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

Break O'Day COUNCIL

Development Applications

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

DA Number	DA 2025 / 00016
Applicant	Studio Steen
Proposal	Residential – Dwelling
Location	4 Reason Way, Binalong Bay

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

Representations must be submitted in writing to the General Manager, Break O'Day Council, 32 -34 Georges Bay Esplanade, St Helens 7216 or emailed to admin@bodc.tas.gov.au, and referenced with the Application Number in accordance with section 57(5) of the abovementioned Act during the fourteen (14) day advertised period commencing on Saturday 22 March 2025 **until 5pm Friday 4 April 2025**.

John Brown
GENERAL MANAGER

BINALONG BAY HOUSE **DEVELOPMENT APPLICATION**

PROJECT INFORMATION

SITE DETAILS

SITE ID	3360773
ADDRESS	4 REASON WAY BINALONG BAY LUTRUWITA (TAS) 7216
TITLE REFERENCE	169424/3
LOCALITY	Binalong Bay
MUNICIPALITY	Break O'Day
PLANNING SCHEME	Tasmanian Planning Scheme
PLANNING ZONE	169424/3
PLANNING CODE OVERLAYS	Bushfire-prone area + Coastal erosion investigation area
GROSS AREA	838M2
CLIMATE ZONE	7
WIND RATING	N3
BAL RATING	29

CONTACT DETAILS

CONTACT	Clare Steen
COMPANY	Studio Steen
ADDRESS	10 Basin View Drive West Launceston LUTRUWITA 7250
PHONE	0438 588 807
ABN	20 108 410 568

DRAWING SCHEDULE

PAGE NO.	DRAWING TITLE	REV	
DA00	Cover Page		
DA01	Existing Site Plan		
DA02	Proposed Site Plan	R1	(11.03.2025)
DA03	Ground Floor Plan		
DA04	First Floor Plan		
DA05	Roof Plan		
DA06	Building Elevations		
DA07	Building Elevations		
DA08	Window Schedule		
DA09	Door Schedule		

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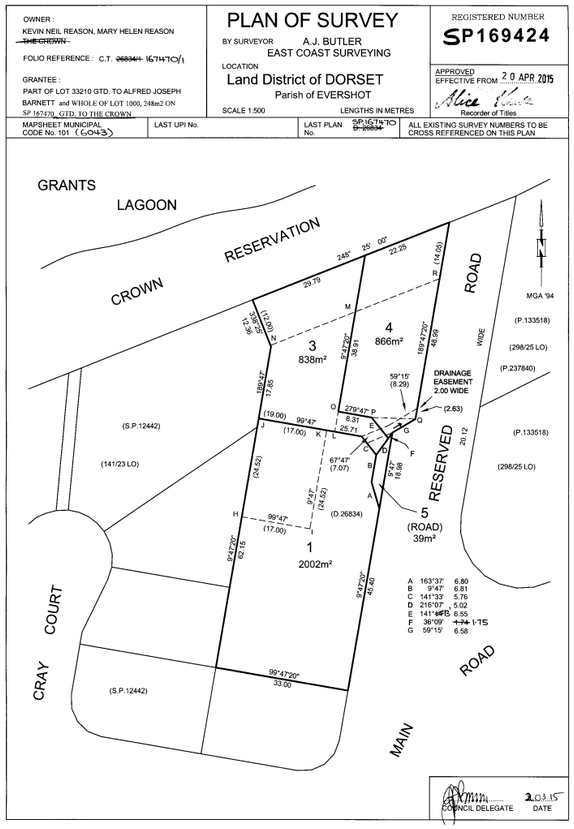
clare@studiosteen.com.au
0438 588 807

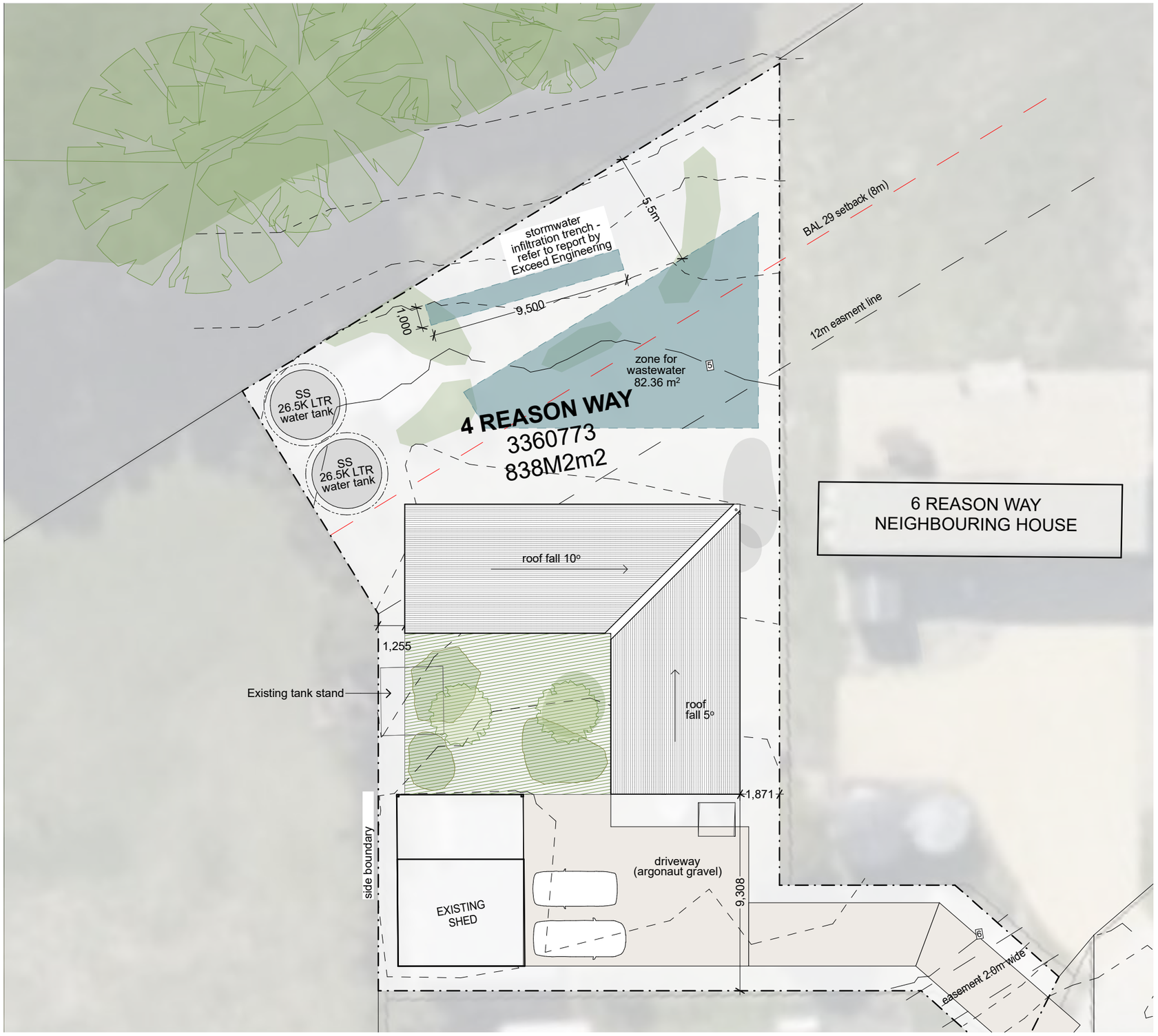
Studio Steen

Context Plan
1:500



FolioPlan-169424-3
N.T.S

Studio Steen ABN 17 880 260 128 clare@studiosteen.com.au 0438 588 807	**BINALONG BAY HOUSE** 4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))	JOB NO. 03	STAGE C	N	DRAWING NAME: **Existing Site Plan**	SCALE: 1:500	DATE: 4/02/2025	DWG NO. **DA01**	REV NO.



Proposed Site Plan
1:200

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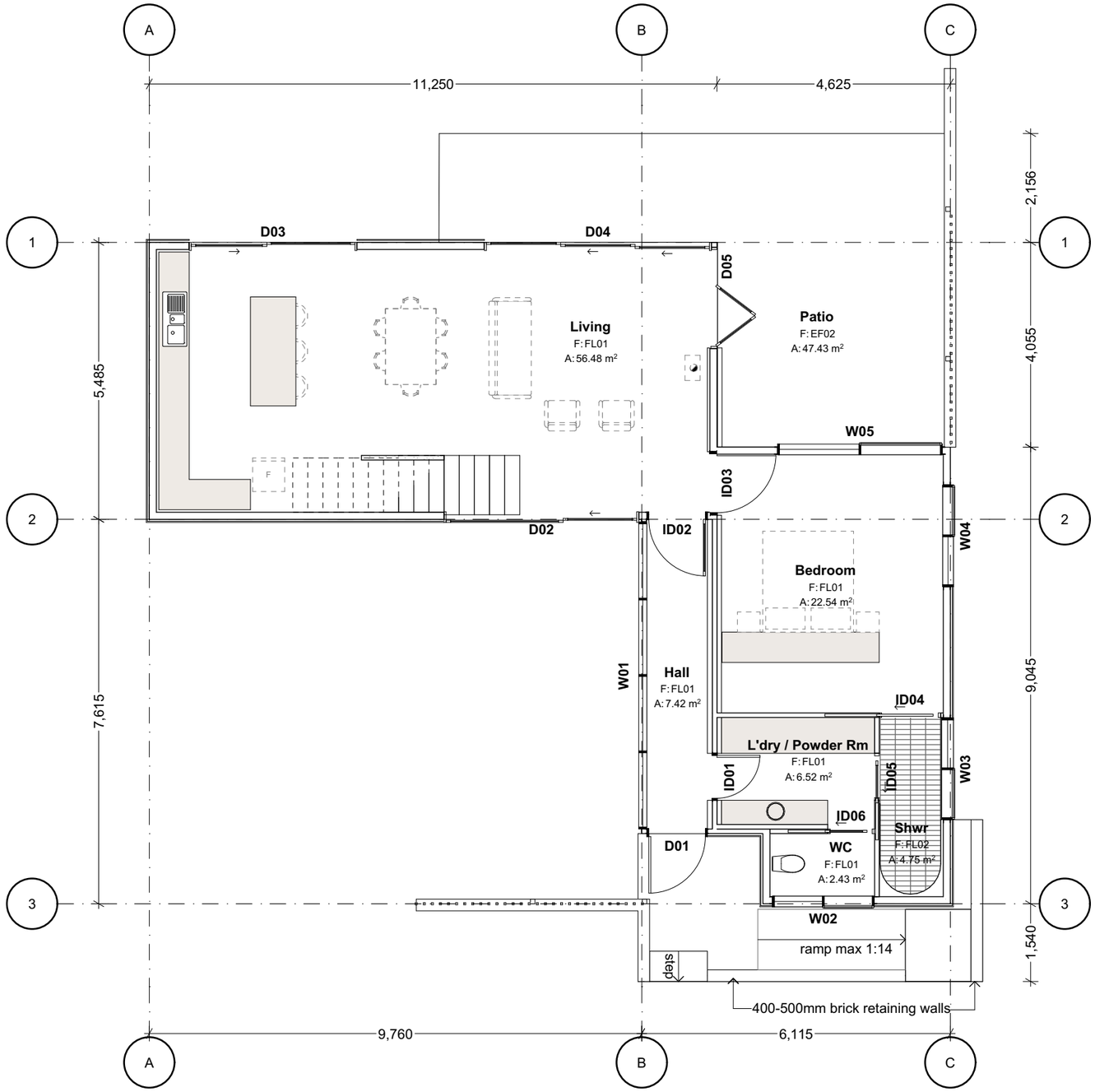
BINALONG BAY HOUSE 4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))	JOB NO. 03	STAGE C	N	DRAWING NAME: **Proposed Site Plan**	SCALE: 1:200	DATE: 11/03/2025	DWG NO. **DA02**	REV NO. **R1**



DA Ground Floor Plan

EXTERNAL FLOOR FINISHES

EF01: Compacted Gravel

Locally sourced compacted gravel with maximum aggregate of 5mm

EF02: Concrete Slab

Concrete slab with river pebble to match interior

EXTERNAL WALL FINISHES

CLD01: Spotted Gum Cladding - Vertical

BAL 29 Rated timber cladding

CLD02: Metal - Custom Orb - Galvanised

Lysaght Custom Orb cladding run with grooves vertically.
Colour: Zincalume
Installed as per manufacturers specifications

CLD03: Brick - Painted White

Recycled brick 230x76x110mm painted white.

Storey	Measured Area
Ground	102.22
first floor	21.03
	123.25 m²

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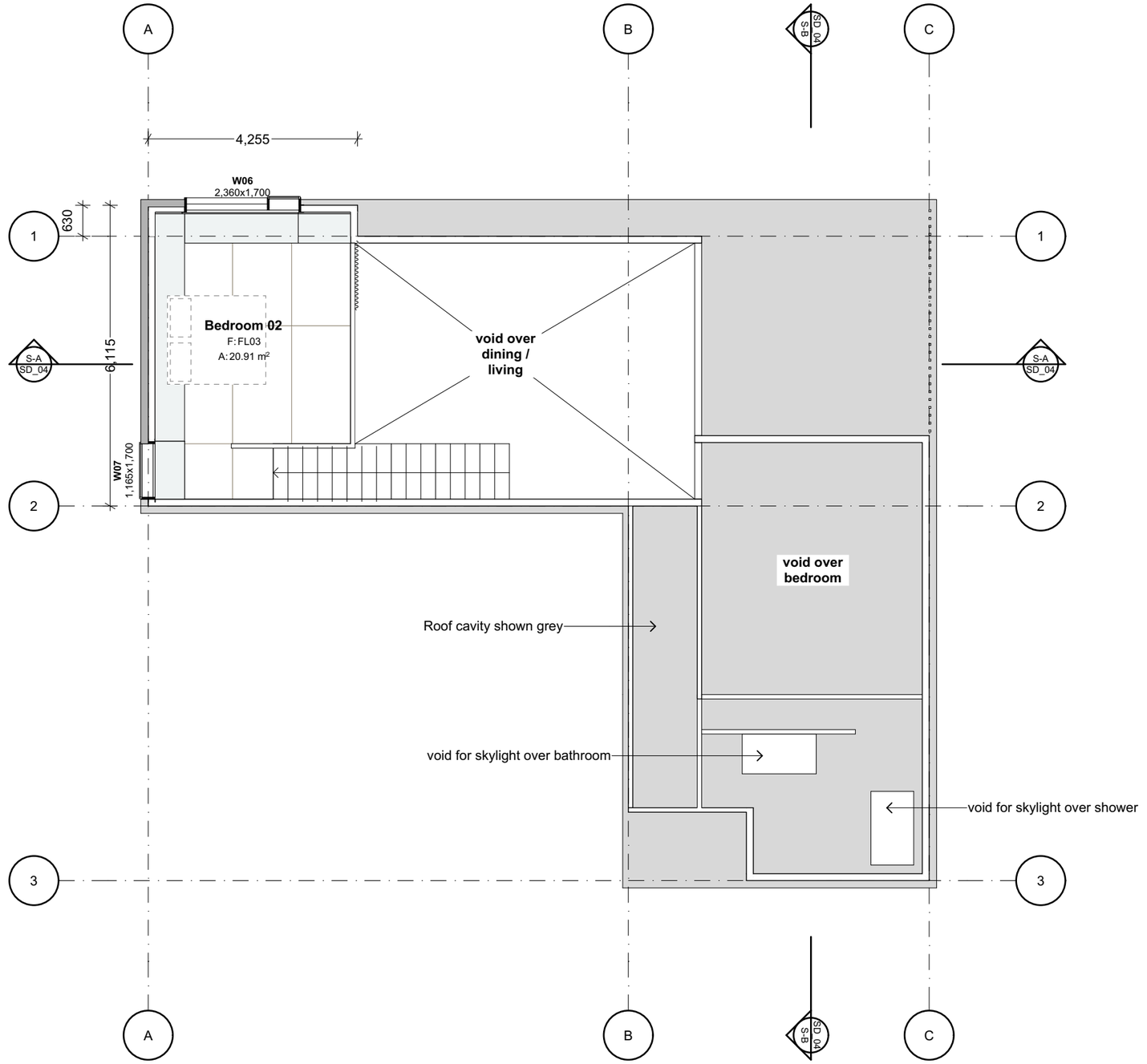
BINALONG BAY HOUSE 4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))	JOB NO.	STAGE		DRAWING NAME:	SCALE:	DATE:	DWG NO.	REV NO.
	03	C		**Ground Floor Plan**		4/02/2025	**DA03**	



DA First Floor Plan

EXTERNAL FLOOR FINISHES

EF01: Compacted Gravel

Locally sourced compacted gravel with maximum aggregate of 5mm

EF02: Concrete Slab

Concrete slab with river pebble to match interior

EXTERNAL WALL FINISHES

CLD01: Spotted Gum Cladding - Vertical

BAL 29 Rated timber cladding

CLD02: Metal - Custom Orb - Galvanised

Lysaght Custom Orb cladding run with grooves vertically.
Colour: Zincalume
Installed as per manufacturers specifications

CLD03: Brick - Painted White

Recycled brick 230x76x110mm painted white.

Storey	Measured Area
Ground	102.22
first floor	21.03
	123.25 m²

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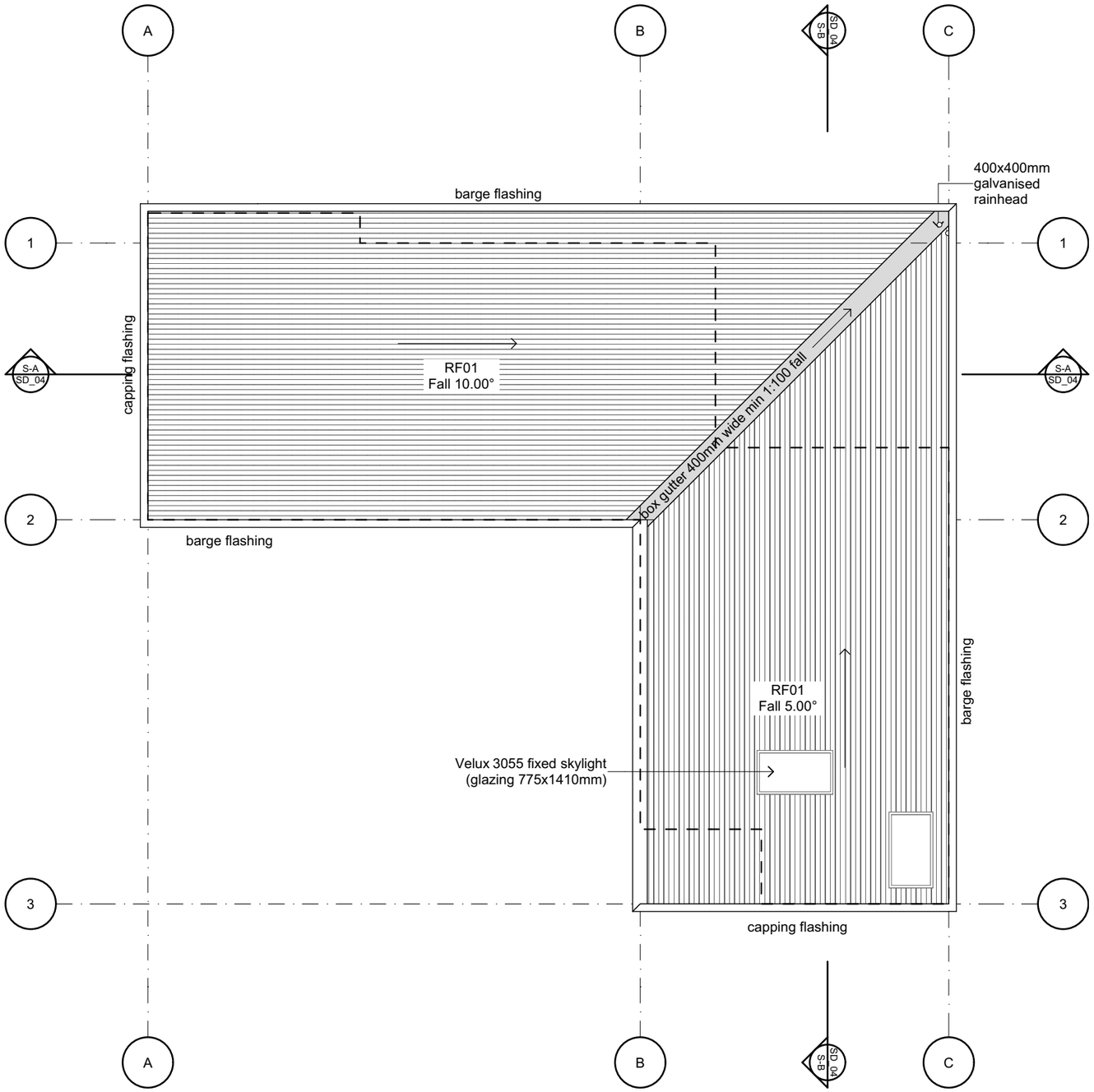
BINALONG BAY HOUSE
4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))

JOB NO.	STAGE		DRAWING NAME:	SCALE:	DATE:	DWG NO.	REV NO.
03	C		**First Floor Plan**		4/02/2025	**DA04**	



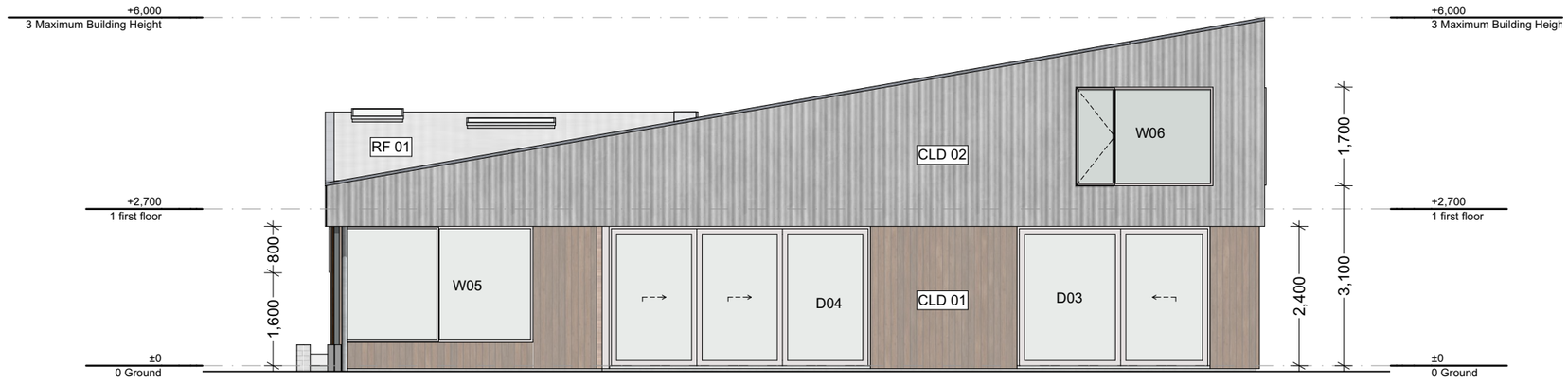
Roof Plan
1:100

ROOF FINISHES

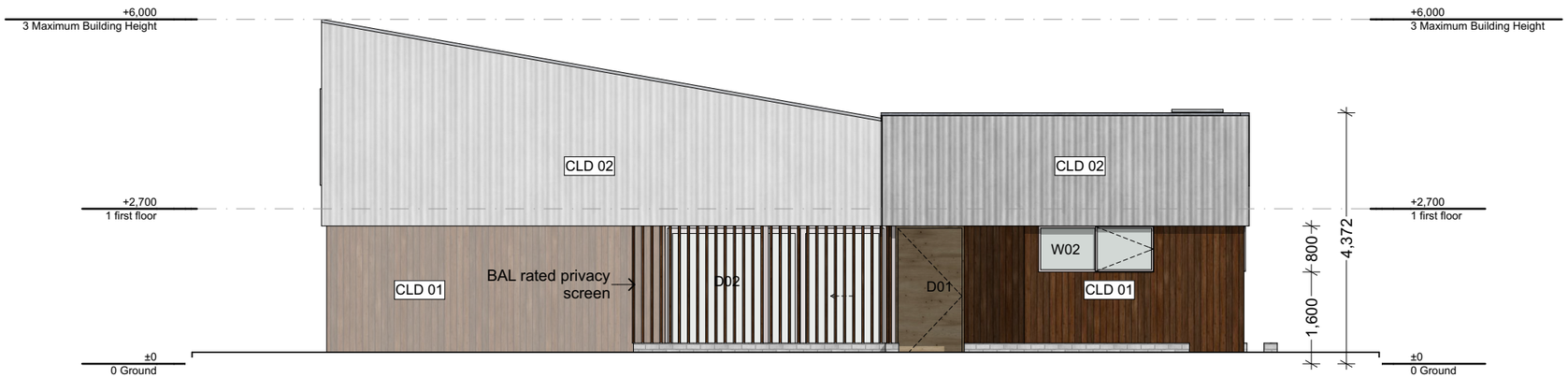
RF01: Custom Orb - Zincalume

Profile: Custom orb
Colour: Zincalume

Studio Steen ABN 17 880 260 128 clare@studiosteen.com.au 0438 588 807	**BINALONG BAY HOUSE** 4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))	JOB NO. 03	STAGE C		DRAWING NAME: **Roof Plan**	SCALE: 1:100	DATE: 4/02/2025	DWG NO. **DA05**	REV NO.



North Elevation



South Elevation

EXTERNAL FLOOR FINISHES

EF01: Compacted Gravel

Locally sourced compacted gravel with maximum aggregate of 5mm

EF02: Concrete Slab

Concrete slab with river pebble to match interior

EXTERNAL WALL FINISHES

CLD01: Spotted Gum Cladding - Vertical

BAL 29 Rated timber cladding

CLD02: Metal - Custom Orb - Galvanised

Lysaght Custom Orb cladding run with grooves vertically.
Colour: Zincalume
Installed as per manufacturers specifications

CLD03: Brick - Painted White

Recycled brick 230x76x110mm painted white.

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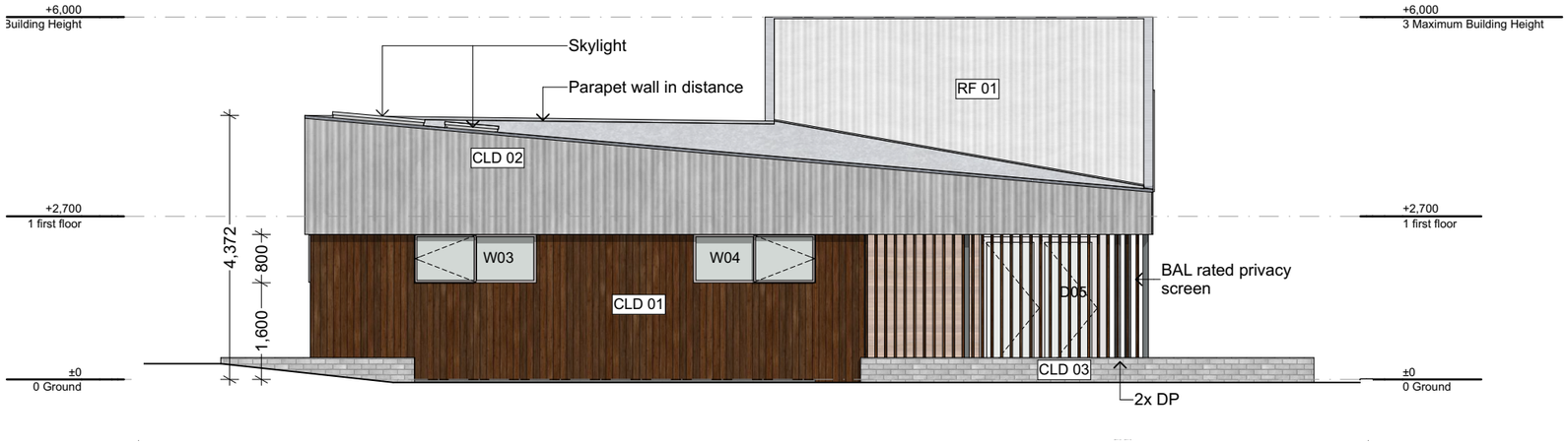
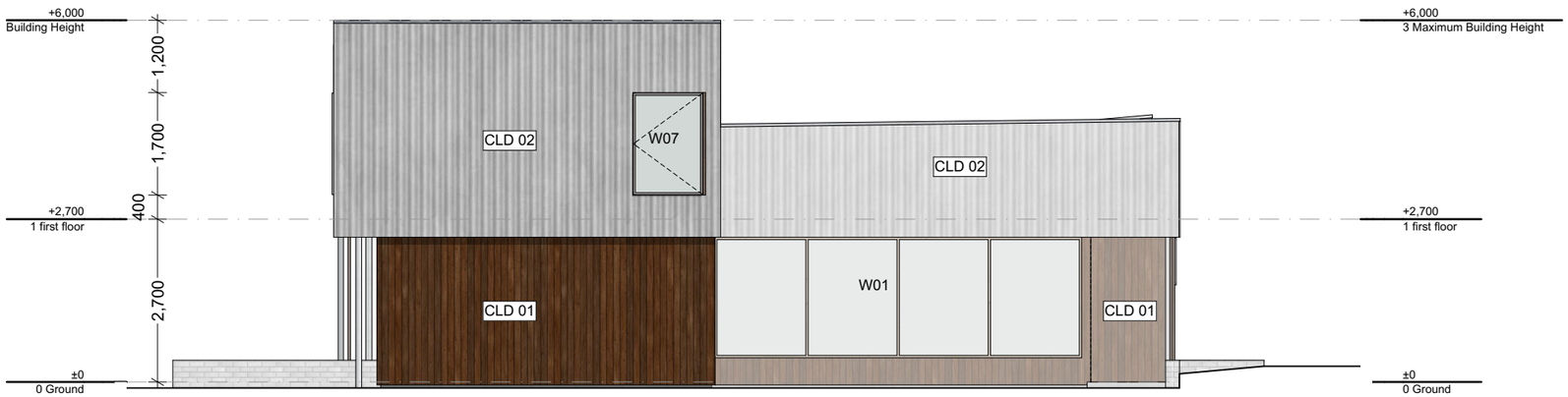
BINALONG BAY HOUSE 4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))	JOB NO. 03	STAGE C		DRAWING NAME: **Building Elevations**	SCALE:	DATE: 4/02/2025	DWG NO. **DA06**	REV NO.



East Elevation



West Elevation

EXTERNAL FLOOR FINISHES

EF01: Compacted Gravel

Locally sourced compacted gravel with maximum aggregate of 5mm

EF02: Concrete Slab

Concrete slab with river pebble to match interior

EXTERNAL WALL FINISHES

CLD01: Spotted Gum Cladding - Vertical

BAL 29 Rated timber cladding

CLD02: Metal - Custom Orb - Galvanised

Lysaght Custom Orb cladding run with grooves vertically.
Colour: Zincalume
Installed as per manufacturers specifications

CLD03: Brick - Painted White

Recycled brick 230x76x110mm painted white.

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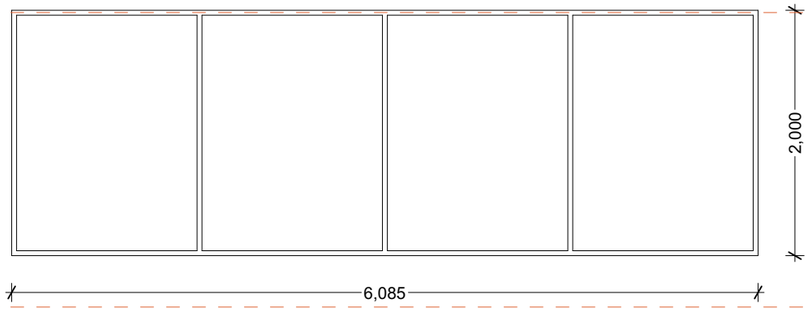
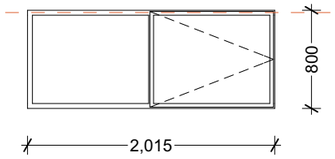
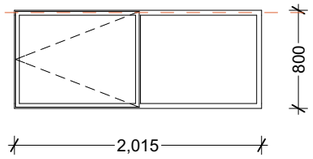
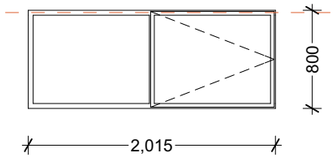
BINALONG BAY HOUSE
4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))

JOB NO.	STAGE		DRAWING NAME:	SCALE:	DATE:	DWG NO.	REV NO.
03	C		**Building Elevations**	1:100	4/02/2025	**DA07**	

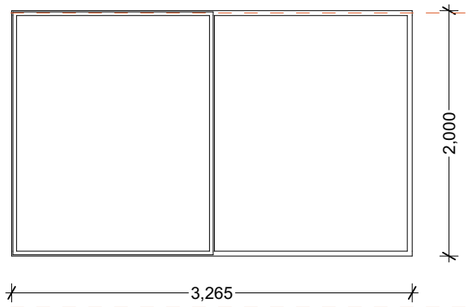


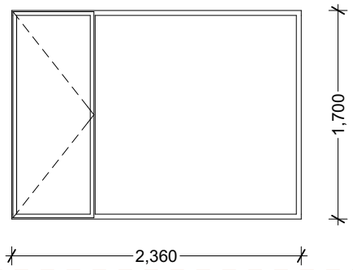


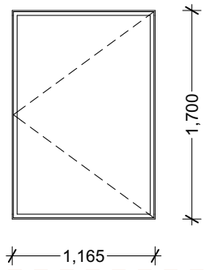




Window Number	W01	W02	W03	W04
Nominal W x H Size	6,085×2,000	2,015×800	2,015×800	2,015×800
Sill Height	1,120	1,600	1,600	1,600
Head Height	3,120	2,400	2,400	2,400
Notes	Miglas fixed double glazed wall	Miglas double glazed aluminiumim/timber composite. 1x fixed panel, 1x casement panel.	Miglas double glazed aluminiumim/timber composite. 1x fixed panel, 1x casement panel.	







Window Number	W05	W06	W07
Nominal W x H Size	3,265×2,000	2,360×1,700	1,165×1,700
Sill Height	400	400	400
Head Height	2,400	2,100	2,100
Notes		Miglas double glazed aluminiumim/timber composite. 1x fixed panel, 1x casement panel.	Miglas double glazed aluminiumim/timber composite. 1x casement sliding panel.

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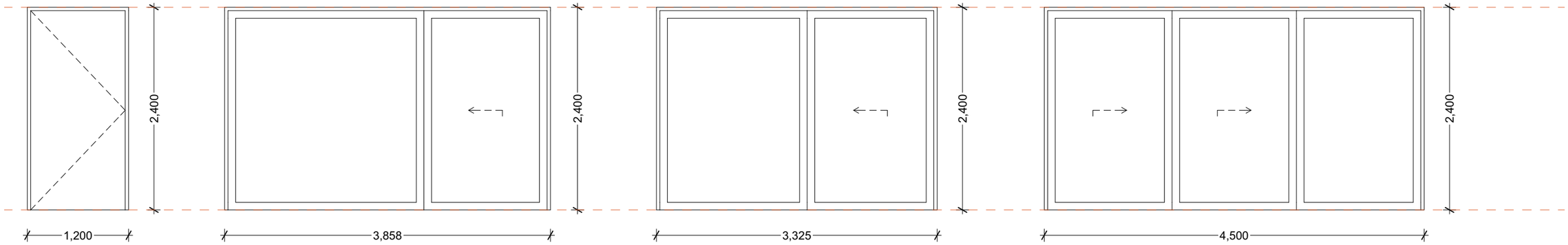
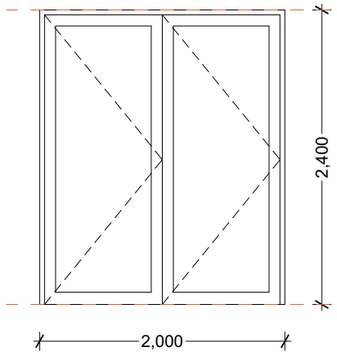
BINALONG BAY HOUSE
4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))

JOB NO.	STAGE		DRAWING NAME:	SCALE:	DATE:	DWG NO.	REV NO.
03	C		**Window Schedule**		4/02/2025	**DA08**	



	D01	D02	D03	D04
Window Number				
Nominal W x H Size	1,200×2,400	3,858×2,400	3,325×2,400	4,500×2,400
Sill Height	0	0	0	0
Head Height	2,400	2,400	2,400	2,400
Notes	Solid BAL rated timber entrance door	Miglas double glazed aluminiumim/timber composite. 1x fixed panel, 1x1500mm sliding panel.	Miglas double glazed aluminiumim/timber composite. 1x fixed panel, 1x1500mm sliding panel.	Miglas double glazed aluminiumim/timber composite. 1x fixed panel, 2x1500mm sliding panel.



	D05
Window Number	
Nominal W x H Size	2,000×2,400
Sill Height	0
Head Height	2,400
Notes	Miglas double glazed aluminiumim/timber composite. 2x bifolding panel.

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BINALONG BAY HOUSE 4 REASON WAY, BINALONG BAY, (LUTRUWITA (TAS))	JOB NO. 03	STAGE C		DRAWING NAME: **Door Schedule**	SCALE:	DATE: 4/02/2025	DWG NO. **DA09**	REV NO.

Studio Steen

PLANNING SCHEME RESPONSE

Applicant/s: Jenny and Jon Purtell

Project: 4 Reason Way, Binalong Bay

Attn: Break O'Day Council Planning Officer

Project: 03_Binalong Bay

Date of Issue: 6 February 2025

To whom it may concern,

Please find attached the Planning Response Summary to support the Development Application at 4 Reason Way, Binalong Bay.

The proposal includes a new Single Residential Dwelling.

The subject land is zoned 10.0 Low Density Residential within the Tasmanian Planning Scheme (2023).

This document outlines the proposal's design response to the relevant clauses and should be read in conjunction with the Architectural plan set.

If there are any queries regarding this proposal, please do not hesitate to contact us —

Clare Steen

Planning Scheme Response

RELEVANT PLANNING CODE SECTIONS

10.0 Low Density Residential Zone

The property is primarily oriented towards Reason Way. It is subject to the Bushfire Prone Areas Code, the Coastal Erosion Hazard Code (Investigation Area), and a Specific Area Plan concerning Stormwater Management. Given the limited dimensions of the site located at 4 Reason Way, Binalong Bay, we are requesting approval in accordance with the applicable Performance Criteria for 10.4.3 A2. The following sections detail the relevant sub-sections of 10.0 Low Density Residential Zone, outlining how the proposed design aligns with the Acceptable Solutions and Performance Criteria established in the Tasmanian Planning Scheme.

10.4 Development Standards for Dwellings

10.4.2 Building height

Objective: That the height of dwellings is compatible with the streetscape and do not cause an unreasonable loss of amenity for adjoining properties.

Acceptable Solutions	Performance Criteria	Design Response
A1 A dwelling must have a building height not more than 8.5m.	**P1** The height of dwellings must be compatible with the streetscape and not cause an unreasonable loss of amenity to adjoining properties having regard to: (a) the topography of the site; (b) the height of buildings on the site and adjacent properties; (c) the bulk and form of existing and proposed buildings; (d) sunlight to habitable rooms and private open space of dwellings; and (e) any overshadowing of adjoining properties	**A1** The proposed building has a maximum building height of less than 8.5m. Refer to drawing DA06 + DA07 Building Elevations

10.4.3 Setback

Objective: That the siting of dwellings is compatible with the streetscape and does not cause an unreasonable loss of amenity for adjoining properties.

Acceptable Solutions	Performance Criteria	Design Response
A1	**P1**	**A1**

Dwellings, excluding protrusions not more than 0.9m into the frontage setback, must have a setback from a frontage not less than 8m.	The siting of a dwelling must be compatible with the streetscape and character of development existing on established properties in the area, having regard to: (a) the topography of the site; (b) the size, shape and orientation of the site; (c) the setbacks of surrounding buildings; (d) the height, bulk and form of existing and proposed buildings; and (e) the safety of road users.	The dwelling is setback from the primary frontage more than 8m.
A2 Dwellings, excluding outbuildings with a building height of not more than 2.4m and protrusions that extend not more than 0.9m horizontally from the building must have a setback from side and rear boundaries of not less than 5m.	**P1** The siting of a dwelling must be compatible with the streetscape and character of development existing on established properties in the area, having regard to: (a) the topography of the site; (b) the size, shape and orientation of the site; (c) the setbacks of surrounding buildings; (d) the height, bulk and form of existing and proposed buildings; (e) the existing buildings and private open space areas on the site; (f) sunlight to private open space and windows of habitable rooms on adjoining properties; and (g) the character of development existing on established properties in the area.	**P1** The limited width of the lot, approximately 19 meters, has necessitated that the buildings be positioned less than 5 meters from the side boundaries. This setback aligns with that of the eastern neighbour at 6 Reason Way, which has a comparable lot size and orientation. The structure has been placed as far north on the property as feasible, thereby reducing the impact on sunlight for the private open space and habitable room windows of the southern neighbour at 2 Reason Way.

10.4.4 Site Coverage

Objective: That site coverage;

a) is consistent with the character of existing development in the area;
b) provides sufficient area for private open space and landscaping; and
c) assists with the management of stormwater runoff.

Acceptable Solutions	Performance Criteria	Design Response
A1 Dwellings must have a site coverage of not more than 30%. NOTE: the Tasmanian Planning Scheme defines the term 'Site Coverage' to mean: *"the proportion of a site, excluding any access strip, covered by roofed buildings."*	**P1** The site coverage of dwellings must be consistent with that existing on established properties in the area, having regard to: (a) the topography of the site; (b) the capacity of the site to absorb runoff; (c) the size and shape of the site; (d) the existing buildings and any constraints imposed by existing development; (e) the provision for landscaping and private open space; (f) the need to remove vegetation; and (g) the site coverage of adjacent properties.	**A1** Dwelling do not have a site coverage of more than 30%

10.4.5 Frontage fences for all dwellings

Objective: That the height and transparency of frontage fences;

a) provides adequate privacy and security for residents;
b) allows the potential for mutual passive surveillance between the road and the dwelling; and
c) is reasonably consistent with fences in the street.

Acceptable Solutions	Performance Criteria	Design Response
A1 No Acceptable Solution *	**P1** A fence (including a free-standing wall) for a dwelling within 4.5m of a frontage must:	Existing fencing to be retained.

Acceptable Solutions	Performance Criteria	Design Response
* An exemption applies for fences in this zone – see Table 4.6	(a) provide for security and privacy, while allowing for passive surveillance of the road; and (b) be consistent with the height and transparency of fences in the street, having regard to: (i) the topography of the site; and (ii) traffic volumes on the adjoining road.	

C10.0 Coastal Erosion Hazard Code

Refer to report by Geo-Environmental Solutions dated 20.10.2023.

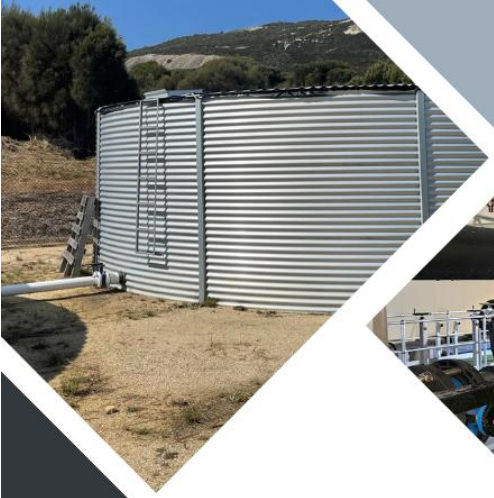
C13.0 Bushfire-Prone Areas Code

C13.4 Use or Development Exempt from this Code

We have conducted an initial evaluation by Rebecca Green and Associates to confirm that the design complies with the necessary BAL 29 setbacks.

BRE-S2.0 Stormwater Management Specific Area Plan

We have conducted initial calculations for waste-water and storm-water management in collaboration with Geo-Environmental Solutions to confirm that the region highlighted in blue on page DA02 of the Proposed Site Plan will provide sufficient setbacks and space for an on-site waste water system.



STORMWATER DESIGN REPORT

4 Reason Way, Binalong Bay

Head Office : L3, 51 York Street, Launceston Tas
Postal : PO Box 1971, Launceston Tas
Phone : (03) 6332 6955
Email : info@exceedengineering.com.au
Web : exceedengineering.com.au

ENGINEERS AUSTRALIA
Chartered Professional Engineer
MEMBER

Exceed Engineering

CLIENT: Studio Steen- Clare Steen
PROJECT: New Dwelling and Gravel Driveway
JOB NO: EE1181

Date	Purpose of Issue/Nature of Revision	Revision No.	Authorised by
03/03/2025	For client review	REV01	SD
05/03/2025	For BA	REV02	SD

This report has been prepared by
Liam Dingemanse BE(Civil) MIEAUST CPENG NER APEC Engineer IntPE(Aus) RPEQ GAICD
Sam Dingemanse BBus BSc MEIANZ

This Report has been prepared in reliance on data, surveys, analysis, designs, plans and other information provided by the client, and other individuals and organisations referenced herein. Except as otherwise stated in this report, Exceed has not verified the accuracy or completeness of such data, surveys, analysis, designs, plans, and other information. The passage of time, manifestation of latent conditions or impacts of future events may result in the actual contents differing from that described in this report.

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

This report does not purport to provide legal advice. Readers should engage professional legal advisers for this purpose.

Exceed Engineering
51 York St, PO Box 1971
Launceston Tasmania 7250 Australia
Telephone: (03) 63326955
Email: info@exceedengineering.com.au

Contents

1 Introduction

This report has been prepared to design a stormwater management system for capture and on-site dispersal of stormwater produced at the proposed new development to be constructed at **4 Reason Way, Binalong Bay**

The purpose of this report is to investigate, design, and document the site stormwater detention and disposal via infiltration, for runoff from the new dwelling and existing shed roofs.

The design provided in this report is in accordance with Australian Runoff Quality A guide to Water Sensitive Urban Design (Engineers Australia, 2006) and Water Sensitive Urban Design Engineering procedures for stormwater management in Tasmania (EPA Tas, 2012).

2 Site and development details

2.1 Existing site conditions

The site is approx. **840m^2** in area. Currently, there are three sheds on the property; two are slated for removal, while the larger shed in the southwest corner will remain. There is an existing infiltration trench servicing this shed, which is located within the footprint of the proposed new residence. As such this trench must be decommissioned and removed, and the proposed trench must be sized to receive stormwater from both roof areas.

The rest of the site is covered with grass and trees.

A site classification conducted by GES Geo-Environmental in September 2023 has determined that the site is classified as sand according to AS2870-2011.

2.2 Development details

The project involves constructing a new residence with a roof area of **140 m²** and a gravel driveway with area of **127m^2**.

This design focuses on managing stormwater runoff generated by the new dwelling and existing shed roofs.

The increase in impervious surfaces from the roofs will concentrate stormwater runoff. The proposed detention and infiltration system is designed to accumulate the stormwater flows at a single point for infiltration into the soil and groundwater.

3 Stormwater design methodology

3.1 Design assumptions

A **20% AEP** storm was used as the basis of the design. This is considered appropriate given the low risk associated with stormwater discharge at the site. A range of storm durations from 5 mins to 72 hrs were assessed to determine the infiltration trench sizing required.

3.2 IFD data

Intensity–Frequency–Duration (IFD) design rainfall intensities were sourced from the Bureau of Meteorology 2016 Design Rainfalls website for the site location. They are as follows (in mm/hr):

	Annual Exceedance Probability (AEP)						
Duration	**63.2%**	**50%#**	**20%***	**10%**	**5%**	**2%**	**1%**
1 min	97.2	110	151	182	214	261	299
2 min	81.5	91.3	123	145	166	194	214
3 min	73.2	82.1	111	131	152	179	199
4 min	66.9	75.2	102	122	142	169	190
5 min	61.7	69.5	95.2	114	133	160	182
10 min	45.6	51.5	71.4	86.3	102	125	145
15 min	37.1	41.8	58.0	70.2	83.3	102	119
20 min	31.7	35.7	49.4	59.8	70.8	86.9	100
25 min	28.0	31.5	43.5	52.5	62.0	75.8	87.3
30 min	25.2	28.4	39.1	47.1	55.5	67.5	77.4
45 min	20.1	22.5	30.8	36.9	43.1	51.8	58.8
1 hour	17.1	19.2	26.1	31.1	36.1	43.0	48.4
1.5 hour	13.7	15.4	20.8	24.6	28.4	33.3	37.2
2 hour	11.7	13.2	17.9	21.0	24.1	28.1	31.2
3 hour	9.52	10.7	14.5	17.0	19.5	22.6	24.9
4.5 hour	7.73	8.76	11.9	14.0	15.9	18.5	20.4
6 hour	6.66	7.57	10.4	12.2	13.9	16.2	17.9
9 hour	5.35	6.12	8.46	10.0	11.5	13.5	15.1
12 hour	4.54	5.20	7.27	8.66	10.0	11.9	13.3
18 hour	3.53	4.06	5.75	6.93	8.11	9.74	11.0
24 hour	2.90	3.34	4.78	5.81	6.86	8.31	9.49
30 hour	2.46	2.84	4.09	5.01	5.95	7.25	8.32
36 hour	2.14	2.47	3.58	4.39	5.25	6.42	7.39
48 hour	1.70	1.96	2.85	3.52	4.23	5.19	5.99
72 hour	1.20	1.38	2.01	2.49	3.01	3.70	4.26

3.3 Design runoff coefficient

The runoff coefficient from the roof was assessed as **1.0.**

		Developed	
Category	**Type**	**Area (m2)**	**Coefficient of Runoff**
Impervious Area	Roofed Area	189	1.0
	Asphalt/Concrete Driveway	-	0.9
	Paved and other handstand	-	0.7
	Total site area	**189**	
	Input Check (has to be 0)	**-**	
	Weighted average runoff coefficient	**1.0**	

3.4 Hydraulic Conductivity

Based on the borehole log conducted by GES Geo-Environmental to assess the distribution and variation of soil materials on the site, a soil hydraulic conductivity of **180 mm/hr** was inferred from the defined soil type.

4 Detention and infiltration

Given the intent for all stormwater produced from the roof to be contained within the site, an infiltration system is proposed which will act to capture, detain and infiltrate the stormwater to the ground.

4.1 Infiltration trench

An infiltration trench (also known as a soakage pit) is an in-ground device with porous walls and base in which plastic crates or gravel is placed to create a void which will accumulate and detain the stormwater and infiltrate it to the surrounding soil.

The infiltration trench was designed using the methodology of *Australian Runoff Quality A guide to WSUD Engineers Australia 2006* and *WSUD Engineering Procedures for Stormwater Management in Tasmania 2012.*

duration (mins)	Storm duration (hrs)	AEP20 % (mm/hr)	Volume in (m3)	Volume out (m3)	Storage volume required (m3)	% of storage provided	Emptying time (hrs)
5		95.2	1.50	0.15	1.35	246%	1
10		74.1	2.33	0.30	2.03	163%	1
30		39.1	3.69	0.90	2.79	119%	2
60	1	26.1	4.93	1.80	3.13	106%	2
120	2	17.9	6.77	3.60	3.17	105%	2
180	3	14.5	8.22	5.40	2.82	118%	2
360	6	10.4	11.79	10.80	0.99	335%	1
720	12	7.27	16.49	21.60	- 5.11	-65%	- 3
1080	18	5.75	19.56	32.40	- 12.84	-26%	- 7
1440	24	4.78	21.68	43.20	- 21.52	-15%	- 12
1800	30	4.09	23.19	54.00	- 30.81	-11%	- 17
2160	36	3.58	24.36	64.80	- 40.44	-8%	- 22
2880	48	2.85	25.86	86.40	- 60.54	-5%	- 34
4320	72	2.01	27.35	129.60	- 102.25	-3%	- 57

It is proposed to use a gravel-filled trench with nominal dimensions of **9.5m**(**L**) x **1.0m**(W) x **1.0m**(D).

This trench will provide **3.17 m^3** of the storage required to up to a **20%** AEP storm event with the critical storm being the **2** hours duration.

4.2 Design requirements

Refer attached drawing **EE1181-C101.**

4.2.1 Setback distance

The recommended minimum setback distance for the infiltration trench for a **sand** soil type is **1.0 m** to boundaries and residence.

Table 10-2 Minimum set-back distances (adapted from Engineers Australia, 2006)

Soil Type	Saturated Hydraulic Conductivity	Minimum distance from structures and property boundaries
Sand	> 5 x 10^{-5} m/s (180 mm/hr)	1.0 m
Sandy Clay	1 x 10^{-5} to 5 x 10^{-5} m/s (36 to 180 mm/hr)	2.0 m
Weathered or Fractured Rock	1 x 10^{-6} to 1 x 10^{-5} m/s (3.6 to 36 mm/hr)	2.0 m
Medium Clay	1 x 10^{-6} to 1 x 10^{-5} m/s (3.6 to 36 mm/hr)	4.0 m
Heavy Clay	1 x 10^{-8} to 1 x 10^{-6} m/s (0.036 to 3.6 mm/hr)	5.0 m

4.2.2 Stormwater reticulation

Stormwater from the existing shed is currently directed into the existing water tanks, which then discharges into an infiltration trench. Due to the placement of the proposed building, this existing infiltration trench will be decommissioned, and overflow from the existing shed will be directed to slim tank on western side of the shed and then will be routed to the two new water tanks.

Stormwater from the proposed dwelling's roof gutters will be conveyed by a 100 mm UPVC pipe to 2×26.5 KL rainwater tanks. Any overflow from these new tanks will discharge into the proposed infiltration system.

4.2.3 Infiltration trench

- The proposed dimensions of the trench are **9.5m (L) x 1.0m (W) x 1.0m (D).**
- After excavation the trench should be lined with geotextile fabric
- The total excavation depth should be **1.2m** to allow for 200mm soil cap to be placed over the gravel, after lining with geotextile fabric. This should be domed to allow for compaction and seeded with grass.

DRAWING TABLE		
SHEET	DESCRIPTION	REV
C100	COVER PAGE	02
C101	STORMWATER SITE PLAN	02
C102	INFILTRATION DETAIL	02
C103	TANK DETAIL	02
C104	CIVIL NOTES	02

IMPORTANT
WORKS ARE TO BE IN ACCORDANCE WITH THE APPLICABLE AUSTRALIAN STANDARDS, CONSTRUCTION CODES (NCC) & REQUIREMENTS OF ANY RELEVANT LOCAL AUTHORITIES

DRAWINGS TO BE READ IN CONJUNCTION WITH ANY WRITTEN SPECIFICATIONS AND ASSOCIATED DOCUMENTATION PREPARED BY THE ARCHITECT OR BUILDING DESIGNER AND THE RELEVANT SUB-CONSULTANTS

BASE DRAWING(S) PREPARED AND PROVIDED BY:
- STUDIO STEEN JOB NO.03

THE FOLLOWING ARE SURVEY DETAILS USED AS BASIS FOR DESIGN:
SURVEYOR: WOOLCOTT SURVEYS
SURVEY REF:
SURVEY DATE:
COORDINATE SYSTEM:
VERTICAL DATUM:

WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE

DOCUMENTATION IS SUBJECT TO STATUTORY APPROVALS

THIS DESIGN IS INTENDED TO BE BUILT ONLY ONCE AND ONLY ON THE SITE THAT THE DESIGN WAS PREPARED FOR

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SITE CIVIL ENGINEERING
4 REASON WAY, BINALOG BAY
COVER PAGE

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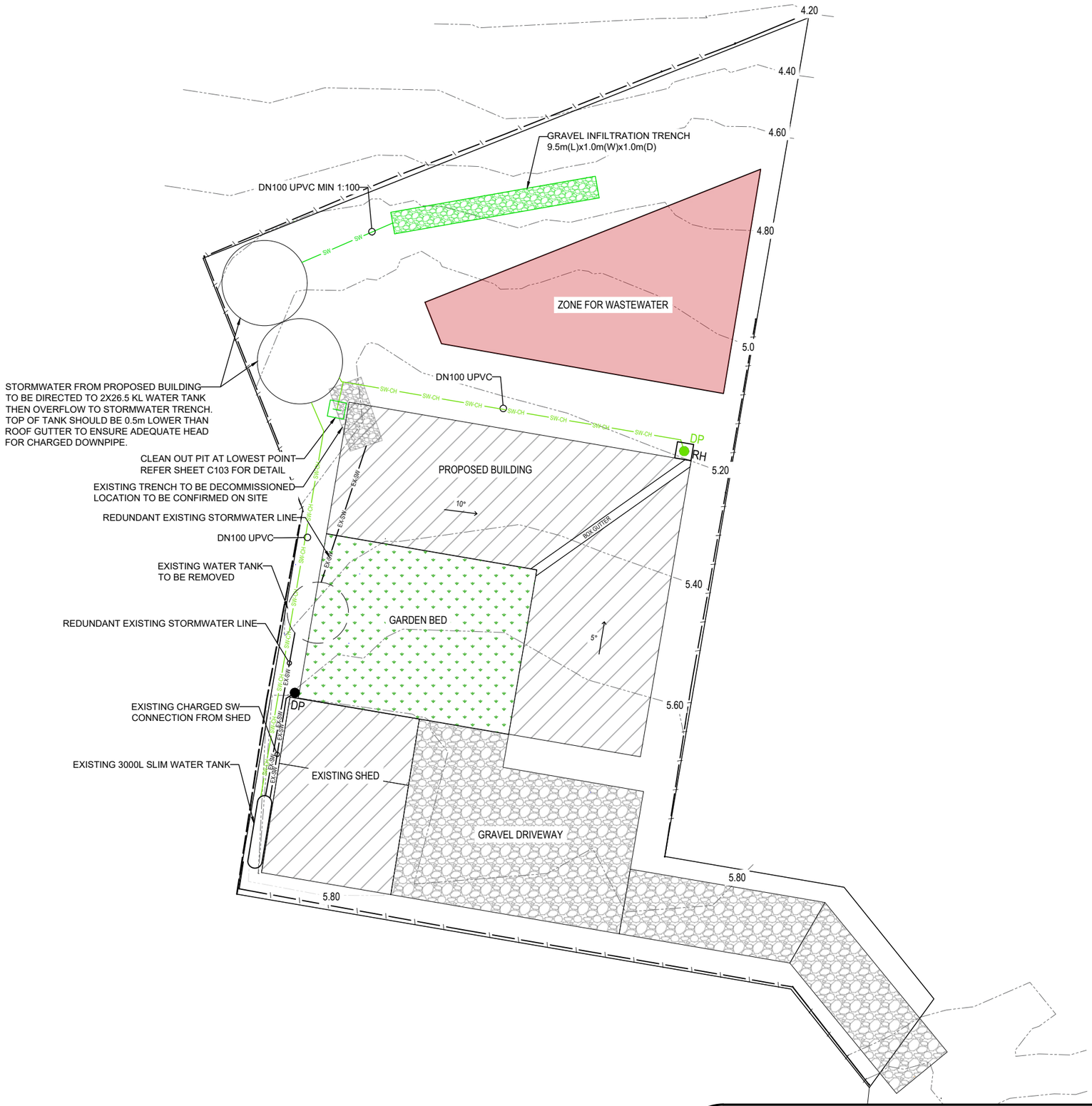

SOME ITEMS LISTED BELOW MAY NOT BE APPLICABLE

- PROPRIETARY STORMWATER PIT (TRAFFICABLE WHERE APPLICABLE) SIZED AS PER TABLE 7.5.2.1
- IO — INSPECTION OPENING (IO)
- MANHOLE
- SURFACE FALL (MIN 1:100 UNLESS OTHERWISE SPECIFIED)
- ×???m — RL (TO VERTICAL DATUM)
- S — NEW SEWER LINE
- S-P — NEW PUMPED SEWER LINE
- EX-S — EXISTING SEWER LINE
- SW — NEW STORMWATER LINE
- SW-AG — NEW AG DRAIN
- SW-OS — NEW SWALE
- SW-CH — NEW CHARGED STORMWATER LINE
- SW-P — NEW PUMPED STORMWATER LINE
- EX-SW — EXISTING STORMWATER LINE
- EX-OS — EXISTING SWALE
- W — NEW WATER LINE
- EX-W — EXISTING WATER LINE
- G — NEW GAS LINE
- EX-G — EXISTING GAS LINE
- E — NEW ELECTRICAL CABLE
- EX-E — EXISTING ELECTRICAL CABLE
- COM — NEW COMMUNICATIONS CABLE
- COM-EX — EXISTING COMMUNICATION CABLE

ADJACENT SURFACES TO BE FALLING AWAY FROM BUILDING

IO TO BE INSTALLED AT MAJOR BENDS IN STORMWATER AND SEWER LINES AND ALL LOW POINTS IN DOWNPIPES

PRODUCTS AND SYSTEMS TO INSTALLED AND/OR USED AS PER MANUFACTURERS INSTRUCTIONS

IMPORTANT
WORKS ARE TO BE IN ACCORDANCE WITH THE APPLICABLE AUSTRALIAN STANDARDS, CONSTRUCTION CODES (NCC) AND REQUIREMENTS OF ANY RELEVANT LOCAL AUTHORITIES

ALL WORKS IN ACCORDANCE WITH WATER SUPPLY CODE OF AUSTRALIA WSA03-2011-3.1 VERSION 3.1 MRWA EDITION V2.0 AND SEWERAGE CODE OF AUSTRALIA MELBOURNE RETAIL WATER AGENVIES CODE WSA02-2014-3.1 MRWA VERSION 2 AND TASWATER SUPPLEMENTS TO THESE CODE

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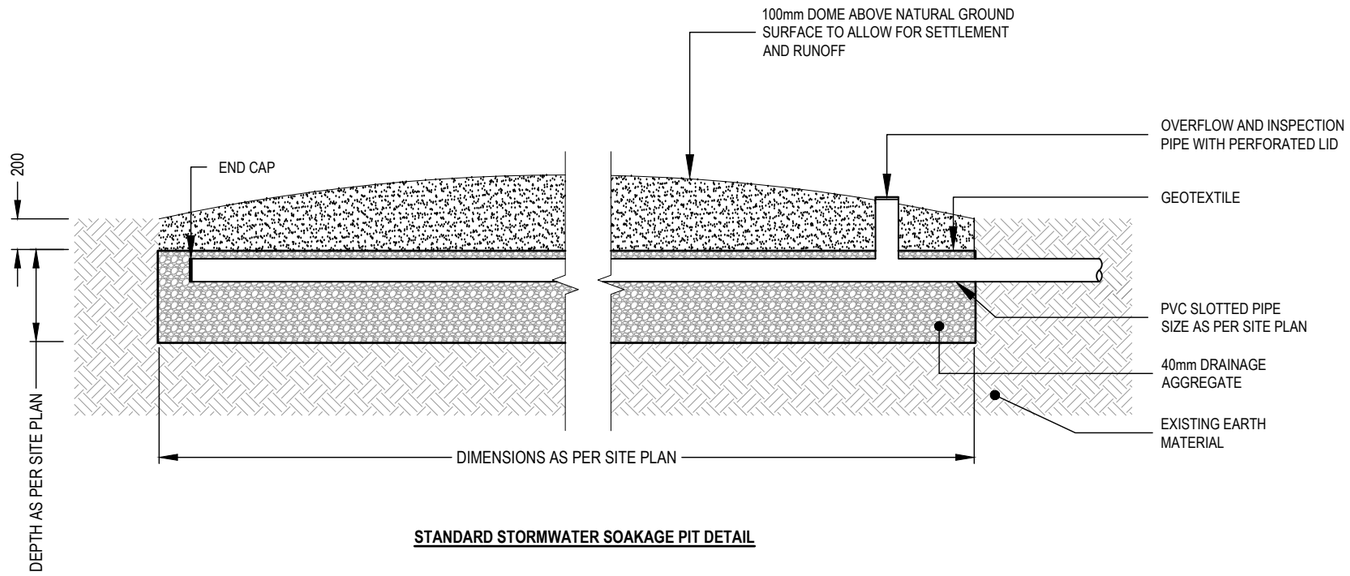
SITE CIVIL ENGINEERING
4 REASON WAY, BINALOG BAY
SITE PLAN STORMWATER

PROJECT #:	SHEET #:	REVISION #:
EE1181	C101	02

STORMWATER OVERFLOW TRENCH NOTES

- TRENCH BASE MUST BE EXCAVATED EVENLY AND LEVEL. IN CLAY SOILS, SMEARING OF WALLS AND FLOORS OF BED MUST BE AVOIDED. SOILS MUST BE PARALLEL RAKED AND TREATED WITH GYPSUM AT A RATE OF 1KG/M2.
- PVC PIPE SLOTTED IN THE 8 O'CLOCK AND 4 O'CLOCK POSITIONS TO BE PLACED ON TOP OF AGGREGATE AS SHOWN. THE PIPE MUST BE LEVEL TO ENSURE FLOW OF STORMWATER TO ALL AREAS OF THE TRENCH. FAILURE TO ENSURE THIS MAY CAUSE PREFERENTIAL OVERLOADING OF THE TRENCH AND THE POTENTIAL FOR BED OVERFLOW.
- TRENCH SHOULD BE LINED AND COVERED WITH HYDROPHILIC GEOTEXTILE LINER, MIN. 125G/M2 WITH SUFFICIENT OVERLAP TO PREVENT INGRESS FROM SOILS.
- BACKFILLING OF THE BED TO 100MM ABOVE ORIGINAL GROUND SURFACE LEVEL WITH ENDEMIC TOPSOIL (IF A SAND/LOAM) OR IMPORTED LOAM SHOULD PROCEED. DO NOT MECHANICALLY COMPACT THIS LAYER.
- AN INSPECTION OUTLET SHOULD BE PLACED ON EACH DISTRIBUTION PIPE
- SLIGHT ADJUSTMENTS TO THE LOCATION OF TRENCHES ARE PERMITTED TO ACHIEVE CORRECT FALL TO LEVELLED TRENCH BASES
- VEHICLES AND LIVESTOCK SHOULD BE EXCLUDED FROM TRENCH AREA



STANDARD STORMWATER SOAKAGE PIT DETAIL

MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS
AS/NZS 3500.3:2021 (TABLE 7.5.2.1)

DEPTH TO INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)		
	RECTANGULAR		CIRCULAR
	WIDTH	LENGTH	DIAMETER
≤ 450	350	350	-
≤ 600	450	450	600
> 600 ≤ 900	600	600	900
> 900 ≤ 1200	600	900	1000

MINIMUM PIPE COVER - FINISHED SURFACE TO TOP OF PIPE
AS/NZS 3500.3:2021 (TABLE 6.2.5)

LOCATION			DUCTILE IRON, GALVANIZED STEEL	PLASTICS
			MINIMUM COVER (mm)	
1		NOT SUBJECT TO VEHICULAR LOADING:		
	(a)	WITHOUT PAVEMENT IN AUSTRALIA -		
		(i) FOR SINGLE DWELLINGS; OR	100	100
		(ii) FOR OTHER THAN SINGLE DWELLINGS.	100	300
	(b)	WITH PAVEMENT OF BRICK OR UNREINFORCED CONCRETE.	100	300
2		SUBJECT TO VEHICULAR LOADING:	100[a]	100
	(a)	OTHER THAN ROADS:		
		(i) WITHOUT PAVEMENT.	300	450
		(ii) WITH PAVEMENT OF -		
		(A) REINFORCED CONCRETE FOR HEAVY VEHICULAR LOADING; OR	NIL[a]	100[a]
		(B) BRICK OR UNREINFORCED CONCRETE FOR LIGHT VEHICULAR LOADING.	NIL[a]	75[a]
	(b)	ROADS -		
		(i) SEALED; OR	600	600
		(ii) UNSEALED.	600	750
3		SUBJECT TO CONSTRUCTION EQUIPMENT LOADING OR IN EMBANKMENT CONDITIONS.	600	750
4		LAND ZONE FOR AGRICULTURE USE.	600	600

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SITE CIVIL ENGINEERING
4 REASON WAY, BINALOG BAY
INFILTRATION TRENCH DETAIL

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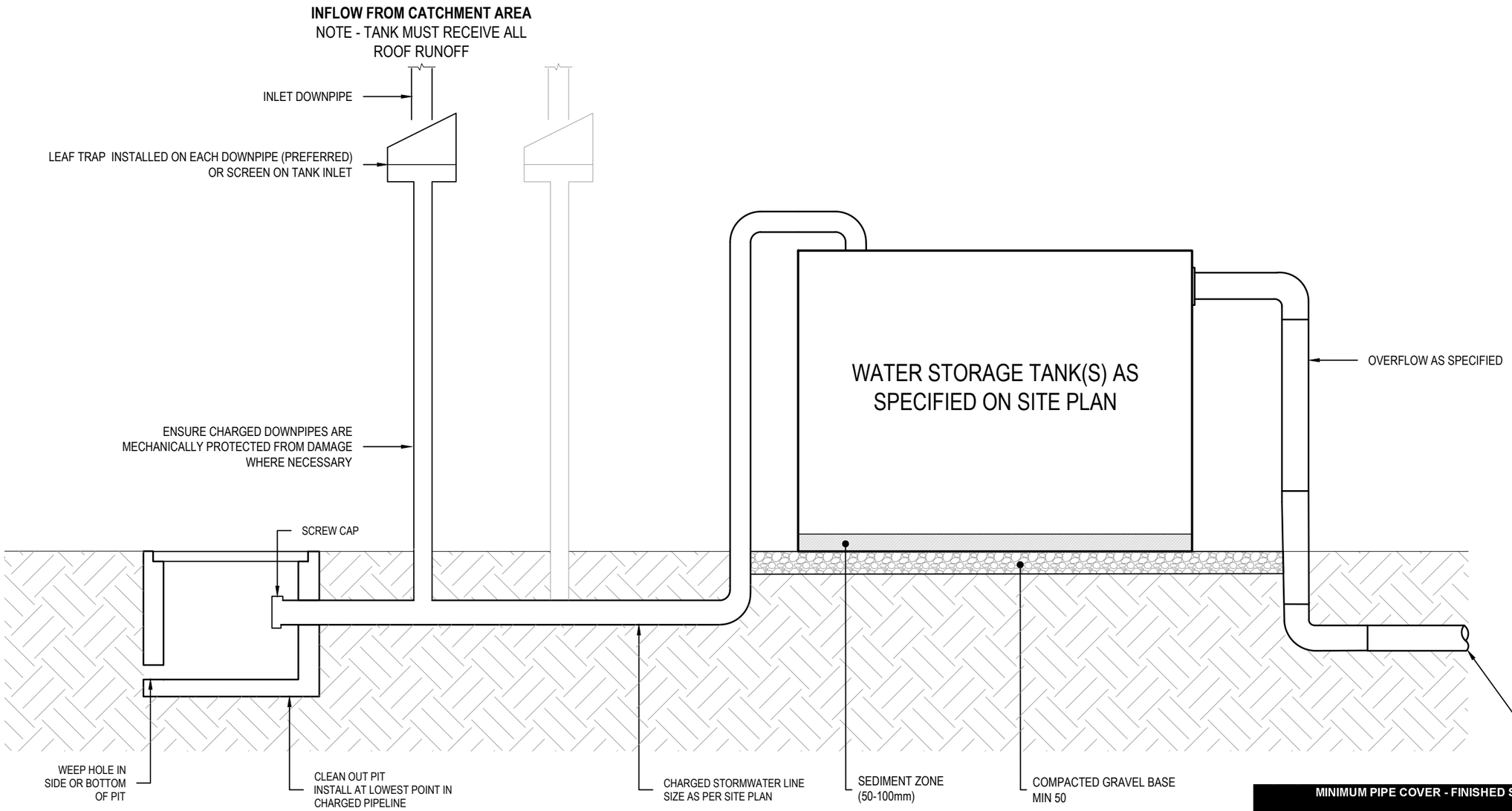
EE1181	C102	02



TYPICAL DETAIL OF ABOVE GROUND RETENTION TANK (CHARGED SYSTEM)

N.T.S.

MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS

AS/NZS 3500.3:2021 (TABLE 7.5.2.1)

	MINIMUM INTERNAL DIMENSIONS (mm)		
	RECTANGULAR		CIRCULAR
DEPTH TO INVERT OF OUTLET	WIDTH	LENGTH	DIAMETER
≤ 450	350	350	-
≤ 600	450	450	600
> 600 ≤ 900	600	600	900
> 900 ≤ 1200	600	900	1000

MINIMUM PIPE COVER - FINISHED SURFACE TO TOP OF PIPE

AS/NZS 3500.3:2021 (TABLE 6.2.5)

LOCATION			DUCTILE IRON, GALVANIZED STEEL	PLASTICS
			MINIMUM COVER (mm)	
1	NOT SUBJECT TO VEHICULAR LOADING:			
	(a)	WITHOUT PAVEMENT IN AUSTRALIA -		
		(i) FOR SINGLE DWELLINGS; OR	100	100
		(ii) FOR OTHER THAN SINGLE DWELLINGS.	100	300
	(b)	WITH PAVEMENT OF BRICK OR UNREINFORCED CONCRETE.	100	300
2	SUBJECT TO VEHICULAR LOADING:		100[a]	100
	(a)	OTHER THAN ROADS:		
		(i) WITHOUT PAVEMENT.	300	450
		(ii) WITH PAVEMENT OF -		
		(A) REINFORCED CONCRETE FOR HEAVY VEHICULAR LOADING; OR	NIL[a]	100[a]
		(B) BRICK OR UNREINFORCED CONCRETE FOR LIGHT VEHICULAR LOADING.	NIL[a]	75[a]
	(b)	ROADS -		
		(i) SEALED; OR	600	600
		(ii) UNSEALED.	600	750
3	SUBJECT TO CONSTRUCTION EQUIPMENT LOADING OR IN EMBANKMENT CONDITIONS.		600	750
4	LAND ZONE FOR AGRICULTURE USE.		600	600

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SITE CIVIL ENGINEERING
4 REASON WAY, BINALOG BAY
ABOVEGROUND TANK DETAIL

PROJECT #:	SHEET #:	REVISION #:
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GENERAL

G1 NO ATTEMPT HAS BEEN MADE TO LOCATE ALL SERVICES. ONLY THOSE SERVICES CONSPICUOUS DURING FIELD SURVEYS ARE SHOWN. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITY(S) SHOULD BE CONTACTED FOR POSSIBLE LOCATION OF FURTHER UNDERGROUND SERVICE AND DETAILED LOCATIONS OF ALL SERVICES. ALL EXISTING SERVICES ARE TO BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO EXISTING SERVICES IS TO BE MADE GOOD AT THE CONTRACTOR'S EXPENSE.

G2 NOMINATION OF PROPRIETARY ITEMS DOES NOT INDICATE EXCLUSIVE PREFERENCE BUT INDICATES THE REQUIRED PROPERTIES OF THE ITEM. SIMILAR ALTERNATIVES HAVING THE REQUIRED PROPERTIES MAY BE OFFERED FOR APPROVAL. INSTALL PROPRIETARY ITEMS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.

G3 REFER ANY DISCREPANCY TO THE SUPERINTENDENT BEFORE PROCEEDING WITH THE WORK.

G4 DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWINGS. DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METRES U.N.O.

G5 THE DATUM FOR ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY.

G6 ALL CODES REFERENCED IN THESE DOCUMENTS WILL BE THE LATEST EDITION AVAILABLE UNLESS NOTED OTHERWISE.

G7 WHERE ANY COMMON TRENCHING IS REQUIRED, THE FOLLOWING CLEARANCE DISTANCES (BARREL TO BARREL) MUST BE MAINTAINED FROM EXISTING OR PROPOSED SERVICES:
HORIZONTALLY:
300mm ALONG A LENGTH GREATER THAN 2 METRES.
500mm MINIMUM FROM ANY MAIN GREATER THAN 200mm DIA.
150mm MINIMUM ALONG A LENGTH LESS THAN 2 METRES.
VERTICALLY:
150mm MINIMUM
300mm MINIMUM FROM ANY MAIN GREATER THAN 200mm DIA.
ELECTRICAL CABLES SHOULD BE LOCATED ON THE OPPOSITE SIDE OF THE STREET. WHERE THIS IS NOT POSSIBLE A 400mm MINIMUM DISTANCE MUST BE OBSERVED OF WHICH 300mm SHOULD BE IN NATURAL AND UNDISTURBED MATERIAL.

G8 THE SCOPE OF WORKS ARE SHOWN IN THESE DOCUMENTS AND THE SPECIFICATION. IT IS EXPECTED THE CONTRACTOR WILL RESOLVE ALL ISSUES UNCOVERED ON SITE THAT ARE NOT DETAILED IN CONJUNCTION WITH THE SUPERINTENDENT.

G9 CLEARANCE REQUIREMENTS AS FOLLOWS UNLESS NOTED OTHERWISE: - -
GAS MAIN - 500mm HORIZONTAL; 300mm VERTICAL
GAS HOUSE CONNECTIONS - 300mm HORIZONTAL; 150mm VERTICAL
TELSTRA / NBN - 600mm HORIZONTAL; 150mm VERTICAL
TASNETWORKS HV / LV CABLES - 450mm
STORMWATER - 600mm HORIZONTAL; 150mm VERTICAL
TASWATER SEWER MAIN - 600mm HORIZONTAL; 500mm VERTICAL

WATER SENSITIVE URBAN DESIGN / ENVIRONMENTAL

E1 CONSTRUCTION SHALL COMPLY WITH ALL ENVIRONMENTAL AND LEGISLATIVE REQUIREMENTS.

E2 ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH 'SOIL & WATER MANAGEMENT ON BUILDING & CONSTRUCTION SITES' GUIDELINES AVAILABLE FROM EPA/NRM SOUTH, COMPRISING THE FOLLOWING:
FACT SHEET 1: SOIL & WATER MANAGEMENT ON LARGE BUILDING & CONSTRUCTION SITES
FACT SHEET 2: SOIL & WATER MANAGEMENT ON STANDARD BUILDING & CONSTRUCTION SITES
FACT SHEET 3: SOIL & WATER MANAGEMENT PLANS
FACT SHEET 4: DISPERSIVE SOILS - HIGH RISK OF TUNNEL EROSION
FACT SHEET 5: MINIMISE SOIL DISTURBANCE
FACT SHEET 6: PRESERVE VEGETATION
FACT SHEET 7: DIVERT UP-SLOPE WATER
FACT SHEET 8: EROSION CONTROL MATS & BLANKETS
FACT SHEET 9: PROTECT SERVICE TRENCHES & STOCKPILES
FACT SHEET 10: EARLY ROOF DRAINAGE CONNECTION
FACT SHEET 11: SCOUR PROTECTION - STORM WATER PIPE OUTFALLS & CHECK DAMS
FACT SHEET 12: STABILISED SITE ACCESS ·
FACT SHEET 13: WHEEL WASH
FACT SHEET 14: SEDIMENT FENCES & FIBRE ROLLS
FACT SHEET 15: PROTECTION OF STORM WATER PITS
FACT SHEET 16: MANAGE CONCRETE, BRICK & TILE CUTTING
FACT SHEET 17: SEDIMENT BASINS
FACT SHEET 18: DUST CONTROL
FACT SHEET 19: SITE RE-VEGETATION

E2 CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EACH SITE DISTURBANCE AND SITE DISTURBANCE SHALL BE STAGED WHERE POSSIBLE

E4 WORK SHALL BE RESTRICTED TO THE WELL-DEFINED WORKS ZONES

E5 A SOIL RETENTION SYSTEM (E.G., GRAVEL SHAKEDOWN ZONE) SHALL BE PROVIDED AT ALL SITE ACCESS

E6 ANY SOIL MATERIAL TRACKED OFF-SITE ONTO ROADWAYS SHALL BE IMMEDIATELY REMOVED

E7 ALL CHEMICAL STORAGE SHALL BE MANAGED (E.G., BUNDED) IN ACCORDANCE WITH WORKCOVER OR EPA GUIDELINES

E8 THE EXTENT OF CUT AND FILLS SHALL BE MINIMISED. CUT AND FILL BATTER GRADES SHALL IDEALLY BE AT 1:3

E9 DISTURBED SOIL AREAS SHALL BE EFFECTIVELY MANAGED BY STAGING, MINIMISING AREA EXPOSED AT ANY ONE TIME, AND MINIMISING THE EXPOSURE TIMEFRAME OF EACH

E10 SEDIMENT FILTERS (E.G., SEDIMENT FENCE) SHALL BE USED TO FILTER ALL 'SHEET FLOW' RUNOFF FROM DISTURBED AREAS AND STOCKPILES TO PREVENT SEDIMENT FROM ENTERING STORMWATER SYSTEMS

E11 TEMPORARY CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE CATCHMENT THEY ARE SERVICING IS STABILISED (FOR GRASS THIS WILL MEAN 70% GROUNDCOVER).

E12 ALL SOIL LOADED TRUCKS LEAVING OR ENTERING THE SITE SHALL BE TARPED

E13 TOPSOIL SHALL BE RE-SPREAD OVER ALL EXPOSED SOIL SURFACES WHERE VEGETATION IS REQUIRED. A MAXIMUM DEPTH OF 50MM SHALL BE PLACED ON SLOPES STEEPER THAN 1:3 AND A MINIMUM DEPTH OF 100MM SHALL BE PLACED ON SLOPES LESS THAN 1:3

E14 AN NPK 11-34-11 FERTILISER OR SIMILAR AS APPROPRIATE SHALL BE APPLIED AT A RATE OF 200-400KG/HA. CARE IS TO BE TAKEN TO AVOID ANY FERTILISER DIRECTLY ENTERING WATERCOURSES.

E15 SCARIFYING OR DIRECT DRILLING SHOULD BE USED TO IMPROVE SEED STRIKE RATES

E16 REVEGETATION WORKS SHALL BE MAINTAINED/ENHANCED (E.G., RESEEDING, FERTILISING, WATERING) UNTIL A MINIMUM OR 70% GROUND COVER IS ESTABLISHED

E17 NO TREES TO BE REMOVED WITHOUT THE APPROVAL OF THE SUPERINTENDENT REPRESENTATIVE

E18 MINIMISE AIR POLLUTION INCLUDING DUST AND NOISE THAT MIGHT INTERFERE WITH NEIGHBOURING PROPERTIES

STORMWATER

SW1 ALL STORM WATER PLUMBING & DRAINAGE TO COMPLY WITH A.S 3500.3:2021 STORM WATER DRAINAGE.

SW2 WHERE RELEVANT, REFER TO IPWEA/LGAT TASMANIAN STANDARD DRAWINGS ISSUED MAY 2020

SW3 ALL DRAINAGE WORKS SHALL BE SUBJECT TO THE TESTS PRESCRIBED BY THE AUTHORITIES HAVING JURISDICTION OVER THE VARIOUS SERVICES. ANY SECTION FAILING SUCH TESTS SHALL BE REMOVED AND PROPERLY INSTALLED AT THE CONTRACTOR'S EXPENSE.

WATER

W1 ALL WATER SUPPLY CONSTRUCTION TO:
WATER SUPPLY CODE OF AUSTRALIA (WSA 03-2011-3.1 VERSION MRWA EDITION V2.0) - PART 2: CONSTRUCTION ·
WATER SERVICES ASSOCIATION OF AUSTRALIA - TASWATER SUPPLEMENT
TASWATER'S STANDARD DRAWINGS TWS-W-0002 SERIES
WATER METERING POLICY/METERING GUIDELINES
TASWATER'S STANDARD DRAWINGS TWS-W-0003 - FOR PROPERTY SERVICE CONNECTIONS - CAGE FOR WATER METER ASSEMBLY
BOUNDARY BACKFLOW CONTAINMENT REQUIREMENTS AND AS3500.1:2021. ANY DEPARTURES FROM THESE STANDARDS REQUIRES THE PRIOR APPROVAL OF THE SUPERINTENDENT AND THE LOCAL WATER AUTHORITY WORKS SUPERVISOR.

WORK HEALTH AND SAFETY

WHS1 ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH:
RELEVANT WORK HEALTH AND SAFETY LEGISLATION
RELEVANT SAFE WORK AUSTRALIA CODES OF PRACTICE
SITE SPECIFIC SAFETY PLANS
IF THE CONTRACTORS PROPOSES AN ALTERNATIVE DESIGN, A SAFETY RISK ASSESSMENT SHOULD BE UNDERTAKEN AND SUBMITTED TO THE SUPERINTENDENT FOR REVIEW

EARTHWORKS

EW1 EARTHWORKS SHALL BE IN ACCORDANCE WITH THIS SPECIFICATION AND AS 3798.

EW2 AREAS OF FILL
REMOVE TOP SOIL AND ORGANIC MATERIAL
PROOF ROLL SUBGRADE IN ACCORDANCE WITH AS1289 TO:
98% STANDARD DRY DENSITY UNDER BUILDING
100% STANDARD DRY DENSITY UNDER ROADS AND CARPARKS
REMOVE ANY SOFT SPOTS AND COMPACT WITH 2% OF OPTIMUM MOISTURE CONTENT TO STANDARD DRY DENSITY AS STATED ABOVE
PLACE FILL AS SPECIFIED AND COMPACT WITHIN 2% OF OPTIMUM MOISTURE CONTENT TO STANDARD DRY DENSITY AS STATED ABOVE

EW3 AREAS OF CUT
REMOVE TOP SOIL AND ORGANIC MATERIAL B. PROOF ROLL SUBGRADE IN ACCORDANCE WITH AS1289 TO:
98% STANDARD DRY DENSITY UNDER BUILDINGS
100% STANDARD DRY DENSITY UNDER ROADS AND CAR PARKS
REMOVE ANY SOFT SPOTS AND COMPACT WITH 2% OF OPTIMUM MOISTURE CONTENT TO STANDARD DRY DENSITY AS STATED ABOVE

ROAD WORKS

WERE RELEVANT, REFER TO IPWEA/ LGATS TASMANIAN SUBDIVISION STANDARD DRAWINGS ISSUED - MAY 2020.

SURVEY

SU1 SURVEY DETAILS ON COVER PAGE

SU2 PROPERTY BOUNDARY OVERLAYS, WHERE SUPPLIED, VARY IN ACCURACY BUT ARE GENERALLY TO 0.5m. THEREFORE A LAND SURVEY, AS DEFINED UNDER THE SURVEYING ACT 2002, SHOULD BE UNDERTAKEN BEFORE ANY CONSTRUCTION ACTIVITY IS CARRIED OUT ON OR NEAR THE LAND BOUNDARIES DEPICTED BY THIS MODEL.

SU3 SURVEY CONTROL INFORMATION IS REGARDED AS SUITABLE FOR THE SURVEY AND CORRECT AT THE TIME OF SURVEY. BUT SHOULD BE VERIFIED BEFORE BEING USED FOR ANY PURPOSE.

SU4 NO DESIGN SHOULD BE UNDERTAKEN OUTSIDE OF SURVEY EXTENTS. IF DESIGN EXCEEDS SURVEY EXTENTS, ADDITIONAL SURVEY DATA SHOULD BE ACQUIRED.

SU5 UNDERGROUND SERVICES: THE LOCATION OF ALL EXISTING UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY. EXCEED TAKES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF SUCH INFORMATION. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONFIRM THE LOCATION & DEPTH/ INVERT LEVEL OF ALL EXISTING UNDERGROUND SERVICES, IN CONJUNCTION WITH THE RELEVANT SERVICE AUTHORITY & ANY CONFLICTS WITH THE PROPOSED DESIGN/ PIPE ALIGNMENT ARE TO BE RESOLVED PRIOR TO CONSTRUCTION

SEWERAGE

S1 ALL SEWER WORKS TO BE IN ACCORDANCE WITH WSA SEWER CODE AND TAS WATER STANDARDS AND SUPPLEMENTS. ANY MODIFICATIONS TO THESE STANDARDS REQUIRES APPROVAL FROM SUPERINTENDENT AND TAS WATER.

S2 ALL NEW LIVE SEWER CONNECTIONS TO EXISTING TAS WATER SEWERAGE INFRASTRUCTURE TO BE COMPLETED BY TAS WATER UNLESS OTHERWISE AGREED AND APPROVED AT OWNERS EXPENSE.

S3 ALL DRAINAGE WORKS TO BE INSPECTED AND TESTED IF REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ORGANISING INSPECTIONS AT BUT NOT LIMITED TO THE FOLLOWING STAGES;
TRENCHING AND PIPEWORK BEDDING
PIPE INSTALLED AND PRIOR TO BACKFILLING
AFTER BACKFILLING
SHOULD ANY INSPECTIONS OR TESTING FAIL TO MEET THE REQUIREMENTS PRESCRIBED BY THE STATUTORY AUTHORITY THE SECTION FAILING THE TESTING/INSPECTION SHOULD BE REMOVED AND REINSTALLED TO MEET THE STATUTORY REQUIREMENTS AND DIRECTIONS PROVIDED. COST OF REINSTALLATION IS AT CONTRACTORS EXPENSE.

S4 TRENCHES ARE TO BE EXCAVATED AND BACKFILLED IN ACCORDANCE WITH THE DESIGN DRAWINGS AND TAS WATER STANDARDS. ELECTROMAGNETIC METAL IMPREGNATED TAPE SHOULD BE INSTALLED IN ALL NON METALLIC PIPE TRENCHES

S5 ALL MANHOLES ARE TO BE PRECAST CONCRETE MINIMUM 1050ID AND INSTALLED IN ACCORDANCE WITH WSA AND TAS WATER STANDARDS. MANHOLE COVERS TO BE HEAVY DUTY CLASS D GATIC COVERS AND SURROUNDS IN TRAFFICABLE AREAS AND MEDIUM DUTY CLASS B GATIC COVERS AND SURROUNDS IN NON TRAFFICABLE AREA.

S6 THE CONTRACTOR IS RESPONSIBLE FOR THE PRODUCTION OF ALL AS CONSTRUCTED DRAWINGS AND DOCUMENTATION. AS CONSTRUCTION DOCUMENTATION SHOULD BE IN ACCORDANCE WITH TAS WATER REQUIREMENTS AND STANDARDS AND BE CERTIFIED BY CHARTERED OR REGISTERED ENGINEER.

S7 ALL REDUNDANT SECTIONS OF PIPE TO BE FILLED WITH "LIQUIFILL" GRADE PC.1
0.5-2.0MPa OR APPROVED EQUIVALENT

REV	DESCRIPTION	DRAFT	DES	CHKD	APP	DATE
02	FOR BA	MT	MT	SD	SD	05/03/2025
01	FOR CLIENT REVIEW	MT	MT	SD	SD	03/03/2025

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SHEET: A3

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CIVIL NOTES

PROJECT #: EE1181
SHEET #: C104
REVISION #: 02

GES

GEO-ENVIRONMENTAL

SOLUTIONS

COASTAL VULNERABILITY ASSESSMENT

PROJECT:

Proposed Dwelling

Site Address:

4 Reason Way
Binalong Bay
TAS 7216

CLIENT:

Plain Architecture

DATE:

20/10/2023

DOCUMENT CONTROL

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DOCUMENT CONTROL		
Report Title:	4 Reason Way Binalong Bay TAS 7216	
Project Type:	Coastal Vulnerability Assessment	
Client:	Plain Architecture	
Project Job Number:	J9429	
Revision Version:	V01	
Date:	20/10/2023	
Approved By:	J. Traynor	
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	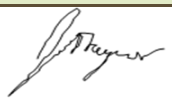	20/10/2023

FIGURES

EXECUTIVE SUMMARY

Geo-Environmental Solutions Pty Ltd (GES) were contracted by Plain Architects to prepare a coastal vulnerability assessment for a proposed dwelling at Binalong Bay. The proposed works are located within cadastral title (CT – 169424/3) located at 4 Reason Way, Binalong Bay TAS 7216.

The project area is within the coastal erosion investigation overlay. GES has undertaken investigation of the study area in order to assess the current conditions of the shoreline. The aim is to categorize the site based on the Coastal Erosion Hazard Bands, utilizing the methodology provided by the DPAC (Department of Premier and Cabinet), Office of Security Emergency Management, Version 1.0, dated 01 Jan 2021 which is applicable for Tasmanian Planning Scheme - Break O'Day Council (TPS). The field data sheet is provided in Appendix 1 for reference and further details.

The project site is located in the rural area of Binalong Bay, situated in the northeastern region of Tasmania, within the local government of Break O'Day. The site is positioned alongside the sheltered Grants Lagoon, which is shielded from ocean swells and primarily exposed to onshore winds. The project area is approximately 40 meters away from the shoreline, and the coastal environment in this vicinity is notably stable. GES conducted a review of historical aerial imagery, which confirmed that there have been no noticeable alterations in the shoreline over the past three decades.

The shoreline along the project area could be characterized as a typical deltaic and salt marsh shore. It heavily relies on the presence of dense vegetation, a common feature for lagoons. Only if the existing vegetation and dense trees were to be removed, would the shoreline become vulnerable to erosion of the soft sediments. Given the current condition of the shoreline, GES has estimated that potential erosion could extend up to 22 meters by the year 2100 under a 1% Annual Exceedance Probability (AEP) scenario.

Following the site inspection, GES performed a coastal hazard band assessment for the site, which confirmed that the site does not fall within a coastal erosion overlay. Moreover, it was determined that the site is located in an area with an acceptable level of hazard risk. Given that the site is not designated within a coastal erosion overlay, no further assessment is necessary as the risk of coastal erosion is considered acceptable for the 1% Annual Exceedance Probability (AEP) scenario in the year 2100.

List of Abbreviations

AHD (83)	Australian Height Datum
AEP	Annual Exceedance Probability
ARI	Average Reoccurrence Interval
CEM	Coastal Engineering Model
CEHC	Coastal Erosion Hazard Code
CIHC	Coastal Inundation Hazard Code
DCP	Dynamic Cone Penetrometer
DEM	Digital Elevation Model
DPAC	Department of Premier and Cabinet
ERMP	Erosion Risk Management plan
GES	Geo-Environmental Solutions Pty Ltd
GIS	Geographical Information System
IPCC	Intergovernmental Panel on Climate Change
LiDAR	Light Detection And Ranging
LIST	Land and Information System, Tasmania
MRT	Mineral Resources Tasmania
NCCOE	National Committee on Coastal and Ocean Engineering
SB	Soil Bore
SPM	Shoreline Protection Manual
SSP	Surf Similarity Parameter
SWAN	Simulating Waves Nearshore
TPS	Tasmanian Planning Scheme
WRL	Water Research Laboratory (University of New South Wales)

1 INTRODUCTION

Geo-Environmental Solutions Pty Ltd (GES) were contracted by Plain Architects to prepare a coastal vulnerability assessment for a proposed dwelling at Binalong Bay. The main works are located within cadastral title (CT – 169424/3) located at 4 Reason Bay, Binalong Bay TAS 7216
An application to conduct construction works has triggered the assessment in accordance with the Tasmanian Planning Scheme (TPS) – Break O'Day Council and following of the Director's Determination for Coastal Erosion areas which provides building requirements for building and demolition work in coastal erosion hazard area.

GES has undertaken investigation of the study area in order to assess the current conditions of the shoreline. The aim is to categorize the site based on the Coastal Erosion Hazard Bands, utilizing the methodology provided by the DPAC (Department of Premier and Cabinet), Office of Security Emergency Management, Version 1.0, dated 01 Jan 2021 which is applicable for Tasmanian Planning Scheme (TPS). The field data sheet is provided in Appendix 1 for reference and further details.

GES have undertaken this assessment using available scientific literature and datasets. Estimations are determined by approximation with appropriate regional information applied where appropriate to site specific information. Data collection and site-specific modelling was undertaken in assessment of the site.

2 OBJECTIVES

The objective of the site investigation is to:

- Identify coastal erosion bands and categorise the site in the relevant Coastal Erosion Hazard Band in accordance with the methodology provided by DPAC;
- Identify which codes need to be addressed in terms of coastal vulnerability and identify the performance criteria relevant to the project which need addressing;
- Used geological mapping and site inspections to determine site physical conditions;
- Where applicable, provide recommendations on methods and design approach to mitigate erosion impact.

3 STUDY AREA

The project area is situated at a rural locality of Binalong Bay in the local government area Break O'Day in the North – east of Tasmania. It is located about 12 kilometres northeast of the town of St Helens. The study area is located on the south side of the Grants Lagoon (refer to Figure 1). The proposed works are for residential dwelling, which is expected to be more than 50m from the High-water mark (HWM).

Figure 1 - Location of the study area marked in red.

4 Planning

4.1 Australian Building Code Board

This report presents a summary of the overall site risk to coastal erosion processes. This assessment has been conducted for the year 2073 which is representative of a 'normal' 50-year building design life category based on a 2023 baseline (ABCB 2015).

Per the Australian Building Code Board (ABCB 2015), when addressing building minimum design life:

> *'The design life of buildings should be taken as 'Normal" for all building importance categories unless otherwise stated.'*
>
> As per Table 3-1, the building design life is 50 years for a normal building.

Table 3-1 Design life of building and plumbing installations and their components

Building Design Life Category	*Building Design Life (years)*	*Design life for components or sub systems readily accessible and economical to replace or repair (years)*	*Design life for components or sub systems with moderate ease of access but difficult or costly to replace or repair (years)*	*Design life for components or sub systems not accessible or not economical to replace or repair (years)*
Short	1 < dl < 15	5 or dl (if dl<5)	dl	dl
Normal	50	5	15	50
Long	100 or more	10	25	100

Note: Design Life (dl) in years

4.2 State Coastal Policy

On 16 April 2003 the State Coastal Policy Validation Act 2003 came into effect. This Act replaces the former definition of the Coastal Zone in the State Coastal Policy 1996 and reinstates the Policy. The Act also validates all previous decisions made under the Policy. The following clauses are pertinent to the scope of this report:

1.1. NATURAL RESOURCES AND ECOSYSTEMS

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

1.4. COASTAL HAZARDS

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

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

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

4.3 The Tasmanian Building Regulations 2016

4.3.1 Building in hazardous areas

As outlined in the Department of Justice web site:

http://www.justice.tas.gov.au/building/building-and-plumbing/building_in_hazardous

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

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

(1) A person must not perform work in a coastal erosion hazard area unless he or she is authorised to do so under the Act.

(2) If a person intends to perform work in an investigation area of a coastal erosion hazard area, the person must, before performing the work, ensure that the land is classified in accordance with the coastal erosion determination (a) as being an acceptable risk;

(3) A responsible person for work being performed in a coastal erosion hazard area must ensure that the work is being performed in accordance with the Act and the coastal erosion determination.
(4) A person performing work in a coastal erosion hazard area must ensure that the work complies with the Act and the coastal erosion determination.

4.4 Tasmanian Planning Scheme Overlays – Break O'Day Council

4.4.1 Coastal Erosion Hazard Code Overlay (CEHC)

The project area is located in the coastal erosion investigation area (Figure 2). GES has conducted the site visit to find more information about the site coastal vulnerability, review a coastal erosion hazard bands and classify accordingly. More detail in Section 5 Coastal Erosion Investigation Area Site Assessment.

Figure 2 Coast Erosion Bands Relevant to the Site (The LIST)

5 COASTAL EROSION INVESTIGATION AREA ASSESSMENT

5.1 Site assessment methodology

GES has undertaken the site investigation to categorise the site relevant Coastal Erosion Hazard Band in accordance with the provided methodology by DPAC, Office of Security Emergency Management V1.0 (Dated 01 Jan 2021). The field data sheet presented in Appendix 1 for reference and further details. The method described above is a commonly employed approach for conducting investigations in coastal areas to gather detailed information about the site. It serves as a valuable tool for guiding the coastal assessment process. GES utilizes this method to gain insights into the site's characteristics, vulnerabilities, and potential risks associated with wave energy and erosion.

5.1.1 How exposed is the site to waves?

The study area is situated within the coastal vicinity of Grants Lagoon, separated from Binalong Bay beach by a narrow strip of vegetation-covered sand. The project site occupies the southwestern part of the lagoon. The lagoon's shoreline is densely inhabited with vegetation, serving as a natural barrier against strong winds within the lagoon area. During the evaluation of coastal processes, it was established that the project site is shielded from ocean swells. The dense vegetation surrounding the lagoon acts as a natural protection, making the site located on the sheltered Grants Lagoon, which remains unaffected by swells and predominantly exposed to onshore winds. Consequently, the project area is appropriately classified as a sheltered beach (please refer to Figure 3 and Figure 4).

Figure 3 Looking west from the shoreline next to the site.

Figure 4 Looking northeast from the shoreline

5.1.2 Is the ground mainly sand, gravel, clay or rocks?

The ground conditions play a significant role in determining the susceptibility of the site to coastal erosion. It is important to consider the thickness of the soil or sand layers above the underlying ground materials, which can vary and make it difficult to identify the actual ground type.

To determine the coastal ground classification of the project area, online mapping and field observation by walking along the shoreline were utilized. Coastal vulnerable features were identified, and the shoreline was categorized accordingly. The geology of the area is mapped as stream alluvium, swamp, and marsh deposits (MRT, 1:25,000).

There is a limited of comprehensive studies regarding coastal erosion in lagoons with swamp or marsh deposits. Based on the prior classification, the study area's shoreline is primarily composed of muddy sediment deposits, which have gradually accumulated from sedimentation. Typically, deltaic sediment shores of this nature tend to slowly advance seaward over time. The erosion of muddy shorelines differs from sandy shores in that the eroded materials are not readily redeposited on the shore.

As existing methods do not specifically stipulate requirements for lagoons, GES has adopted the position that the potential erosion for this particular area could extend up to 22 meters by the year 2100 under a 1% Annual Exceedance Probability (AEP) scenario. The accompanying photos below depict the current shoreline conditions at the site, characterized by a muddy shoreline with dense vegetation (Figure 5 and 6).

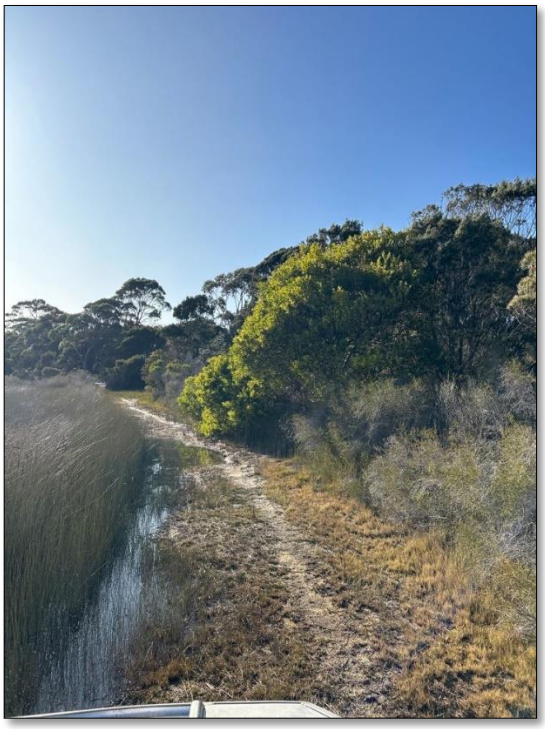

Figure 5 Typical shoreline of the project area.

Figure 6 Typical shoreline.

5.1.1 Is the site flat, slopping, or on cliff?

The erosion type and speed that is likely to occur at the site is influenced by its slope. The topography area around the shoreline is a flat along the coast with a gentle slope halfway to the site which is approx. 5-10°. The slopes are very densely vegetated with trees, shrubs, and weeds. A typical slope is presented in Figure 7 and Figure 8. The slope was calculated using Lidar Data and QGIS software. Mapping was based on field observations made by walking along the study area's shoreline.

Figure 7 Typical shoreline near the project area

Figure 8 Typical shoreline of the project area

How close is your site to the mean high-water mark?

The highest regular wave wash line on the shore during normal weather is known as the Mean High-Water Mark (MHM). The Figure 9 below display a typical HWM feature characterized by vegetation. The proposed works are located more than 40m from the HWM which was determined using online tools to measure the distance from the LIST. The shoreline is vegetated with no exposure to the soils.

Figure 9 The shoreline with potential high-water mark

5.2 Assess your site's hazard band classification.

The map below in Figure 10 displays the estimated coastal erosion band for the study area. Coastal erosion modelling and spatial data can assist in identifying properties that are susceptible to erosion at varying degrees of risk. After the site investigation and considering all important features GES classified the project area to the low hazard band for coastal erosion in the Grants Lagoon, swell-protected coastal defence zones:

- Low Hazard Band (HWM to 22m)
- Acceptable Hazard Band (>20m)

Figure 10 Proposed coastal erosion band for the study area.

6 CONCLUSIONS

The project area is situated on the southwest portion of Grants Lagoon, making it largely unaffected by swells and primarily exposed to fetch winds. GES has reviewed a historical aerial image and has confirmed that there have been no observable changes in the shoreline over the past three decades. The lagoon shoreline looks stable around the site because of very dense vegetation. There are indications of possible erosion due to factors like the lower elevation, sea level rise, and the possibility of future floods around the coastline.

The shoreline is very reliant to vegetation, which should be protected as much as possible to keep the same conditions of the coastline in long term. As the proposed works are located more than 50m away from the coastline they are unlikely to have a direct impact on the shoreline. GES has established from the assessment that there is not a credible risk of erosion impacting the proposed works on the site, and it is acceptable risk for 2100 (1% AEP). The proposed works are not located on the mobile land. GES do not have any specific recommendations for the proposed works apart of the regular maintenance.

7 LIMITATIONS STATEMENT

The following limitations apply to this report:

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

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Appendix 1 Coastal Investigation Data Sheet

Data sheet

Please record the results of your site assessment in this data sheetand include any other supporting information and photographic evidence.

CONTACT INFORMATION

Name	Geo – Environmental Solutions		
Phone	03 6223 1839	Mobile or other phone	
Email	office@geosolutions.net.au		
Are you the landowner?	☐ YES	■ NO	

SITE ADDRESS

Street number and name	4 Reason Way
Suburb or town	Binalong Bay TAS 7216

1. HOW EXPOSED IS THE SITE TO WAVES? *(see page 6-7)*

1.1 How would you categorise the swell exposure of your site? (select one)

☐ Swell-exposed	■ Swell-sheltered

1.2 In which of the four coastal regions is your site located?(select one)

☐ North Coast	■ East Coast	☐ Storm Bay	☐ South and West

ACTION Please attach and label TWO or more photographs and other information:
- ☐ 1: General photos that provide evidence of the swell exposure of your site
- ☐ 2: Photos taken from your site, looking out to sea, any surrounding islands or estuary

2. IS THE GROUND MAINLY SAND, GRAVEL, CLAY OR ROCK? *(see page 8)*

2.1 How would you categorize the ground on your site? (select one)

☐ Soft, sandy or loose	■ Coarse boulder clay	☐ Soft rock	☐ Sandy beach backed by hard rock	☐ Hard rock

2.2 Is your site protected by a man-made coastal defence, such as a seawall? (select one)

☐ Yes - resilient (estimated lifespan more than 10 years)	☐ Yes - non-resilient (estimated lifespan lessthan 10 years)	■ No protection

ACTION Please attach and label TWO or more photographs and other information:
- 1: Photos that provide evidence of the type of ground on your site
- 2: Photos and information about any manmade coastal defences protecting your site, if present

COASTAL EROSION INVESTIGATION AREA – SITE ASSESSMENT
Guide to conducting a site assessment in a Coastal Erosion Investigation Area

3. IS THE SITE FLAT, SLOPING OR ON A CLIFF? *(see page 9)*

How would you categorise the slope of your site? (select one)

■ Flat to moderate slope	☐ Steep or on a cliff

ACTION Please attach and label TWO or more photographs and other information:

☐ 1: Photos that provide evidence of the slope of your site

☐ 2: Any other supporting information, including the method used to calculate slope

4. HOW CLOSE IS YOUR SITE TO THE MEAN HIGH WATER MARK?

What is the shortest distance from the Mean High Water Mak to the boundary of your site?

40 metres (estimate to the nearest metre)

ACTION Please attach and label TWO or more photographs and other information: 1: Photos that support your estimate of distance to the Mean High Water Mark

☐

☐ 2 A description that notes the exact distance of your site from Mean High Water Mark

(see page 9)

5. ASSESS YOUR SITE'S HAZARD BAND CLASSIFICATION

Use answers to the questions above to find the relevant Hazard Band in in Appendix A. (select one)

☐ HIGH	MEDIUM ☐	LOW ☐	■ ACCEPTABLE

6. CERTIFICATION AND SIGNATURE (APPLICANT)

Date	06/10/2023
Name	Jonathan Traynor
Signature	

Appendix 2 Acceptable Solutions

Coastal Erosion Hazard Assessment

This coastal erosion hazard report has been prepared in general accordance with methodology specified in the Directors Determination – Coastal Erosion Hazard Areas pursuant to section 20(3)(b) of the Building Act 2016 and regulation 51 of the Building Regulations 2016 (Document Version 1.2 Dated 27 September 2021).

This report has been prepared by Jonathon Traynor who has more than 10 years' experience as a professional geologist. Jonathon Traynor has a Bachelor of Science Degree with Honours in Geology. In his role at GES Jonathan prepares geotechnical reports including Site Classification Reports for Construction to AS2870, Geotechnical Site Investigations, Landslip Assessments in Accordance Australian Geomechanics Guidelines (AGS 2007), and Coastal Erosion Reports.

Practices used in this assessment are developed from recent literature, including regional public domain remote sensing, wave, sea level, and storm tide modelling data obtained through various government agencies. This data is refined to a local (site scale) using detailed bathymetry models and methods within the coastal engineering manual (CEM) as well as equations obtained from recent publications to determine wind setup, wave setup, and wave runup which is specific to the coastal setting.

Specific determinations regarding coastal hazard reporting as presented in the Director's Determination - Coastal Erosion Hazard Areas, Division 2, Section 4 'Coastal Hazard Reporting' are presented in the Table below.

Signature

Jonathon Traynor
BSc (Hons)
Geology

Works in a Coastal Erosion Hazard Area

According to this director's determination, the following regulations are applicable for the works in a coastal erosion hazard area:

(1) The AS 2870 site classification of any land located in a coastal erosion hazard area must be Class P, on the basis that it may be subject to coastal erosion.

(2) A coastal erosion hazard report must be prepared.

(3) The design of the building footing system must be prepared by an engineer-civil.

(4) The building design (including footing system) must take into account the coastal erosion hazard report.

(5) In determining an application for a Certificate of Likely Compliance, the building surveyor must:

(a) take into account the coastal erosion hazard report and any relevant coastal erosion management plan; and

(b) be satisfied that the proposed work will not cause or contribute to coastal erosion on the site or on adjacent land; and

(c) be satisfied that the proposed work can achieve and maintain a tolerable risk for the intended life of the building without requiring any specific coastal erosion protection measures; and

(d) be satisfied that the proposed work will not be located on actively mobile landforms, except where the work relates to protection measures or remediation works to protect land, property or human life.

(6) In determining an application for a permit, the permit authority must take into account the coastal erosion hazard report and any relevant coastal erosion management plan