Eden Street
Riverside Tasmania 7250
Telephone: (03) 6323 9300
Facsimile: (03) 6323 9349

PLANNING APPLICATION FORM

Section 57 & 58

OFFICE USE ONLY		
	Application Number	PA2025410
	Assess No:	A10667
	PID No:	2560933

Applicant Name:	Design To Live					
Postal Address:						
Contact Phone:	**Home**		**Work**		**Mobile**	
Email Address:						

Planning Application Lodgement Checklist

The following documents have been submitted to support the consideration of this application:

1. A current copy of the property title text, folio plan and schedule of easements ☐
2. A completed application form including a detailed description of the proposal ☐
3. A complete plan set: ☐
   - a) **Floor plans** ☐
   - b) **Elevations** (from all orientations/sides and showing natural ground level and finished surface level) ☐
   - c) **Site Plan** showing: ☐
     - Orientation
     - All title boundaries
     - Location of buildings and structure (both existing and proposed)
     - Setbacks from all boundaries
     - Native vegetation to be removed
     - Onsite services, connections and drainage details (including sewer, water and stormwater)
     - Cut and/or Fill
     - Car parking and access details (including construction material of all trafficable areas)
     - Fence details
     - Contours
4. Other:

If submitting plans in over the counter please ensure they are A3.
All plans must be to scale.

WEST TAMAR COUNCIL

Application Number: «Application_Number»

APPLICANT DETAILS

Applicant Name:	Design To Live Lyndon Stubbs

Note: *Full name(s) of person(s) or company making the application and postal address for correspondence.*

LAND DETAILS

Owner/Authority Name: *(as per certificate of title)*	SAMUEL MANIX-GEEVES AND SIAN BEETON

Location / Address:	3 ROSEVEARS DRIVE, LEGANA
Title Reference:	142286/3
Zone(s):	RURAL LIVING (ZONE B)

Existing Development/Use:	VACANT

Existing Developed Area:	Area 0

DEVELOPMENT APPLICATION DETAILS

Proposed Use:	Residential: ☑	Visitor Accommodation: ☐	Commercial: ☐	Other: ☐
	Description of Use: RESIDENTIAL			

Development Type:	Building work: ☑	Demolition: ☐	Subdivision: ☐	Other: ☐
	Description of development: PROPOSED DWELLING			

New or Additional Area:	Area 284.07m^2	
Estimated construction cost of the proposed development:	$400,000	
Building Materials:	Wall Type: VAR- SEE PLANS	Colour: TBC
	Roof Type: METAL	Colour: TBC

WEST TAMAR COUNCIL

Application Number: «Application_Number»

SUBDIVISION ☒N/A

Subdivision creating additional lots ☐

Boundary adjustment with no additional lots created ☐

Number of Lots (existing) :		**Number of Lots (proposed) :**	
Description:			
If applying for a subdivision which creates a new road(s), please supply three proposed names for the road(s), in order of preference:			
1.			
2.			
3.			

COMMERCIAL, INDUSTRIAL OR OTHER NON-RESIDENTIAL DEVELOPMENT/USE ☒N/A

Hours of Operation:	Monday / Friday:		To	
	Saturday:		To	
	Sunday:		To	

Existing Car Parking:	
Proposed Car Parking:	

Number of Employees: ***(Existing)***	
Number of Employees: **(*Proposed*)**	

Type of Machinery installed:	
Details of trade waste and method of disposal:	

WEST TAMAR COUNCIL

Application Number: «Application_Number»

APPLICANT DECLARATION

Owner: *As the owner of the land, I declare that the information contained in this application is a true and accurate representation of the proposal and I consent to this application being submitted and for Council Officers to conduct inspections as required for the proposal,*

Name (print)	*Signed*	*Date*

Applicant: *(if not the owner)* *As the applicant, I declare that I have notified the owner of my intention to make this application* and that *the information contained in this application is a true and accurate representation of the proposal,*

Lyndon Stubbs		8/12/2025
Name (print)	*Signed*	*Date*

Please Note: If the application involves Crown Land you will need to provide a letter of consent and this form signed by the Minister, or a delegated officer of the Crown with a copy of the delegation.

Crown Consent *(if required)*

Name (print)	*Signed*	*Date*

General Manager *(if required)*

Name (print)	*Signed*	*Date*

If the subject site is accessed via a right of way, the owner of the ROW must also be notified of the application.

Right of Way Owner:

As the applicant, I declare that I have notified the owner of the land encumbered by the Right Of Way, of my intent to lodge this application that will affect their land.

Name (print)	*Signed*	*Date*

OWNER IVAN JORDAN
ELIZABETH JORDAN

FOLIO REFERENCE 138412/1
20661/5
20661/6
20661/7

GRANTEE

PART OF 800 ACRES GRANTED TO JOSIAS MCALLAN

PLAN OF SURVEY

BY SURVEYOR M.R.ROSE FOR COHEN & ASSOCIATES PTY LTD, LAUNCESTON

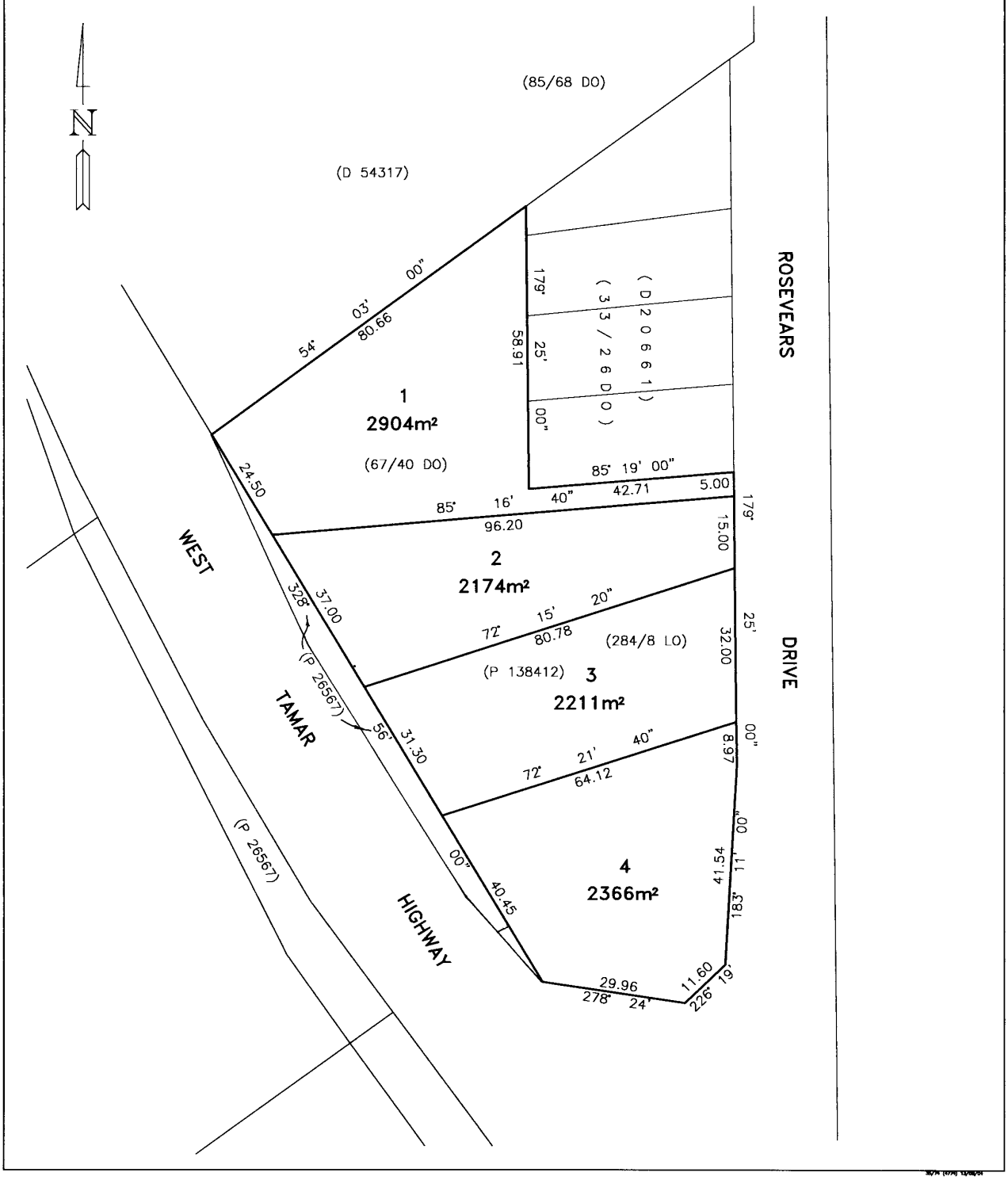
LOCATION
LAND DISTRICT OF DEVON
PARISH OF ST.MICHAELS

SCALE 1:750 LENGTHS IN METRES

REGISTERED NUMBER
SP142286

APPROVED
EFFECTIVE FROM - 1 DEC 2004
Alice Kawa
Recorder of Titles

MAPSHEET MUNICIPAL CODE No	LAST UPI No	LAST PLAN No	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN
129 (5042-51)	4105427, 4105428 4105429, 4105430	P 138412 D 20661	



SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP 142286

EASEMENTS AND PROFITS

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

FENCING PROVISION

The subdividers Ivan Jordan and Elizabeth Jordan shall not be required to fence.

No other easements, covenants or profits a prendre are hereby created to benefit or burden any lot shown on the plan

Signed by **Ivan Jordan** and)
Elizabeth Jordan)
being the registered proprietors of)
folios of the register volume 138412 folio 1,)
volume 20661 folio 5, volume 20661 folio 6,)
and volume 20661 folio 7)
in the presence of -)

Signature ..... I Jordan .....

..... E J Jordan .....

Name... Michael Peter Powell

Address... 6 Miami Ct Wivenhoe

Occupation... Building Practitioner

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER:	PLAN SEALED BY:
FOLIO REF:	DATE: 11th November 2004
SOLICITOR & REFERENCE:	DA 56/04 REF NO. ..... Council Delegate

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

md:#LING__N1_31233_4.DOC

PROPOSED DWELLING
3 ROSEVEARS DRIVE,
LEGANA, 7277.

DRAWING #	DRAWING
RSVR03-1	COVER PAGE
RSVR03-2	LOCATION PLAN
RSVR03-3	SITE PLAN
RSVR03-4	FLOOR PLAN
RSVR03-5	GROUND FLOOR EXTERNAL SERVICES
RSVR03-6	ELEVATIONS NORTH AND SOUTH
RSVR03-7	ELEVATIONS EAST AND WEST
RSVR03-8	PERSPECTIVES

AREAS	(m²)
DWELLING	238.62
ALFRESCO	14.29
DECK	31.16

COUNCIL	WEST TAMAR	ZONE	RURAL LIVING (ZONE B)
LAND TITLE REFERENCE	142286/3	ENERGY STAR RATING	6.1
PROPERTY ID	2560933	CLIMATE ZONE	7
LOT SIZE (M²)	2211	ALPINE AREA	N/A
BAL RATING	N/A	CORROSION ENV'	MEDIUM
DESIGN WIND CLASS	N3	SITE HAZARDS	MEDIUM LANDSLIP HAZARD BAND
SOIL CLASSIFICATION	P		
PLANNING OVERLAY	SCENIC PROTECTION AREA, LANDSLIP HAZARD CODE AND WATERWAY AND COASTAL PROTECTION AREA		

ATTACHMENTS

DESIGN TO LIVE
ACC # 371799313
ABN. 71 615 812 747
PH. 6344 7319
E. info@designtolive.com.au
W. designtolive.com.au

CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
3 ROSEVEARS DRIVE, LEGANA, 7277.

DRAWING
COVER PAGE

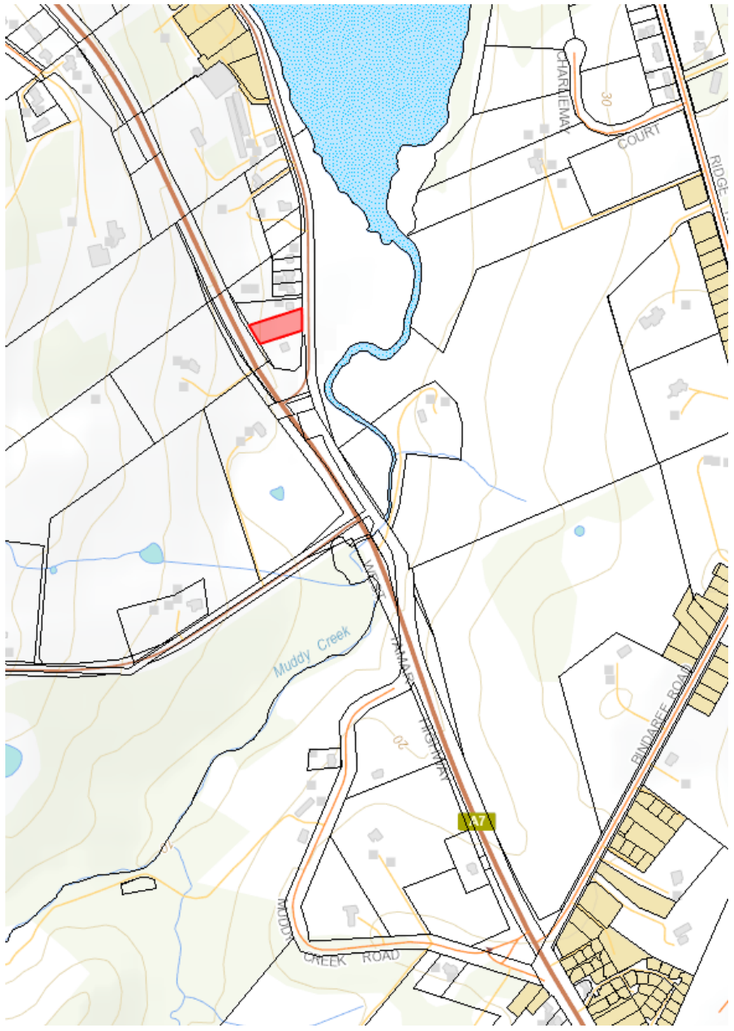
I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

SIGNATURE: **DATE:**

SIGNATURE: **DATE:**

REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
R4	8/04/2025	D.A. F.I.R
R5	23/05/2025	COLOURS ADDED
R6	8/12/2025	AMENDMENT

DESIGNER	L.S.	JOB NUMBER	RSVR03
DRAWN	L.S.	DRAWING	1/8
CHECKED	M.L.	SCALE (@A3)	NTS



LOCALITY PLAN
NOT TO SCALE

WEST TAMAR HIGHWAY

EXISTING NEIGHBOURING DWELLING

TITLE BOUNDARY- 80.78m

TITLE BOUNDARY- 31.30m

PROPOSED DWELLING

TITLE BOUNDARY- 32.00m

TITLE BOUNDARY- 64.12m

ROSEVEARS ROAD

EXISTING NEIGHBOURING DWELLING

REFER DRAWING RSVR03 3/8

N

0 10 20 30 40 50m

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CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
3 ROSEVEARS DRIVE, LEGANA, 7277.

DRAWING
LOCATION PLAN

I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

SIGNATURE: **DATE:**

SIGNATURE: **DATE:**

REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
R4	8/04/2025	D.A. F.I.R
R5	23/05/2025	COLOURS ADDED
R6	8/12/2025	AMENDMENT

DESIGNER	L.S.	**JOB NUMBER**	RSVR03
DRAWN	L.S.	**DRAWING**	**2/8**
CHECKED	M.L.	**SCALE (@A3)**	1:500

MINIMUM 10x NATIVE TREES PLANTED FOR SCREENING
APPROX 3m CANOPY DIAMETER
AND MIN 6m HIGH MATURE HEIGHT
(MIN 1m ABOVE THE TOP OF THE DWELLING: AHD 14.315)

EXISTING NEIGHBOURING DWELLING

N

TITLE BOUNDARY- 80.78m

WASTE WATER SYSTEM AND PUMP
SEE SPECIALIST REPORT- J11688

SUB SURFACE IRRIGATION AREA
SEE SPECIALIST REPORT- J11688
350.00 m²

ALFRESCO

DECK

PROPOSED DWELLING
GF FFL: AHD 7.70

GARAGE/ENTRY
FFL: AHD 6.70

PROPOSED CONCRETE DRIVEWAY

WATERWAY AND COASTAL PROTECTION

WM

100mm AC WATER MAIN

TITLE BOUNDARY- 31.30m

TITLE BOUNDARY- 32.00m

TITLE BOUNDARY- 64.12m

LINE OF DEAD OR DYING TREES THAT HAVE BEEN REMOVED FOR SAFTEY.

43.330

9.260

10.976

13.636

3.900

4.075

EXISTING CROSSOVER

ROSEVEARS ROAD

AREA	m²
DWELLING	238.62
DECK	31.16
ALFRESCO	14.29

EXISTING NEIGHBOURING DWELLING

0 1 2 3 4 5 6 7 8 9 10m

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CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
3 ROSEVEARS DRIVE, LEGANA, 7277.

DRAWING
SITE PLAN

I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

SIGNATURE: **DATE:**

SIGNATURE: **DATE:**

REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
R4	8/04/2025	D.A. F.I.R
R5	23/05/2025	COLOURS ADDED
R6	8/12/2025	AMENDMENT

DESIGNER	L.S.	**JOB NUMBER**	RSVR03
DRAWN	L.S.	**DRAWING**	**3/8**
CHECKED	M.L.	**SCALE (@A3)**	1:200

0 1 2 3 4 5m

N

DESIGN TO LIVE

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CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
3 ROSEVEARS DRIVE, LEGANA, 7277.

DRAWING
FLOOR PLAN

I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

SIGNATURE: **DATE:**

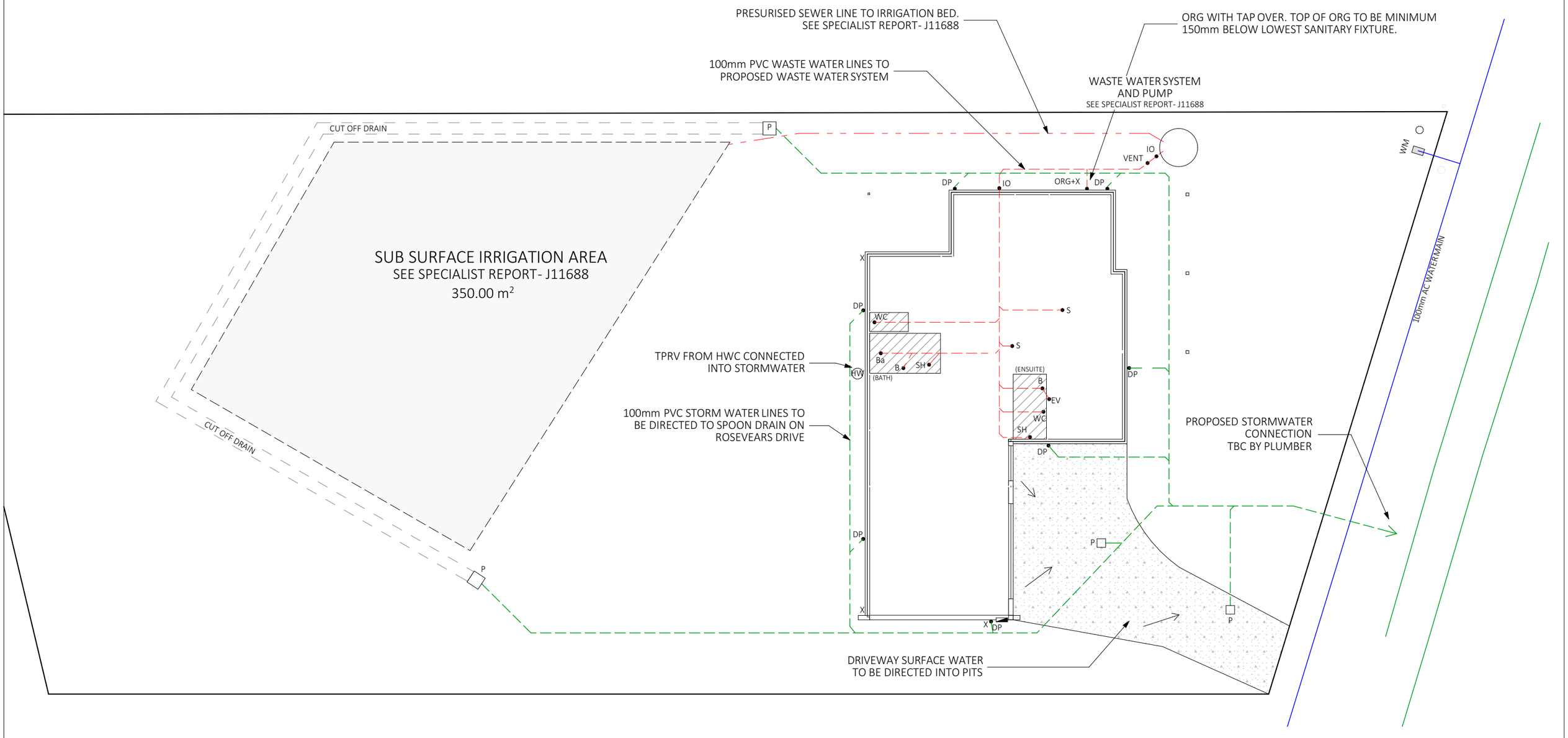
SIGNATURE: **DATE:**

REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
R4	8/04/2025	D.A. F.I.R
R5	23/05/2025	COLOURS ADDED
R6	8/12/2025	AMENDMENT

DESIGNER	L.S.	**JOB NUMBER**	RSVR03
DRAWN	L.S.	**DRAWING**	**4/8**
CHECKED	M.L.	**SCALE (@A3)**	1:100

THIS PAGE IS TO BE PRINTED AND READ IN COLOUR.

TO BE READ IN CONJUNCTION WITH NOTES ON FIRST FLOOR EXTERNAL SERVICES PLAN



DESIGN TO LIVE

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E. info@designtolive.com.au
W. designtolive.com.au

CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
3 ROSEVEARS DRIVE, LEGANA, 7277.

DRAWING
GROUND FLOOR EXTERNAL SERVICES

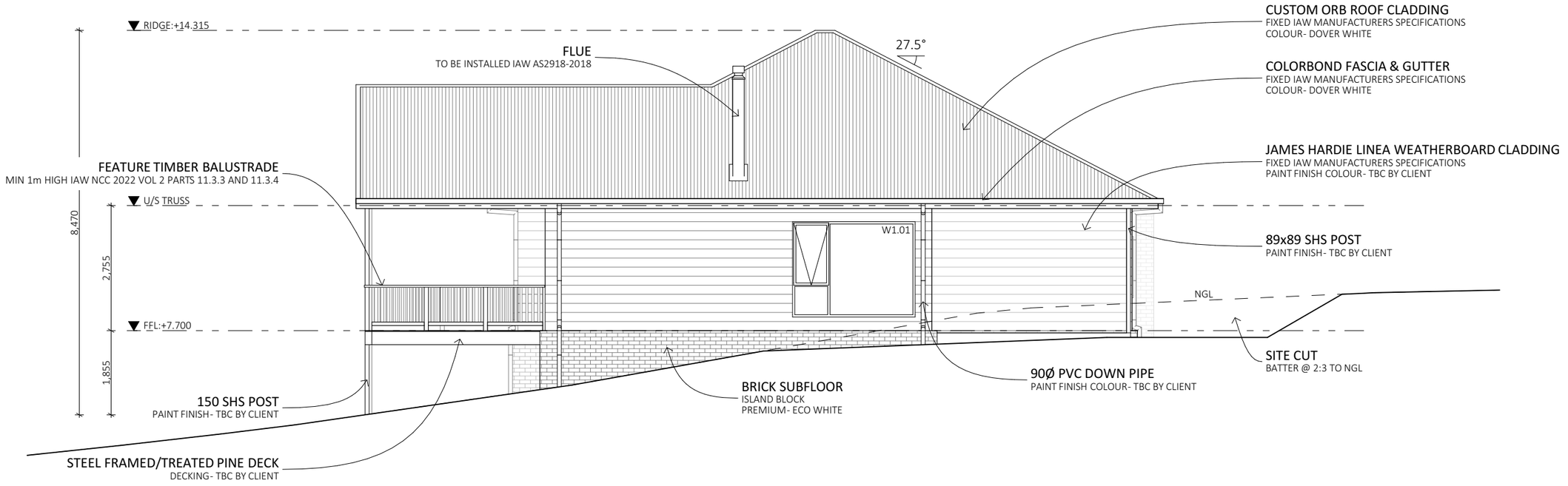
I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

SIGNATURE: **DATE:**

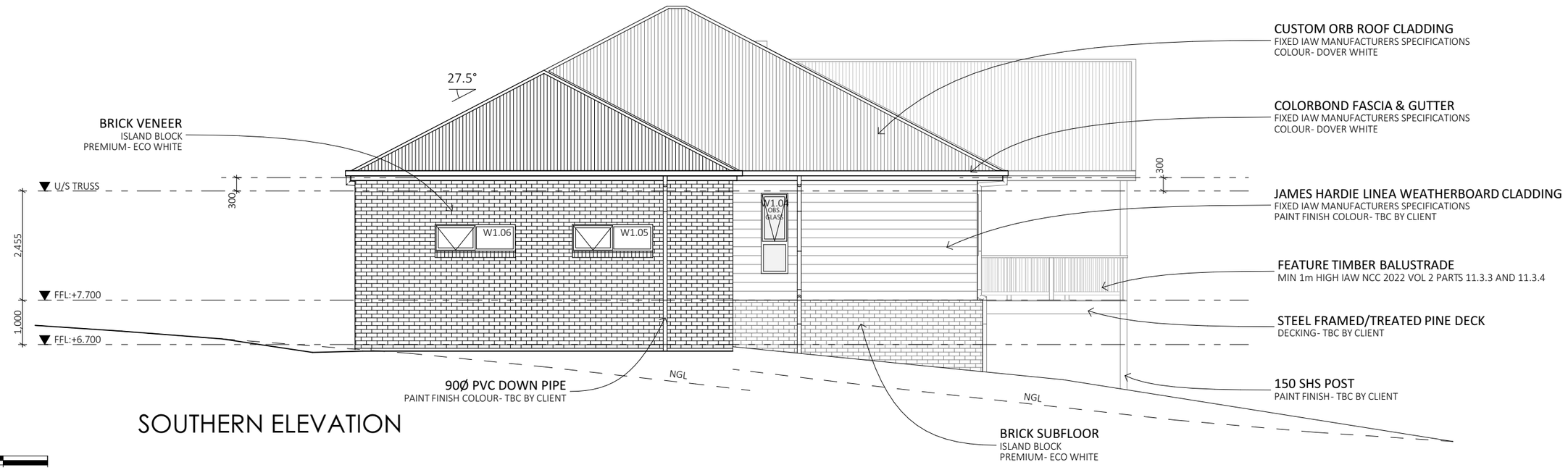
SIGNATURE: **DATE:**

REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
R4	8/04/2025	D.A. F.I.R
R5	23/05/2025	COLOURS ADDED
R6	8/12/2025	AMENDMENT

DESIGNER	L.S.	**JOB NUMBER**	RSVR03
DRAWN	L.S.	**DRAWING**	**5/8**
CHECKED	M.L.	**SCALE (@A3)**	1:200



NORTHERN ELEVATION



SOUTHERN ELEVATION

0 1 2 3 4 5m

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CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
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DRAWING
ELEVATIONS NORTH AND SOUTH

I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

SIGNATURE: **DATE:**

SIGNATURE: **DATE:**

REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
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R5	23/05/2025	COLOURS ADDED
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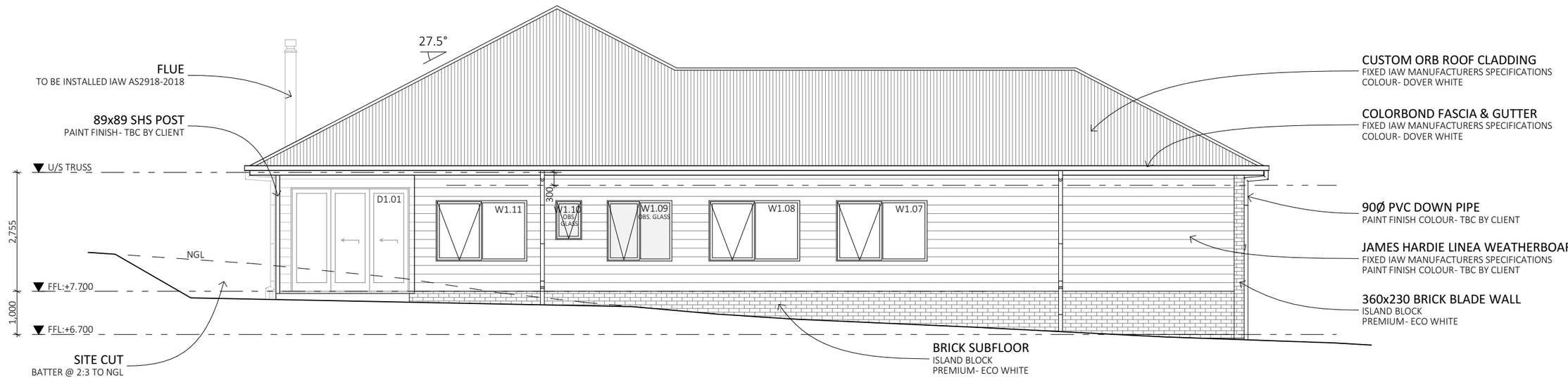
DRAWN	L.S.	**DRAWING**	**6/8**
CHECKED	M.L.	**SCALE (@A3)**	1:100

EASTERN ELEVATION



WESTERN ELEVATION

0 1 2 3 4 5m

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W. designtolive.com.au

CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
3 ROSEVEARS DRIVE, LEGANA, 7277.

DRAWING
ELEVATIONS EAST AND WEST

I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

SIGNATURE: **DATE:**

SIGNATURE: **DATE:**

REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
R4	8/04/2025	D.A. F.I.R
R5	23/05/2025	COLOURS ADDED
R6	8/12/2025	AMENDMENT

DESIGNER	L.S.	**JOB NUMBER**	RSVR03
DRAWN	L.S.	**DRAWING**	**7/8**
CHECKED	M.L.	**SCALE (@A3)**	1:100

DESIGN TO LIVE

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CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
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DRAWING
PERSPECTIVES

I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

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REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
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DESIGNER	L.S.	**JOB NUMBER**	RSVR03
DRAWN	L.S.	**DRAWING**	**8/8**
CHECKED	M.L.	**SCALE (@A3)**	NTS

GEO-ENVIRONMENTAL ASSESSMENT

3 Rosevears Drive

Legana

May 2025

Updated October 2025

GEO-ENVIRONMENTAL

SOLUTIONS

Investigation Details

Client:	Samuel Manix- Geeves & Sian Beeton
Site Address:	3 Rosevears Drive, Legana
Date of Inspection:	28/03/2023
Proposed Works:	New house
Investigation Method:	Drill Tech Auger
Inspected by:	AM

Site Details

Certificate of Title (CT):	142286/3
Title Area:	Approx. 2231 m²
Applicable Planning Overlays:	Landslip Hazard, Scenic protection area, Waterway and Coastal Protection Areas
Slope & Aspect:	4° NE facing slope
Vegetation:	Grass & Weeds
Ground Surface:	Disturbed

Background Information

Geology Map:	MRT 1:250000
Geological Unit:	Quaternary Sediments
Climate:	Annual rainfall 700mm
Water Connection:	Mains
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	*AS2870:2011, AS1726:2017 & AS1547:2012*

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)	HRZ	Description
0.00-0.20	0.00-0.20	0.00-0.40	A1	**Clayey SILT (ML) with some fine grained sand**: Medium plasticity,
	0.20-0.40		A2	**Silty SAND (SM)**: light-grey, moist, medium dense.
0.20-3.60	0.40-3.30	0.40-2.00+	B2	**Silty CLAY (CH) trace fine rounded gravels, occasional cobbles & trace sand with depth**: High plasticity, brown-grey-mottled yellow, moist, very stiff, refusal on assumed rock/boulder.

Site Notes

The soils on site consist of clayey silt topsoils overlying deep clay subsoils which have developed from alluvial Quaternary Sediments.

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 P

Y_s range: **60-75mm**

Notes: The site has been classified as Class P, due to the property residing in a medium landslip hazard band and the potential for instability/landslip.

Wind Loading Classification

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

Wind Classification:	**N3**
Region:	A
Terrain Category:	1.0
Shielding Classification:	PS
Topographic Classification:	T2
Wind Classification:	N3
Design Wind Gust Speed – m/s ($V_{h,u}$):	50

Wastewater Classification & Recommendations

According to AS1547-2012 (on-site waste-water management) the natural soil is classified as Light Clay (category 5). The site is unsuited to the installation of a traditional septic tank and trenches due to low permeability subsoils. Secondary treatment of effluent will be required, and it is proposed to install a package treatment system (e.g. Econocycle, Envirocycle, Ozzikleen etc) with treated effluent disposed by subsurface irrigation. A Design Irrigation Rate (DIR) of 3L/m^2/day has been assigned for this site.

The proposed four-bedroom dwelling has a calculated maximum wastewater output of 900L/day. This is based on a mains water supply and a maximum occupancy of 6 people (150L/day/person). With secondary treatment this will require an absorption area of at least 350m^2. This can be accommodated by subsurface irrigation. Soils on site were found to be dispersive therefore it is strongly recommended that gypsum be applied to thebottom of the absorption area at a rate of 1Kg/m^2. Additional mulch (min 100mm) is to be added to the irrigation area during installation. For all calculations please refer to the Trench summary reports.

A cut-off drain will be required, and the area excluded from traffic or any future building works. Due to limited space available, providing a full reserve area is not possible on this site. As per recommendations from the permit authority and AS1547 C5.5.3.4, pg. 51 a 50% reserve area has been assigned. In event of system failure old lines and mulch must be removed and replaced with new mulch and irrigation systems within a 48-hour period.

The following setback distances are required to comply with the Building Act 2016:

Upslope or level buildings:	3m
Downslope buildings:	3.5m
Upslope or level boundaries:	1.5m
Downslope boundaries:	7.5m
Downslope surface water:	>100m

Compliance with Building Act 2016 Guidelines for On-site Wastewater Management Systems is outlined in the attached table.

During construction GES will need to be notified of any variation to the soil conditions or wastewater loading as outlined in this report.

Construction Notes & Recommendations

The site has been classified as **Class P**.

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.

During construction GES will need to be notified of any variation to the soil conditions or wastewater loading as outlined in this report.

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

Director

GES P/L

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	Peter & Emily Young	Assess. Date	1-May-23
		Ref. No.	
Assessed site(s)	3 Rosevear Drive, Legana	Site(s) inspected	28-Mar-23
Local authority	West Tamar	Assessed by	John Paul Cumming

This report summarises wastewater volumes, climatic inputs for the site, soil characteristics and sustem 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 = 900 (using the 'No. of bedrooms in a dwelling' method)
Septic tank wastewater volume (L/day) = 300
Sullage volume (L/day) = 600
Total nitrogen (kg/year) generated by wastewater = 2.7
Total phosphorus (kg/year) generated by wastewater = 2.2

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)	50	40	57	66	78	87	103	108	79	60	64	59
Adopted rainfall (R, mm)	50	40	57	66	78	87	103	108	79	60	64	59
Retained rain (Rr, mm)	43	34	49	56	66	74	88	92	67	51	54	50
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	31	34	42	63	84	105	126
Evapotr. less rain (mm)	**87**	**76**	**42**	**7**	**-24**	**-43**	**-54**	**-50**	**-4**	**33**	**51**	**76**

Annual evapotranspiration less retained rain (mm) = 197

Soil characterisitics

Texture = Light Clay Category = 5 Thick. (m) = 3.3
Adopted permeability (m/day) = 0.12 Adopted LTAR (L/sq m/day) = 3 Min depth (m) to water = 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:	None
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) =	20
Width (m) =	18
Depth (m) =	0.5
Total disposal area (sq m) required =	350
comprising a Primary Area (sq m) of:	350
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments
A minimum irrigation area of 350sqm will be required.

GES P/L

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	Peter & Emily Young	Assess. Date	1-May-23
		Ref. No.	
Assessed site(s)	3 Rosevear Drive, Legana	Site(s) inspected	28-Mar-23
Local authority	West Tamar	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 Trench	Limitation Amended	Remarks
	Expected design area	sq m	1,000	V. high	Moderate	No change	
	Density of disposal systems	/sq km	20	Mod.	Moderate		
	Slope angle	degrees	6	High	Low		
	Slope form	Straight simple		High	Low		
	Surface drainage	Imperfect		High	Moderate		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Rare		High	Low		
	Aspect (Southern hemi.)	Faces E or W		V. high	Moderate		
	Frequency of strong winds	Common		High	Low		
	Wastewater volume	L/day	900	High	High	Moderate	Other factors lessen impact
	SAR of septic tank effluent		1.7	High	Low		
	SAR of sullage		2.6	High	Moderate		
	Soil thickness	m	3.3	V. high	Very low		
	Depth to bedrock	m	3.3	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	1.2	High	Very low		
AA	Soil dispersion	Emerson No.	2	V. high	Very high		
	Adopted permeability	m/day	0.12	Mod.	Very low	Moderate	
	Long Term Accept. Rate	L/day/sq m	3	High	High	Moderate	Other factors lessen impact

To enter comments, click on the line below 'Comments' . (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

Soils onsite were found to be slightly dispersive therefore it is recomended taht gypsum be applied to the absorption area at rate of 1kg/m^2.

GES P/L

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	Peter & Emily Young	Assess. Date	1-May-23
		Ref. No.	
Assessed site(s)	3 Rosevear Drive, Legana	Site(s) inspected	28-Mar-23
Local authority	West Tamar	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 Trench	Limitation Amended	Remarks
A	Cation exchange capacity	mmol/100g	50	High	High		
A	Phos. adsorp. capacity	kg/cub m	0.4	High	High		
	Annual rainfall excess	mm	-197	High	Very low		
	Min. depth to water table	m	5	High	Very low		
	Annual nutrient load	kg	4.9	High	Very low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	3	High	Very low		
	Risk to adjacent bores	Very low		V. high	Very low		
	Surf. water env. value	Agric non-sensit		V. high	Low		
A	Dist. to nearest surface water	m	120	V. high	High		
AA	Dist. to nearest other feature	m	3	V. high	Very high		
	Risk of slope instability	Low		V. high	Low		
AA	Distance to landslip	m	1	V. high	Very high		

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

Secondary treatment will be required.

APPENDIX 1 - DCP Results Table

Dynamic Cone Penetration (DCP) Conversion to Californian Bearing Ratio
(ref: Australian Standard AS 1289.6.3.2 - 1997)

DCP Location BH1

Depth (mm)	DCP (Blows/100mm)	DCP (mm/Blow)	DCP Resistance (mPa)	Allowable Bearing Capacity (kPa)	CBR (Rounded Up)
0-100	1	100.0	0.3	35	2
100-200	4	25.0	1.3	139	8
200-300	5	20.0	1.6	174	10
300-400	3	33.3	0.9	104	6
400-500	5	20.0	1.6	174	10
500-600	5	20.0	1.6	174	10
600-700	8	12.5	2.5	278	17
700-800	5	20.0	1.6	174	10
800-900	8	12.5	2.5	278	17
900-1000	10	10.0	3.1	347	22
1000-1100	8	12.5	2.5	278	17
1100-1200	9	11.1	2.8	313	20
1200-1300	7	14.3	2.2	243	15
1300-1400	6	16.7	1.9	208	13
1400-1500	6	16.7	1.9	208	13
1500-1600	7	14.3	2.2	243	15
1600-1700	7	14.3	2.2	243	15
1700-1800	8	12.5	2.5	278	17
1800-1900	10	10.0	3.1	347	22
1900-2000	8	12.5	2.5	278	17
2000-2100	9	11.1	2.8	313	20
2100-2200	10	10.0	3.1	347	22
2200-2300	9	11.1	2.8	313	20

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

Acceptable Solutions	**Performance Criteria**	**Compliance**
A1 Horizontal separation distance from a building to a land application area must comply with one of the following: a) be no less than 6m; or b) be no less than: (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.	P1 a) The land application area is located so that (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	Complies with A1 (b) (i) Land application area will be located with a minimum separation distance of 3m from an upslope or level building. Complies with A1 (b) (iii) Land application area will be located with a minimum separation distance of 3.5m of downslope building.
A2 Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b) (a) be no less than 100m; or (b) be no less than the following: (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.	P2 Horizontal separation distance from downslope surface water to a land application area must comply with all of the following: 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.	Complies with A2 (a) Land application area will be located a minimum of >100m from downslope surface water

A3 Horizontal separation distance from a property boundary to a land application area must comply with either of the following: (a) be no less than 40m from a property boundary; or (b) be no less than: (i) 1.5m from an upslope or level property boundary; and (ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or (iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary.	P3 Horizontal separation distance from a property boundary to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	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 Complies with A3 (b) (i) Land application area will be located with a minimum separation distance of 7.5m of downslope property boundary.
A4 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.	P4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable	Complies with A4 No bore or well identified within 50m

A5 Vertical separation distance between groundwater and a land application area must be no less than: (a) 1.5m if primary treated effluent; or (b) 0.6m if secondary treated effluent	P5 Vertical separation distance between groundwater and a land application area must comply with the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable	Complies with A5 (b) No groundwater encountered
A6 Vertical separation distance between a limiting layer and a land application area must be no less than: (a) 1.5m if primary treated effluent; or (b) 0.5m if secondary treated effluent	P6 Vertical setback must be consistent with AS/NZS1547 Appendix R.	Complies with A5 (b)
A7 nil	P7 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	Complies

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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: 3 Rosevear Drive, Legana

System Capacity: 6 persons @ 150L/person/day

Summary of Design Criteria

DIR: 3mm/day.

Irrigation area: 350m^2

Reserve area location /use: 50% reserve area assigned. Irrigation lines and topsoil will need to be replaced within a 48 hour period

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 irrigation 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 irrigation 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.

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: Samuel Manix- Geeves & Sian Beeton *Owner name*
10 Whites Road *Address*
Beaconsfield 7270 *Suburb/postcode*

Designer details:

Name: John-Paul Cumming
Category: Bld. Srvcs. Dsgnr. - Hydraulic
Business name: Geo-Environmental Solutions
Phone No: 03 6223 1839
Business address: 29 Kirksway Place
Battery Point 7004
Fax No: N/A
Licence No: CC774A
Email address: office@geosolutions.net.au

Details of the proposed work:

Owner/Applicant Samuel Manix- Geeves & Sian Beeton
Designer's project reference No. J11688
Address: 3 Rosevears Drive
Lot No: 142286/3
Legana 7277

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

Description of work:
On-site wastewater management 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
	☐ Building design	Architect or Building Designer
	☐ Structural design	Engineer or Civil Designer
	☐ Fire Safety design	Fire Engineer
	☐ Civil design	Civil Engineer or Civil Designer
	☒ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Service Designer
	☐ Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐ Other (specify)	

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

Other details:

AWTS with subsurface irrigation

Design documents provided:

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

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: Oct-25
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: Oct-25
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by: Geo-Environmental Solutions	Date: Oct-25

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.

Any other relevant documentation:

Geo-Environmental Assessment - 3 Rosevears Drive Legana - Oct-25

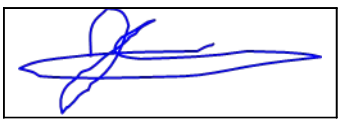
Geo-Environmental Assessment - 3 Rosevears Drive Legana - Oct-25

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.

	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		06/10/2025
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.

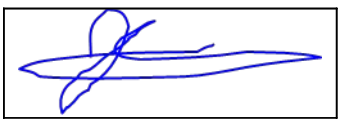
I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- [x] The works will not increase the demand for water supplied by TasWater
- [x] 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
- [x] The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- [x] The works will not damage or interfere with TasWater's works
- [x] The works will not adversely affect TasWater's operations
- [x] The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- [x] I have checked the LISTMap to confirm the location of TasWater infrastructure
- [x] 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

	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		06/10/2025

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Samuel Manix- Geeves & Sian Beeton *Owner /Agent*

10 Whites Road *Address*

Beaconsfield 7270 *Suburb/postcode*

Qualified person details:

Qualified person: John-Paul Cumming

Address: 29 Kirksway Place

Battery Point 7004

Phone No: 03 6223 1839

Fax No:

Licence No: AO999

Email address: jcumming@geosolutions.net.au

Qualifications and Insurance details: Certified Professional Soil Scientist (CPSS stage 2)

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

Speciality area of expertise: AS2870-2011 Foundation Classification

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

Details of work:

Address: 3 Rosevears Drive

Legana 7277

Lot No:

Certificate of title No: 142286/3

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

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

Certificate details:

Certificate type: Foundation Classification

(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: ☐

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: J11688

Date: 06/10/2025

MINIMUM 10x NATIVE TREES PLANTED FOR SCREENING
APPROX 3m CANOPY DIAMETER
AND MIN 6m HIGH MATURE HEIGHT
(MIN 1m ABOVE THE TOP OF THE DWELLING: AHD 14.315)

EXISTING NEIGHBOURING DWELLING

N

TITLE BOUNDARY- 80.78m

WASTE WATER SYSTEM AND PUMP
SEE SPECIALIST REPORT- J11688

SUB SURFACE IRRIGATION AREA
SEE SPECIALIST REPORT- J11688
350.00 m²

ALFRESCO

DECK

PROPOSED DWELLING
GF FFL: AHD 7.70

GARAGE/ENTRY
FFL: AHD 6.70

PROPOSED CONCRETE DRIVEWAY

WATERWAY AND COASTAL PROTECTION

WM

100mm AC WATER MAIN

TITLE BOUNDARY- 31.30m

TITLE BOUNDARY- 32.00m

TITLE BOUNDARY- 64.12m

LINE OF DEAD OR DYING TREES THAT HAVE BEEN REMOVED FOR SAFTEY.

43.330

9.260

10.976

13.636

3.900

4.075

EXISTING CROSSOVER

ROSEVEARS ROAD

AREA	m²
DWELLING	238.62
DECK	31.16
ALFRESCO	14.29

EXISTING NEIGHBOURING DWELLING

0 1 2 3 4 5 6 7 8 9 10m

DESIGN TO LIVE
ACC # 371799313
ABN. 71 615 812 747
PH. 6344 7319
E. info@designtolive.com.au
W. designtolive.com.au

CLIENT/S:
SAMUEL MANIX-GEEVES AND SIAN BEETON

SITE ADDRESS:
3 ROSEVEARS DRIVE, LEGANA, 7277.

DRAWING
SITE PLAN

I/WE APPROVE THESE DRAWING TO BE CORRECT PER CONTRACT.

SIGNATURE: **DATE:**

SIGNATURE: **DATE:**

REV.	DATE	DESCRIPTION
R3	21/03/2025	FOR D.A.
R4	8/04/2025	D.A. F.I.R
R5	23/05/2025	COLOURS ADDED
R6	8/12/2025	AMENDMENT

DESIGNER	L.S.	**JOB NUMBER**	RSVR03
DRAWN	L.S.	**DRAWING**	**3/9**
CHECKED	M.L.	**SCALE (@A3)**	1:200

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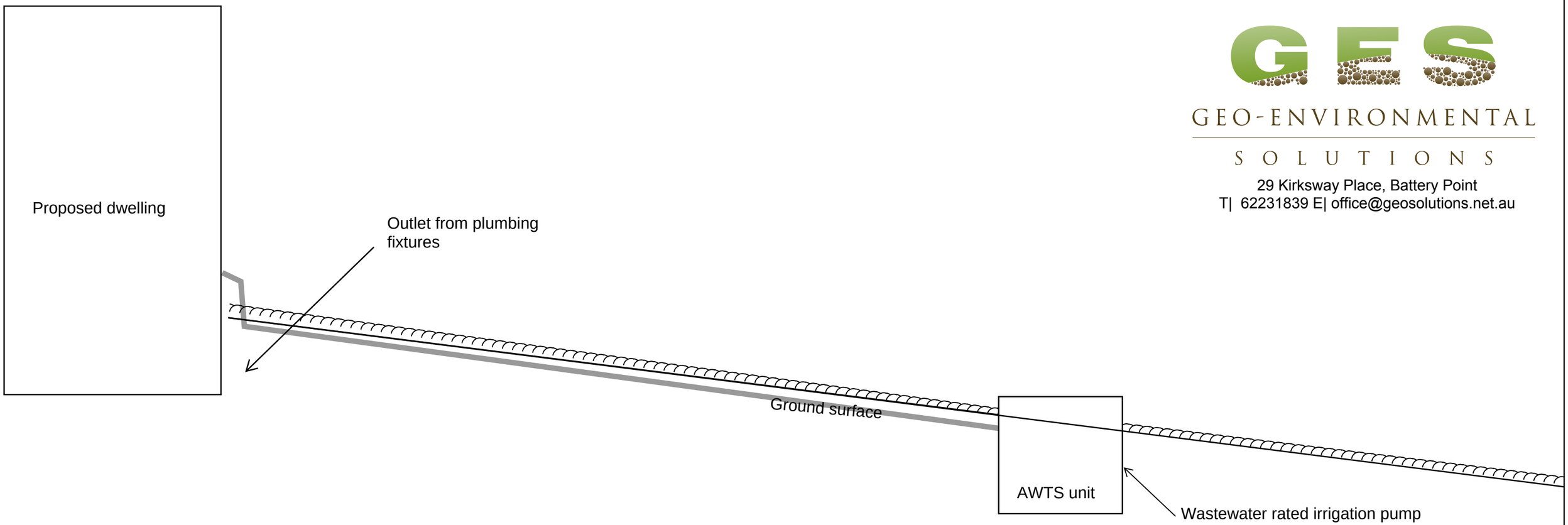
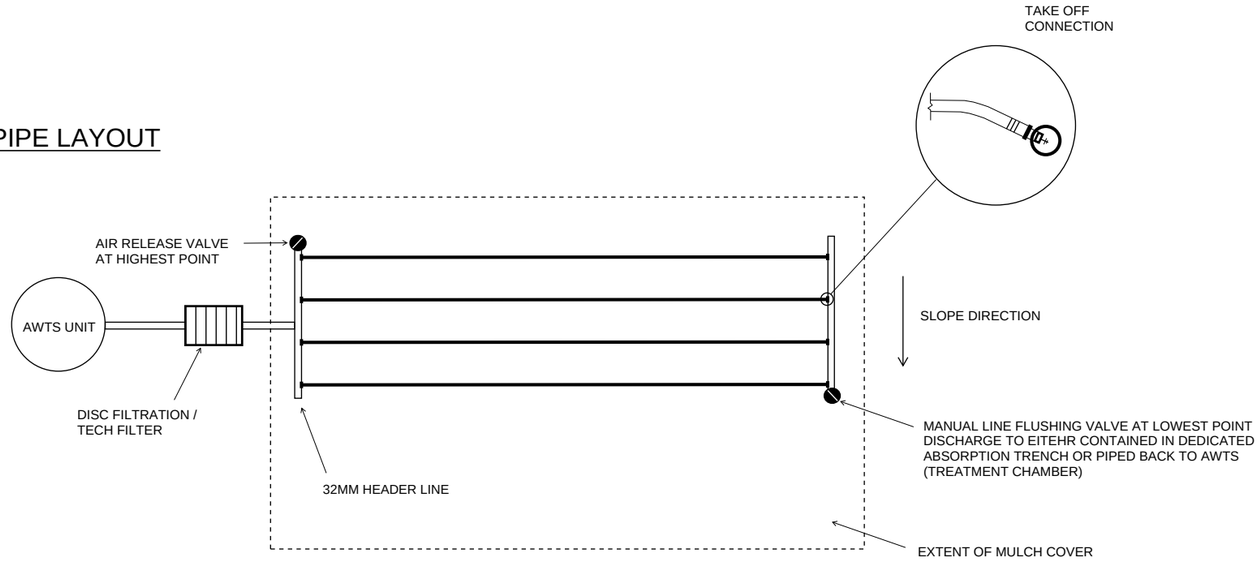
29 Kirksway Place, Battery Point
T| 62231839 E| office@geosolutions.net.au



Fall
0.88m over 6m complies
with 1:60 fall

Do not scale from these drawings. Dimensions to take precedence over scale.					Drawing Number:	Sheet 1 of 1 Prepared by: LR

BED PLAN PIPE LAYOUT



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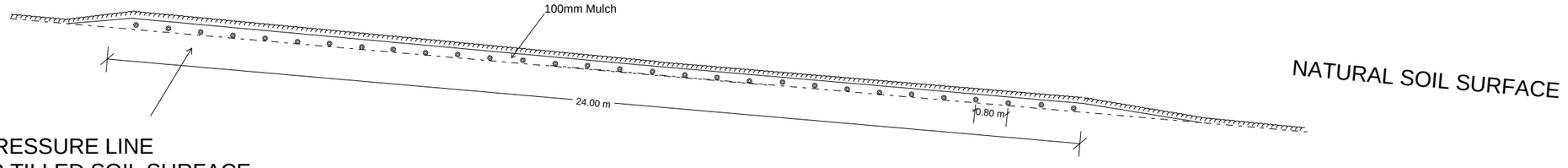
APPLICATION AREA NOTES

1. APPLICABLE DIMENSIONS OF UP TO 40m LONG BY 10m WIDE
2. BASE OF APPLICATION AREA TO BE SCARIFIED TO BREAK SURFACE LAYER. SMEARING AND COMPACTION TO BE AVOIDED
4. IRRIGATION LINES TO BE INSATLLED INTO 100mm TILLED SOIL SURFACE AND COVERED WITH MIN 100mm OF LOAM
5. DEPENDANT ON TREATMENT SYSTEM A 200µm FILTER MAY BE INSTALLED AT THE PUMPING CHAMBER OUTLET, BUT A 100-120µm INLINE DISC FILTER SHOULD BE INSTALLED PRIOR TO DISCHARGE INTO THE IRRIGTION AREA.
6. A VACUUM BREAKER VALVE MUST BE INSTALLED AT THE HIGHEST POINT OF EACH ABSORPTION ZONE IN A MARKED AND PROTECTED VALVE CONTROL BOX.
7. A FLUSH LINE MUST BE INSTALLED AT THE LOWEST POINT OF EACH ABSORPTION AREA WITH A RETURN VALVE FOR FLUSHING BACK INTO THE TREATMENT CHAMBER OF THE SYSTEM (NOT PRIMARY CHAMBER) OR TO A DEDICATED ABSORPTION TRENCH.
8. THE MINIMUM IRRIGATION PUMPING CAPACITY SHOULD BE EQUIVALENT TO 120 kpa (i.e. 12m OF HEAD) AT THE HIGHEST POINT OF THE IRRIGATION AREA.
9. CUT-OFF DIVERSION DRAIN REQUIRED UPSLOPE
10. ALL WORKS TO COMPLY WITH AS3500 AND TASMANIAN PLUMBING CODE

APPLICATION AREA CROSS-SECTION



UNIBIOLINE PRESSURE LINE
PLACED OVER TILLED SOIL SURFACE

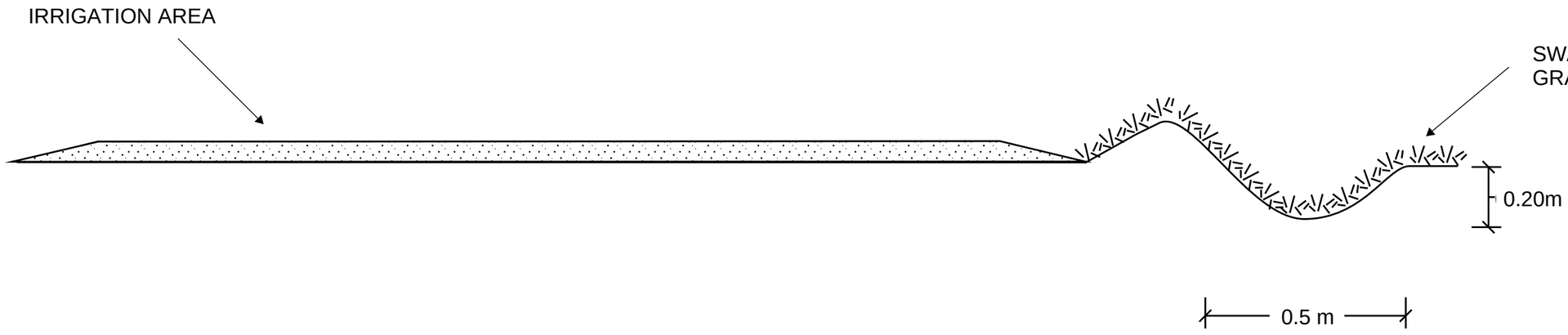
Do not scale from these drawings. Dimensions to take precedence over scale.				CROSS-SECTION SUBSURFACE APPLICATION SLOPES 10 - 20%		Sheet 1 of 1 Drawn by: LR

GEO-ENVIRONMENTAL
SOLUTIONS
29 Kirksway Place Battery Point
T| 62231839 E| office@geosolutions.net.au

TYPICAL GRASSED SWALE DRAIN CROSS-SECTION

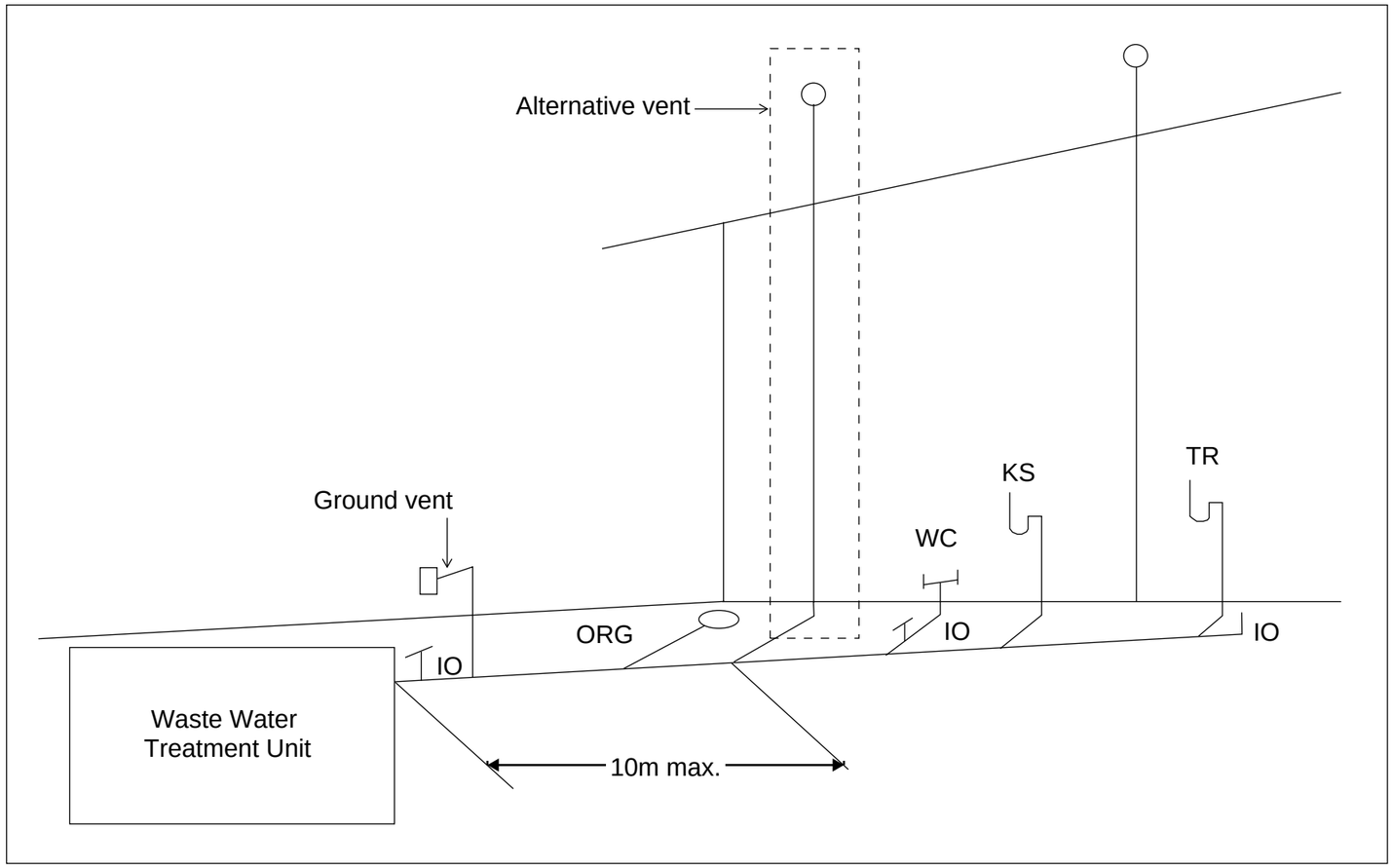
SWALE DRAIN TO BE MIN 0.5M WIDE BY MIN 0.20M DEEP

GRASS COVER TO BE MAINTAINED TO SLOW WATER FLOW AND MINIMSE EROSION



Do not scale from these drawings. Dimensions to take precedence over scale.	Geo-Environmental Solutions		Date: Nov 2021	Grassed swale drain typical cross-section	Sheet 1 of 1 Drawn by SR

GES
GEO-ENVIRONMENTAL
SOLUTIONS
29 Kirksway Place, Battery Point
T| 62231839 E| office@geosolutions.net.au



Tas Figure H101.2 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

Alternative vent is the preferred arrangement where possible.

Do not scale from these drawings. Dimensions to take precedence over scale.				Tas Figure H101.2 Alternative Venting Arrangements		Sheet 1 of 1

Tasmanian Government

Certificate of Accreditation

On-Site Waste Water Management System

This Certificate of Accreditation is hereby issued by the Director of Building Control pursuant to Section 18(1) of the *Building Act 2016* (accreditation of on-site wastewater management systems).

System:	**EnviroTas AS** Advanced Secondary Quality at 1600L/day 10EP with nutrient reduction
Manufacturer / Supplier:	Professional Plumbing Pty Ltd
Of:	91 Lampton Avenue, Derwent Park TAS 7009

This is to certify that the **EnviroTas AS** Advanced Secondary Treatment System as described in Schedule 1, is accredited as a Secondary Treatment System for use in plumbing installations in Tasmania for single dwellings. This accreditation is subject to the conditions and permitted uses specified in Schedule 2, and the National Construction Code.

Peter John Graham
Director of Building Control
Consumer, Building and Occupational Services
Department of Justice

Date of Issue: 1 July 2022 **Certificate Number:** DOC/22/55457

This Certificate of Accreditation is in force until 1 July 2027, unless withdrawn earlier at the discretion of the Director of Building Control

Document Development History

Version	Certificate Number	Approved by	Amendment Notes
7 June 2017	DOC/17/44413	Director of Building DEW	First issue
22 May 2019	DOC/19/35195	Director of Building AG	V1 issue (4.1& 6.1)
1 July 2022	DOC/22/55457	Director of Building PJG	Second issue

Schedule 1: Specification

EnviroTas AS Secondary Treatment System

General Description

The EnviroTas AS ('the system') collects and treats domestic wastewater.
For treatment system schematic drawings and flow path, refer to Appendix A.
For Engineering drawings refer to Appendix B.
For treatment system components list, including concrete tank specifications, refer to Appendix C

System Components

The system consists of one 6388L vertical-axis pre-cast reinforced concrete cylinder containing:

- A 1478L primary sedimentation anaerobic chamber;
- A 1698L anerobic filtration chamber;
- A 2065L contact aeration chamber
- A timer-controlled Air Blower which operates at 80 L/minute when timed on;
- A 407L secondary sedimentation chamber;
- A 336L pump-out/disinfection chamber housing a chlorine dispenser and a submersible irrigation pump;
- High level float switches;
- A sludge return system in the secondary sedimentation chamber constructed of UPVC pipe and operated by the Air Blower;
- A Control module and programmable logic controller (PLC) air blower timer; and
- An audio-visual alarm system.

Certification to AS/NZS 1546.3 for *systems* manufactured at **91 Lampton Ave, Derwent Park, Tasmania** has been given by **Geo Environmental Solutions (Hobart)**. The *system* is designed to treat a maximum Hydraulic Load of 1600 Litres of domestic wastewater per day from residential premises. The Raw Influent used in the testing of the system met the requirements of *AS/NZS 1546.3:2017*

Description of Treatment Processes

Wastewater enters the primary (anaerobic septic) chamber where the bulk of the organic and inorganic solids are retained, by either settling to the bottom of the chamber or floating to the surface.
The clarified sewage flows into a second anaerobic settling (filtration) chamber before passing into the aeration chamber. Organic material in the wastewater is consumed by anaerobic microbes in the first two chambers and by aerobic microbes in the aeration chamber (see Figure 1 and Appendix A).

The 80 litre per minute air blower forces air through micro diffusers located in the aeration chamber. This supplies oxygen to aerobic microbes in the biomass suspended within the water column and attached to the fixed media.

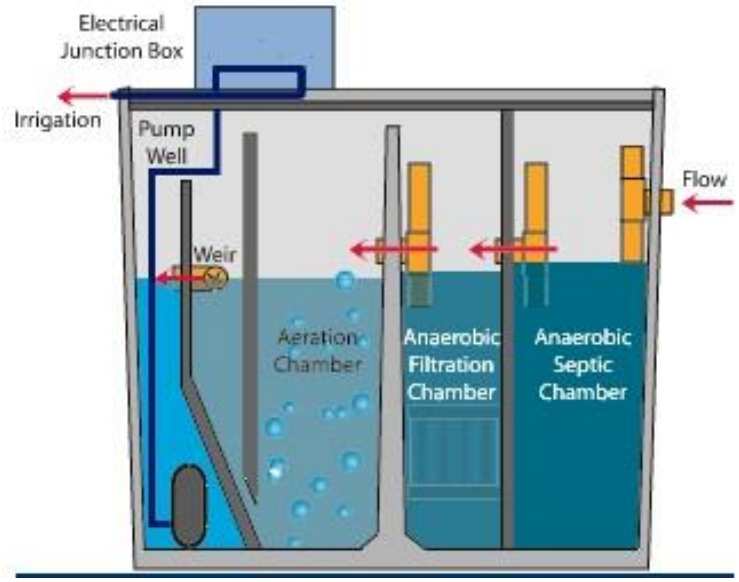


Figure 1 General View

The Blower is pre-set to operate on a pre-determined on/off cycle throughout a 24 hour period in order to provide aeration which matches the design organic loading and achieves the design nitrogen/nutrient reduction.

The biologically treated water flows from the aeration chamber into the clarification/sedimentation chamber to allow settling of suspended particles to occur. A sludge return pipe located in the clarification/sedimentation chamber transfers accumulated settled sludge back to the primary chamber for further treatment.

The clarified effluent is then disinfected as it flows over chlorine tablets into the effluent storage chamber (pump-well). A float switch attached to the pump controls it to periodically discharge the effluent to the irrigation field. A high-level alarm located in the pump well detects high water levels.

Emergency storage capacity of not less than 1000 litres without cross contamination in accordance with clause 2.4.8 of AS/NZS 1546.3:2017 is provided within the primary treatment chambers of the system.

The primary tank is de-sludged every five years or less as deemed necessary by the service contractor.

The *system* is fitted with a control panel containing a programmable logic controller (PLC).

The *system* is designed to treat all household wastewater from the kitchen, bathroom, toilet and laundry.

Hydraulic and organic loading and effluent quality

Influent

Design flow, as specified by the manufacturer,

- Daily flow (maximum hydraulic load) 150 litres per person, 10.67 EP = 1600 litres

Organic loading, as specified by the manufacturer,

- Daily BOD_5 70 grams per person, 10EP = 700 grams per day
- Daily TSS 70 grams per person, 10EP = 700 grams per day
- Daily Nitrogen 15 grams per person 10EP = 150 grams per day
- Daily Phosphorus 2.5 grams per person, 10EP = 25 grams per day

Effluent

The effluent test results for 90% of samples tested showed:

- BOD_5 less than or equal to 10.0 mg/L
- TSS less than or equal to 10.0 mg/L.
- E. coli less than or equal to 10cfu/100mL
- Total nitrogen concentrations less than or equal to 55 mg/L
- Total phosphorous concentrations less than or equal to 9.14 mg/L

Schedule 2: Conditions of Accreditation

1.0 Definitions

In this schedule:

AS/NZS 1547 means the Joint Australian/New Zealand Standard '*AS/NZS 1547:2000 On-site domestic-wastewater management*';
AS/NZS 1546.3 means the Joint Australian/New Zealand Standard 'AS/NZS 1546.3:2017 On-site domestic wastewater treatment units, Part 3: Aerated wastewater treatment systems';
AS/NZS 3000 means the Joint Australian/New Zealand Standard '*AS/NZS 3000: Wiring rules'*
AS/NZS 5667 means the Joint Australian/New Zealand Standard 'AS/NZS 5667.1:1998 Water quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and preservation and handling of samples';
STS means Secondary Treatment System. A wastewater treatment system which produces treated effluent of a secondary standard (as specified in AS 1546.3:2017 Tables 2.1 & 2.2)
BOD_5 means '5-day Biochemical Oxygen Demand';
cfu means colony forming unit
Council means 'the Municipal Council having jurisdiction';
Commissioned means 'when the test results from a NATA Certified Laboratory show that the water quality requirements for the AWTS have been met and all pre-commissioning tests have been carried out in accordance with AS/NZS 1547 on all associated equipment and land application system';
Designer means 'a person who has a specialty in the area of designing on-site waste water management system installations and may include but not be restricted to appropriately trained professional engineers, soil scientists, land surveyors and plumbers'
Director means 'the Director of Building Control';
EC means electrical conductivity
E. coli means 'Escherichia coli of the family Enterobacteriaceae which is a bacterium used in public health as an indicator of faecal pollution';
g/m^3 means grams per cubic metre
Manufacturer means 'Professional Plumbing Pty Ltd';
NATA means 'National Association of Testing Authorities';
PCA means 'Vol. 3 of the National Construction Code (Plumbing Code of Australia)';
Permit means 'a Permit issued by the *council* pursuant to Part 12 of the *Building Act 2016'*;
Permit authority means 'a person or body authorised for that purpose by the *council* of the municipal area in which the on-site waste water management system is installed';
Plumber means a person who holds an appropriate class of licence under the *Occupational Licensing Act 2005* as a Plumber Practitioner (Certifier).
Supplier means 'the party that is responsible for ensuring that products meet and, if applicable, continue to meet, the requirements on which the certification is based.' The supplier for the **EnviroTas 10ANR** is '**Professional Plumbing Pty Ltd.'**
System means 'EnviroTas 10ANR'
TSS means 'Total Suspended Solids'.
TN means 'Total Nitrogen'
TP means 'Total Phosphorus'.

2.0 General

2.1 This Certificate of Accreditation is valid up until the date nominated on the front page of this accreditation. Any application for variation or renewal must be accompanied by Product Certification to AS/NZS1546.3 that has been issued by a JAS-ANZ accredited Conformity Assessment Body (CAB) and other required documentation in accordance with the latest Application for Accreditation Form. The Certificate of Accreditation may be withdrawn by the *Director* at any time and is not transferable

2.2 This certificate supersedes all previously issued certificates.

2.3 The system must be supplied, constructed and installed in accordance with the design submitted and accredited by the Director.

2.4 The system must not be installed or used in a plumbing installation other than in accordance with the conditions of the permit issued by the *Permit Authority*.

2.5 Each system must be permanently and legibly marked on a non-corrosive metal plaque or equivalent, attached to the lid with the following information:

- The brand and model name or designation of the system;
- The manufacturer's name or registered trademark;
- Top load limitations; and
- The month and year of manufacture.

2.6 The supplier must supply the owner and occupier of each installation with a user manual setting out the following:

(a) the treatment process;
(b) procedures to be followed in the event of a system failure;
(c) emergency contact number;
(d) care, operation, monitoring and maintenance requirements; and
(e) inspection and sampling procedures to be followed as part of the on-going monitoring and program required by the *Permit Authority*.

2.7 Any proposed modifications to the system's specified processes, equipment, materials, fittings or manuals must have prior authorisation in writing from the *Director* and may be subject to additional verification or testing.

2.8 Each application to a permit authority to install a system must be accompanied by a site-and-soil evaluation report and design report in accordance with AS/NZS 1547 as appropriate.

2.9 The supplier must provide the following information to each *Permit Authority* where it is intended to install a system in their jurisdiction:

- Statement of warranty
- Statement of service life
- Quality Assurance Certification
- Installation Manual
- Service Manual
- Owner's Manual
- Service Report Form
- Engineering Drawings on A3 format
- Detailed Specifications

- Certificate of Accreditation and Schedules.

2.10 This Certificate of Accreditation is valid for five (5) years from the date of issue or until withdrawn by the Director.

2.11 At each anniversary of the accreditation date the supplier must submit to the Director a list of all systems installed in Tasmania during the previous 12 months. The Director may randomly select up to 10% of the installed systems from each year of installation. The Director will notify the supplier's nominated NATA accredited laboratory which systems are to be sampled and tested for BOD5 and TSS and Chlorine residual. The sampling and testing of the selected systems is to be done at the supplier's expense. The following results must be reported to the *Director*:

- Address of premises;
- Date inspected and sampled;
- Sample identification number;
- Chlorine Residual;
- $BOD_{5;}$
- TSS;
- Total nitrogen concentrations
- Total phosphorous concentrations and
- Service history

2.12 Where, due to a design fault, the *system* has been found not to operate satisfactorily during its service life and as a result requires modification to achieve the required water quality limits, all installed *systems* are to be modified accordingly.

2.13 When granting a *permit* the *permit authority* is to satisfy itself that the *designer's* choice of the *system* configuration is optimal for the proposed use and site conditions.

2.14 The *system* must not be deployed to areas where seasonal climatic conditions will negatively affect its proper operation (refer to *manufacturer's* specifications).

2.15 Prior to the granting of a *permit* to install a *system* the following reports (see AS/NZS 1547 Clause 7.4) must be submitted with an application to the *permit authority*:

Site-and-soil evaluation report

The site and soil evaluation report is to detail results of an assessment of the individual lot(s) for the public health, environmental, legal and economic factors which are likely to impinge on the location and design of a land-application system. (Refer to AS/NZS 1547 Clause 5.2.4 and Appendices B, C, D, E & G).

Design report

The Design Report is to include the following:

(a) Relevant aspects of the Site-and-soil Evaluation Report.

(b) A report on the selection of the land-application system. (Refer to AS/NZS 1547, Clause 5.5.7).

(c) A report on the selection of the wastewater-treatment unit. (Refer to AS/NZS 1547 Clause 5.2.4 and Appendices B, C, D, E & G)).

(d) Sufficient information to show that the relevant performance requirements set out in the *PCA* have been met.

(e) A loading certificate which sets out the design criteria and the limitations associated with use of the *system* and incorporates such matters as:
  (i) System capacity (number of persons and daily flow);
  (ii) Summary of design criteria;
  (iii) The location of and use of reserve areas;
  (iv) Use of water efficient fittings, fixtures, or appliances;
  (v) Allowable variation from design flows (peak loading events);
  (vi) Consequences of changes in loading (due to varying wastewater characteristics);
  (vii) Consequences of overloading the system;
  (viii) Consequences of underloading the system;
  (ix) Consequences of lack of operation, maintenance and monitoring attention; and
  (x) Any other relevant considerations related to the use of the system.

2.16 The following reports must be submitted to the *permit authority* and owner and be made available to the *Director* upon request after *commissioning* of the *system*:

Installation and commissioning report
The Installation and Commissioning Report is to cover the 'as-constructed' records of the *system* installation together with the results of *commissioning* tests to demonstrate correct construction and installation. The report is to be provided to the owner and *permit authority* on completion of the work. (Refer to and AS/NZS 1547 Clause 6.2.5.4).

Inspection and Maintenance Report
Maintenance reports cover ongoing inspection and maintenance operations in order to monitor the operation of the installation. (Refer to AS/NZS 1547 Clause 6.3.5, Appendix T & U).

2.17 Where the supplied pump is not suitably rated for the proposed land application area it must be replaced with a pump which has a rated capacity that matches the hydraulic characteristics of the irrigation system and be capable of discharging at least 50% more than the 30 minute flow rate. For drip irrigation systems, ensure that drip emitter flow rates do not vary more than 10% from the design rate over the whole of the system when installed on a sloping site.

Note: The pump selection is to be based on flow, head loss and pressure requirements.

2.18 Effluent distribution by sub-surface application may be permitted where the *Permit Authority* is satisfied that the application for a *permit* to install the *system* has demonstrated that the:
  (a) effluent can be retained within the authorised land application area;
  (b) where applicable the land application system has been designed and is capable of being installed and maintained in accordance with *AS/NZS 1547*;
  (c) the location of the land application system satisfies the relevant requirements of the *State Policy on Water Quality Management 1997*; and
  (d) the discharge is capable of satisfying the relevant water quality limits (see 5.2).

Product approval documentation

The following documents are referenced as part of this Accreditation:

Document	Document date
Global Certification Pty Ltd – Product Certificate of Registration No. 3576-2779-03 AS/NZS 1546.3:2017 Advanced Secondary Quality Effluent at 1600L/day (10.6 EP) Level with nutrient reduction	29/06/2022
Global Certification Pty Ltd – Global Certification Report Number 002 of ENVIROTAS 21AS6 to AS/NZS 1546.3:2017	07/03/2022

3.0 Installation and Commissioning

3.1 The installation and operation of the *system* must comply with the conditions of accreditation and the *manufacturer's* instructions.

3.2 All plumbing work carried out in connection with the *system* installation must satisfy the requirements of the *Building Act 2016* and be carried out by a registered plumber with appropriate training and qualifications.

3.3 All electrical work must be carried out by a licensed electrician and in accordance with relevant provisions of *AS/NZS 3000*.

3.4 The *system* requires a 240V AC power supply. A weather-proof isolating switch must be provided at the power outlet. The power supply must have its own clearly marked designated circuit breaker in the electricity supply fuse box.

3.5 Each *system* installation must be inspected and checked by the *designer* or the designer's agent. The *designer* on completion is to certify that the system has been constructed, installed and *commissioned* in accordance with its design, the conditions of accreditation and any additional requirements set out in the *permit*. (refer to AS/NZS 1547 Clause 6.2.5)

Note: Where the designer is not available to supervise the installation the designer should obtain signed certification from the installing plumber stating that the installation has been constructed/installed and commissioned in accordance with its design, the conditions of accreditation and any additional requirements of the council and/or permit authority.

3.6 Where discharging wastewater to a land application system by irrigation, a lockable sampling tap or gate valve is to be provided on the outlet pipe to the irrigation system.

3.7 A report is to be prepared by the *council* approved plumbing contractor detailing the inspection of the installation and the results of the *commissioning* tests and be accompanied by a certificate certifying that the system is operating and performing adequately.

3.8 Copies of the following reports/certificates must be submitted to the *council* and the owner as soon as practicable after the commissioning of the *system* and after each scheduled or unscheduled service or inspection for the period specified in the *permit*:

(a) The initial plant installation and commissioning report;
(b) All required laboratory analytical test reports; and
(c) All inspection and maintenance reports

3.9 Copies of any report or certificate required by the conditions of accreditation must be made available to the *Director* on request.

3.10 The *designer* is to provide a statement warning the user of which items and products that must not be placed in the *system*.

3.11 To verify that the plant is commissioned, sampling must be carried out, by a *council* approved person, for BOD_5, *TSS* and Free Residual Chlorine. The samples are to be tested and reported on by a NATA certified laboratory.

4.0 Maintenance and monitoring

4.1 Each installation must be serviced and monitored to the following requirements:

- If the system uses chlorine for E coil reduction and has an above ground disposal; at 3 monthly intervals.
- If the system does not use chlorine and disposes the effluent beneath the surface of gardens by trickle filters; at 6 monthly intervals.

All in accordance with the conditions of accreditation, the conditions of *permit* and *manufacturer's* requirements.

Notes:
Only a *plumber* can carry out the maintenance and required monitoring of the *system* other than electrical work unless licensed to do so.
The *plumber* may need to complete training by the *supplier* before carrying out any maintenance on the *system*.
The maintenance and monitoring intervals may be combined provided the monitoring frequency remains at intervals specified in 4.1.

4.2 The owner of the *system* must enter into and maintain a maintenance contract with the *council*, the *supplier* of the *system*, or other *council* approved plumbing contractor.

4.3 The owner must enter into an agreement with the *council* to maintain the maintenance contract where that contract is with the *supplier* of the *system* or other *council* approved plumbing contractor.

4.4 The *system* must be operated and maintained to ensure it performs continuously and without any intervention between inspections carried out by the *council* approved plumbing contractor.

4.5 A service report is to be prepared by the plumbing contractor who carried out the work detailing the inspection of the installation and the results of all servicing tests and conditions at the completion of all scheduled or unscheduled services or inspections.

4.6 The service report is to be accompanied by a signed document certifying that the system is operating and performing adequately.

4.7 A copy of the service report and certifying document is to be provided to the occupant and *council*. Each service report is to contain a statement reminding the user about items and products that must not be placed in the *system*.

4.8 Each service must include monitoring the operation of the *system* and associated land application system.

4.9 Maintenance must be carried out on all mechanical, electrical and functioning components of the *system* as appropriate.

4.10 The monitoring, servicing and reporting of the installation must include but not be restricted to the following matters, as appropriate:

(a) Reporting on weather conditions, ambient temperature, effluent temperature;
(b) Odour;
(c) Check and test pump
(d) Check and test air blower, fan or air venturi and clean/replace air filters;
(e) Check and test alarm system;
(f) Check slime growth on membranes and report the on condition of membranes;
(g) Check and report operation of sludge return, sludge level and de-sludging;
(h) Check and record water meter reading (if fitted);

(i) Check and record operation of irrigation area, irrigation fittings;
(j) Check and clean/replace irrigation filters;
(k) Check and report on water quality (testing for pH, Turbidity, EC and dissolved oxygen);
(l) Check, and replenish chlorine disinfection system;
(m) Cleaning of the following items at above the waterline–
  (i) clarifier,
  (ii) pipework,
  (iii) valves
  (iv) walls of chambers

5.0 Performance

5.1 Hydraulic and Organic Loading:

The system is accredited for treatment of domestic wastewater as defined in AS1546.3:2017 clause 1.8.7 limited to 10EP with the following MAXIMUM hydraulic and organic loads:

Model	**Hydraulic load (L/day)**	**Biochemical Oxygen Demand (g/day)**
EnviroTas AS	**1600**	**700**

5.2 Hydraulic and Organic Loading:

Treated effluent from the system must not exceed the following limits (90% of samples):

For sub-surface irrigation:	
5-day Biochemical Oxygen Demand (BOD_5)	10 g/m³ (max. 30 g/m³)
Total Suspended Solids (TSS)	10 g/m³ (max. 45 g/m³)
For surface irrigation:	
5-day Biochemical Oxygen Demand (BOD_5)	20 g/m³ (max. 30 g/m³)
Total Suspended Solids (TSS)	30 g/m³ (max. 45 g/m³)
E. coli	10 cfu/100 mL (max. 20 cfu/100 mL)
Free Residual Chlorine concentrations	≥ 0.5 g/m³and less than 2.0 g/m³

6.0 On-going management

6.1 The mandatory servicing and monitoring is to commence 3 months after the plant is *commissioned*. The servicing and monitoring is to coincide with the *supplier's* required on-going routine scheduled maintenance program.

6.2 In the event of failure to comply with the water quality limits set out in these conditions, fortnightly sampling and testing for *BOD_5*, *TSS* and Free Residual Chlorine must be carried out until the plant is *re-commissioned.*

6.3 The method of preserving and the handling of samples taken from the plant must satisfy the relevant requirements of *AS/NZS 5667.*

6.4 Copies of the following reports and certificates must be submitted to the *permit authority* and the owner as soon as practicable after the *commissioning* of the *system* and after each scheduled or unscheduled service for the period specified in the *permit:*

- the initial plant installation and *commissioning* report
- all laboratory analytical test reports; and
- all inspection and maintenance reports

6.5 The system is to be de-sludged strictly in accordance with the *manufacturer's* recommendations and the sludge is to be disposed of in accordance with the Tasmanian Biosolids Reuse Guidelines and the conditions of *permit.*

6.6 Only persons with a waste transport business Environment Protection Notice are to be engaged for the removal, transporting and disposal of accumulated sludge removed from the *system.*

6.7 Any waste material removed from the system must be collected and disposed of or utilised by an approved facility or agency.

6.8 Measures are to be put in place during servicing that will protect the environment, personnel and any other persons who could be affected by the activity.

7.0 Permitted uses

7.1 The effluent is suitable for land application by way of the following forms:

(a) sub-surface by:

(i) subsurface drip irrigation in accordance with the relevant provisions of AS/NZS 1547

(ii) trenches, beds, mounds, evapo-transpiration in accordance with the relevant provisions of AS/NZS 1547.

(b) above ground by:

(i) spray irrigation

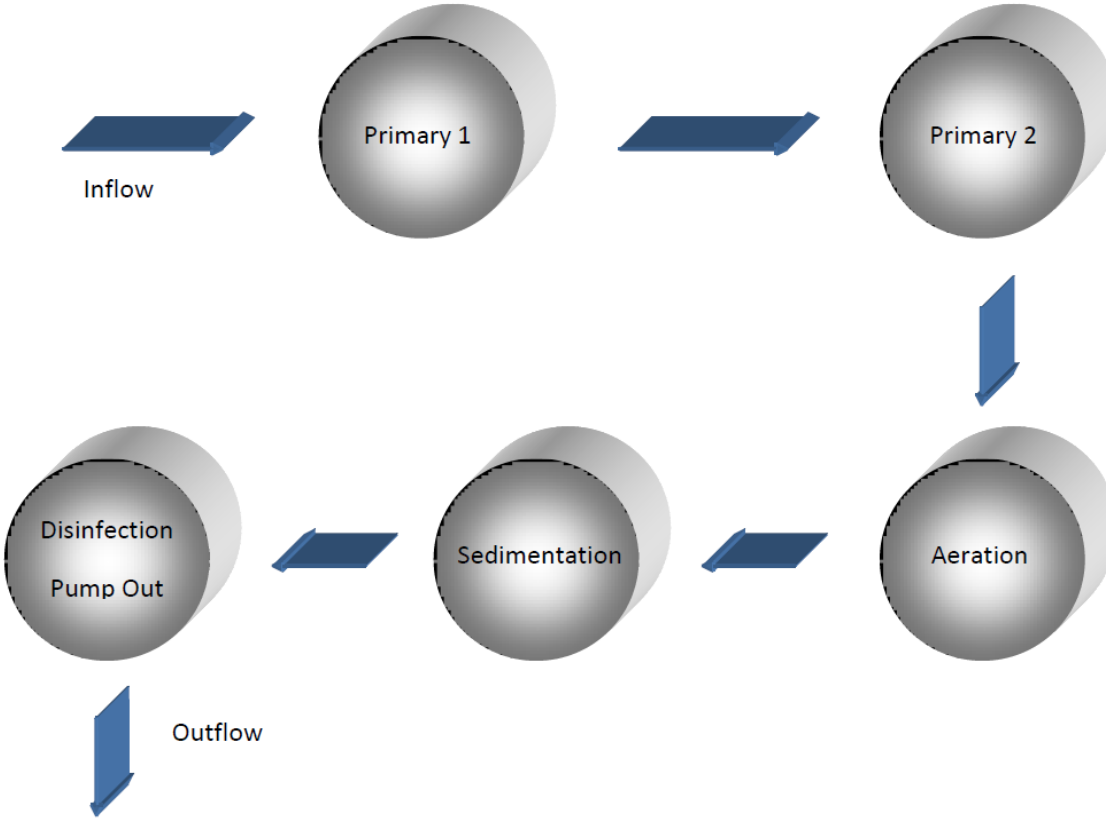
(ii) surface drip irrigation in accordance with the relevant provisions of AS/NZS 1547.

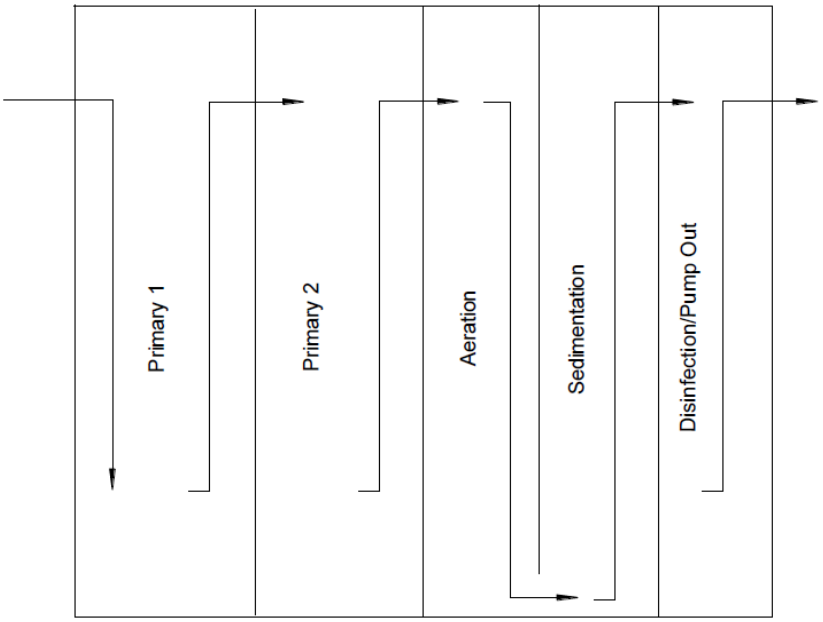
Note: Each of the above forms of irrigation is subject to consent from the *permit authority* and the relevant provisions of *AS/NZS 1547*.

7.2 Where it is not practicable for effluent from the system to be applied in accordance with *AS/NZS 1547* the method of discharge must satisfy contemporary relevant regulatory requirements to the satisfaction of the *permit authority.*

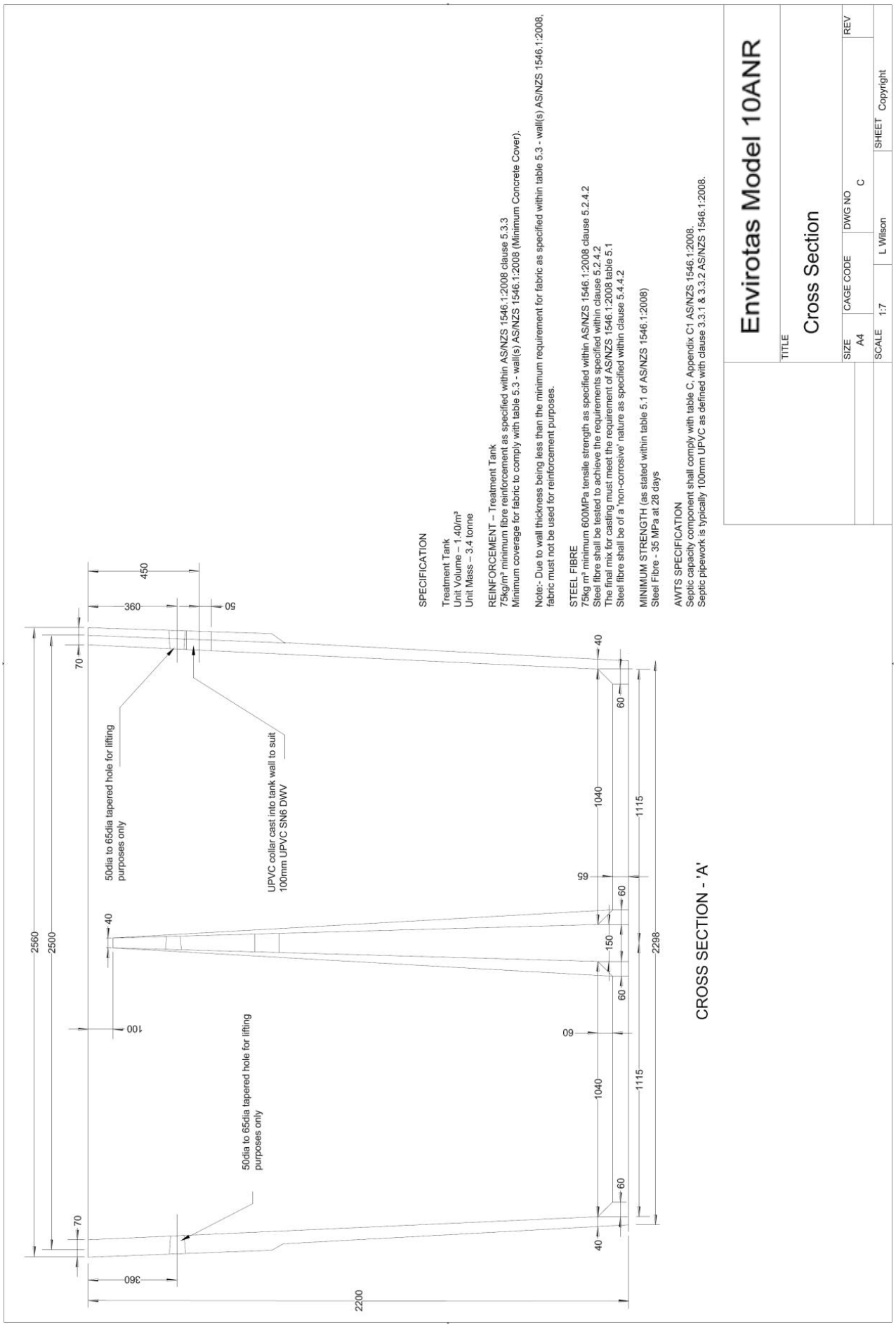
Appendix A - Schematic drawings, Process Flow

EnviroTas 10ANR

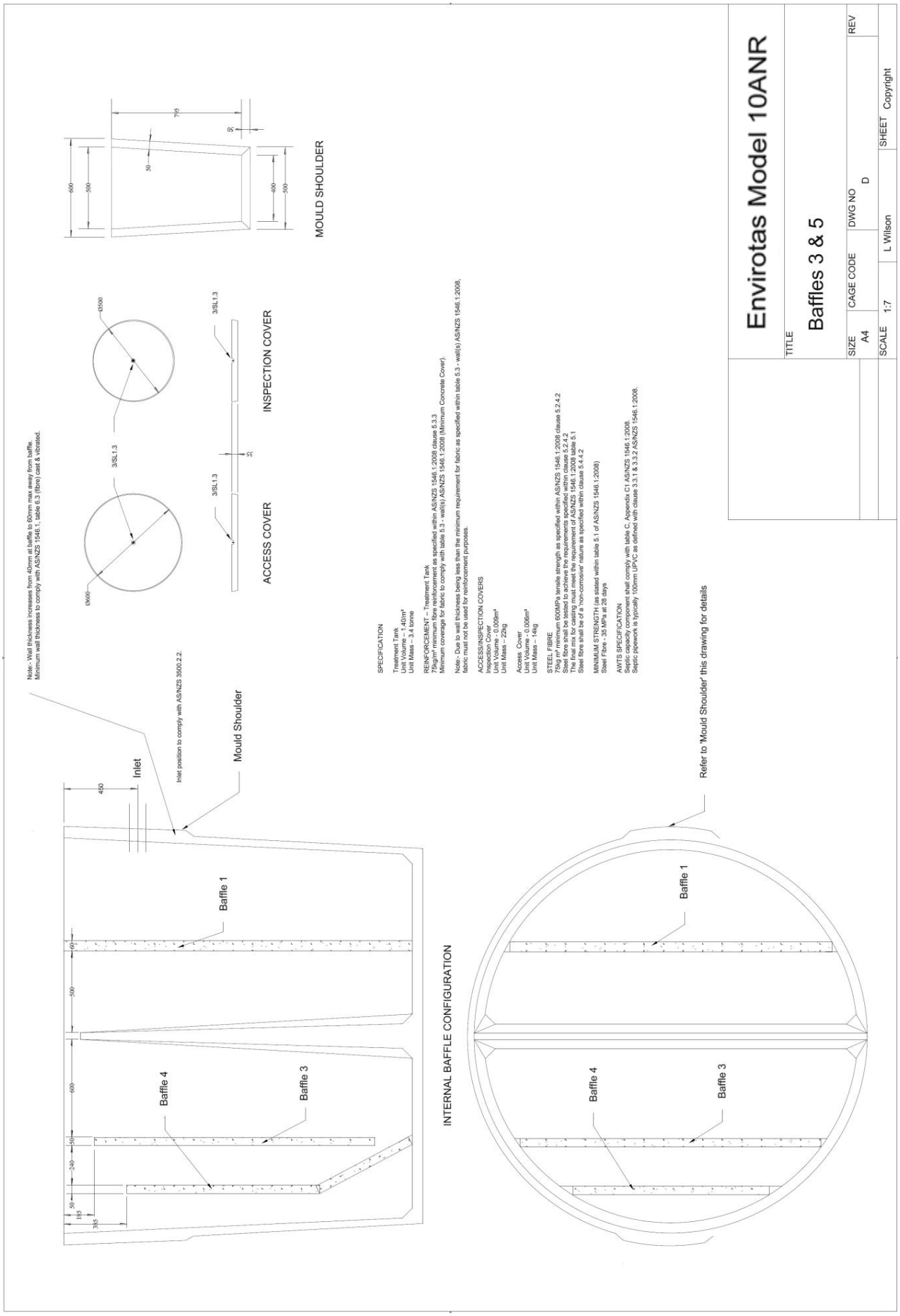




Appendix B - Engineering Drawings



Appendix B - Engineering Drawings



Appendix C Component list and specifications

No	Description	Material	Specification
1.	Inflow Junction	PVC	Ø100 Sewer pipe Ø100 Sewer junction 90°
2.	Outflow Junction	PVC	Ø100 Sewer pipe Ø100 Sewer junction 90°
3.	Outflow Junction	PVC	Ø100 Sewer pipe Ø100 Sewer junction 90°
4.	Circulation pipe	PVC	Ø32 Pressure pipe
5.	Circulation weir	PVC	Ø32 End cap
6.	Anaerobic filter	PP	45m²/m³ surface area
7.	Filter holder	GAL	Ø11 mm
8.	Filter baffle	FRP or PP	≥ 2.0 mm
9.	Diffuser	PE	Ø30 mm
10.	Aerobic filter	PP	45m²/m³ surface area
11.	Air valve for diffuser	PVC	Ø15 valve
12.	Air lift pump	PVC	Ø32 Pressure pipe
13.	Air pipe	PVC	Ø15 Pressure
14.	Air valve for backwash	PVC	Ø15 valve
15.	Weir	PVC	Ø100 Sewer pipe Ø100 Sewer junction 90° Ø100 End cap
16.	Water level sensor	PVC	Ø76 mm
17.	Irrigation pump	Submersible	≥ 0.1KW
18.	High water level alarm	PVC	Ø15 mm
19.	Union	PVC	15mm pressure
20.	Backwash diffuser	PE	Ø30 mm
21.	Sed. Baffle	Concrete	Reinforced concrete
22.	Irrigation pump pipe	PVC	Ø25 Pressure pipe
23.	Union	PVC	25mm pressure
24.	Irrigation filter	PE	25mm
25.	UV filter	SS	Ø63 mm
26.	UV outflow pipe	PVC	25mm pressure
27.	Air blower	Air pump	100lit/min
28.	Electrical panel	Rigid PVC	See wiring diagram model 10NR
29.	Blower cover	Plastic polymer	
PS	Primary Sedimentation Chamber		
AF	Anaerobic Filtration Chamber		
CA	Contact Aeration Chamber		
SS	Secondary Sedimentation Chamber		
PU	Pump Chamber		
			Envirocycle™ Model 10ANR

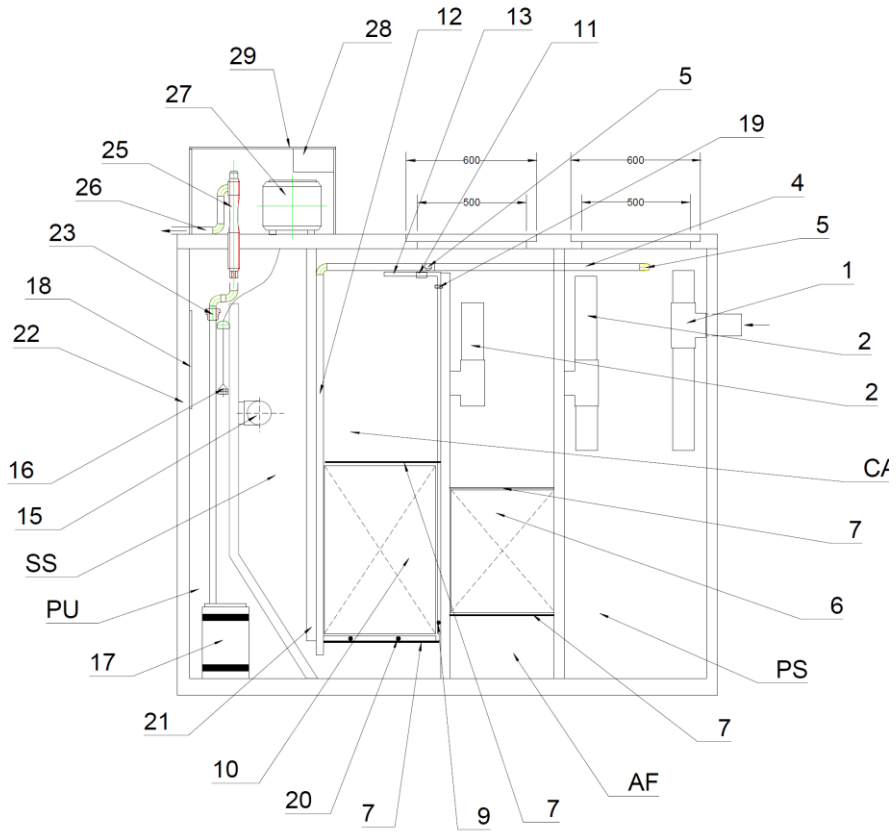
SPECIFICATION

Primary/Anaerobic		3.3004m³
Aeration		2.0430m³
Sedimentation		0.6642m³
Pump Chamber		0.3876m³
	Total	6.3876m³

75kg/m³ minimum fibre reinforcement as specified within AS/NZS 1546.1:2008 clause 6.4.1.1.
Minimum coverage for fabric to comply with table 6.4 - wall(s) AS/NZS 1546.1:2008 (Minimum Concrete Cover).

STEEL FIBRE
75kg m³ minimum 600MPa tensile strength as specified within table 6.1, AS/NZS 1546.1:2008 and clause 6.2.4.2.
Steel fibre shall be tested to achieve the requirements specified within clause 6.3.3. The final mix for casting must meet the requirement of AS/NZS 1546.1:2008 clause 6.4. Steel fibre shall be of a 'non-corrosive' nature as specified within clause 6.7.2.

Side elevation



Plan