** 

Drafted by: S.P.	Approved by: F.G.			
Date:	Scale:			
12.06.2025	1:100			
Project/Drawing no:		Re	vision:	
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ASSOCIATION OF AUSTRALIA

# DRAWINGS LL ЦО SCALE NOT 00 NOTE:

# Prime Design

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Project: **PROPOSED NEW RESIDENCE 33 PENELOPE STREET** ST HELENS

Client name: L.K. & T.J. BROWN Drawing:

**ELEVATIONS** 

Drafted by: S.P.	Approved by: F.G.			
Date:	Scale:			
12.06.2025	1:100			
Project/Drawing no:		Re	vision:	
PDH24091 -08		0	4	



### ROOF PLUMBING NOTES:

GUTTER INSTALLATION TO BE IN ACCORDANCE WITH ABCB HOUSING PROVISIONS PART 7.4.4 WITH FALL NO LESS THAN 1:500 FOR EAVES GUTTER BOX GUTTERS IN ACCORDANCE WITH AS33500.3:2021

UNLESS FIXED TO METAL FASCIA EAVES GUTTER TO BE FIXED @ 1200 CRS MAX.

VALLEY GUTTERS ON A ROOF WITH A PITCH: A) MORE THAN 12.5° DEGREES - MUST HAVE A WIDTH OF NOT LESS THAN 400mm AND ROOF OVERHANG OF NOT LESS THAN 150mm EACH SIDE OFVALLEY GUTTER. B) LESS THAN 12.5° DEGREES, MUST BE

LAP GUTTERS 75mm IN THE DIRECTION OF FLOW, RIVET & SEAL WITH AN APPROVED SILICONE SEALANT.

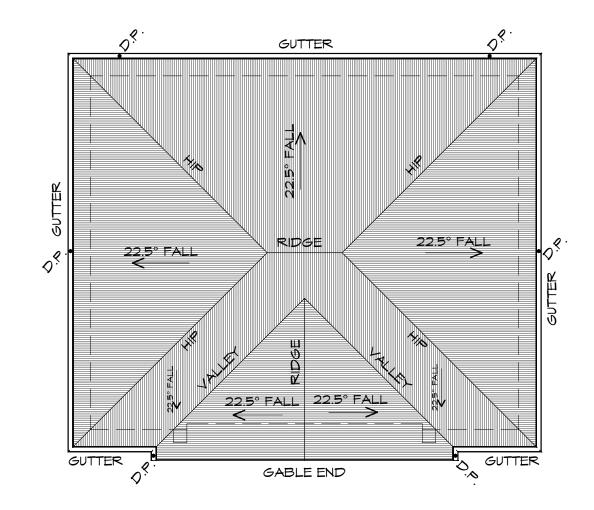
PLAN ARE NOMINAL ONLY. REQUIREMENTS.

METAL ROOF METAL SHEETING ROOF TO BE INSTALLED IN ACCORDANCE WITH ABCB HOUSING PROVISIONS PART 7.2. REFER TO TABLE 7.2.28 FOR ACCEPTABLE CORROSION PROTECTION FOR SHEET ROOFING REFER TO TABLE 7.2.26-7.2.26 FOR ACCEPTABILITY OF CONTACT BETWEEN DIFFERENT ROOFING MATERIALS. FOR FIXING, SHEET LAYING SEQUENCE FASTENER FREQUENCY FOR TRANVERSE FLASHINGS AND CAPPINGS, ANTI CAPILLARY BREAKS, FLASHING DETAILS REFER TO ABCB HOUSING PROVISIONS PART 7.2.5-7.2.7. ROOF PENETRATION FLASHING DETAILS. REFER TO TO ABCB HOUSING PROVISIONS PART 7.2.5- 7.2.7. ROOF SHEETING MUST OVERHANG MIN 35mm AS PER ABCB HOUSING PROVISIONS PART 7.2.8

Project: **PROPOSED NEW RESIDENCE** 

33 PENELOPE STREET ST HELENS

Client name: L.K. & T.J. BROWN



ROOF PLAN

1:100

ADDITIONAL ROOF LOAD NO SOLAR P.V. SYSTEM HAS BEEN ALLOWED FOR. NO SOLAR HOT WATER HAS BEEN ALLOWED FOR.

> Prime Design

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info@primedesigntas.com.au primedesigntas.com.au

SNERS		
STRALIA	Accredited building practitioner: Frank Geskus -No CC246A	
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	Date:	Scale:		
	12.06.2025	1:100		
	Project/Drawing no:		Revision:	
DQQQ	PDH24091 -09	9	04	
BUILDING DESIGNERS	Accredited building pra	ctitioner: Frank (	Geskus -No CC2	246

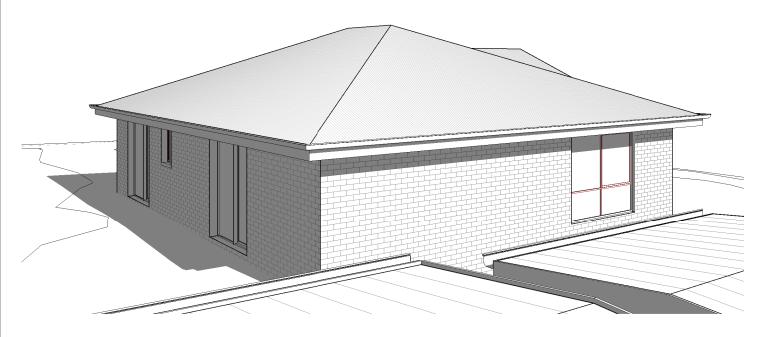
### Drawing: **ROOF PLAN**

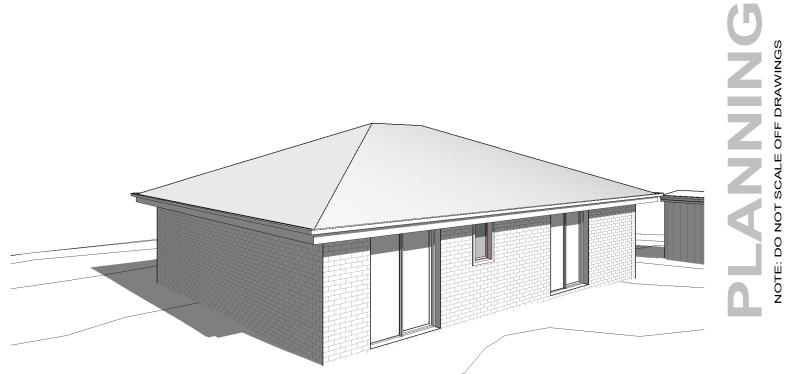
SPACING BETWEEN DOWNPIPES MUST NOT BE MORE THAN 12m & LOCATED AS CLOSE AS POSSIBLE TO VALLEY GUTTERS

DOMNPIPE POSITIONS SHOWN ON THIS EXACT LOCATION & NUMBER OF D.P'S REQUIRED ARE TO BE IN ACCORDANCE WITH ABCB HOUSING PROVISIONS PART 7.4.5

DESIGNED AS A BOX GUTTER.

DRAWINGS LL Б SCALE NOT 00 ш NOT











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# Project: PROPOSED NEW RESIDENCE 33 PENELOPE STREET ST HELENS

Client name: L.K. & T.J. BROWN

	proved by: .G.
--	-------------------





# Drawing: PERSPECTIVES

Date: Scale: 12.06.2025 Project/Drawing no: Revision: PDH24091 -10 04



12 June 2025

Break O'Day Council 32-34 Georges Bay Esplanade, St Helens Tasmania 7216

Dear Planner,

# Re: Proposed New Residence at 33 Penelope Street, St. Helens

Please see a proposal for a new residence with 2 bedrooms, 1 bath, open living/ kitchen/ dining, walk-in pantry, laundry and deck. The proposal falls in the General Residential zone in the Tasmanian Planning Scheme.

I will be looking to address the codes where possible. Please do not hesitate to get in touch if you require further information for us to complete this application.

## 8.4.2 Setbacks and building envelope for all dwelling

Proposed residence complies but the sheds (8.94m2 each) does not comply

P3 The siting and scale of the proposed sheds

- a) The siting and scale of proposed sheds will not cause any unreasonable loss of amenity to the adjoining property as it has a setback of at least 1.3 meters from its boundary and over 10 meters from the existing residence in the adjoining property. It is highly unlikely in reduction of sunlight to a habitable room of a dwelling and overshadowing the private open space in the adjoining property. Moreover, the sheds have a maximum height of 2.6 metres from the existing surface level and has area of 8.94m2 each being quite insignificant to cause any visual impact when viewed from an adjoining property.
- b) The sheds are at similar setbacks with the existing established properties in the area. Please refer to locality plan.
- c) The sheds will not cause any unreasonable reduction in sunlight to an existing solar installation on adjoining property.

## C2.6 Development Standards for Buildings and Works

C2.6.1 Construction of parking areas

Does not comply – Parking, accessways, manoeuvring and circulation spaces to be constructed using gravel.

**P1** Construction of parking areas to be readily identifiable and constructed so that it is usable in all weather conditions.

a) Proposed gravel driveway to be use for residential purpose with movement of light vehicles back and forth from the property.

 $\mathrm{Page}\,1\,\mathrm{of}\,2$ 



- b) Driveway to be constructed in a way that its sits intact in the existing topography of the land and is usable in all weather conditions.
- c) Proposed driveway is a permeable surface which would not have additional load to the existing drainage system and to be maintained so that the debris/dust does not affect the existing drainage system.
- d) Periodic cleaning and maintenance of the driveway to be undertaken to ensure there is no/ minimal transporting of sediment / debris from the site onto a road or public place.
- e) Compact gravel surface used by light vehicles for residential purpose is unlikely to generate excessive dust.
- f) Nature of proposed compact gravel driveway surfacing to be durable in all weather conditions.

### Kind regards

Sadixya Pant



# MEMO

# 11 June 2025

# Re: Onsite Stormwater Disposal Requirements at 33 Penelope Street, St Helens

# Introduction

Hydrodynamica was engaged to provide an onsite stormwater disposal report and design for the proposed residential dwelling at 33 Penelope Street, St Helens. There is no public stormwater system available so disposal will be via onsite via an infiltration system. Break O'Day Council requires BRE-S2.7 Development Standards for Buildings and Works P1 to be addressed.

Figure 1 provides an overview of the site:

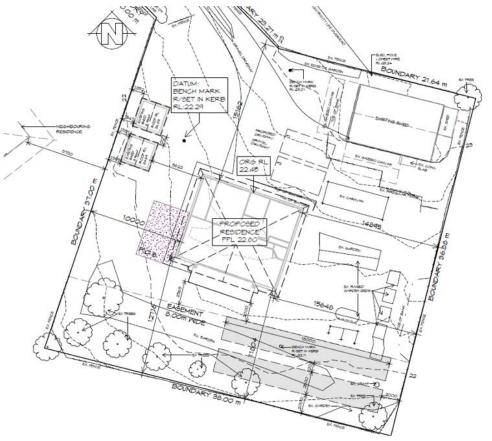


Figure 1. Site plan (from Prime Design drawing PDH24091 -02 04 030625)



# **Assessment and Infiltration Trench Sizing**

This assessment relies on soil investigations undertaken by Envirotech Consultants Pty Ltd who undertook a geotechnical investigation for foundation classification, reported in *Foundation Classification 33 Penelope St – St Helens Proposed New Residence* (11/11/2024).

Page 4 of the report presented the following results obtained from two boreholes:

#	Layer Details		USCS	BH01	BH02		
1	Silty SAND	Silty SAND TOPSOIL: Silty SAND, black, well sorted, coarse grained sand, trace roots, trace clay, 5 % roots; sub-rounded gravel, MD		0-0.4 DS@0.1	0-0.1		
2	Silty SAND	Silty SAND with clay, trace gravel, grey, well sorted, medium grained sand, MD	SM		0.1-0.6 DS@0.2		
3	Clayey Sandy SILT	Clayey Sandy SILT trace gravel, black, well sorted, low plasticity, coarse grained sand, F-St	ML	0.4-0.6 DS@0.5	0.6-0.7		
4	Clayey Sandy SILT	Clayey Sandy SILT trace gravel, light greenish grey, mottled dark red, well sorted, low plasticity, coarse grained sand, F-VSt	ML	0.6-1.8 DS@1.2	0.7-1.3		
5	Silty CLAY	Y Silty CLAY with sand, trace gravel, pale green, mottled dark red, medium plasticity, F-VSt			1.3-2.2 DS@1.8		
6	Silty CLAY	Silty CLAY trace sand, light greenish grey, mottled dark red, medium plasticity, St-VSt	CI	1.8-2.2 DS@2.0			
Consistency1VS Very soft; S Soft; F Firm; St Stiff; Vst Very Stiff; H Hard. Consistency values are based on soil strengths AT TH TESTING and is subject to variability based on field moisture conditionDensity2VL Very loose; L Loose; MD Medium dense; D Dense; VD Very DenseRock StrengthEL Extremely Low; VL Very Low; L Low; M Medium; H High; VH Very High; EH Extremely HighPLPoint load test (lump)DSDisturbed samplePVPocket vane shear testFVDownhole field vane shear testU50Undisturbed 48mm diameter core sample collected for laboratory testing.REFBorehole refusal					AT THE TIME OF		
INF	DCP has continued through this layer and the geology has been inferred.						

 Table 1. Envirotech Consultants Pty Ltd soil results

The top 400-600mm of the soil profile is predominately sand, which trends to clayey sandy silt at depths of approximately 600mm to 1300mm or more. It then becomes silty clay to depths of over



2000mm. Given the depth of the proposed onsite disposal system the limiting layer is the sandy silt. This aligns with a class 4 to 5 soil category in AS1547-2012 Onsite Domestic Waste Management.

Table 5.1 in the standard provides an indicative permeability  $K_{sat}$  ranging from 0.12m/day to 0.5m/day. Given the potential for groundwater 600mm below ground surface (refer to Table 1 of the Envirotech Consultants report) the bottom end of this range has therefore been adopted for this onsite stormwater disposal assessment.

In the absence specific standards of onsite stormwater disposal, the <u>Water Sensitive Urban Design</u> – <u>Engineering Procedures for Stormwater Management in Tasmania</u> (Derwent Estuary Program, 2012) Chapter 10 have been used. These procedures detail a robust methodology for sizing of infiltration stormwater disposal areas.

The assumptions used in the calculations contained in this report are as follows:

- Total area to be serviced (areas provided by Prime Design)
  - $\circ$  Proposed dwelling (roof area) = 129.1 m<sup>2</sup>
  - Existing Sheds x  $3 = 76.2 \text{ m}^2$  total
- A volumetric runoff coefficient of 1
- A saturated permeability rate of 0.12 m/d
- A void ratio of 33% for 20mm to 40mm gravel aggregate
- The range of 5% AEP rainfall intensities are as per the BOM Design Rainfall Data System (2016)
- Table 2 provides a summary of infiltration bed inflow volumes, outflow volumes, and required storages for the range of 5% AEP storm durations for the dwelling:

Duration (mins)	l(mm/hr)	D (hrs)	Inflow Vol (m3)	Outflow Vol (m3)	Required Storage (m3)	Cv	1	
5	135	0.08	2.31	0.04	2.26	A	205.3	m2
6	127	0.1	2.61	0.05	2.55	Length	36	m
10	103	0.17	3.52	0.09	3.43	Width	2.5	m
20	71.6	0.33	4.85	0.18	4.67	Depth	0.45	m
30	56	0.5	5.75	0.27	5.48	Р	77	m2
60	36.5	1	7.49	0.54	6.96			
120	24.3	2	9.98	1.07	8.90	K <sub>sat</sub>	120.00	mm/day
180	19.6	3	12.07	1.61	10.46	K <sub>sat</sub>	5.00	mm/hr
360	14	6	17.25	3.22	14.03	A <sub>inf</sub>	90	m2
720	10	12	24.64	6.44	18.20	V Bed (total) (L x W x H)	40.5	m3
1440	6.79	24	33.46	12.88	20.58	V (aggregate void- storage available)	9.09	m3
2880	4.15	48	40.90	25.76	15.14	V (3x12m RELN Large Arch) (0.12m3/m)	12.96	m3
4320	2.94	72	43.46	38.64	4.82	Total Storage Available:	22.05	m3

Table 2. Stormwater disposal bed calculation summary (proposed dwelling)



# Specification

<u>Two disposal beds each 18 metres long x 2.5 metres wide x 450mm deep</u> will provide adequate infiltration and storage to cater for all 5% AEP storms, ranging from the 5 minute through to the 72 hour duration storm. The storage requirement peaks during the 24 hour duration storm.

Figure 2 shows an indicative bed profile:

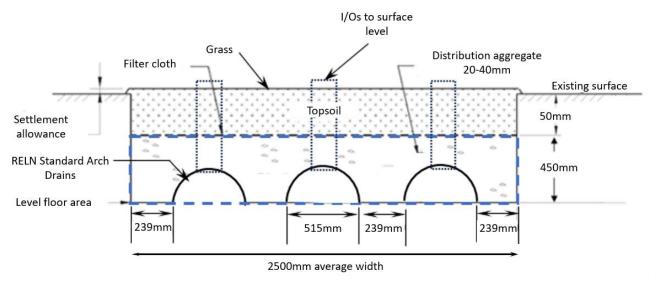


Figure 2. Stormwater infiltration bed detail (NOT TO SCALE)

- Beds shall be laid outside of trafficable areas, have a flat base and, as far as practicable, be laid along the contour.
- They shall also have a minimum separation of 2 metres from property boundaries and structures.
- Inspection openings shall be installed at each end of each of the sets of arches.
- Pre-treatment of stormwater for the removal of debris and sediment is essential, and storm runoff should not be conveyed directly into the infiltration system. Pre-treatment measures should include the provision of leaf and roof litter guards along the roof gutters and/or screening within a 450mm x 450mm discharge control pit prior to even disposal into the infiltration bed. The pit shall include a 200mm sump below the outlet for the interception of debris, and a mesh screen installed on the outlet to the infiltration bed as per AS3500.3:2021 7.10.2(d)(a)(i-v)
- All plumbing and drainage shall comply with the requirements in AS3500:2021.



### **BRE-S2.7.1** Response

BRE-S2.7.1 of the Stormwater Management Specific Area Plan is as follows:

Objective:	That development provides for adequate stormwater management.					
Acceptable S	Solutions	Performance Criteria				
(b) permitted discharg	must be: of connecting to the ormwater system; or d by the General Manager to e stormwater to a system other than ic stormwater system.	<ul> <li>P1 Development must be capable of accommodatin an on-site stormwater management system adequate for the development, having regard to <ul> <li>(a) topography of the site;</li> <li>(b) the size and shape of the site;</li> <li>(c) soil conditions;</li> <li>(d) any existing buildings and any constraints imposed by existing development on the si </li> <li>(e) any area of the site covered by impervious surfaces;</li> <li>(f) any watercourses on the land;</li> <li>(g) stormwater quality and quantity management targets identified in the State Stormwater Strategy 2010; and</li> <li>(h) any advice from a suitably qualified person on the seasonal water table at the site, risk of inundation, land instability or coastal erosion.</li> </ul> </li> </ul>	ite			

The Performance Criteria apply:

P1a) Topography of the site has been considered. Onsite disposal beds will be laid along the contours and contain the range of 5% AEP storms.

P1b) The onsite disposal system stormwater fits within the site, with appropriate offsets from boundaries and structures.



P1c) Conservative soil conditions have been adopted in the calculations.

P1d) Existing buildings have been considered, and appropriate offets provided.

P1e) The system has been sized to accommodate existing shed roofs and the proposed residence using an approporate runoff coefficient and a conservative AEP.

P1f) There are no watercourses on the land.

P1g) Onsite disposal through infiltration will be implimented. While the *State Stormwater Strategy* 2010 targets have not been specifically modelled using MUSIC, the <u>Water Sensitive Urban Design –</u> <u>Engineering Procedures for Stormwater Management in Tasmania</u> procedures have been used to size the infiltration system, which is a WSUD device. Both the *State Stormwater Strategy* and <u>Water</u> <u>Sensitive Urban Design – Engineering Procedures for Stormwater for Stormwater Management in Tasmania</u> procedures recommend infiltration devices to improve stormwater quality in the environment.

P1h) No additional advice provided, other than what is contained in this report. Water table was considered in the design. There are no inundation risks – the Tasmanian Statewide Strategic Flood Maps show no impacts. The site is not impacted by LISTmap land stability hazard bands or coastal erosion hazard bands.

and

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