

NOTICE OF PROPOSED DEVELOPMENT

Notice is hereby given that an application has been made for planning approval for the following development:

SITE:

8 VERONICA STREET, PRIMROSE SANDS

PROPOSED DEVELOPMENT:

DWELLING

The relevant plans and documents can be inspected at the Council Offices at 47 Cole Street, Sorell during normal office hours, or the plans may be viewed on Council's website at www.sorell.tas.gov.au until **Tuesday 23rd June 2026**.

Any person may make representation in relation to the proposal by letter or electronic mail (sorell.council@sorell.tas.gov.au) addressed to the Chief Executive Officer. Representations must be received no later than **Tuesday 23rd June 2026**.

APPLICATION NO: 5.2026-128.1

DATE: 5 JUNE 2026



Annotations

- Polygon8
- Polygon7

Surrounding Properties for PID: 17786 82

- Property

Roads

- DSG Roads
- Council Roads

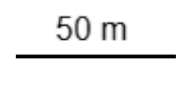
Property

- property
- Titles



Disclaimer

Any information extracted from this document (from the face of the document or by scale) should be verified on site. Council takes no responsibility for the accuracy of any information contained or presented in the document. While every care has been taken to ensure the accuracy of this information, Council makes no representations or warranties about the accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and liability.



Part B: Please note that Part B of this form is publicly exhibited.

Full description of Proposal:	Use:
	Development:
	<i>Large or complex proposals should be described in a letter or planning report.</i>

Design and construction cost of proposal:	\$
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Is all, or some the work already constructed:	No: <input type="checkbox"/> Yes: <input type="checkbox"/>
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Location of proposed works:	Street address:
	Suburb: Postcode:
	Certificate of Title(s) Volume: Folio:

Current Use of Site
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Current Owner/s:	Name(s).....
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Is the Property on the Tasmanian Heritage Register?	No: <input type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please provide written advice from Heritage Tasmania</i>
Is the proposal to be carried out in more than one stage?	No: <input type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please clearly describe in plans</i>
Have any potentially contaminating uses been undertaken on the site?	No: <input type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please complete the Additional Information for Non-Residential Use</i>
Is any vegetation proposed to be removed?	No: <input type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please ensure plans clearly show area to be impacted</i>
Does the proposal involve land administered or owned by either the Crown or Council?	No: <input type="checkbox"/> Yes: <input type="checkbox"/>	<i>If yes, please complete the Council or Crown land section on page 3</i>

If a new or upgraded vehicular crossing is required from Council to the front boundary please complete the Vehicular Crossing (and Associated Works) application form
<https://www.sorell.tas.gov.au/services/engineering/>



Sorell Council
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Part B continued: Please note that Part B of this form is publicly exhibited

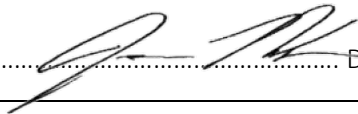
Declarations and acknowledgements

- I/we confirm that the application does not contradict any easement, covenant or restriction specified in the Certificate of Title, Schedule of Easements or Part 5 Agreement for the land.
- I/we consent to Council employees or consultants entering the site and have arranged permission and/or access for Council’s representatives to enter the land at any time during normal business hours.
- I/we authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation and have permission of the copyright owner for such copies.
- I/we declare that, in accordance with s52(1) of the *Land Use Planning and Approvals Act 1993*, that I have notified the owner(s) of the intention to make this application.
- I/we declare that the information in this application is true and correct.

Details of how the Council manages personal information and how you can request access or corrections to it is outlined in Council’s Privacy Policy available on the Council website.

- I/we acknowledge that the documentation submitted in support of my application will become a public record held by Council and may be reproduced by Council in both electronic and hard copy format in order to facilitate the assessment process, for display purposes during public exhibition, and to fulfil its statutory obligations. I further acknowledge that following determination of my application, Council will store documentation relating to my application in electronic format only.

- Where the General Manager’s consent is also required under s.14 of the *Urban Drainage Act 2013*, by making this application I/we also apply for that consent.

Applicant Signature:	Signature:  Date:
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Crown or General Manager Land Owner Consent


If the land that is the subject of this application is owned or administered by either the Crown or Sorell Council, the consent of the relevant Minister or the Council General Manager whichever is applicable, must be included here. This consent should be completed and signed by either the General Manager, the Minister, or a delegate (as specified in s52 (1D-1G) of the *Land Use Planning and Approvals Act 1993*).

Please note:

- If General Manager consent is required, please first complete the General Manager consent application form available on our website www.sorell.tas.gov.au
- If the application involves Crown land you will also need a letter of consent.
- Any consent is for the purposes of making this application only and is not consent to undertaken work or take any other action with respect to the proposed use or development.

I _____ being responsible for the administration of land at _____

declare that I have given permission for the making of this application for _____



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Signature of General Manager, Minister or Delegate:	Signature: Date:
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SEARCH OF TORRENS TITLE

VOLUME 54632	FOLIO 57
EDITION 2	DATE OF ISSUE 18-Nov-2020

SEARCH DATE : 26-Feb-2026

SEARCH TIME : 12.01 pm

DESCRIPTION OF LAND

Parish of CARLTON, Land District of PEMBROKE
 Lot 57 on Plan 54632 (formerly being P1404(L))
 Derivation : Portion of Lot 31145 Gtd to E J Kennedy
 Prior CT 2068/35

SCHEDULE 1

M856820 TRANSFER to SHANE ROY THOMPSON and CARMEL MAJELLA
 THOMPSON Registered 18-Nov-2020 at 12.01 pm

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
 BENEFITING EASEMENT: a right of carriage way over the piece of
 land containing 16 perches on Diagram No. 415/15
 E237689 MORTGAGE to Australia and New Zealand Banking Group
 Limited Registered 18-Nov-2020 at 12.02 pm

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



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(S.P.2952)

B. S. Simmonds 904-2 ct. (Fee Farm)
 The Closer Settlement Board 711-73 ct. (Fee Simple)
 1005-91 ct

B. S. Simmonds

REGISTERED NUMBER
55124(N)

REGISTERED NUMBER
55125(M)

Plotted by *A*
 Mathematically checked by *A*
 Examined as to boundaries by *A*
 Entered on card by *A*

Town & Country Planning Act 1944
 APPROVAL OF SUB-DIVISION
 Under Section 36(6)
 No. 31-252/1

It is certified that this plan of subdivision is approved by me, in accordance with the provisions of Section 36(6) of the Town and Country Planning Act, 1944.

Date *11.11.80*

Commissioner

LETTERS A B C D E F G H J
 ADDED ON 26/5/194

Erte Barrie Valentine, of Sandy Bay, Registered Surveyor, of Tasmania, do hereby certify that this plan has been made from surveys executed by me or under my own personal supervision, inspection and field check, and that the boundaries and survey are correct, and were made in accordance with the Land Surveyors' By-Law No. 2 dated 3rd July, 1940.

Erte Barrie Valentine
 Authorised Surveyor

Dated this *11th* day of *December* 1980

THE SPELLING OF TAMARIX ROAD ROAD HEREON HAS BEEN AMENDED AND THE NAME NERINE STREET HAS BEEN ADDED UNDER SECTION 139 OF THE LAND TITLES ACT 1980.

Area of land surrounded by green line is **24A OR 11/2 P. Partially**

RECORDER OF TITLES
 2 JUNE 2021

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Sorell Council

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Date Received: 20/04/2026

(P17783)

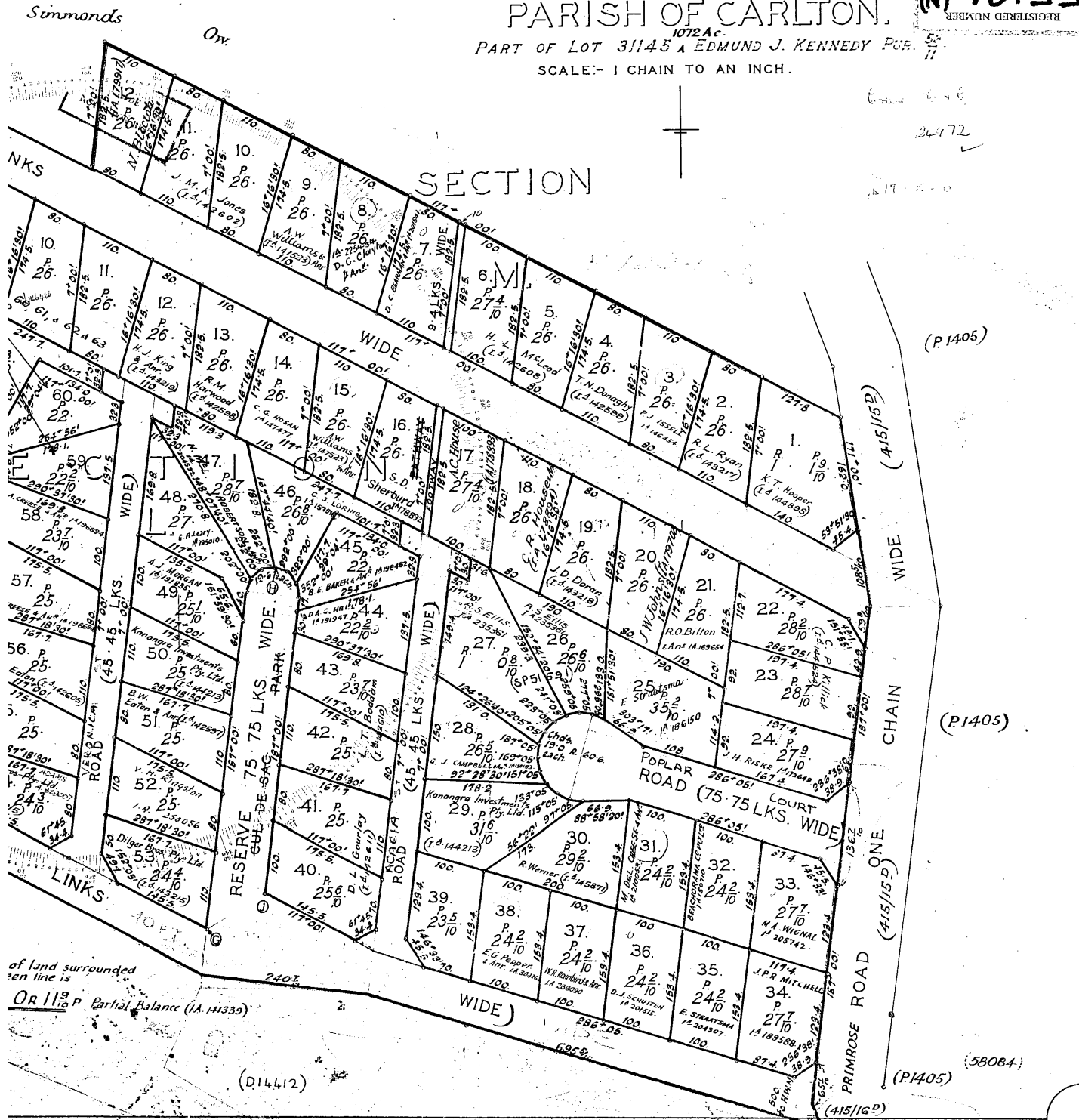
COUNTY OF PEMBROKE
PARISH OF CARLTON.

1072 Ac.
PART OF LOT 31145 A EDMUND J. KENNEDY PUR.
SCALE: 1 CHAIN TO AN INCH.

54632 (1)
REGISTERED NUMBER

55125 (M)
REGISTERED NUMBER

55124 (N)
REGISTERED NUMBER



(P1405)

(P1405)

(58084)

of land surrounded by a double line is
OR 11/10 P Partial Balance (IA 141339)

GEO-ENVIRONMENTAL ASSESSMENT

8 Veronica Street

Primrose Sands

May 2026



GEO-ENVIRONMENTAL
S O L U T I O N S



Sorell Council

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Disclaimer: The author does not warrant the information contained in this document is free from errors or omissions. The author shall not in any way be liable for any loss, damage or injury suffered by the User consequent upon, or incidental to, the existence of errors in the information.

Investigation Details

Client:	Shane Thompson
Site Address:	8 Veronica Street, Primrose Sands
Date of Inspection:	24/04/2026
Proposed Works:	New house
Investigation Method:	Geoprobe 540UD - Direct Push
Inspected by:	C. Cooper

Site Details

Certificate of Title (CT):	54632/57
Title Area:	Approx. 630.8 m ²
Applicable Planning Overlays:	Flood-prone Areas, Priority Vegetation, Airport obstacle limitation area
Slope & Aspect:	Flat with no dominant aspect
Vegetation:	Grass & Weeds

Background Information

Geology Map:	MRT
Geological Unit:	Quaternary Sediments
Climate:	Annual rainfall 500mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	AS2870:2011, AS1726:2017, AS1547:2012 & AS4055:2021

**Sorell Council**

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Investigation

A number of bore holes were completed to identify the distribution and variation of the soil materials at the site, bore hole locations are indicated on the site plan. See soil profile conditions presented below. Tests were conducted across the site to obtain bearing capacities of the material at the time of this investigation.

Soil Profile Summary

BH 1 Depth (m)	BH 2 Depth (m)	BH 3 Depth (m)	USCS	Description
0.00-0.20	0.00-0.20	0.00-0.20	SP	SAND: grey, dry, medium dense
0.20-0.60	0.20-0.80	0.20-0.60	SP	SAND: light grey, dry, medium dense
0.60-0.70	0.80-1.30	0.60-0.80	SP	SAND: dark brown, slightly moist, dense
0.70-1.00			SP	SAND: grey, slightly moist, medium dense
1.00-3.0+	1.30-2.0+	0.80-1.5+	SP	SAND: light brown grey, moist to wet, dense, no refusal

Site Notes

The soil onsite has formed from Quaternary sediments and consists of deep sandy sediments. A watertable was encountered at a depth of approx 1.5m.

Site Classification

The site has been assessed and classified in accordance with AS2870:2011 “*Residential Slabs and Footings*”.

The site has been classified as:

Class S

y_s range: **0-20mm**

Notes: Class S - The subsurface profile across the site generally comprises soils exhibiting low shrink–swell potential, indicative of slight reactivity. These materials are expected to undergo minor volume changes in response to seasonal variations in moisture conditions.



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Wind Loading Classification

According to “AS4055:2021 - Wind Loads for Housing” the house site is classified below:

Wind Classification:	N2
Region:	A
Terrain Category:	1.0
Shielding Classification:	PS
Topographic Classification:	T0
Wind Classification:	N2
Design Wind Gust Speed – m/s ($V_{h,u}$):	40

Wastewater Classification & Recommendations

According to AS1547-2012 (on-site waste-water management) the natural soil is classified as **SAND (category 1)**. The site limitations require secondary treated wastewater system to be installed. It is proposed to install an Aerated Wastewater Treatment System (AWTS such as Econocycle, Envirocycle, Ozzikleen etc) with the treated wastewater applied to an absorption bed. A Design Loading Rate (DLR) of 40L/m²/day has therefore been assigned for secondary treated wastewater.

The proposed three-bedroom dwelling has a calculated maximum wastewater output of 600L/day. This is based on a tank water supply and a maximum occupancy of 5 people (120L/day/person).

Using the DLR of 40L/m²/day, an absorption area of at least 15m² will be required. This can be accommodated by one 7m x 2.5m x 0.6m absorption bed as per the attached design. This will be located outside of the mapped flood overlay.

A cut-off drain will not be required upslope of the application area due to the highly permeable soil onsite. However, all stormwater overflow will need to be managed to ensure it does not impact the proposed wastewater area. A 100% reserve area will need to be set aside and kept free from development for any future wastewater requirements.

The following setback distances are consistent with the Directors Guidelines for On-Site Wastewater Management:

Buildings:	1.5m
Upslope or level boundaries:	1.5m
Downslope boundaries:	2.5m
Downslope surface water:	100m



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Further details are outlined in the attached table and associated risk assessment.

Construction Notes & Recommendations

The site has been classified as **Class S** - Slightly reactive site, which may experience only slight ground movement from moisture changes.

It is recommended that all footings be founded in the natural material with bearing capacities >100kPa.

All earthworks on site must comply with AS3798:2007, and I further recommend that consideration be given to drainage and sediment control on site during and after construction. Care should also be taken to ensure there is adequate drainage in the construction area to avoid the potential for weak bearing and foundation settlement associated with excessive soil moisture.

I also recommend that during construction that I and/or the design engineer be notified of any major variation to the foundation conditions as predicted in this report.



Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD

Director



Sorell Council

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GES
Land suitability and system sizing for on-site wastewater management
 Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report
Site assessment for on-site waste water disposal

Assessment for Shane Thompson

Assess. Date

21-May-26

Ref. No.

Assessed site(s) 8 Veronica St Primrose Sands

Site(s) inspected

24-Apr-26

Local authority Sorell

Assessed by

John Paul Cumming

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

Wastewater Characteristics

Wastewater volume (L/day) used for this assessment = 600 (using the 'No. of bedrooms in a dwelling' method)

Septic tank wastewater volume (L/day) = 200

Sullage volume (L/day) = 400

Total nitrogen (kg/year) generated by wastewater = 1.8

Total phosphorus (kg/year) generated by wastewater = 1.2

Climatic assumptions for site

(Evapotranspiration calculated using the crop factor method)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	41	36	36	45	36	29	46	47	40	48	44	56
Adopted rainfall (R, mm)	41	36	36	45	36	29	46	47	40	48	44	56
Retained rain (Rr, mm)	37	32	32	41	32	26	41	42	36	43	40	50
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	29	32	42	63	84	105	126
Evapotr. less rain (mm)	93	78	59	23	10	3	-10	0	27	41	65	76

Annual evapotranspiration less retained rain (mm) = 463

Soil characteristics

Texture = Sand

Category = 1

Thick. (m) = 3

Adopted permeability (m/day) = 3

Adopted LTAR (L/sq m/day) = 40

Min depth (m) to water = 1.5

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site: All wastewater will be disposed of on the site

The preferred method of on-site primary treatment: In a package treatment plant

The preferred method of on-site secondary treatment: In-ground

The preferred type of in-ground secondary treatment: Evapotranspiration bed(s)

The preferred type of above-ground secondary treatment: None

Site modifications or specific designs: Not needed

Suggested dimensions for on-site secondary treatment system

Total length (m) = 6

Width (m) = 2.5

Depth (m) = 0.6

Total disposal area (sq m) required = 15

comprising a Primary Area (sq m) of: 15

and a Secondary (backup) Area (sq m) of:

Sufficient area is available on site

Comments

 Using the DLR for secondary treated effluent of 40L/m²/day within a Category 1 soil, an absorption area of at least 15m² will be required.

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GES
Land suitability and system sizing for on-site wastewater management
 Trench 3.0 (Australian Institute of Environmental Health)

Site Capability Report
Site assessment for on-site waste water disposal

Assessment for Shane Thompson

Assess. Date

21-May-26

Ref. No.

Assessed site(s) 8 Veronica St Primrose Sands

Site(s) inspected

24-Apr-26

Local authority Sorell

Assessed by

John Paul Cumming

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

Alert	Factor	Units	Value	Confid level	Limitation		Remarks
					Trench	Amended	
A	Expected design area	sq m	500	V. high	High		
	Density of disposal systems	/sq km	20	Mod.	Moderate		
	Slope angle	degrees	0	High	Very low		
	Slope form	Straight simple		High	Low		
	Surface drainage	Good		High	Very low		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Infrequent		High	Moderate		
	Aspect (Southern hemi.)	Faces N		V. high	Very low		
	Frequency of strong winds	Common		High	Low		
	Wastewater volume	L/day	600	High	Moderate		
	SAR of septic tank effluent		1.7	High	Low		
	SAR of sullage		2.6	High	Moderate		
	Soil thickness	m	3.0	V. high	Very low		
	Depth to bedrock	m	5.0	V. high	Very low		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		5.5	High	Low		
	Soil bulk density	gm/cub. cm	1.4	High	Very low		
	Soil dispersion	Emerson No.	8	V. high	Very low		
	Adopted permeability	m/day	3	Mod.	Very high	Moderate	Other factors lessen impact
	Long Term Accept. Rate	L/day/sq m	40	High	Very high	Moderate	Other factors lessen impact

Comments

Secondary treatment of wastewater is required


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GES

Land suitability and system sizing for on-site wastewater management
Trench 3.0 (Australian Institute of Environmental Health)

Environmental Sensitivity Report
Site assessment for on-site waste water disposal

Assessment for Shane Thompson

Assess. Date 21-May-26

Ref. No.

Assessed site(s) 8 Veronica St Primrose Sands

Site(s) inspected 24-Apr-26

Local authority Sorell

Assessed by John Paul Cumming

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

Alert	Factor	Units	Value	Confid level	Limitation		Remarks
					Trench	Amended	
A	Cation exchange capacity	mmol/100g	35	High	High		
A	Phos. adsorp. capacity	kg/cub m	0.4	High	High		
	Annual rainfall excess	mm	-463	High	Very low		
	Min. depth to water table	m	1.5	High	Moderate		
	Annual nutrient load	kg	3.1	High	Very low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	2	High	Very low		
	Risk to adjacent bores	Very low		V. high	Very low		
A	Surf. water env. value	Recreational		V. high	High		
	Dist. to nearest surface water	m	135	V. high	Moderate		
	Dist. to nearest other feature	m	200	V. high	Very low		
	Risk of slope instability	Very low		V. high	Very low		
	Distance to landslip	m	200	V. high	Low		

Comments

Secondary treatment of wastewater is required

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APPENDIX 1 - PSP Results Table

Perth Sand Penetrometer (PSP) Conversion to Californian Bearing Ratio
(ref: Australian Standard AS 1289.6.3.3 - 1997)

PSP Location BH1

Depth (mm)	PSP (Blows/100mm)	PSP (mm/Blow)	PSP Resistance (mPa)	Allowable Bearing Capacity (kPa)	CBR (Rounded Up)
0-100	2	50.0	0.6	74	4
100-200	3	33.3	0.9	110	6
200-300	3	33.3	0.9	110	6
300-400	2	50.0	0.6	74	4
400-500	2	50.0	0.6	74	4
500-600	3	33.3	0.9	110	6
600-700	3	33.3	0.9	110	6
700-800	5	20.0	1.6	184	10
800-900	5	20.0	1.6	184	10
900-1000	5	20.0	1.6	184	10
1000-1100	4	25.0	1.3	147	8
1100-1200	6	16.7	1.9	221	13
1200-1300	7	14.3	2.2	257	15
1300-1400	7	14.3	2.2	257	15
1400-1500	8	12.5	2.5	294	17
1500-1600	7	14.3	2.2	257	15
1600-1700	7	14.3	2.2	257	15
1700-1800	8	12.5	2.5	294	17
1800-1900	8	12.5	2.5	294	17
1900-2000	7	14.3	2.2	257	15
2000-2100	8	12.5	2.5	294	17
2100-2200	9	11.1	2.8	331	20
2200-2300	8	12.5	2.5	294	17
2300-2400	8	12.5	2.5	294	17
2400-2500	8	12.5	2.5	294	17



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Explanatory Notes

1 Scope of Works

The methods of description and classification of soils used in this report are based largely on Australian Standard 1726 – Geotechnical Site Investigations (AS1726:2017), with reference to Australian Standard 1289 – Methods for testing soils for engineering purposes (AS1289), for eventual Site Classification according to Australian Standard 2870 (AS2870:2011) – Residential Slabs and Footings and Australian Standard 1547 (AS1547:2012) On-site domestic wastewater management.

1.1 Site Classification AS2870:2011

Site classification with reference to the above Australian Standards are based on site reactivity.

Class	Foundation Conditions	Characteristic Surface Movement
A	Most sand and rock sites with little or no ground movement from moisture changes.	0mm
S	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes.	0 – 20mm
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes.	20 – 40mm
H-1	Highly reactive clay sites, which may experience high ground movement from moisture changes.	40 – 60mm
H-2	Highly reactive clay sites, which may experience very high ground movement from moisture changes.	60 – 75mm
E	Extremely reactive sites, which may experience extreme ground movement from moisture changes.	>75mm

*Note: Soils where foundation performance may be significantly affected by factors other than reactive soil movement are classified as **Class P**.*

A site is classified as **Class P** when:

- The bearing capacity of the soil profile in the foundation zone is generally less than 100kpa
- If excessive foundation settlement may occur due to loading on the foundation.
- The site contains uncontrolled fill greater than 0.8m in depth for sandy sites and 0.4m in depth for other soil materials.
- The site is subject to mine subsidence, landslip, collapse activity or coastal erosion.
- The site is underlain by highly dispersive soils with significant potential for erosion
- If the site is subject to abnormal moisture conditions which can affect foundation performance



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1.2 Soil Characterisation

This information explains the terms of phrase used within the soil description area of the report.

It includes terminology for cohesive and non-cohesive soils and includes information on how the Unified Soil Classification Scheme (USCS) codes are determined.

NON COHSIVE – SAND & GRAVEL		
Consistency Description	Field Test	Dynamic Cone Penetrometer blows/100 mm
Very loose (VL)	Easily penetrated with 13 mm reinforcing rod pushed by hand.	0 - 1
Loose (L)	Easily penetrated with 13 mm reinforcing rod pushed by hand. Can be excavated with a spade; 50 mm wooden peg can be easily driven.	1 - 3
Medium dense (MD)	Penetrated 300 mm with 13 mm reinforcing rod driven with 2 kg hammer, - hard shovelling.	3 - 8
Dense (D)	Penetrated 300 mm with 13 mm reinforcing rod driven with 2 kg hammer, requires pick for excavation: 50 mm wooden peg hard to drive.	8 - 15
Very dense (VD)	Penetrated only 25 - 50 mm with 13 mm reinforcing rod driven with 2 kg hammer.	>15

COHESIVE - SILT & CLAY		
Consistency Description	Field Test	Indicative undrained shear strength kPa
Very soft	Easily penetrated >40 mm by thumb. Exudes between thumb and fingers when squeezed in hand.	<12
Soft	Easily penetrated 10 mm by thumb. Moulded by light finger pressure	>12 and <25
Firm	Impression by thumb with moderate effort. Moulded by strong finger pressure	>25 and <50
Stiff	Slight impression by thumb cannot be moulded with finger.	>50 and <100
Very Stiff	Very tough. Readily indented by thumbnail.	>100 and <200
Hard	Brittle. Indented with difficulty by thumbnail.	>200



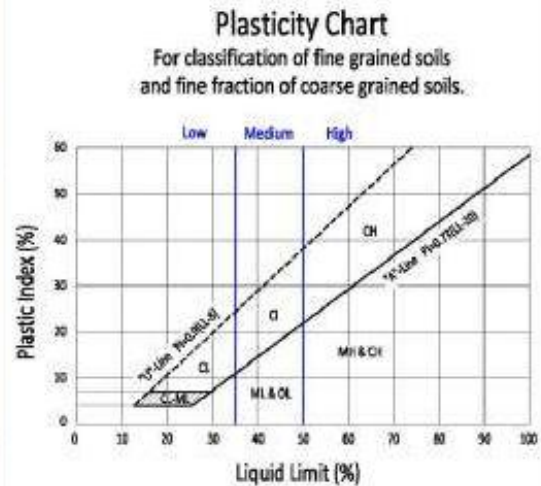
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1.3 USCS Material Descriptions

Soils for engineering purposes are the unconsolidated materials above bedrock, they can be residual, alluvial, colluvial or aeolian in origin.

Major Divisions		Particle size mm	USCS Group Symbol	Typical Names	Laboratory Classification					
COARSE GRAINED SOILS (more than half of material less than 63 mm & larger than 0.075 mm)	BOULDERS	200			% < 0.075 mm (2)	Plasticity of fine fraction	$C_u = \frac{D_{60}}{D_{10}}$	$C_c = \frac{(D_{30})^2}{(D_{10})(D_{60})}$	NOTES	
	COBBLES	63								
	GRAVELS (more than half of coarse fraction is larger than 2.36 mm)	coarse	20	GW	Well graded gravels and gravel-sand mixtures, little or no fines	0-5	—	>4	Between 1 and 3	(1) Identify fines by the method given for fine-grained soils.
		medium	6	GP	Poorly graded gravels and gravel-sand mixtures, little or no fines, uniform gravels	0-5	—	Fails to comply with above		
		fine	2.36	GM	Silty gravels, gravel-sand-silt mixtures (1)	12-50	Below 'A' line or PI<4	—	—	
				GC	Clayey gravels, gravel-sand-clay mixtures (1)	12-50	Above 'A' line and PI>7	—	—	
	SANDS (more than half of coarse fraction is smaller than 2.36 mm)	coarse	0.6	SW	Well graded sands and gravelly sands, little or no fines	0-5	—	>6	Between 1 and 3	(2) Borderline classifications occur when the percentage of fines (fraction smaller than 0.075 mm size) is greater than 5% and less than 12%. Borderline classifications require the use of SP-SM, GW-GC.
		medium	0.2	SP	Poorly graded sands and gravelly sands, little or no fines	0-5	—	Fails to comply with above		
		fine	0.075	SM	Silty sands, sand silt mixtures (1)	12-50	Below 'A' line or PI<4	—	—	
				SC	Clayey sands, sand-clay mixtures (1)	12-50	Above 'A' line and PI>7	—	—	
	FINE GRAINED SOILS (more than half of material less than 63 mm & smaller than 0.075 mm)	SILTS & CLAYS (Liquid Limit ≤50%)		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	Use the gradation curve of material passing 63 mm for classification of fractions according to the criteria given in 'Major Divisions'				
				CL CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays					
			OL	Organic silts and clays of low plasticity						
SILTS & CLAYS (Liquid Limit >50%)			MH	Inorganic silts, mic-aceous or diato-maceous fine sands or silts, elastic silts						
			CH	Inorganic clays of high plasticity, fat clays						
			OH	Organic silts and clays of high plasticity						
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils						



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Grain size analysis is performed by two processes depending on particle size. Sand silt and clay particles are assessed using a standardised hydrometer test, and coarse sand and larger is assessed through sieving by USCS certified sieves. For more detail see the following section.

Soil Classification	Particle Size
Clay	Less than 0.002mm
Silt	0.002 – 0.06mm
Fine/Medium Sand	0.06 – 2.0mm
Coarse Sand	2.0mm – 4.75mm
Gravel	4.75mm – 60.00mm

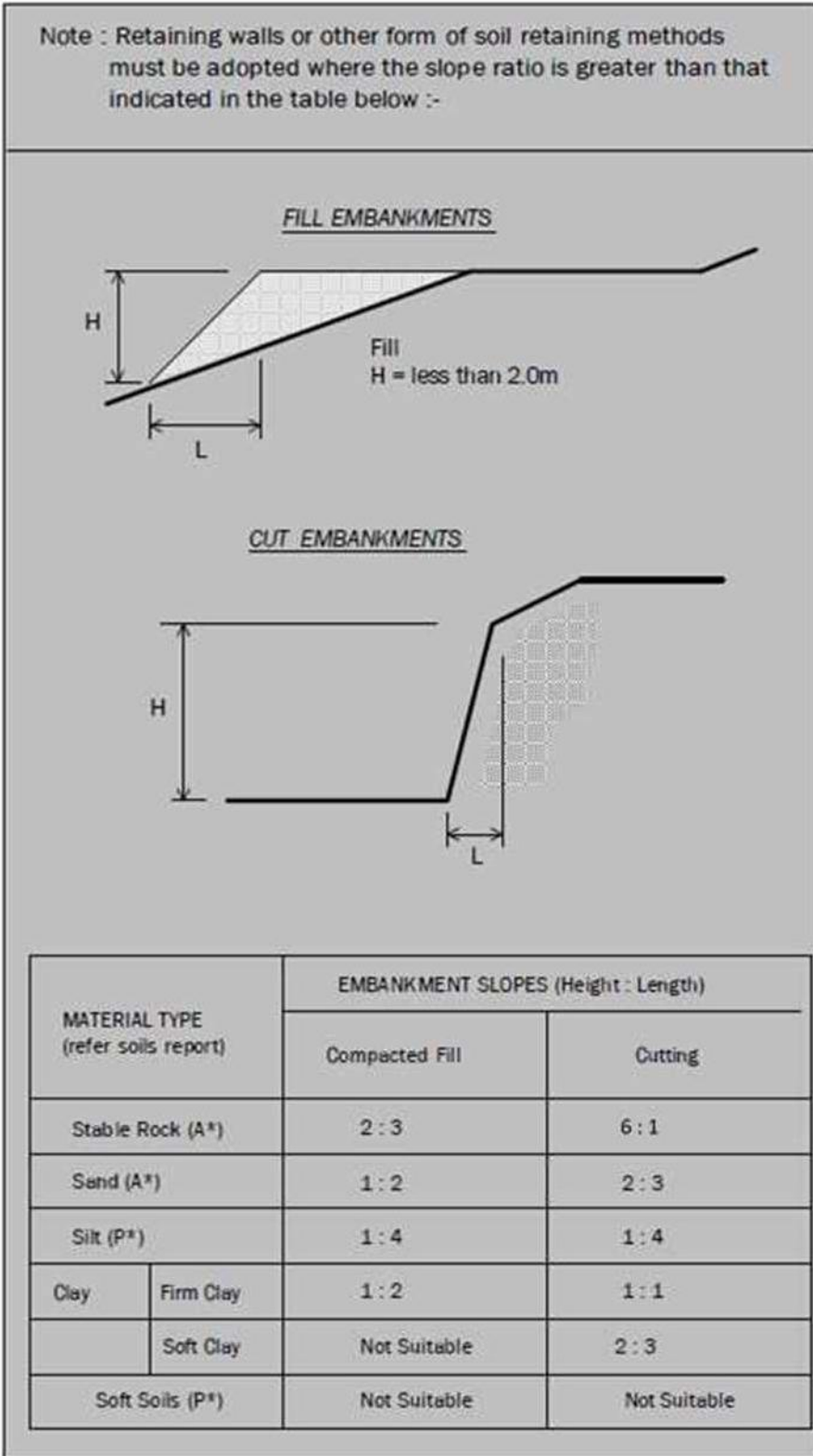
1.4 Bearing Capacities and DCP testing.

DCP and PSP weighted penetrometer tests – Dynamic Cone Penetrometer (DCP) and Perth Sand Penetrometer (PSP) tests are carried out by driving a rod into the ground with a falling weight hammer and measuring the blows for successive 100mm increments of penetration. Normally, there is a depth limitation of 1.2m but this may be extended in certain conditions by the use of extension rods. The methods for the two tests are quite similar.

- Dynamic Cone Penetrometer – a 16mm rod with a 20mm diameter cone end is driven with a 9kg hammer dropping 510mm (AS 1289, Test 6.3.2).
- Perth Sand Penetrometer – a 16mm diameter flat-ended rod is driven with a 9kg hammer, dropping 600mm (AS 1289 Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.

Site Anomalies – During construction GES will need to be notified of any major variation to the foundation conditions as predicted in this report.

1.5 Batter Angles for Embankments (Guide Only)



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Glossary of Terms

Bearing Capacity – Maximum bearing pressure that can be sustained by the foundation from the proposed footing system under service loads which should avoid failure or excessive settlement.

Clay – (Mineral particles less than 0.002mm in diameter). Fine grained cohesive soil with plastic properties when wet. Also includes sandy clays, silty clays, and gravelly clays.

Dynamic Cone Penetrometer (DCP) – Field equipment used to determine underlying soil strength and therefore bearing capacity (kPa) by measuring the penetration of the device into the soil after each hammer blow.

Dispersive soil – A soil that has the ability to pass rapidly into suspension in water.

Footing – Construction which transfers the load from the building to the foundation.

Foundation – Ground which supports the building

Landslip – Foundation condition on a sloping site where downhill foundation movement or failure is a design consideration.

Qualified Engineer – A professional engineer with academic qualifications in geotechnical or structural engineering who also has extensive experience in the design of the footing systems for houses or similar structures.

Reactive Site – Site consisting of clay soil which swells on wetting and shrinks on drying by an amount that can damage buildings on light strip footings or unstiffened slabs. Includes sites classified as S, M, H-1, H-2 & E in accordance with AS2870-2011.

Sand – (Mineral particles greater than 0.02mm in diameter). Granular non-cohesive, non-plastic soil that may contain fines including silt or clay up to 15%.

Services – Means all underground services to the site including but not limited to power, telephone, sewerage, water & storm water.

Silt – (Mineral particles 0.002 – 0.02mm in diameter). Fine grained non-cohesive soil, non-plastic when wet. Often confers a silky smoothness of field texture, regularly includes clay and sand to form clayey silts, sandy silts and gravelly silts.

Site – The site title, as denoted by address, lot number, or Certificate of Title (CT) number, or Property Identification Number (PID).

Surface Movement (Ys) – Design movement (mm) at the surface of a reactive site caused by moisture changes.



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Disclaimer

This Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and the Client. To the best of GES's knowledge, the information presented herein represents the client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that discussed in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible geotechnical parameter or the soil conditions over the whole area of the site. Soil and rock samples collected from the investigation area are assumed to be representative of the areas from where they were collected and not indicative of the entire site. The conclusions discussed within this report are based on observations and/or testing at these investigation points.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.


No responsibility is accepted for use of any part of this report in any other context or for any other purpose by a third party.



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Demonstration of wastewater system compliance to *Building Act 2016 Guidelines for On-site Wastewater Disposal*


Acceptable Solutions	Performance Criteria	Compliance
<p>A1</p> <p>Horizontal separation distance from a building to a land application area must comply with one of the following:</p> <ul style="list-style-type: none"> a) be no less than 6m; or b) be no less than: <ul style="list-style-type: none"> (i) 3m from an upslope building or level building; (ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building; (iii) If secondary treated effluent and subsurface application, no less than 2m plus 0.25m for every degree of average gradient from a downslope building. 	<p>P1</p> <ul style="list-style-type: none"> a) The land application area is located so that <ul style="list-style-type: none"> (i) the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low.; and (ii) is setback a sufficient distance from a downslope excavation around or under a building to prevent inadequately treated wastewater seeping out of that excavation 	<p>Complies with P1</p> <p>Land application area will be located with minimum separation distance to proposed building of 1.5m.</p> <p>The risk of wastewater reducing the bearing capacity of a building's foundation is acceptably low.</p>
<p>A2</p> <p>Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b)</p> <ul style="list-style-type: none"> (a) be no less than 100m; or (b) be no less than the following: <ul style="list-style-type: none"> (i) if primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or (ii) if secondary treated effluent and subsurface application, 15m plus 2m for every degree of average gradient to down slope surface water. 	<p>P2</p> <p>Horizontal separation distance from downslope surface water to a land application area must comply with all of the following:</p> <ul style="list-style-type: none"> a) Setbacks must be consistent with AS/NZS 1547 Appendix R; b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable. 	<p>Complies with A2 (a)</p> <p>Land application area located > 100m from downslope surface water</p> <div data-bbox="1675 1177 2096 1358" style="border: 1px solid orange; padding: 5px; margin-top: 20px;">  <p>Sorell Council</p> <p>Development Application: 5.2026.128.1 - Response to Request For Information - 8 Veronica Street, Primrose Sands.pdf Plans Reference: P2 Date received: 29/05/2026</p> </div>

<p>A3</p> <p>Horizontal separation distance from a property boundary to a land application area must comply with either of the following:</p> <p>(a) be no less than 40m from a property boundary; or</p> <p>(b) be no less than:</p> <p>(i) 1.5m from an upslope or level property boundary; and</p> <p>(ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or</p> <p>(iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary.</p>	<p>P3</p> <p>Horizontal separation distance from a property boundary to a land application area must comply with all of the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.</p>	<p>Complies with A3 (b) (i) Land application area will be located with a minimum separation distance of 1.5m from an upslope or level property boundary</p> <p>Complies with A3 (b) (iii) Land application area will be located with a minimum separation distance of 2.5m of downslope property boundary</p>
<p>A4</p> <p>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must be no less than 50m and not be within the zone of influence of the bore whether up or down gradient.</p>	<p>P4</p> <p>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable</p>	<p>Complies with A4 No bore or well identified within 50m</p>



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<p>A5</p> <p>Vertical separation distance between groundwater and a land application area must be no less than:</p> <p>(a) 1.5m if primary treated effluent; or</p> <p>(b) 0.6m if secondary treated effluent</p>	<p>P5</p> <p>Vertical separation distance between groundwater and a land application area must comply with the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable</p>	<p>Complies with A5 (b)</p> <p>Proposed separation of 0.9m</p>
<p>A6</p> <p>Vertical separation distance between a limiting layer and a land application area must be no less than:</p> <p>(a) 1.5m if primary treated effluent; or</p> <p>(b) 0.5m if secondary treated effluent</p>	<p>P6</p> <p>Vertical setback must be consistent with AS/NZS1547 Appendix R.</p>	<p>Complies with A6 (b)</p> <p>No limiting layer identified</p>
<p>A7</p> <p>nil</p>	<p>P7</p> <p>A wastewater treatment unit must be located a sufficient distance from buildings or neighbouring properties so that emissions (odour, noise or aerosols) from the unit do not create an environmental nuisance to the residents of those properties</p>	<p>Complies</p> <div data-bbox="1509 1067 2078 1315" style="border: 1px solid orange; padding: 5px;">  <p>Sorell Council</p> <p>Development Application: 5.2026.128.1 - Response to Request For Information - 8 Veronica Street, Primrose Sands.pdf Plans Reference: P2 Date received: 29/05/2026</p> </div>

AS1547:2012 – Loading Certificate – AWTS Design

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

Site Address: 8 Veronica Street, Primrose Sands

System Capacity: 5 persons @ 120L/person/day

Summary of Design Criteria

DLR: 40L/m²/day.

Absorption area: 15m²

Reserve area location /use: Assigned

Water saving features fitted: Standard fixtures

Allowable variation from design flows: 1 event @ 200% daily loading per quarter

Typical loading change consequences: Expected to be minimal due to use of AWTS and large land area

Overloading consequences: Continued overloading may cause hydraulic failure of the absorption area and require upgrading/extension of the area. Risk considered acceptable due to monitoring through quarterly maintenance reports.

Underloading consequences: Lower than expected flows will have minimal consequences on system operation unless the house has long periods of non occupation. Under such circumstances additional maintenance of the system may be required. Long term under loading of the system may also result in vegetation die off in the absorption area and additional watering may be required. Risk considered acceptable due to monitoring through quarterly maintenance reports.

Lack of maintenance / monitoring consequences: Issues of underloading/overloading and condition of the irrigation area require monitoring and maintenance, if not completed system failure may result in unacceptable health and environmental risks. Monitoring and regulation by the permit authority required to ensure compliance.

Other considerations: Owners/occupiers must be made aware of the operational requirements and limitations of the system by the installer/maintenance contractor.



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CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Owner /Agent
 Address
 Suburb/postcode

Qualified person details:

Qualified person:
Address: Phone No:
 Fax No:
Licence No: Email address:

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

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

Details of work:

Address: Lot No:
 Certificate of title No:
The assessable item related to this certificate: (description of the assessable item being certified)
Assessable item includes –
- a material;
- a design
- a form of construction
- a document
- testing of a component, building system or plumbing system
- an inspection, or assessment, performed

Certificate details:

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

This certificate is in relation to the above assessable 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:

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In issuing this certificate the following matters are relevant –

Documents:	The attached soil report for the address detailed above in 'details of work'
Relevant calculations:	Reference the above report.
References:	AS2870:2011 residential slabs and footings AS1726:2017 Geotechnical site investigations CSIRO Building technology file – 18.

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

Site Classification consistent with AS2870-2011.

Scope and/or Limitations

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

I, John-Paul Cumming certify the matters described in this certificate.

Qualified person:

Signed:

Certificate No:

Date:

J12995

21/05/2026



A handwritten signature in black ink, appearing to read 'John Paul Cumming', written over a light grey background.

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CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: Owner name
 Address
 Suburb/postcode

Designer details:

Name: Category:
 Business name: Phone No:
 Business address:
 Fax No:
 Licence No: Email address:

Details of the proposed work:

Owner/Applicant Designer's project reference No.
Address: Lot No:

Type of work: Building work Plumbing work (X all applicable)

Description of work:
 (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
	<input type="checkbox"/> Building design	Architect or Building Designer
	<input type="checkbox"/> Structural design	Engineer or Civil Designer
	<input type="checkbox"/> Fire Safety design	Fire Engineer
	<input type="checkbox"/> Civil design	Civil Engineer or Civil Designer
	<input checked="" type="checkbox"/> Hydraulic design	Building Services Designer
	<input type="checkbox"/> Fire service design	Building Services Designer
	<input type="checkbox"/> Electrical design	Building Services Designer
	<input type="checkbox"/> Mechanical design	Building Service Designer
	<input type="checkbox"/> Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	<input type="checkbox"/> Other (specify)	


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

Other details:
 
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Design documents provided:

The following documents are provided with this Certificate –
 Document description:

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: May-26
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: May-26
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by: Geo-Environmental Solutions	Date: May-26

Standards, codes or guidelines relied on in design process:	
AS1547:2012 On-site domestic wastewater management.	
AS3500 (Parts 0-5)-2013 Plumbing and drainage set.	 Sorell Council Development Application: 5.2026.128.1 - Response to Request For Information - 8 Veronica Street, Primrose Sands.pdf Plans Reference: P2 Date received: 29/05/2026


Any other relevant documentation:	
Geo-Environmental Assessment - 8 Veronica Street Primrose Sands - May-26 Geo-Environmental Assessment - 8 Veronica Street Primrose Sands - May-26	

Attribution as designer:	
---------------------------------	--

I John-Paul Cumming, 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.

	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	John-Paul Cumming		21/05/2026
Licence No:	CC774A		

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 John-Paul Cumming..... 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












	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	John-Paul Cumming		21/05/2026





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Legend

-  - Electrical Connection
-  - Electrical Turret
-  - Sewer Connection
-  - Stormwater Connection
-  - Telstra Connection
-  - Telstra Pit
-  - Water Meter
-  - Water Stop Valve
-  - Fire Hydrant
-  - Solar Bollard Light
-  - Spotlight with sensor

Surface Water Drainage

Ground to fall away from building in all directions in compliance with AS2870 & N.C.C 2022 3.3.3.

Surface water must be diverted away from a Class 1 building as follows:

- (a) Slab-on-ground - finished ground level adjacent to a building: the external finished surface surrounding the slab must be drained to move surface water away from the building and graded to give a slope of not less than
 - (i) 25mm over the first 1m from the building
 - (A) in low rainfall intensity areas for surfaces that are reasonably impermeable (such as concrete or claypaving); or
 - (B) for any reasonably impermeable surface that forms part of an access path or ramp provided for the purposes of Clauses 1.1 (2) or (4)(c) of the ABCB Standard for Livable Housing Design; or
 - (ii) 50 mm over the first 1 m from the building in any other case.
- (b) Slab-on-ground - finished slab heights: the height of the slab-on-ground above external finished surfaces must be not less than
 - (i) 100 mm above the finished ground level in low rainfall intensity areas or sandy, well-drained areas; or
 - (ii) 50 mm above impermeable (paved or concrete) areas that slope away from the building in accordance with (a); or
 - (iii) 150 mm in any other case.
- (c) The ground beneath suspended floors must be graded so that the area beneath the building is above the adjacent external finished ground level and surface water is prevented from ponding under the building.

Subsoil Drainage

is to comply with AS2870, AS3500 & N.C.C 2022 3.3.4.

- Where a subsoil drainage system is installed to divert subsurface water away from the area beneath a building, the subsoil drain must-
 - (a) be graded with a uniform fall of not less than 1:300; and
 - (b) discharge into an external silt pit or sump with-
 - (i) the level of discharge from the silt pit or sump into an impervious drainage line not less than 50 mm below the invert level of the inlet; and provision for cleaning and maintenance.

Note

All driveway pits and grate drains to be **Class B**.

Stormwater pits are indicative. Location may vary depending on site conditions.

Wastewater system:


AWTS unit located to ensure min 1:60 fall from all fixtures. Vented according to NCC Vol 3 Tas C2D6

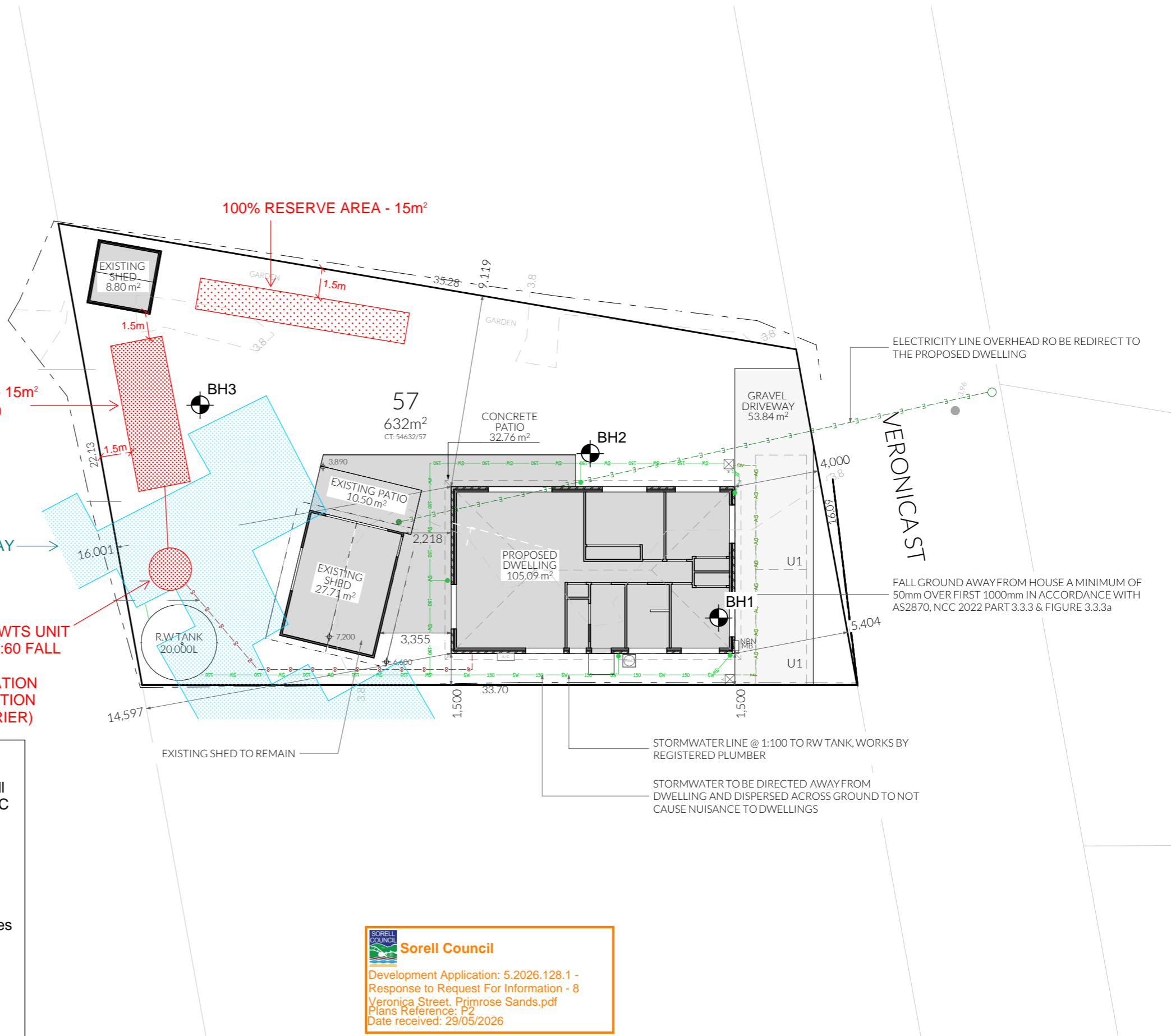
Absorption Bed - 15m²
1 x 7m x 2.5m x 0.6m

- Min 1.5m from upslope buildings
- Min 1.5m from upslope or level boundaries
- Min 2.5m from downslope boundary
- Min 100m from downslope surface water

Refer to GES report

Dr. John Paul Cumming
Building Services Designer-
Hydraulic
CCC774A


21/5/2026






Sorell Council

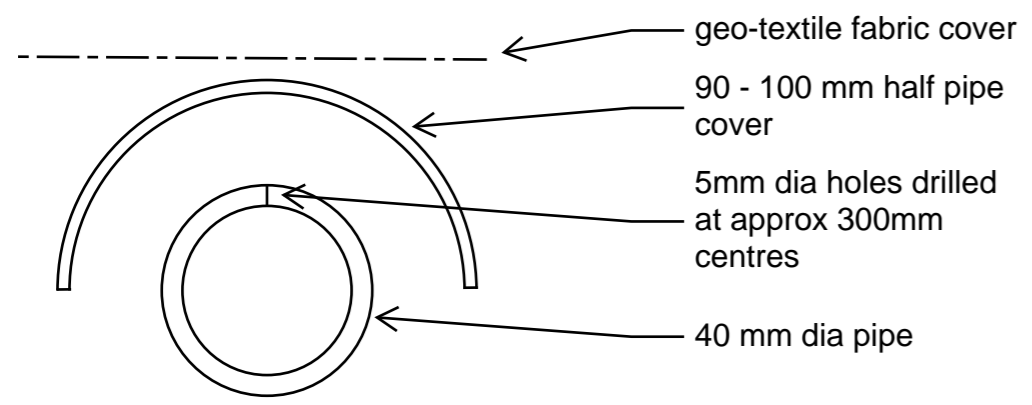
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Site Areas

Site Area	632 m ²
Building Footprint	141.6 m ²
Total Site Coverage	22.40%

 <p>PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au Licence: CC6073Y</p>	<p>Site Plan</p> <p>Revision: DA - 01 Approved by: JD</p>	<p>Scale: 1:200 @ A3 Pg. No: A.02</p>	<p>Proposal: New Dwelling Client: Shane & Carmel Thompson Address: 8 Veronica St, Primrose Sands, 7173</p>	<p>Date: 05/03/26 Drawn by: MG Job No: 016-2026 Engineer: TBA Building Surveyor: TBA</p>	<p>Issue</p>	<p>Date</p>	<p>Designer</p>		<p>These drawings are the property of Pinnacle Drafting & Design Pty Ltd, reproduction in whole or part is strictly forbidden without written consent. © 2024. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any Certificate of Likely Compliance and/or permit documentation. DO NOT SCALE FROM DRAWINGS. All Contractors are to verify dimensions on site before commencing any orders, works or requesting producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF PINNACLE DRAFTING & DESIGN PTY LTD AS SOON AS PRACTICABLE. This document must be printed in colour. Pinnacle Drafting takes no responsibility for any errors, issues, or omissions caused by contractors and builders not following colour-printed plans.</p>	
					<p>NOTE: Refer to cover page for further details on changes.</p>					

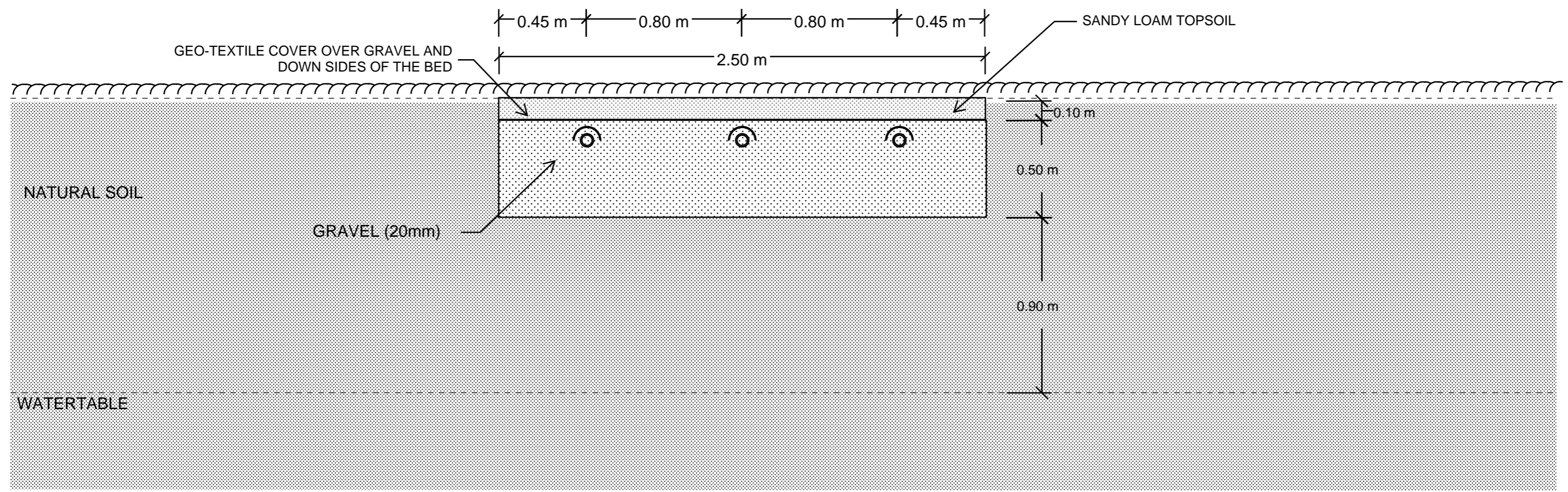
Distribution pipe detail



GEO-ENVIRONMENTAL

SOLUTIONS

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<p>Do not scale from these drawings. Dimensions to take precedence over scale.</p>	<p>Raised modified absorption bed</p>			<p>On-site Wastewater Cross-Section</p>	<p>Sheet 1 of 2</p>
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Design notes:

1. Absorption bed dimensions of up to 15m long by 0.6 deep by 2.50m wide.
2. Base of bed to be excavated level max 100mm into natural soils and smearing and compaction avoided.
3. Bed to be filled with clean washed gravel (7-20mm) and drilled 40mm distribution pipes packed into upper 100mm.
4. 40mm distribution pipes drilled with sufficient 5mm holes in the top of the pipe (approx spacing 300mm) to distribute the effluent and half circle 90-100mm UPVC pipe, un-perforated, laid over each 40mm perforated lateral to direct water jet downwards.
5. One 5 mm hole at centre of invert of each pipe to allow for drainage between pump cycles.
6. Geotextile or filter cloth to be placed over the distribution pipes to prevent clogging of the pipes and aggregate - the sides of the bed should also be lined.
7. Final finished surface with sandy loam to be a minimum of 150 mm above aggregate with turf cover or mulched with appropriate vegetation (eg native grasses and small shrubs at 1 plant per 1 m²)
8. The turf or vegetation is an essential component of the system and must be maintained with regular mowing and or trimming as appropriate
9. The distribution pipe grid must be absolutely level to allow even distribution of effluent around the absorption area – it is recommended that the level be verified by running water into the system before backfilling and commissioning the trench
10. All works on site to comply with AS3500 and Tasmanian Plumbing code.

The pump must be capable of delivering the total flow rate required for all laterals whilst providing a 1.5m residual head (ie squirt height) at the highest orifice (with no more than 15% variation in squirt height across the whole bed).

For beds with individual laterals, no more than 15m long, it is acceptable to adopt a flow rate of 4-5L/min/lineal metre. Total dynamic head (including friction loss) will need to be determined on a site-specific basis.

Individual flush points must be installed for each lateral. This may be a screw cap fitting on a 90 degree elbow level with the bed surface or a pressure controlled flush valve inside an irrigation control box.

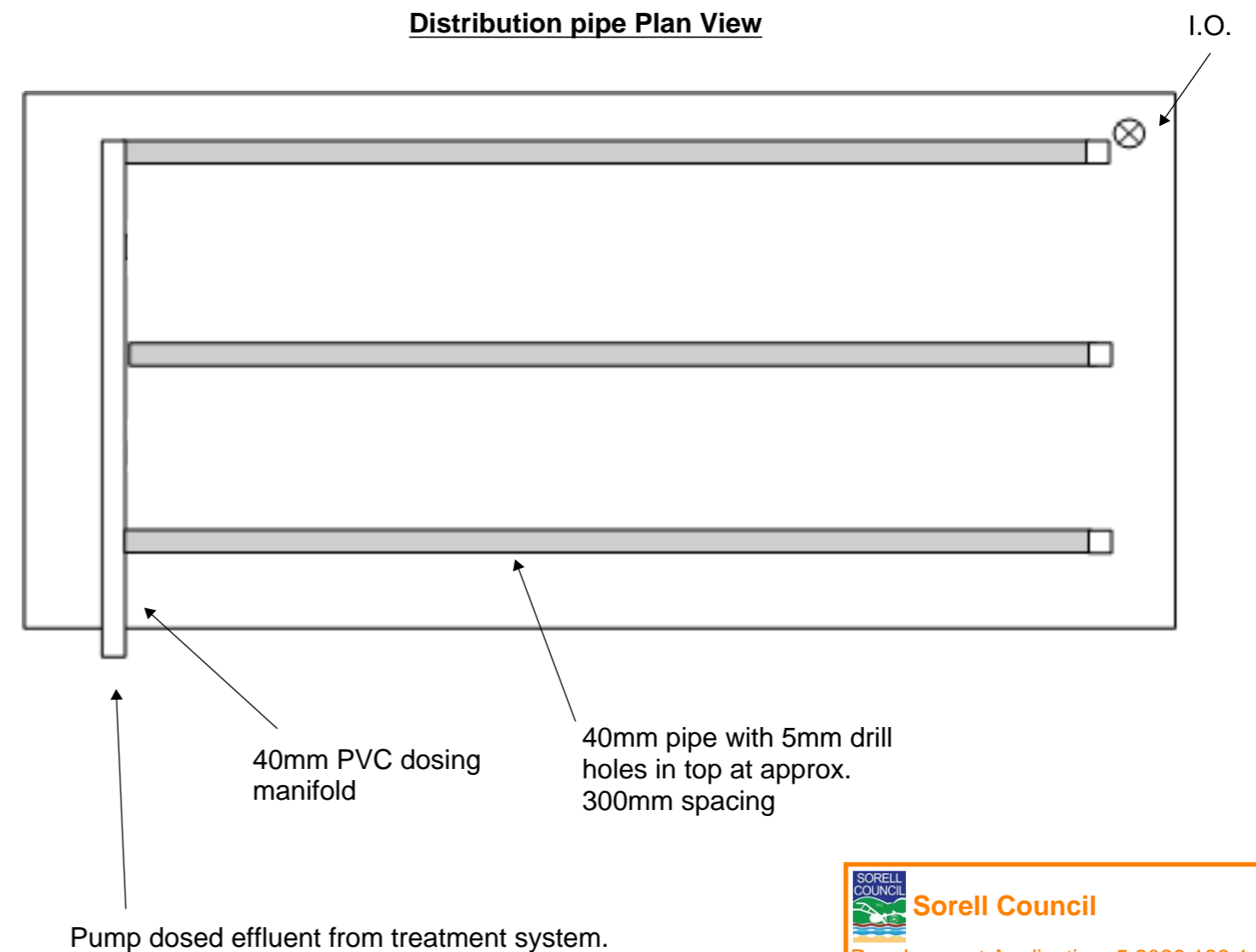


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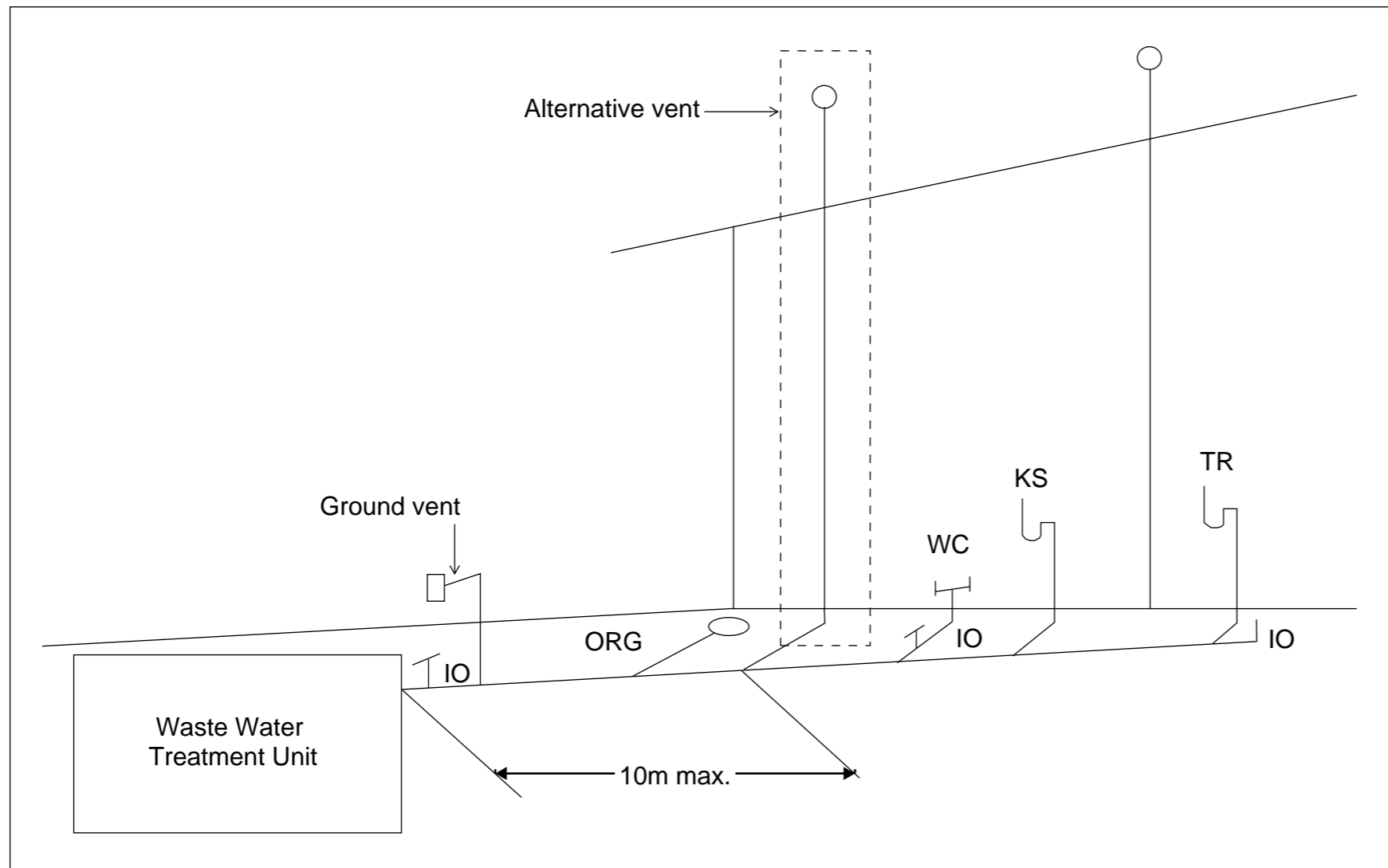
Distribution pipe Plan View



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Tas Figure C2D6 Alternative Venting Arrangements

Vents must terminate in accordance with AS/NZS 3500.2

Alternative venting to be used by extending a vent to terminate as if an upstream vent, with the vent connection between the last sanitary fixture or sanitary appliance and the on-site wastewater management system. Use of a ground vent in not recommended

Inspection openings must be located at the inlet to an on-site wastewater management system treatment unit and the point of connection to the land application system and must terminate as close as practicable to the underside of an approved inspection opening cover installed at the finished surface level

Access openings providing access for desludging or maintenance of on-site wastewater management system treatment unites must terminate at or above finished surface level

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STORMWATER ASSESSMENT

8 Veronica Street

Primrose Sands

May 2026



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Investigation Details

Client:	Shane Thompson
Site Address:	8 Veronica Street, Primrose Sands
Date of Inspection:	24/04/2026
Proposed Works:	New house
Investigation Method:	Geoprobe 540UD - Direct Push
Inspected by:	C. Cooper

Site Details

Certificate of Title (CT):	54632/57
Title Area:	Approx. 630.8 m ²
Applicable Planning Overlays:	Flood-prone Areas, Priority Vegetation, Airport obstacle limitation area
Slope & Aspect:	Flat with no dominant aspect
Vegetation:	Grass & Weeds

Background Information

Geology Map:	MRT
Geological Unit:	Quaternary Sediments
Climate:	Annual rainfall 500mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	Onsite Stormwater Retention

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Investigation

A number of bore holes were completed to identify the distribution and variation of the soil materials at the site, bore hole locations are indicated on the site plan. See soil profile conditions presented below.

Soil Profile Summary

BH 1 Depth (m)	BH 2 Depth (m)	BH 3 Depth (m)	USCS	Description
0.00-0.20	0.00-0.20	0.00-0.20	SP	SAND: grey, dry, medium dense
0.20-0.60	0.20-0.80	0.20-0.60	SP	SAND: light grey, dry, medium dense
0.60-0.70	0.80-1.30	0.60-0.80	SP	SAND: dark brown, slightly moist, dense
0.70-1.00			SP	SAND: grey, slightly moist, medium dense
1.00-3.0+	1.30-2.0+	0.80-1.5+	SP	SAND: light brown grey, moist to wet, dense, no refusal

Soil Conditions

The soil onsite has formed from Quaternary sediments and consists of deep sandy sediments and has an estimated permeability of >3m/day.

GES have identified the following at the site:

- The site has a <5% grade and presents a low risk to slope stability and landslip.
- There are no proposals for cuts or changes of grade which may impact on any proposed onsite stormwater absorption.
- The soil onsite has been identified as comprising of sands overlying sandy clay subsoils. No soil dispersion was identified.
- No evidence of a water table was observed at the time of the investigation
- There is a low risk of the natural soils being impacted by contamination
- Bedrock was encountered at a depth of approximately 1.0m

Soil Dispersion

The soil is non-dispersive.



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Existing Conditions and Assumptions

The site covers an area of approximately 630m² with a total impervious area of approx. 230m². This consists of approx. 133m² of roof area, 43m of concrete and 54m² of gravel.

There is no public stormwater system that the property can connect to, and it is therefore it is proposed that stormwater from the site would be routed through the proposed conventional underground drainage system comprising of Grated Sumps and PVC Pipes, coupled with soakage trench elements for on-site detention.

The stormwater management report is prepared in accordance with the design criteria listed below:

- The stormwater drainage system is designed using Bureau of Meteorology (BOM) published rainfall Intensity Frequency Duration (IFD) data as a minor / major system to accommodate the 5% AEP / 20 min storm events.
- The flow rate of stormwater leaving the site shall be designed so that it does not exceed the pre-developed flow rate for both the minor and major rain events.
- The total site discharges are modelled as described in *Storm Drainage Design in Small Urban Catchments*, a handbook for Australian practice by *Australian Rainfall and Runoff (ARR2019)*, Book 9 – Runoff in Urban Areas.

Detention Calculations

Detention calculations area provided in Appendix A

Summary and Conclusions

- Detention design to be adopted as per design and documentation.
- The designed solution complies with the performance solution design check carried out.
- The 9m² base (5m x 1.8m), 1m deep soakage trench is designed over a 20-minute storm duration for proposed development.
- DN100 slotted PVC pipe with geotextile covering on top of aggregate to be installed within the soakage trench.

It is also recommended that regular inspection and maintenance is conducted to ensure the stormwater system is operating without obstruction. A schematic of recommended checks is attached.

GES Stormwater Maintenance Plan Checklist

Indicative frequency	Inspection and criteria	Maintenance activities (where required)
Annual	Check whether any tree branches overhang the roof or are likely to grow to overhang the roof	If safe and where permitted, consider pruning back any overhanging branches
	Check that access covers to storage tanks are closed	Secure any open access covers to prevent risk of entry
	Check that screens on inlets, overflows and other openings do not have holes and are securely fastened	Repair any defective screens to keep out mosquitoes
	Inspect tank water for presence of rats, birds, frogs, lizards or other vermin or insects	Remove any infestations, identify point of entry and close vermin and insect-proof mesh
	Inspect tank water for presence of mosquito larvae (inspect more frequently in sub-tropical and tropical northern Australia, based on local requirements)	Identify point of entry and close with insect-proof mesh with holes no greater than 1.6 mm in diameter
	Inspect gutters for leaf accumulation and ponding	Clean leaves from gutters-remove more regularly if required. If water is ponding, repair gutter to ensure water flows to downpipe
	Check signage at external roof water taps and that any removable handle taps are being properly used	Replace or repair the missing or damaged signage and fittings
	Check plumbing and pump connections are watertight/without leakage	Repair any leaks as necessary
	Check suction strainers, in-line strainers and pump location for debris	Clean suction strainers, in-line strainers or debris from pump location
	Check pump installation is adequate for reliable ongoing operation	Modify and repair as required
	Check first flush diverter, if present	Clean first flush diverter, repair and replace if necessary
	Check health of absorption trench area and surrounding grass or plants	Investigate any adverse impacts observed that might be due to irrigation
	Check condition of roof and coatings	Investigate and resolve any apparent changes to roof condition, such as loss of material coatings
Triennial	Drain, clean out and check the condition of the tank walls and roof to ensure no holes have arisen due to tank deterioration	Repair any tank defects

	Check sediment levels in the tank	Organise a suitable contractor to remove accumulated sediment if levels are approaching those that may block tank outlets
	Undertake a systematic review of operational control of risks to the system	Identify the reason for any problems during inspections and take actions to prevent failures occurring in future
After 20 years and then every 5 years	Monitor the effectiveness of the stormwater absorption area to assess for any clogging due to algal growth, or blocking due to tree roots/grass growth/trench failure.	Clean or replace clogged equipment
Ongoing	Inspect and follow up on any complaints or concerns raised that could indicate problems with the system	Repair or replace any problems that are notified



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APPENDIX A: STORMWATER DETENTION CALCULATIONS

STORAGE TRENCH			
Hydrology			
Total Catchment Area		230	m ²
Runoff Coefficient		0.864	
Annular Recurrence Interval (ARI)		20	yr
Ground Conditions			
Hydraulic conductivity (K)		5	m/day
		3.470	mm/min
Adjusted Rate (15% clogging factor)		2.950	mm/min
Trench Design			
Length		5	m
Width		1.8	m
Depth		1	m
Infiltration Area		9	m ²
Porosity		0.35	%
Trench Storage		3.15	m ³
		3150	L
Final Check			
Criteria	Requirement	Design	Check
Detention reqd	2370	3150	OK



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STORM CHECK					
Storm Duration	Intensity	Inflow Volume	Outflow Volume	Required Storage	Emptying time
	(mm/hr)	(m ³)	(L)	(L)	(hr)
1 min	141	467	27	440	0.28
2 min	112	742	53	689	0.43
3 min	101	1004	80	924	0.58
4 min	93	1232	106	1126	0.71
5 min	86.6	1434	133	1301	0.82
10 min	65.3	2163	265	1897	1.19
15 min	53.1	2638	398	2240	1.41
20 min	45.2	2994	531	2463	1.55
25 min	39.6	3279	664	2615	1.64
30 min	35.5	3527	796	2731	1.71
45 min	27.6	4114	1195	2919	1.83
1 hour	23.1	4590	1593	2998	1.88
1.5 hour	18.1	5395	2389	3006	1.89
2 hour	15.3	6081	3185	2895	1.82
3 hour	12.2	7273	4778	2495	1.57
4.5 hour	9.86	8817	7167	1650	1.04
6 hour	8.52	10159	9556	602	0.38
9 hour	6.94	12412	14335	-	-
12 hour	5.99	14284	19113	-	-
18 hour	4.8	17169	28669	-	-
24 hour	4.05	19316	38226	-	-
30 hour	3.51	20925	47782	-	-
36 hour	3.1	22177	57338	-	-
48 hour	2.51	23942	76451	-	-
72 hour	1.8	25754	114677	-	-
			Full volume	3150	1.89
Notes:					
Inflow volume calculated using Equation 10.1 (WSUD Guidelines: Chapter 10)					
Outflow volume calculated using Equation 10.2 (WSUD Guidelines: Chapter 10)					
Required storage and emptying time is left blank when outflow volume exceeds inflow volume					


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Location

Label: 8 Veronica Ave Primrose Sands
Easting: 554450
Northing: 5251315
Zone: 55
Latitude: Nearest grid cell: 42.8875 (S)
Longitude: Nearest grid cell: 147.6625 (E)



Issued: 25 May 2026

IFD Design Rainfall Intensity (mm/h)

Rainfall intensity for Durations, Exceedance per Year (EY), and Annual Exceedance Probabilities (AEP).
[FAQ for New ARR probability terminology](#)

Table Chart Unit:

Duration	Annual Exceedance Probability (AEP)						
	63.2%	50%#	20%*	10%	5%	2%	1%
1 min	64.8	72.8	99.9	120	141	171	196
2 min	54.9	61.2	81.9	96.7	112	130	143
3 min	48.8	54.5	73.4	86.9	101	118	132
4 min	44.2	49.5	67.1	79.9	93.0	110	124
5 min	40.5	45.5	62.0	74.1	86.6	104	118
10 min	29.6	33.3	45.9	55.4	65.3	80.0	92.4
15 min	24.0	27.0	37.3	45.0	53.1	65.2	75.4
20 min	20.5	23.1	31.8	38.3	45.2	55.3	63.8
25 min	18.1	20.3	27.9	33.6	39.6	48.3	55.5
30 min	16.3	18.4	25.1	30.2	35.5	43.0	49.3
45 min	13.0	14.6	19.8	23.6	27.6	33.1	37.5
1 hour	11.1	12.4	16.8	19.9	23.1	27.4	30.8
1.5 hour	8.88	9.93	13.3	15.7	18.1	21.2	23.6
2 hour	7.61	8.52	11.4	13.4	15.3	17.8	19.7
3 hour	6.14	6.89	9.20	10.7	12.2	14.1	15.5
4.5 hour	4.97	5.59	7.48	8.70	9.86	11.4	12.5
6 hour	4.27	4.82	6.47	7.53	8.52	9.84	10.8
9 hour	3.42	3.88	5.25	6.13	6.94	8.08	8.92
12 hour	2.90	3.30	4.50	5.27	5.99	7.01	7.78
18 hour	2.26	2.58	3.57	4.20	4.80	5.68	6.35
24 hour	1.87	2.14	2.98	3.53	4.05	4.83	5.43
30 hour	1.60	1.83	2.56	3.05	3.51	4.21	4.75
36 hour	1.39	1.60	2.25	2.68	3.10	3.73	4.22
48 hour	1.12	1.28	1.81	2.16	2.51	3.03	3.44
72 hour	0.797	0.916	1.29	1.55	1.80	2.17	2.47
96 hour	0.622	0.714	1.00	1.20	1.39	1.67	1.90
120 hour	0.513	0.587	0.817	0.972	1.12	1.35	1.54
144 hour	0.439	0.501	0.693	0.818	0.938	1.13	1.28
168 hour	0.386	0.441	0.604	0.708	0.805	0.967	1.10

Note:
 # The 50% AEP IFD **does not** correspond to the 2 year Average Recurrence Interval (ARI) IFD. Rather it corresponds to the 1.44 ARI.
 * The 20% AEP IFD **does not** correspond to the 5 year Average Recurrence Interval (ARI) IFD. Rather it corresponds to the 4.48 ARI.



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Location: Primrose Sands, TAS
Site: 230m² with tc = 25 and tcs = 10 mins.
PSD: AEP of 5%, Underground rectangular tank PSD = 1.23L/s
Storage: AEP of 5%, Underground rectangular tank volume = 2.37m³

Design Criteria (Custom AEP IFD data used)

Location = Primrose Sands, TAS
 Method = E (A)RI 2001,A(E)P 2019

PSD annual exceedance probability (APE) = 5 %
 Storage annual exceedance probability (APE) = 5 %

Storage method = U (A)bove,(P)ipe,(U)nderground,(C)ustom

Site Geometry

Site area (As) = 230 m² = 0.023 Ha
 Pre-development coefficient (Cp) = 0.30
 Post development coefficient (Cw) = 0.86
 Total catchment (tc) = 25 minutes
 Upstream catchment to site (tcs) = 10 minutes

Coefficient Calculations

Pre-development				Post development			
Zone	Area (m ²)	C	Area * C	Zone	Area (m ²)	C	Area * C
Concrete	0	0.90	0	Concrete	43	0.90	39
Roof	0	1.00	0	Roof	133	1.00	133
Gravel	0	0.50	0	Gravel	54	0.50	27
Garden	230	0.30	69	Garden	0	0.30	0
Total	230	m²	69	Total	230	m²	199

Cp = $\frac{\sum \text{Area} * C}{\text{Total}} = 0.300$ Cw = $\frac{\sum \text{Area} * C}{\text{Total}} = 0.864$

Permissible Site Discharge (PSD) (AEP of 5%)

PSD Intensity (I) = 40.3 mm/hr For catchment tc = 25 mins.
 Pre-development (Qp = Cp*I*As/0.36) = 0.77 L/s
 Peak post development (Qa = 2*Cw*I*As/0.36) = 4.44 L/s = (0.110 x I) Eq. 2.24
 Storage method = U (A)bove,(P)ipe,(U)nderground,(C)ustom
 Permissible site discharge (Qu = PSD) = 1.229 L/s

Above ground - Eq 3.8

$$Q = \text{PSD}^2 - 2 * Q_a / t_c * (0.667 * t_c * Q_p / Q_a + 0.75 * t_c + 0.25 * t_{cs}) * \text{PSD} + 2 * Q_a * Q_p$$

Taking x as = PSD and solving

a = 1.0 b = -8.6 c = 6.9

$$\text{PSD} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

PSD = 0.891 L/s

Below ground pipe - Eq 3.3

$$Q_p = \text{PSD} * [1.6 * t_{cs} / \{t_c * (1 - 2 * \text{PSD} / (3 * Q_a))\} - 0.6 * t_{cs}^{2.67} / \{t_c * (1 - 2 * \text{PSD} / (3 * Q_a))\}^{2.67}]$$

= 0.77

PSD = 1.126 L/s

Below ground rectangular tank - Eq 3.4

$$t = t_{cs} / \{t_c * (1 - 2 * \text{PSD} / (3 * Q_a))\} = 0.490$$

$$Q_p = \text{PSD} * [0.005 - 0.455 * t + 5.228 * t^2 - 1.045 * t^3 - 7.199 * t^4 + 4.519 * t^5]$$

= 0.77

PSD = 1.229 L/s

Licensee: Geo-Environmental Solutions



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Design Storage Capacity (AEP of 5%)

Above ground (Vs) = $[0.5*Qa*td - [(0.875*PSD*td)(1-0.917*PSD/Qa) + (0.427*td*PSD^2/Qa)]]*60/10^3 \text{ m}^3$ Eq 4.23
 Below ground pipe (Vs) = $[(0.5*Qa - 0.637*PSD + 0.089*PSD^2/Qa)*td]*60/10^3 \text{ m}^3$ Eq 4.8
 Below ground rect. tank (Vs) = $[(0.5*Qa - 0.572*PSD + 0.048*PSD^2/Qa)*td]*60/10^3 \text{ m}^3$ Eq 4.13

td (mins)	I (mm/hr)	Qa (L/s)	Above Vs (m ³)	Pipe Vs (m ³)	B/G Vs (m ³)
5	88.1	9.7			1.25
13	58.3	6.4			1.97
17	50.4	5.6			2.14
21	44.7	4.9			2.24
26	39.3	4.3			2.31
30	36.0	4.0			2.35
34	33.4	3.7			2.36
38	31.2	3.4			2.37
42	29.3	3.2			2.36
46	27.7	3.1			2.34

Table 1 - Storage as function of time for AEP of 5%

Type	td (mins)	I (mm/hr)	Qa (L/s)	Vs (m ³)
Above Pipe				
B/ground	37.1	31.6	3.5	2.37

Table 2 - Storage requirements for AEP of 5%

Frequency of operation of Above Ground storage

$Q_{op2} = 0.75$ Cl 2.4.5.1
 $Q_{p2} = Q_{op2} * Q_{p1}$ (where $Q_{p1} = PSD$) = 0.67 L/s at which time above ground storage occurs
 $I = 360 * Q_{p2} / (2 * C_w * A_s * 10^3)$ = 6.1 mm/h Eq 4.24

Period of Storage

Time to Fill:

Above ground (tf) = $td * (1 - 0.92 * PSD / Qa)$ Eq 4.27
 Below ground pipe (tf) = $td * (1 - 2 * PSD / (3 * Qa))$ Eq 3.2
 Below ground rect. tank (tf) = $td * (1 - 2 * PSD / (3 * Qa))$ Eq 3.2

Time to empty:

Above ground (te) = $(Vs + 0.33 * PSD^2 * td / Qa * 60 / 10^3) * (1.14 / PSD) * (10^3 / 60)$ Eq 4.28
 Below ground pipe (te) = $1.464 / PSD * (Vs + 0.333 * PSD^2 * td / Qa * 60 / 10^3) * (10^3 / 60)$ Eq 4.32
 Below ground rect. tank (te) = $2.653 / PSD * (Vs + 0.333 * PSD^2 * td / Qa * 60 / 10^3) * (10^3 / 60)$ Eq 4.36

Storage period (Ps = tf + te) Eq 4.26

Type	td (mins)	Qa (L/s)	Vs (L/s)	tf (mins)	te (mins)	Ps (mins)
Above Pipe						
B/ground	37.1	3.5	2.4	28.4	96.7	125.1

Table 3 - Period of Storage requirements for AEP of 5%

Orifice

Permissible site discharge ($Q_u = PSD$) = 1.23 L/s (Underground storage)
 Orifice coefficient (CD) = 0.61 For sharp circular orifice
 Gravitational acceration (g) = 9.81 m/s²
 Maximum storage depth above orifice (H) = 400 mm
 Orifice flow (Q) = $CD * A_o * \sqrt{2 * g * H}$

Therefore:

Orifice area (A_o) = 719 mm²
 Orifice diameter ($D = \sqrt{4 * A_o / \pi}$) = 30.3 mm



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 Development Application: 5.2026.128.1 -
 Response to Request For Information - 8
 Veronica Street, Primrose Sands.pdf
 Plans Reference: P2
 Date received: 29/05/2026

Legend

- Electrical Connection
- Electrical Turret
- Sewer Connection
- Stormwater Connection
- Telstra Connection
- Telstra Pit
- Water Meter
- Water Stop Valve
- Fire Hydrant
- Solar Bollard Light
- Spotlight with sensor

Surface Water Drainage

Ground to fall away from building in all directions in compliance with AS2870 & N.C.C 2022 3.3.3.

Surface water must be diverted away from a Class 1 building as follows:

- (a) Slab-on-ground - finished ground level adjacent to a building; the external finished surface surrounding the slab must be drained to move surface water away from the building and graded to give a slope of not less than
 - (i) 25mm over the first 1m from the building
 - (A) in low rainfall intensity areas for surfaces that are reasonably impermeable (such as concrete or claypaving); or
 - (B) for any reasonably impermeable surface that forms part of an access path or ramp provided for the purposes of Clauses 1.1 (2) or (4)(c) of the ABCB Standard for Livable Housing Design; or
 - (ii) 50 mm over the first 1 m from the building in any other case.

- (b) Slab-on-ground - finished slab heights: the height of the slab-on-ground above external finished surfaces must be not less than
 - (i) 100 mm above the finished ground level in low rainfall intensity areas or sandy, well-drained areas; or
 - (ii) 50 mm above impermeable (paved or concrete) areas that slope away from the building in accordance with (a); or
 - (iii) 150 mm in any other case.
- (c) The ground beneath suspended floors must be graded so that the area beneath the building is above the adjacent external finished ground level and surface water is prevented from ponding under the building.

Subsoil Drainage

is to comply with AS2870, AS3500 & N.C.C 2022 3.3.4.

Where a subsoil drainage system is installed to divert subsurface water away from the area beneath a building, the subsoil drain must-

- (a) be graded with a uniform fall of not less than 1:300; and
- (b) discharge into an external silt pit or sump with-
 - (i) the level of discharge from the silt pit or sump into an impervious drainage line not less than 50 mm below the invert level of the inlet; and provision for cleaning and maintenance.

Note

All driveway pits and grate drains to be **Class B**.

Stormwater pits are indicative. Location may vary depending on site conditions.

New Services

- STORMWATER PIPE WITH FLOW DIRECTION
- GRATED STORMWATER PIT 450x450 CLASS B ACO GALVANISED HEELGUARD OR SIMILAR ENGINEER APPROVED

Performance Solution Compliance Notes:

- AS 3500.3 - CL 7.10
- 7.10.1 - OVERFLOW IS SAFE AND DOES NOT COMPROMISE FREEBOARD TO HABITABLE SPACES.
- GENERAL**
- AS/NZS 3500.3: PART 3 STORMWATER DRAINAGE AUSTRALIAN RAINFALL AND RUN-OFF VOLUME 8: URBAN STORMWATER MANAGEMENT
- AUSTRALIAN RUNOFF QUALITY - A GUIDE TO WATER SENSITIVE URBAN DESIGN
- STORM DRAINAGE DESIGN IN SMALL URBAN CATCHMENTS: A HANDBOOK FOR AUSTRALIAN PRACTICE
- WATER SENSITIVE URBAN DESIGN (WSUD) ENGINEERING PROCEDURE: STORMWATER
- WATER SERVICES ASSOCIATION OF AUSTRALIA CODE (WSAA)

Stormwater Services Notes:

1. ALL SITE SAFETY & MANAGEMENT PROCEDURES SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF STATE GROWTH SPECIFICATIONS: SECTION 168 OCCUPATIONAL HEALTH AND SAFETY & SECTION 176 ENVIRONMENTAL MANAGEMENT.
2. ALL PIPES UNDER TRAFFICABLE AREAS ARE TO BE BACKFILLED FULL DEPTH WITH 20 F.C.R. AND FULLY COMPACTED.
3. ALL STORMWATER PIPES TO BE PVC-U-SWJ CLASS "SN8" TO AS1254 UNO.
4. ALL DRAIN AND TRENCH CONSTRUCTION SHALL COMPLY WITH THE LGAT STANDARD DRG TSD G01.
5. ANY EXCAVATED TRENCHES IN EXCESS OF 1.5M IN DEPTH ARE TO BE ADEQUATELY SHORED TO PREVENT COLLAPSE DURING WORKS.

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Site Plan

Revision: DA - 01
Approved by: JD

Scale: 1:200 @ A3
Pg. No: A.02

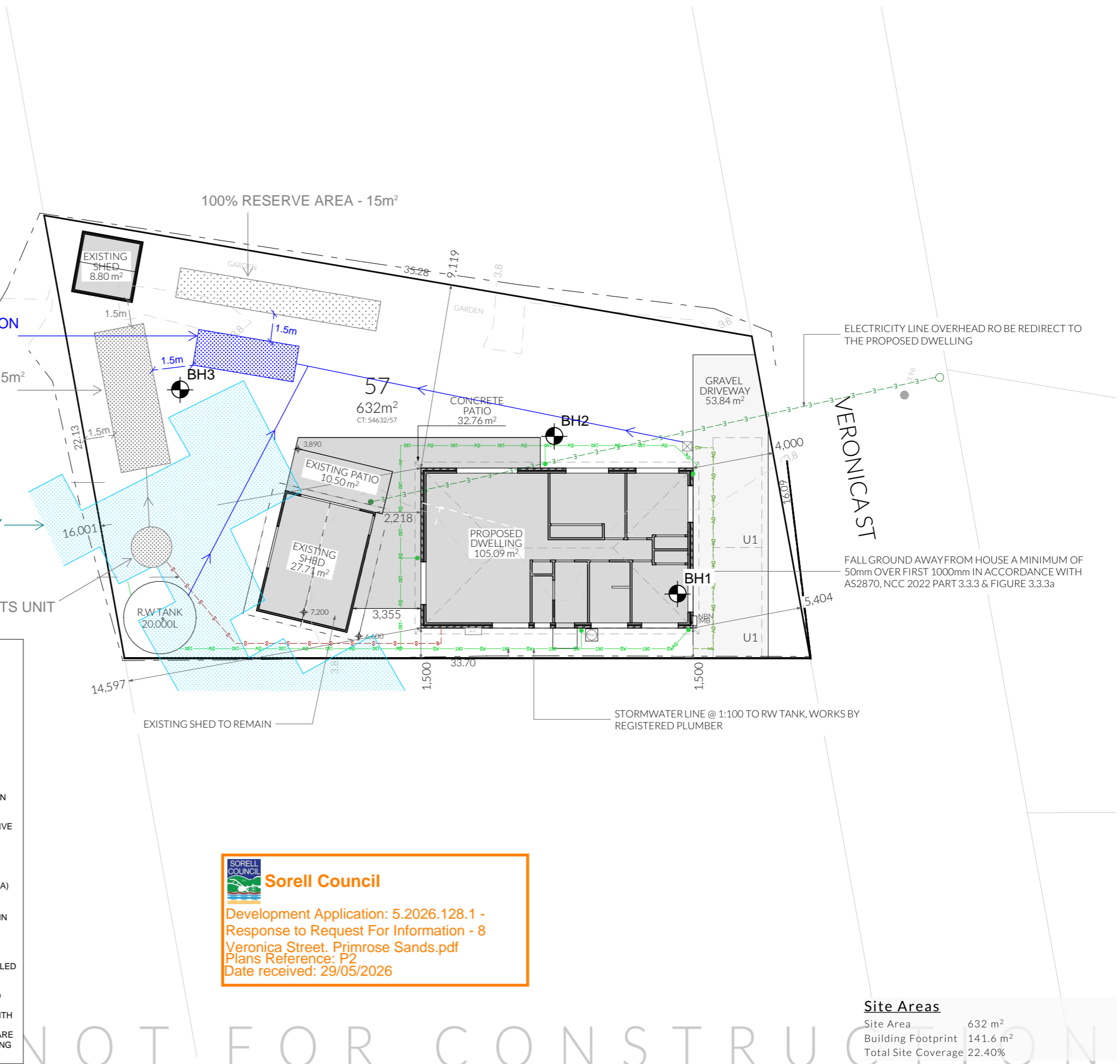
Proposal: New Dwelling
Client: Shane & Carmel Thompson
Address: 8 Veronica St, Primrose Sands. 7173

Date: 05/03/26
Drawn by: MG
Job No: 016-2026
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Designer



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Development Application: 5.2026.128.1 - Response to Request For Information - 8
Veronica Street, Primrose Sands.pdf
Plans Reference: P2
Date received: 29/05/2026

Site Areas

Site Area	632 m ²
Building Footprint	141.6 m ²
Total Site Coverage	22.40%

NOT FOR CONSTRUCTION

NOTE: Refer to cover page for further details on changes.

Design notes:

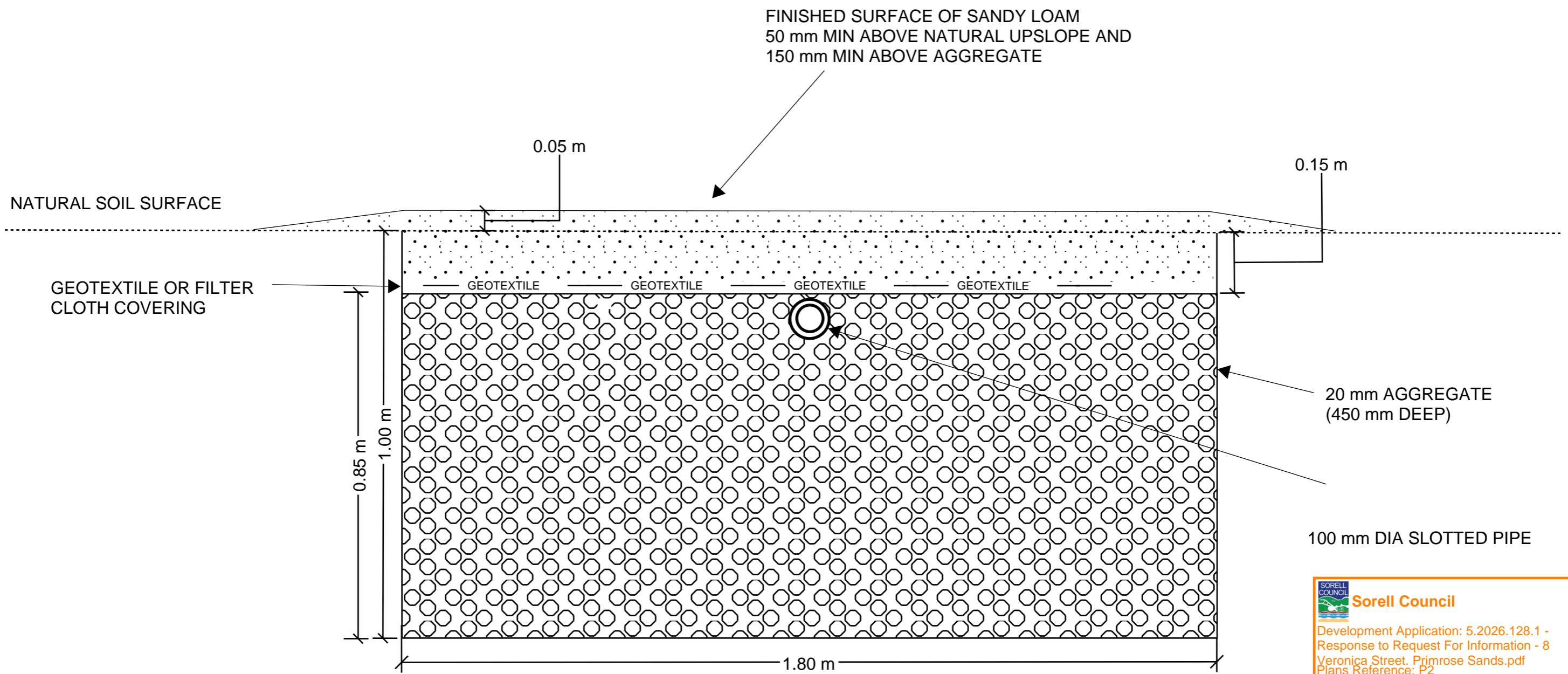
1. Absorption bed dimensions of up to 21m long by 1.0m deep by 1.8m wide
– total storage volume calculated at average 35% porosity.
2. Base of bed to be excavated level and smearing and compaction avoided.
3. 90-100mm slotted pipe should be placed in the top 100mm of the 20mm aggregate
4. Geotextile or filter cloth to be placed over the pipe to prevent clogging of the pipes and aggregate
5. Construction on slopes up to 20% to allow trench depth range 600mm upslope edge to 400mm on down slope edge.
6. All works on site to comply with AS3500 and Tasmanian Plumbing code.



GEO-ENVIRONMENTAL

SOLUTIONS

29 Kirksway Place, Battery Point
T| 62231839 E| office@geosolutions.net.au



 **Sorell Council**
 Development Application: 5.2026.128.1 -
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 Veronica Street, Primrose Sands.pdf
 Plans Reference: P2
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**Do not scale from these drawings.
Dimensions to take precedence
over scale.**

Geo-Environmental Solutions
Stormwater trench

Stormwater Absorption Detail

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

To: Owner name
 Address
 Suburb/postcode

Form **35**

Designer details:

Name: Category:
 Business name: Phone No:
 Business address:
 Fax No:
 Licence No: Email address:

Details of the proposed work:

Owner/Applicant Designer's project reference No.
Address: Lot No:

Type of work: Building work Plumbing work (X all applicable)

Description of work:

On-Site stormwater system - design



(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
	<input type="checkbox"/> Building design	Architect or Building Designer
	<input type="checkbox"/> Structural design	Engineer or Civil Designer
	<input type="checkbox"/> Fire Safety design	Fire Engineer
	<input checked="" type="checkbox"/> Civil design	Civil Engineer or Civil Designer
	<input type="checkbox"/> Hydraulic design	Building Services Designer
	<input type="checkbox"/> Fire service design	Building Services Designer
	<input type="checkbox"/> Electrical design	Building Services Designer
	<input type="checkbox"/> Mechanical design	Building Service Designer
	<input type="checkbox"/> Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	<input type="checkbox"/> Other (specify)	

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

Other details:


Onsite Stormwater Retention

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: May-26
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: May-26
Computations:	Prepared by:	Date:
Performance solution proposals: Onsite stormwater retention	Prepared by: Geo-Environmental Solutions	Date: May-26
Test reports:	Prepared by: Geo-Environmental Solutions	Date: May-26

Standards, codes or guidelines relied on in design process:	
AS3500 (Parts 0-5)-2013 Plumbing and drainage set.	 <p>Sorell Council Development Application: 5.2026.128.1 - Response to Request For Information - 8 Veronica Street, Primrose Sands.pdf Plans Reference: P2 Date received: 29/05/2026</p>


Any other relevant documentation:	
Stormwater Assessment - 8 Veronica Street Primrose Sands - May-26	

Attribution as designer:	
---------------------------------	--

I Vinamra Gupta, 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.

	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	Vinamra Gupta		25/05/2026
Licence No:	685982720		

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 Vinamra Gupta..... 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

	<i>Name: (print)</i>	<i>Signed</i>	<i>Date</i>
Designer:	Vinamra Gupta		25/05/2026



Sorell Council

Development Application: 5.2026.128.1 -
 Response to Request For Information - 8
 Veronica Street, Primrose Sands.pdf
 Plans Reference: P2
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P I N N A C L E



Sorell Council

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Veronica Street, Primrose Sands.pdf
Plans Reference: P2
Date received: 29/05/2026

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Note: The images provided are artistic representations only and should not be used as references for final colours, finishes, or external/internal features.

8 Veronica St, Primrose Sands. 7173












Owner(s) or Clients	Shane & Carmel Thompson	Title Reference	54632/57
Building Classification	1a	Zoning	Low Density Residential
Designer	Jason Nickerson CC6073Y	Land Size	632m ²
Total Floor Area (Combined)	105.09m ² Deck 32.76m ²	Design Wind Speed	TBA
Alpine Area	N/A	Soil Classification	TBA
Other Hazards	Airport obstacle limitation area, Priority vegetation area, Flood-prone areas	Climate Zone	7
		Corrosion Environment	High
		Bushfire Attack Level (BAL)	Low

Changes List			
Issue	Description of change	Date	Designer




Sorell Council
 Development Application: 5.2026.128.1 -
 Response to Request For Information - 8
 Veronica Street, Primrose Sands.pdf
 Plans Reference: P2
 Date received: 29/05/2026

ID	Sheet Name	Issue
A.01	Location Plan - Demolition	DA - 02
A.02	Location Plan - Proposed	DA - 02
A.03	Site Plan	DA - 02
A.04	Floor Plan	DA - 02
A.05	Elevations	DA - 02
A.06	Elevations	DA - 02
A.07	Roof Plan	DA - 02

Legend

-  - Electrical Connection
-  - Electrical Turret
-  - Sewer Connection
-  - Stormwater Connection
-  - Telstra Connection
-  - Telstra Pit
-  - Water Meter
-  - Water Stop Valve
-  - Fire Hydrant
-  - Solar Bollard Light
-  - Spotlight with sensor




RENOVATION LEGEND

-  EXISTING
-  DEMOLITION














 **Sorell Council**
 Development Application: 5.2026.128.1 -
 Response to Request For Information - 8
 Veronica Street, Primrose Sands.pdf
 Plans Reference: P2
 Date received: 29/05/2026

Site Areas
 Site Area 632 m²
 Existing Footprint 36.51 m²
 Proposed Footprint 105.09 m²
 Total Site Coverage 22.40%

	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au Licence: CC6073Y	Location Plan - Demolition Revision: DA - 02 Approved by: JD	Scale: 1:250 @ A3 Pg. No: A.01	Proposal: New Dwelling Client: Shane & Carmel Thompson Address: 8 Veronica St, Primrose Sands, 7173	Date: 17/04/26 Drawn by: MG Job No: 016-2026 Engineer: TBA Building Surveyor: TBA	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Issue</th> <th style="width: 30%;">Date</th> <th style="width: 40%;">Designer</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Issue	Date	Designer					These drawings are the property of Pinnacle Drafting & Design Pty Ltd, reproduction in whole or part is strictly forbidden without written consent. © 2024. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any Certificate of Likely Compliance and/or permit documentation. DO NOT SCALE FROM DRAWINGS. All Contractors are to verify dimensions on site before commencing any orders, works or requesting producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF PINNACLE DRAFTING & DESIGN PTY LTD AS SOON AS PRACTICABLE. This document must be printed in colour. Pinnacle Drafting takes no responsibility for any errors, issues, or omissions caused by contractors and builders not following colour-printed plans.
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RENOVATION LEGEND

-  EXISTING
-  NEW CONSTRUCTION



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Location Plan - Proposed

Revision: DA - 02
 Approved by: JD

Scale: 1:250 @ A3
 Pg. No: A.02

Proposal: New Dwelling
 Client: Shane & Carmel Thompson
 Address: 8 Veronica St, Primrose Sands, 7173

Date: 17/04/26
 Drawn by: MG
 Job No: 016-2026
 Engineer: TBA
 Building Surveyor: TBA

Issue	Date	Designer



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Legend

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- (b) Slab-on-ground - finished slab heights: the height of the slab-on-ground above external finished surfaces must be not less than (i) 100 mm above the finished ground level in low rainfall intensity areas or sandy, well-drained areas; or (ii) 50 mm above impermeable (paved or concrete) areas that slope away from the building in accordance with (a); or (iii) 150 mm in any other case.
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 - (i) the level of discharge from the silt pit or sump into an impervious drainage line not less than 50 mm below the invert level of the inlet; and provision for cleaning and maintenance.

Note

All driveway pits and grate drains to be **Class B**.

Stormwater pits are indicative. Location may vary depending on site conditions.

Important Note

Wastewater design is indicative only and is to be confirmed by the GES report.

Survey Notes from Surveyor

This plan and associated digital model is prepared for Pinnacle Drafting from a combination of field survey and existing records for the purpose of designing new constructions on the land and should not be used for any other purpose.

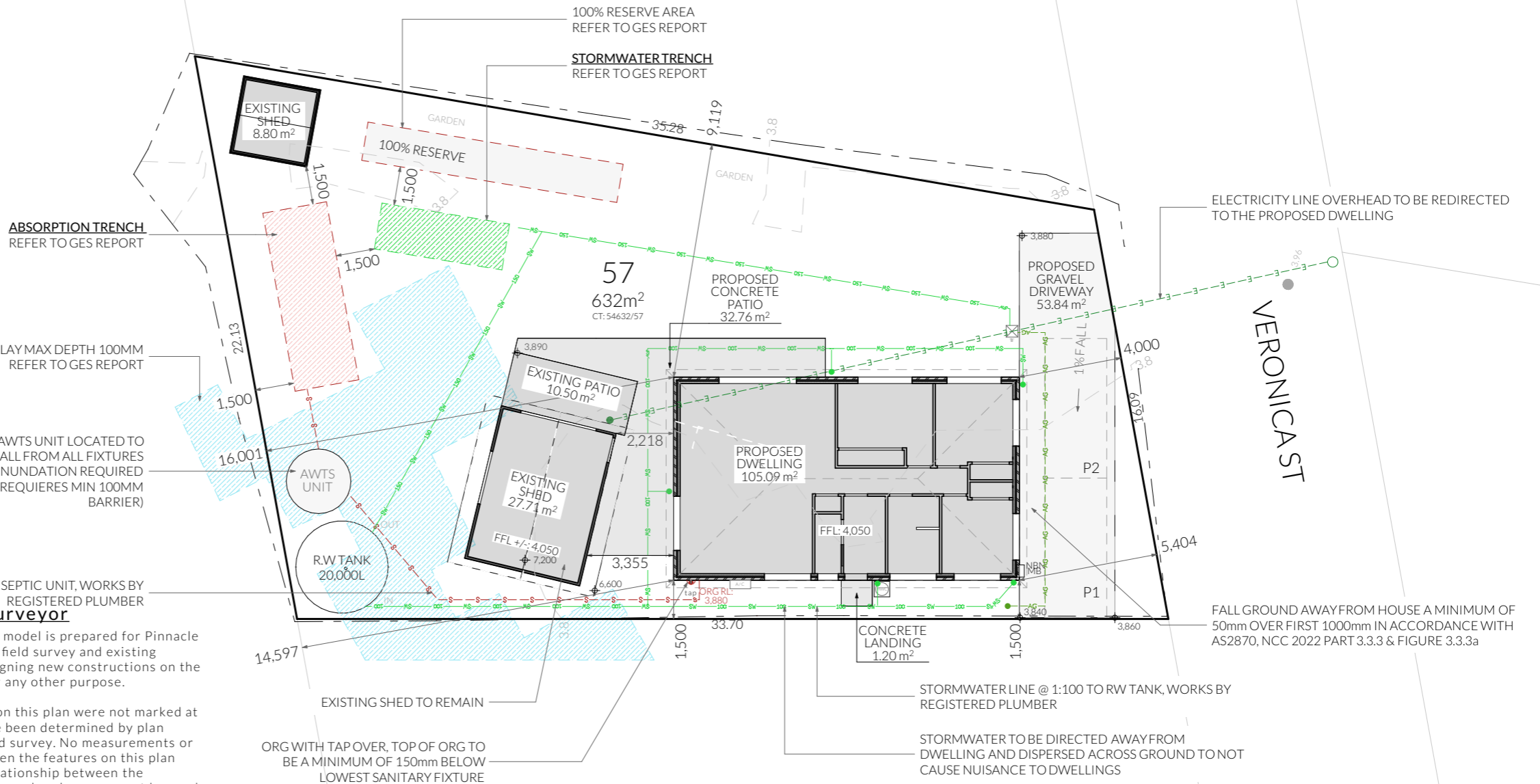
The title boundaries as shown on this plan were not marked at the time of the survey and have been determined by plan dimensions only and not by field survey. No measurements or offsets are to be derived between the features on this plan and the boundary layer. The relationship between the features in this model and the boundary layers cannot be used for any set-out purposes or to confirm the position of the title boundaries on site.

Due to the nature of the title boundary information, if any structures are designed on or near a boundary, we recommend a re-mark survey be completed and lodged with the Land Titles Office to support the boundary definition.

Services shown have been located where visible by field survey. Services denoted as being "per BYDA only" are approximate and for illustrative purposes only. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

If subsequent design is intended for construction set-out, future surveying set-out costs are increased if the digital data provided is rotated, scaled or moved.

This note forms an integral part of the plan/data. Any reproduction of this plan/model without this note attached will render the information shown invalid.



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Site Plan

Revision: **DA - 02**
Approved by: **JD**

Scale: **1:200** @A3
Pg. No: **A.03**

Proposal: New Dwelling
Client: Shane & Carmel Thompson
Address: 8 Veronica St, Primrose Sands, 7173

Date: 17/04/26
Drawn by: MG
Job No: 016-2026
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Designer



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Sorell Council
Development Application: 5.2026.128.1 -
Response to Request For Information - 8
Veronica Street, Primrose Sands.pdf
Plans Reference: P2
Date received: 29/05/2026

Site Areas

Site Area	632 m²
Existing Footprint	36.51 m²
Proposed Footprint	105.09 m²
Total Site Coverage	22.40%

NOT FOR CONSTRUCTION

NOTE: Refer to cover page for further details on changes.



Access Panel



Articulation Joint



Smoke Alarm

— BATTS TO WALL
— SOUND INSULATION

Construction of sanitary compartments 10.4.2 of NCC 2022

The door to a fully enclosed sanitary compartment must -
· open outwards; or
· slide; or
· be readily removable from the outside of the compartment.

unless there is a clear space of at least 1.2 m, measured in accordance with Figure 10.4.2 of NCC 2022 Vol II, between the closet pan within the sanitary compartment and the doorway.

Note: Safe Movement & Egress

Openable windows greater than 4m above the surface below are to be fitted with a device to limit opening or a suitable screen so a 125mm sphere cannot pass through. Except for Bedrooms, where the requirement is for heights above 2m. Refer to clauses 11.3.7 and 11.3.8 of NCC 2022 for further information on suitable protective devices.

Note: Paved Areas

All paths and patios to fall away from dwelling.

Note: Stair Construction

All stairs to be constructed in accordance with NCC Vol II 2022 Part 11.2.2:
Riser: Min 115mm - Max 190mm
Going: Min 240mm - Max 355mm
Slope (2R+G): Max 550 - Min 700
For stairways serving non-habitable room used infrequently, refer to table 11.2.2(b).

Landings to comply with Clause 11.2.5 and be a minimum of 750mm deep measured 500mm from the inside edge of the landing.

Slip resistance of treads, nosings and ramps to comply with Clause 11.2.4.

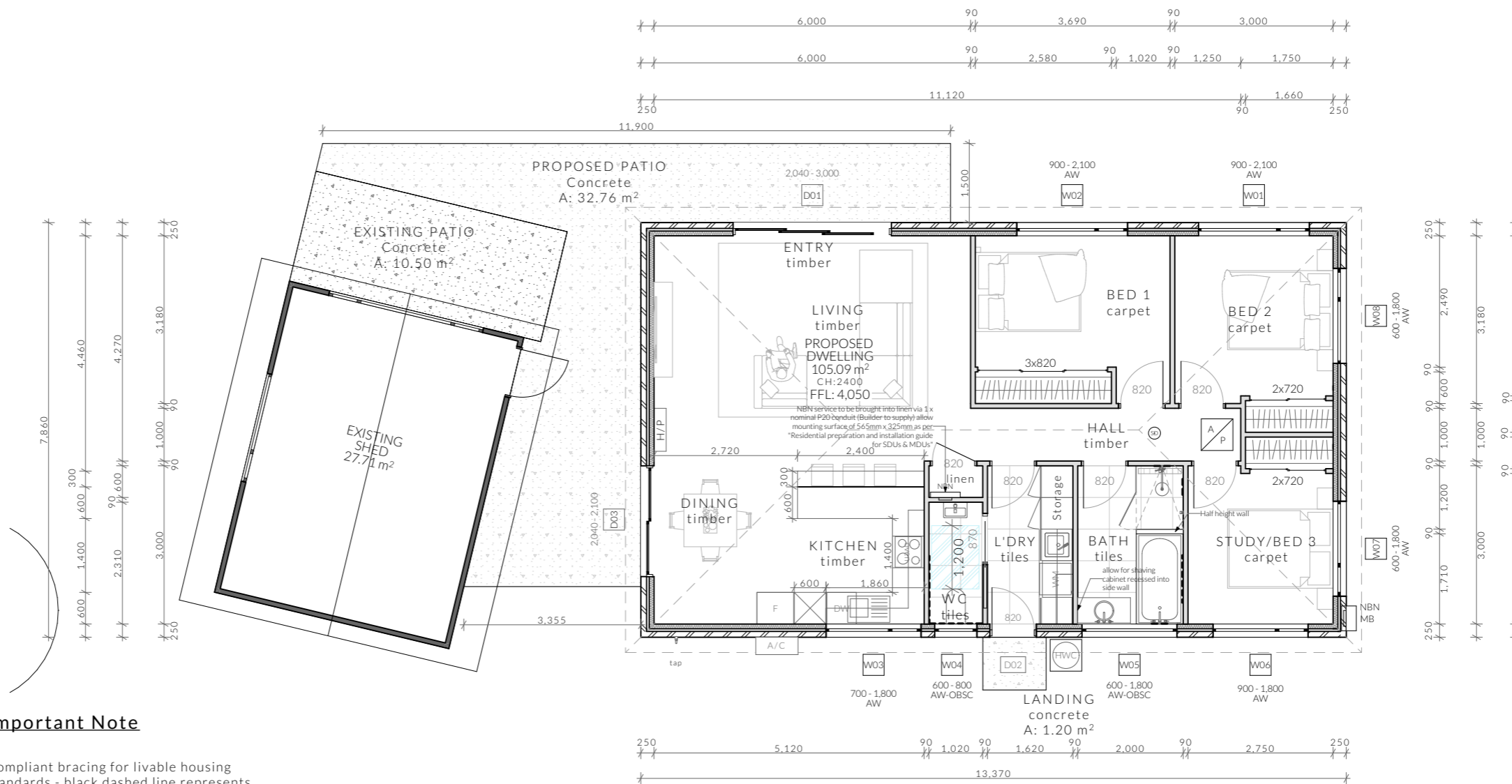
Heights of rooms & other spaces 10.3.1 of NCC 2022

Heights of rooms and other spaces must not be less than;
(a) in a habitable room excluding a kitchen - 2.4 m; and
(b) in a kitchen - 2.1 m; and
(c) in a corridor, passageway or the like - 2.1 m; and
(d) in a bathroom, shower room, laundry, sanitary compartment, airlock, pantry, storeroom, garage, car parking area or the like - 2.1 m; and
(e) in a room or space with a sloping ceiling or projections below the ceiling line within- See NCC directly for these items
(f) in a stairway, ramp, landing, or the like - 2.0 m measured vertically above the nosing line of stairway treads or the floor surface of a ramp, landing or the like.

If required onsite, the builder may work within the tolerances of the above as specified within the NCC 2022 Vol II. Builder to contact Pinnacle before undertaking works.

Floor Areas

Total Floor Area 105.09m²
Deck 32.76m²



Important Note



Compliant bracing for livable housing standards - black dashed line represents location of reinforcement materials.

In accordance with the Livable Housing Provisions, acceptable options for reinforcement material include noggings with a minimum thickness of 25mm or structural grade plywood with a minimum thickness of 12mm.

Required reinforcement of bathroom and sanitary compartment in compliance with Livable Housing Design Standards 2022

Builder to refer to;
Shower - Figure 6.2c
Bath - Figure 6.2a
Toilet - Figure 6.2e

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Plans Reference: P2
Date received: 29/05/2026

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Floor Plan

Revision: DA - 02
Approved by: JD

Scale: 1:100 @ A3
Pg. No: A.04

Proposal: New Dwelling
Client: Shane & Carmel Thompson
Address: 8 Veronica St, Primrose Sands, 7173

Date: 17/04/26
Drawn by: MG
Job No: 016-2026
Engineer: TBA
Building Surveyor: TBA

Issue Date Designer



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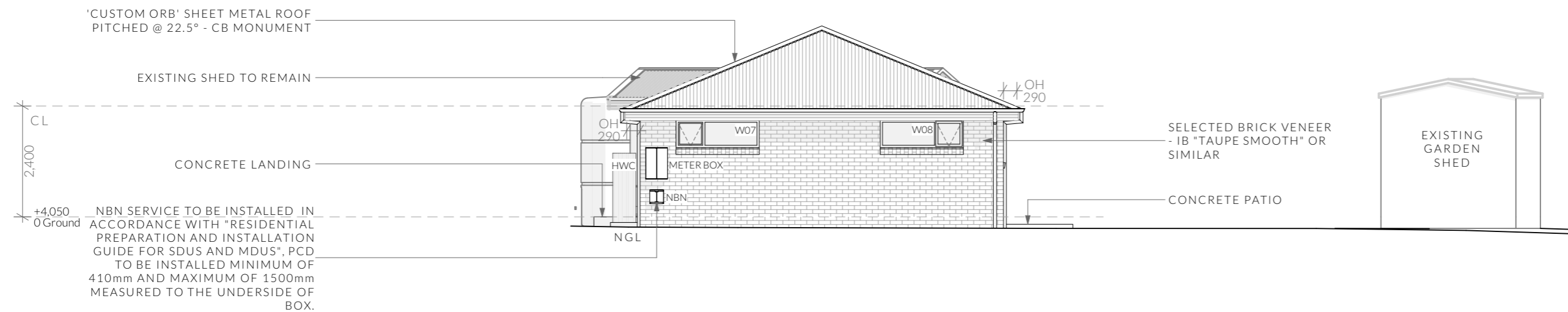


NOTE: Refer to cover page for further details on changes.



North Elevation

1:100



East Elevation

1:100

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NOTE

Clearances between cladding and ground shall comply with Clause 7.5.7 of the NCC 2022 and shall be a minimum clearance of: 100mm in low rainfall intensity areas or sandy, well-drained areas; or 50mm above impermeable areas that slope away from the building; or 150mm in any other case.

Wall cladding must extend a minimum of 50 mm below the bearer or lowest horizontal part of the suspended floor framing.

U.N.O in builders specifications or located in saline environments or if using a glazed finish brick, brickwork is to be installed in stretcher bond pattern with raked joints.

As per NCC parts 11.3.7 and 11.3.8,

Openable windows greater than 4m above ground level are to be fitted with a device to limit the opening or a suitable screen so a 125mm sphere cannot pass through, and withstand a force of 250N. Except for bedrooms, where the requirement is for heights above 2m.

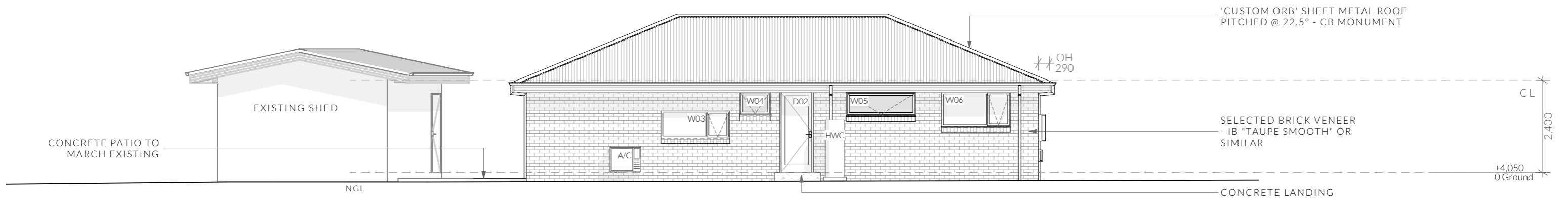
All stairs to be constructed in accordance with NCC 2022 Vol II Part 11.2.2

Riser: Min 115mm - Max 190mm Going: Min 240mm - Max 355mm

Slope (2R+G): Max 550 - Min 700

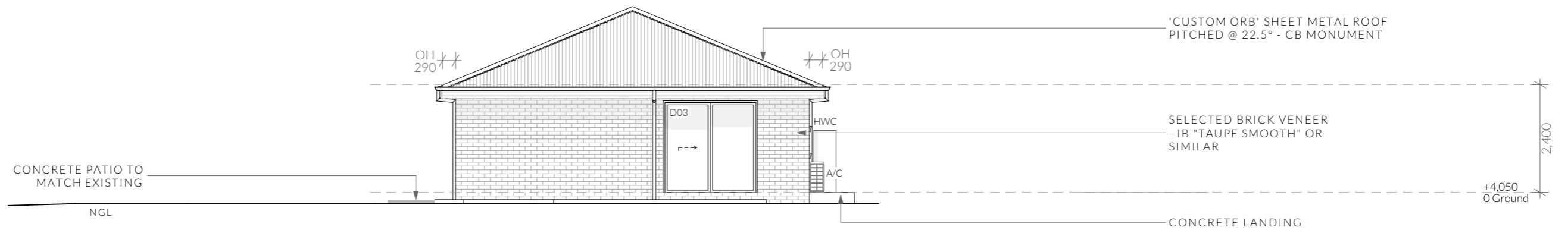
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PINNACLE PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au Licence: CC6073Y	Elevations Revision: DA - 02 Approved by: JD	Scale: 1:100 @ A3 Pg. No: A.05	Proposal: New Dwelling Client: Shane & Carmel Thompson Address: 8 Veronica St, Primrose Sands, 7173	Date: 17/04/26 Drawn by: MG Job No: 016-2026 Engineer: TBA Building Surveyor: TBA	<table border="1"> <thead> <tr> <th>Issue</th> <th>Date</th> <th>Designer</th> </tr> </thead> <tbody> <tr> <td colspan="3">NOTE: Refer to cover page for further details on changes.</td> </tr> </tbody> </table>	Issue	Date	Designer	NOTE: Refer to cover page for further details on changes.			<p>These drawings are the property of Pinnacle Drafting & Design Pty Ltd, reproduction in whole or part is strictly forbidden without written consent. © 2024. These drawings are to be read in conjunction with all drawings and documentation by Engineers, Surveyors and any other consultants referred to within this drawing set as well as any Certificate of Likely Compliance and/or permit documentation. DO NOT SCALE FROM DRAWINGS. All Contractors are to verify dimensions on site before commencing any orders, works or requesting producing shop drawings. ANY AND ALL DISCREPANCIES DISCOVERED BY OUTSIDE PARTIES ARE TO BE BROUGHT TO THE ATTENTION OF PINNACLE DRAFTING & DESIGN PTY LTD AS SOON AS PRACTICABLE. This document must be printed in colour. Pinnacle Drafting takes no responsibility for any errors, issues, or omissions caused by contractors and builders not following colour-printed plans.</p>	
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South Elevation

1:100



West Elevation

1:100

NOTE

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All stairs to be constructed in accordance with NCC 2022 Vol II Part 11.2.2

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Slope (2R+G): Max 550 - Min 700



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Ventilation of roof spaces NCC 2022

Part 10.8.3

A roof must have a roof space that-

- (a) is located-
 - (i) immediately above the primary insulation layer; or
 - (ii) immediately above sarking with a vapour permeance of not less than 1.14 µg/N.s, which is immediately above the primary insulation layer; or
 - (iii) immediately above ceiling insulation; and
- (b) has a height of not less than 20 mm; and
- (c) is either-
 - (i) ventilated to outdoor air through evenly distributed openings in accordance with Table 10.8.3; or
 - (ii) located immediately underneath the roof tiles of an unsarked tiled roof.

Stormwater Notes

All gutters, downpipes and rain heads to be designed and installed in compliance with AS3500.3 & NCC 2022 Volume II Part 7.4.

Roofing Cladding

Roof cladding, flashings, cappings, roof sheeting and fixings are to be installed in accordance with NCC 2022 Volume II Part 7.2 for sheet roofing and Part 7.3 for tiled and shingle roofing.

Eaves & Soffit Linings

To comply with NCC 2022 Vol II Part 7.5.5 and where provided, external fibre-cement sheets and linings used as eaves and soffit linings must-

- (a) comply with AS/NZS 2908.2 or ISO 8336; and
- (b) be fixed in accordance with Table 7.5.5 and Figure 7.5.5 using-
 - (i) 2.8 x 30 mm fibre-cement nails; or
 - (ii) No. 8 wafer head screws (for 4.5 mm and 6 mm sheets only); or
 - (iii) No. 8 self embedding head screws (for 6 mm sheets only).

Refer to table 7.5.5 for trimmer and fastener spacings.

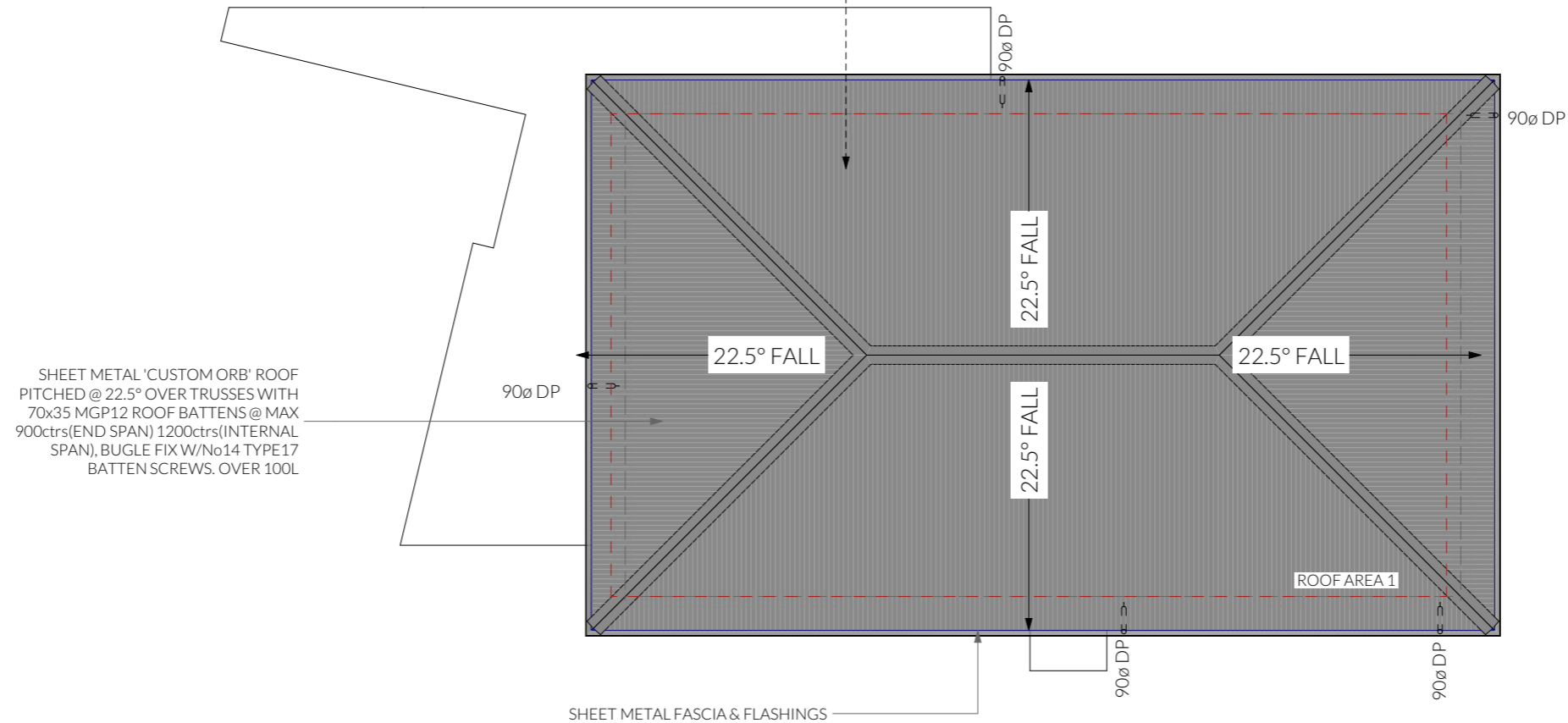
REQUIRED NUMBER OF ROOF VENTS:

REQUIRED VENT AREA
 Low Vents = 0.91m² (130.5m x 7,000mm²)
 High Vents = 0.28m² (55.1m x 5,000mm²)

EAVE VENTS
 BUILDERS EDGE EAVE VENT (EV4020)
 22x 400X200mm(0.042m²) VENTS EVENLY SPACED
 OR
 25mm CONTINUOUS VENT

RIDGE VENT SYSTEM
 RIDGE CAP (Continuous 5mm gap in sarking)
 4x GABLE VENTS 300x300mm (0.09m²)

NOTE: GABLE VENTS SHALL BE INSTALLED WITHIN 900mm OF RIDGE



ROOF PITCH	VENTILATION OF OPENINGS (TABLE 10.8.3)
>15° AND <75°	7,000 mm ² /m provided at the eaves and 5,000 mm ² /m at high level, plus an additional 18,000 mm ² /m at the eaves if the roof has a cathedral ceiling
(1) Ventilation openings are specified as a minimum free open area per metre length of the longest horizontal dimension of the roof. (2) For the purposes of this Table, high level openings are openings provided at the ridge or not more than 900 mm below the ridge or highest point of the roof space, measured vertically.	

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