NOTICE OF PROPOSED DEVELOPMENT

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

SITE: 4 Pinto Close, Orielton

PROPOSED DEVELOPMENT:
DWELLING, SECONDARY RESIDENCE & OUTBUILDING

The relevant plans and documents can be inspected at the Council Offices at 47 Cole Street, Sorell during normal office hours, or the plans may be viewed on Council's website at www.sorell.tas.gov.au until **Monday 4th August 2025.**

Any person may make representation in relation to the proposal by letter or electronic mail (sorell.council@sorell.tas.gov.au) addressed to the General Manager. Representations must be received no later than **Monday 4th August 2025.**

APPLICANT: **Sarah Harriss**

APPLICATION NO: **DA 2025 / 00177 1**
DATE: **17 July 2025**

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

Full description of Proposal:	*Use:* Residential *Development:* New Residence, Shed and Ancillary Dwelling *Large or complex proposals should be described in a letter or planning report.*
Design and construction cost of proposal:	$ 700,000
Is all, or some the work already constructed:	No: ☑ Yes: ☐
Location of proposed works:	Street address: 4 Pinto Close Suburb: Orielton Postcode: 7172 Certificate of Title(s) Volume: 186369 Folio: 9
Current Use of Site	Vacant Lot
Current Owner/s:	Name(s) Darcy Hall

Is the Property on the Tasmanian Heritage Register?	No: ☑ Yes: ☐	*If yes, please provide written advice from Heritage Tasmania*
Is the proposal to be carried out in more than one stage?	No: ☑ Yes: ☐	*If yes, please clearly describe in plans*
Have any potentially contaminating uses been undertaken on the site?	No: ☑ Yes: ☐	*If yes, please complete the Additional Information for Non-Residential Use*
Is any vegetation proposed to be removed?	No: ☑ Yes: ☐	*If yes, please ensure plans clearly show area to be impacted*
Does the proposal involve land administered or owned by either the Crown or Council?	No: ☑ Yes: ☐	*If yes, please complete the Council or Crown land section on page 3*
If a new or upgraded vehicular crossing is required from Council to the front boundary please complete the Vehicular Crossing (and Associated Works) application form https://www.sorell.tas.gov.au/services/engineering/		

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form 55

To: Sheds n Homes *Owner /Agent*

57 Cove Hill Rd *Address*

Bridgewater TAS 7030 *Suburb/postcode*

Qualified person details:

Qualified person: Kris Taylor

Address: 445 Macquarie Street

Hobart 7004

Phone No: 0476 595 889

Fax No:

Licence No: NA

Email address: office@envirotechtas.com.au

Qualifications and Insurance details: Bachelor of Science with Honours in Geology. Lloyd's Underwriting $2,000,000: Site classification. Soil & rock testing. Soil & rock mechanics.

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

Speciality area of expertise: Foundation classification in accordance with AS 2870*

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

Details of work: Foundation Classification

Address: 4 Pinto Close

Orielton 7172

Lot No: 9

Certificate of title No: 186369/9

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 - AS 2870 and Stability Report in accordance with Foundation and Footings Society (Tasmania) Code of Practice.*

(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 items, 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:	*Enviro-Tech Consultants Pty. Ltd. 2025. Site Soil Evaluation for Foundations and Wastewater Report for a Proposed Dwellings And Shed, 4 Pinto Close - Orielton. Unpublished report for Sheds n Homes by Enviro-Tech Consultants Pty. Ltd., 30/05/2025.
Relevant calculations:	
References:	AS2870-2011 Residential Slabs and Footings AS1726-2017 Geotechnical site investigations AS1289-2014 Methods of testing soils for engineering purposes CSIRO Building technology file – 18.

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

Foundation 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, placement of fill, uncontrolled earthworks, drainage condition changes, variations in site maintenance other than indicated in supplied plans.

*This report contains soil classification information prepared in accordance with AS2870 as well as AS2870 extracts which may be used as general guidance for plumbing design. The hydraulic designer is to use their own judgment in the application of this information and this report must be read in in conjunction with hydraulic plans prepared for the proposed development.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:			30/05/2025

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form 55

To: Sheds n Homes *Owner /Agent*

57 Cove Hill Rd *Address*

Bridgewater TAS 7030 *Suburb/postcode*

Qualified person details:

Qualified person: Kris Taylor

Address: 445 Macquarie Street

Hobart 7004

Phone No: 0476 595 889

Fax No:

Licence No: NA

Email address: office@envirotechtas.com.au

Qualifications and Insurance details: Bachelor of Science with honours in geology, 25 years environmental geology experience, PI Insurance to $2,000,000 in environmental geology

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

Speciality area of expertise: Site and soil evaluation and land application system design*

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

Details of work

Address: 4 Pinto Close

Orielton 7172

Lot No: 9

Certificate of title No: 186369/9

The assessable item related to this certificate: Site and soil evaluation for wastewater management

(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: On-site wastewater management

(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 items, 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

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: Sheds n Homes *Owner name*

Address

TAS *Suburb/postcode*

Designer details:

Name: Christopher Fysh

Category: Building Services Designer – Civil / Hydraulic

Business name: Fysh Design

Phone No: 0414149394

Business address: Unit 4, 160 Bungana Way

Cambridge Tas

Fax No:

Licence No: 479819732

Email address: cfysh@fyshdesign.com.au

Details of the proposed work:

Owner/Applicant Sheds N Homes

Designer's project reference No. CKD-HYD-287

Address: 4 Pinto Close

Orielton TAS

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

Description of work:

Wastewater Design

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

(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:

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing: Wastewater Design Report Rev-0	Prepared by: Fysh Design	Date:23/06/2025
Schedules:	Prepared by:	Date
Specifications:	Prepared by:	Date
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by:	Date:

Standards, codes or guidelines relied on in design process:

AS3500.3:2021, AS1547.2012, NCC 2022 Vol 3,
All council drainage departures and requirements

Any other relevant documentation:

Insurance details:
CGU Civil / Hydraulic Liability Professional Indemnity CGU PI 05-21 $5,000,000
CGU General and Product Public Liability $20,000,000

Attribution as designer:

I Christopher Fysh ..... 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:	Christopher Fysh		23/06/2025
Licence No:	479819732		

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.

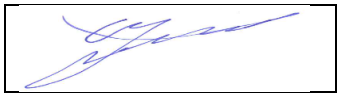
I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- [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 ..Christopher Fysh..... 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.

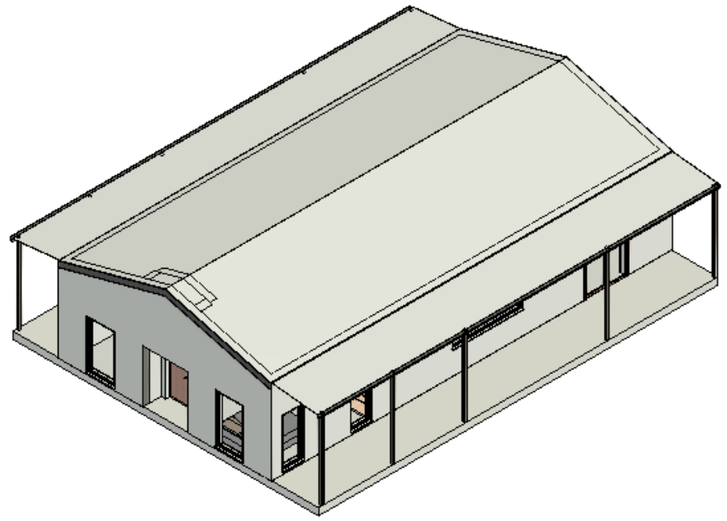
Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	Name: (print)	*Signed*	*Date*
Designer:	Christopher Fysh		23/06/2025

DEVELOPMENT APPLICATION - NEW DWELLING (CLASS 1A), NEW SHED AND NEW ANCILLARY DWELLING

CLIENT	Darcy Hall
PROPERTY TITLE REFERENCE	186369/9
PROPERTY IDENTIFICATION NUMBER	9456527
PROPERTY ADDRESS	4 Pinto Close, Orielton
LOCAL AUTHORITY	SORELL
PLANNING SCHEME	TASMANIAN PLANNING SCHEME
ZONE	RURAL LIVING
OVERLAYS	Airport obsticle limiation area, Bushfire-Prone Area
BUSHFIRE ATTACK LEVEL (BAL)	TBC
CORROSION ENVIRONMENT	
SOIL CLASSIFICATION	TBC
WIND CLASSIFICATION	N3
PROPERTY LOT SIZE	10090M2
EXISTING BUILDING FOOTPRINT/S	NIL
PROPOSED DWELLING FOOTPRINT	261m2/

CONTENTS



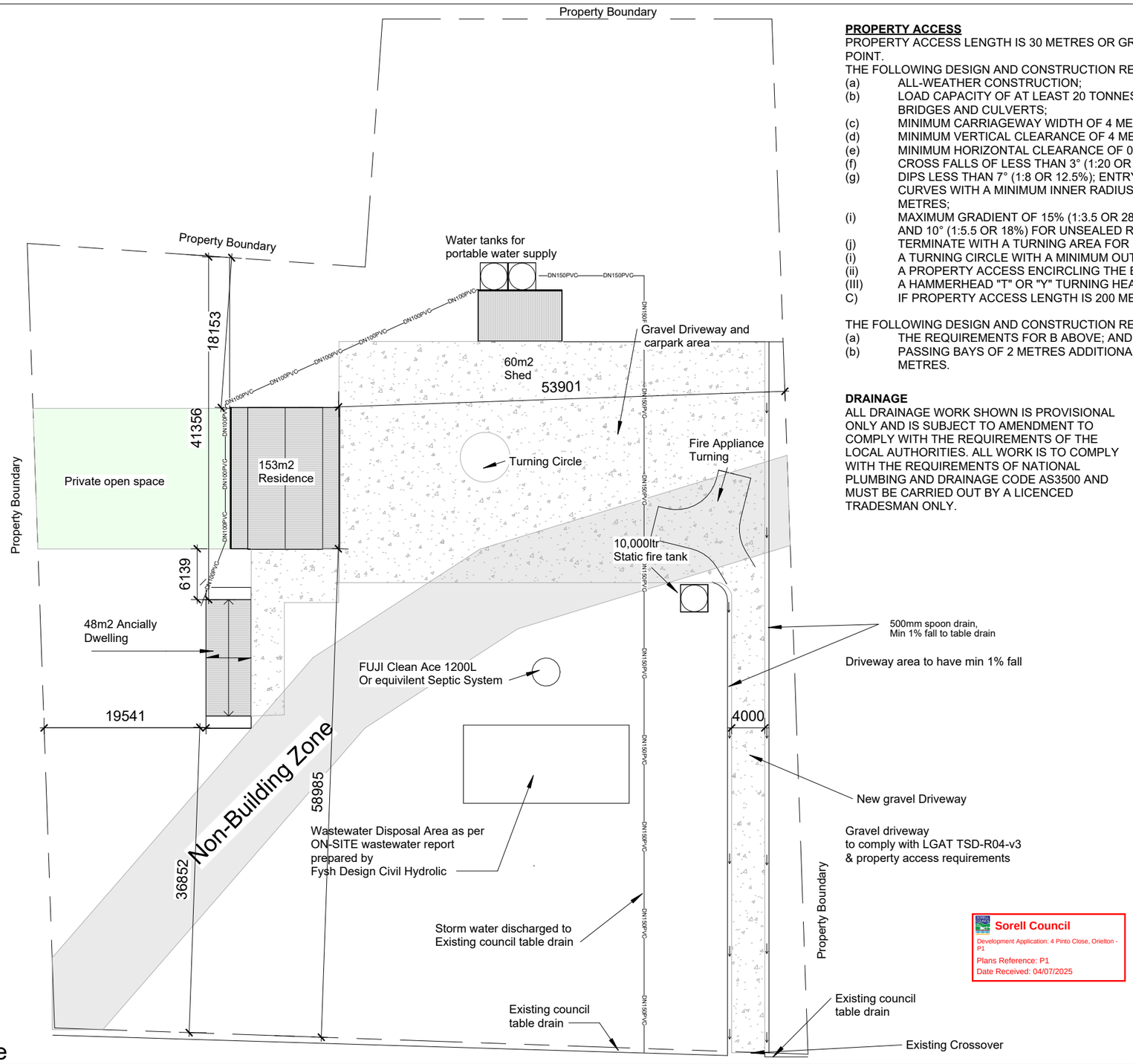
DIMENSION NOTE:
Use written diemtnions only. Do no scale from drawings. All figured dimensions are to be used as a guide only. It is imperative that all dimensions, setouts and levels be confirmed onsite by the builder, Surveyor or Sub Contractor prior to the commencement of work, manufacture or installaion; and the Builder, Sub Contractor and/or manufacturer ensures a full set of plans are on hand and reference has been made to the general notes

SHEDS & HOMES
SHEDS. MADE. TOUGH.

57 Cove Hill Road
Bridgewater TAS 7030
(03) 6263 6545
hobart@shedsnhomes.com.au

BLST Pty Ltd
ABN 52 660 422 159

CLIENT NAME: DARCY HALL			DRAWING TITLE: COVER SHEET	
PROJECT ADDRESS: 4 Pinto Close, Orielton		DATE: 16/05/2025	SCALE:	DRAWN BY: SH
PROJECT: New residece, shed and ancillary dwelling	REVISION No:	SHEET SIZE: A3	JOB No: SNH25-023	SHEET No: C1.0



Pinto Close

PROPERTY ACCESS

PROPERTY ACCESS LENGTH IS 30 METRES OR GREATER; OR ACCESS IS FOR A FIRE APPLIANCE TO A FIRE FIGHTING WATER POINT.

THE FOLLOWING DESIGN AND CONSTRUCTION REQUIREMENTS APPLY TO PROPERTY ACCESS:

(a) ALL-WEATHER CONSTRUCTION;
(b) LOAD CAPACITY OF AT LEAST 20 TONNES, INCLUDING FOR BRIDGES AND CULVERTS;
(c) MINIMUM CARRIAGEWAY WIDTH OF 4 METRES;
(d) MINIMUM VERTICAL CLEARANCE OF 4 METRES;
(e) MINIMUM HORIZONTAL CLEARANCE OF 0.5 METRES FROM THE EDGE OF THE CARRIAGEWAY;
(f) CROSS FALLS OF LESS THAN 3° (1:20 OR 5%);
(g) DIPS LESS THAN 7° (1:8 OR 12.5%); ENTRY AND EXIT ANGLE; (H) CURVES WITH A MINIMUM INNER RADIUS OF 10 METRES;
(i) MAXIMUM GRADIENT OF 15% (1:3.5 OR 28%) FOR SEALED ROADS, AND 10° (1:5.5 OR 18%) FOR UNSEALED ROADS; AND
(j) TERMINATE WITH A TURNING AREA FOR FIRE APPLIANCES PROVIDED BY ONE OF THE FOLLOWING:
(i) A TURNING CIRCLE WITH A MINIMUM OUTER RADIUS OF 10 METRES;
(ii) A PROPERTY ACCESS ENCIRCLING THE BUILDING; OR
(III) A HAMMERHEAD "T" OR "Y" TURNING HEAD 4 METRES WIDE AND 8 METRES LONG.
C) IF PROPERTY ACCESS LENGTH IS 200 METRES OR GREATER.

THE FOLLOWING DESIGN AND CONSTRUCTION REQUIREMENTS APPLY TO PROPERTY ACCESS:

(a) THE REQUIREMENTS FOR B ABOVE; AND
(b) PASSING BAYS OF 2 METRES ADDITIONAL CARRIAGEWAY WIDTH AND 20 METRES LENGTH PROVIDED EVERY 200 METRES.

DRAINAGE

ALL DRAINAGE WORK SHOWN IS PROVISIONAL ONLY AND IS SUBJECT TO AMENDMENT TO COMPLY WITH THE REQUIREMENTS OF THE LOCAL AUTHORITIES. ALL WORK IS TO COMPLY WITH THE REQUIREMENTS OF NATIONAL PLUMBING AND DRAINAGE CODE AS3500 AND MUST BE CARRIED OUT BY A LICENCED TRADESMAN ONLY.

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

DIMENSION NOTE:
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DRAWING NOTE:

SHEDS n HOMES
SHEDS. MADE. TOUGH.
57 Cove Hill Road
Bridgewater TAS 7030
(03) 6263 6545
hobart@shedsnhomes.com.au
BLST Pty Ltd
ABN 52 660 422 159

CLIENT NAME: DARCY HALL			DRAWING TITLE: SITE PLAN	
PROJECT ADDRESS: 4 Pinto Close, Orielton	DATE: 16/05/2025	SCALE: 1 : 500		DRAWN BY: SH
PROJECT: New residece, shed and ancillary dwelling R2	REVISION No:	SHEET SIZE: A3	JOB No: SNH25-023	SHEET No: C2.0

Sorell Council

Development Application: 4 Pinto Close, Orielton - P1

Plans Reference: P1

Date Received: 04/07/2025

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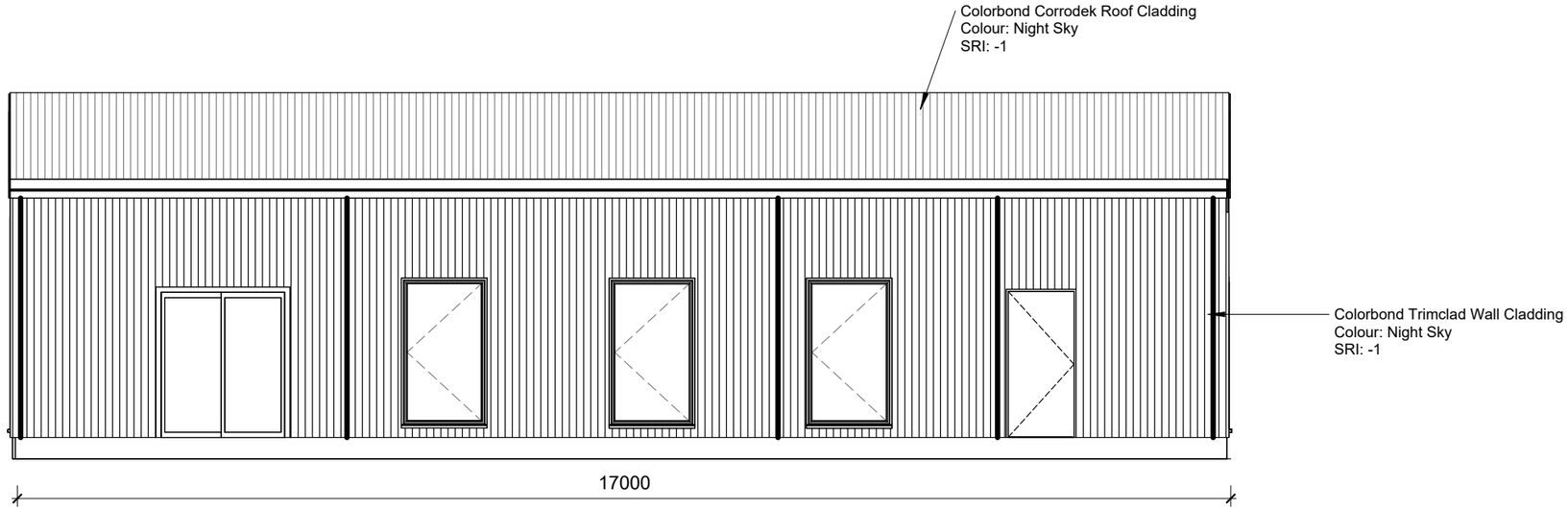
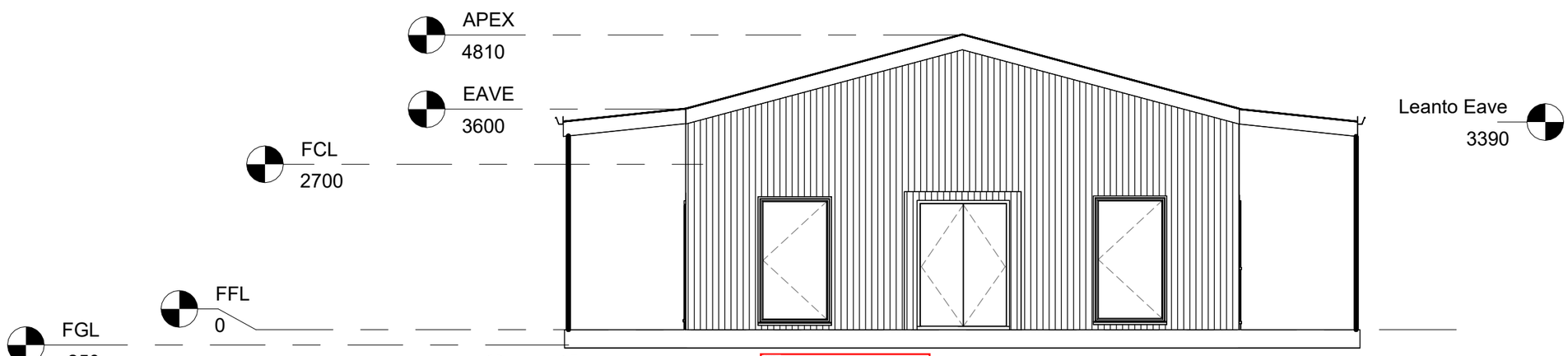
BLST Pty Ltd
ABN 52 660 422 159

CLIENT NAME: DARCY HALL			DRAWING TITLE: Floorplan - Residence	
PROJECT ADDRESS: 4 Pinto Close, Orielton		DATE: 26/06/2025	SCALE: 1 : 100	DRAWN BY: SH
PROJECT: New Residence, Shed and Ancillary Dwelling	REVISION No:	SHEET SIZE: A3	JOB No: SNH25-23	SHEET No: C3.0



1 West
1 : 75



2 South
1 : 75

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

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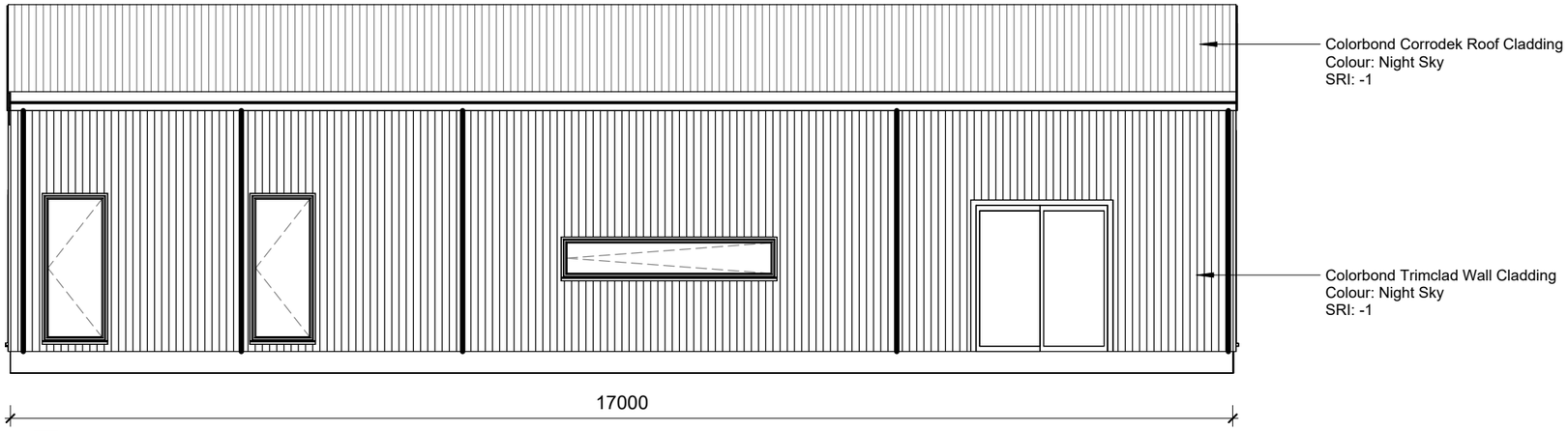
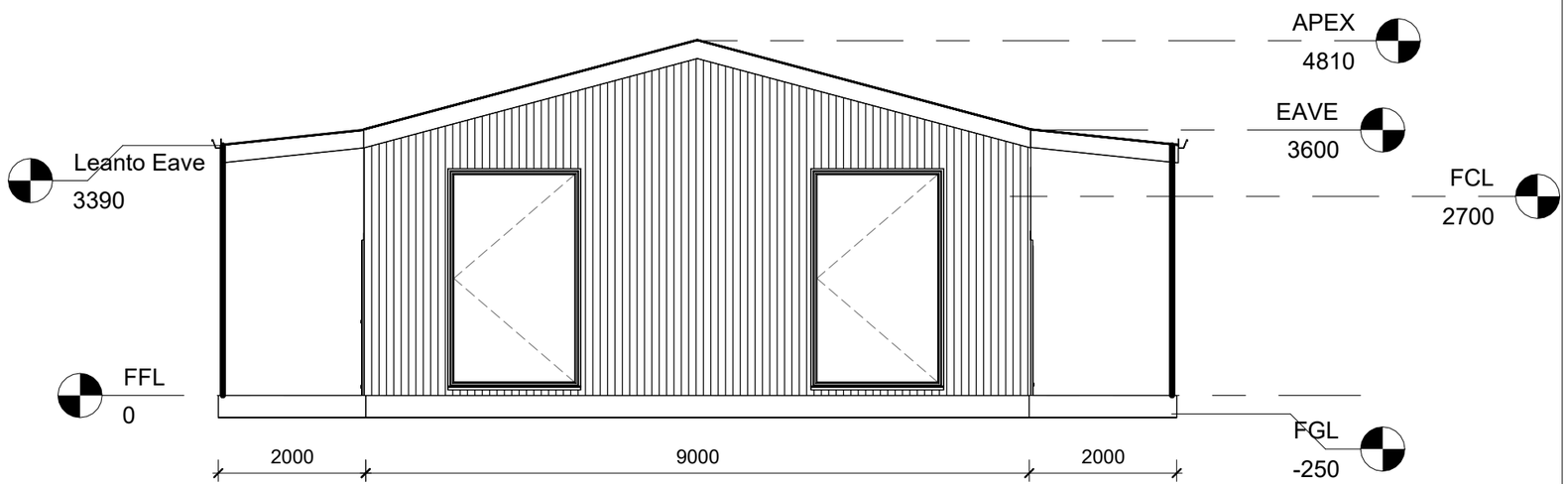
BLST Pty Ltd
ABN 52 660 422 159

CLIENT NAME: DARCY HALL			DRAWING TITLE: Elevations - Residence	
PROJECT ADDRESS: 4 Pinto Close, Orielton		DATE: 26/06/2025	SCALE: 1 : 75	DRAWN BY: SH
PROJECT: New Residence, Shed and Ancillary Dwelling	REVISION No:	SHEET SIZE: A3	JOB No: SNH25-23	SHEET No: C4.0



1 East
1 : 75



2 North
1 : 75

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

DIMENSION NOTE:
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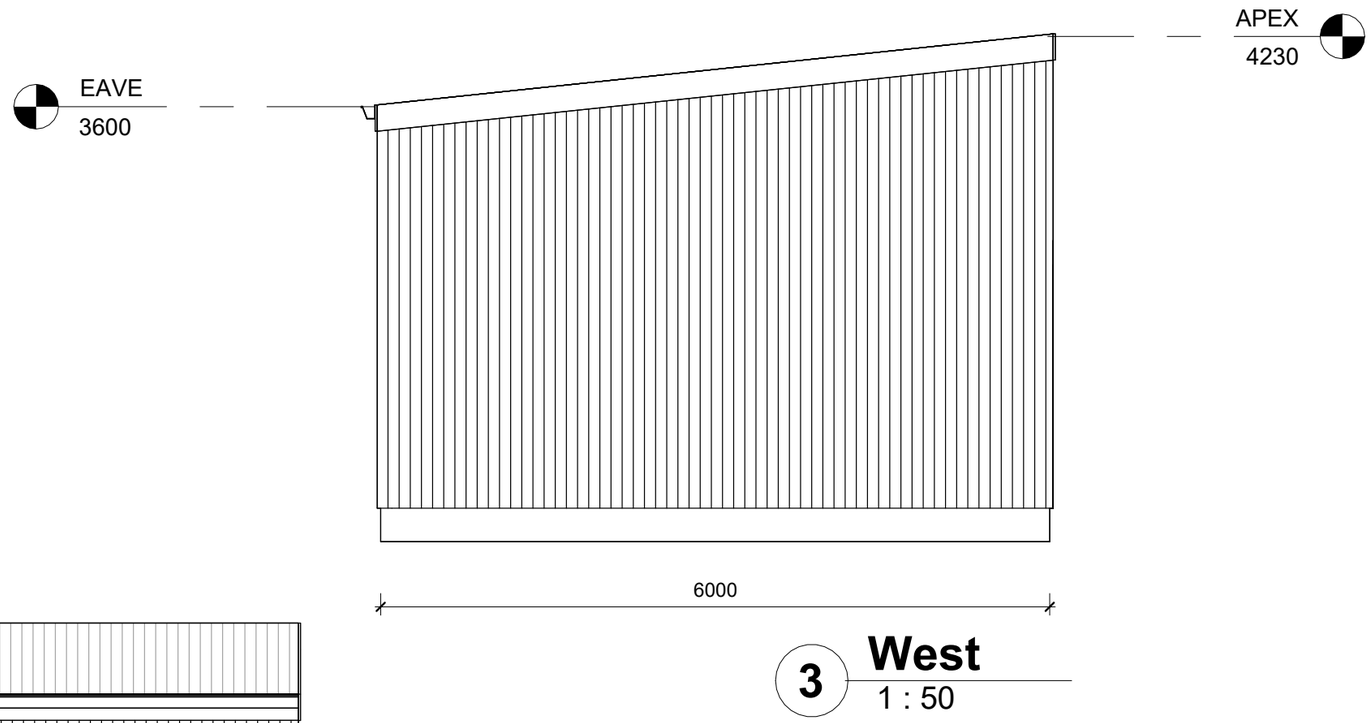
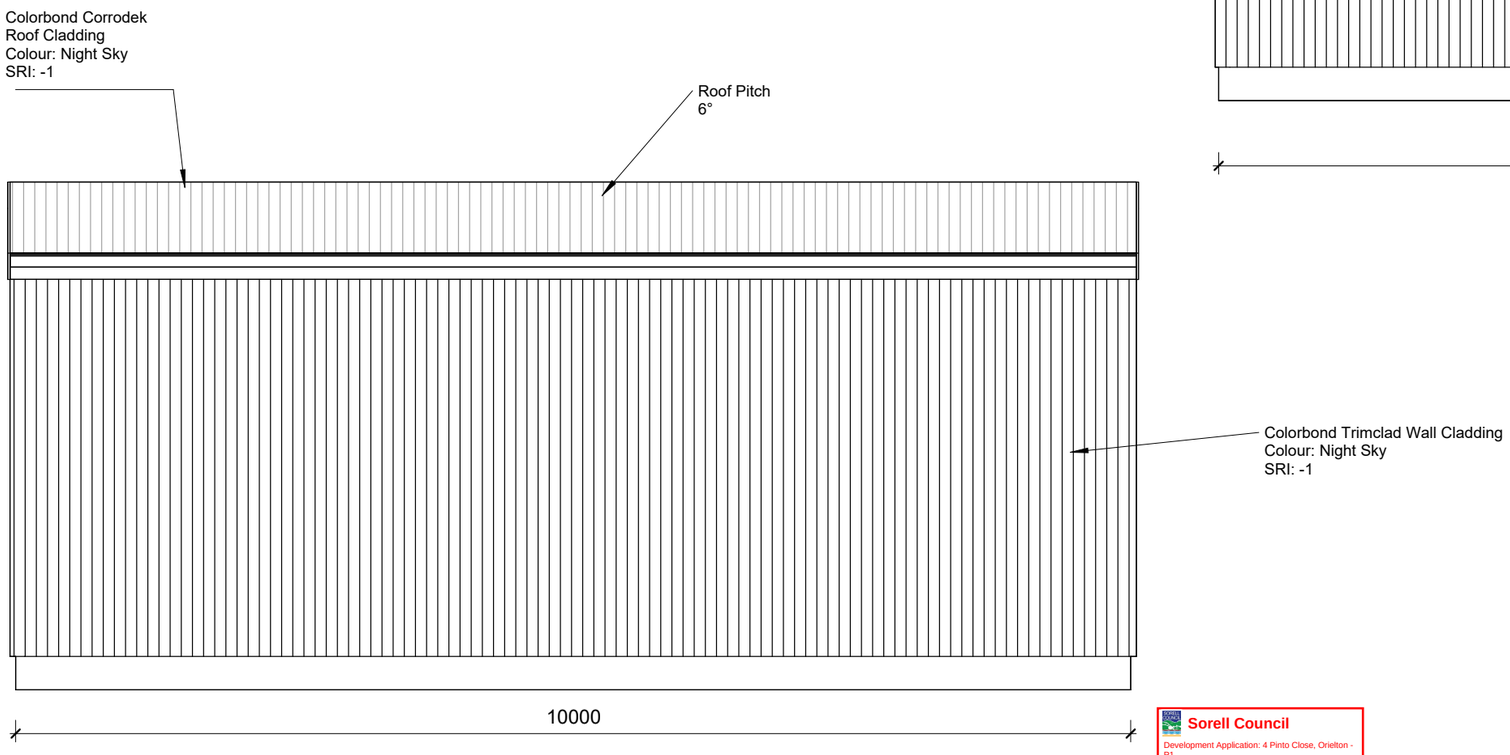
BLST Pty Ltd
ABN 52 660 422 159

CLIENT NAME: DARCY HALL			DRAWING TITLE: Elevations - Residence	
PROJECT ADDRESS: 4 Pinto Close, Orielton		DATE: 26/06/2025	SCALE: 1 : 75	DRAWN BY: SH
PROJECT: New Residence, Shed and Ancillary Dwelling	REVISION No:	SHEET SIZE: A3	JOB No: SNH25-23	SHEET No: C4.1



3 **West**
1 : 50



1 **North**
1 : 50

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

DIMENSION NOTE:
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SHEDS MADE TOUGH

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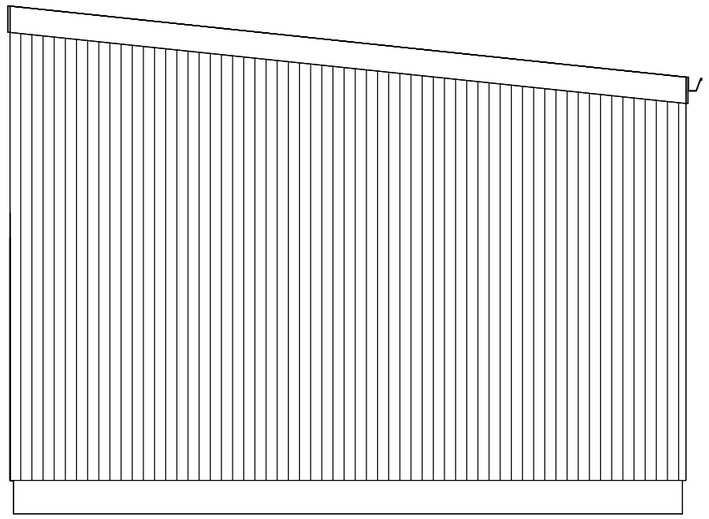
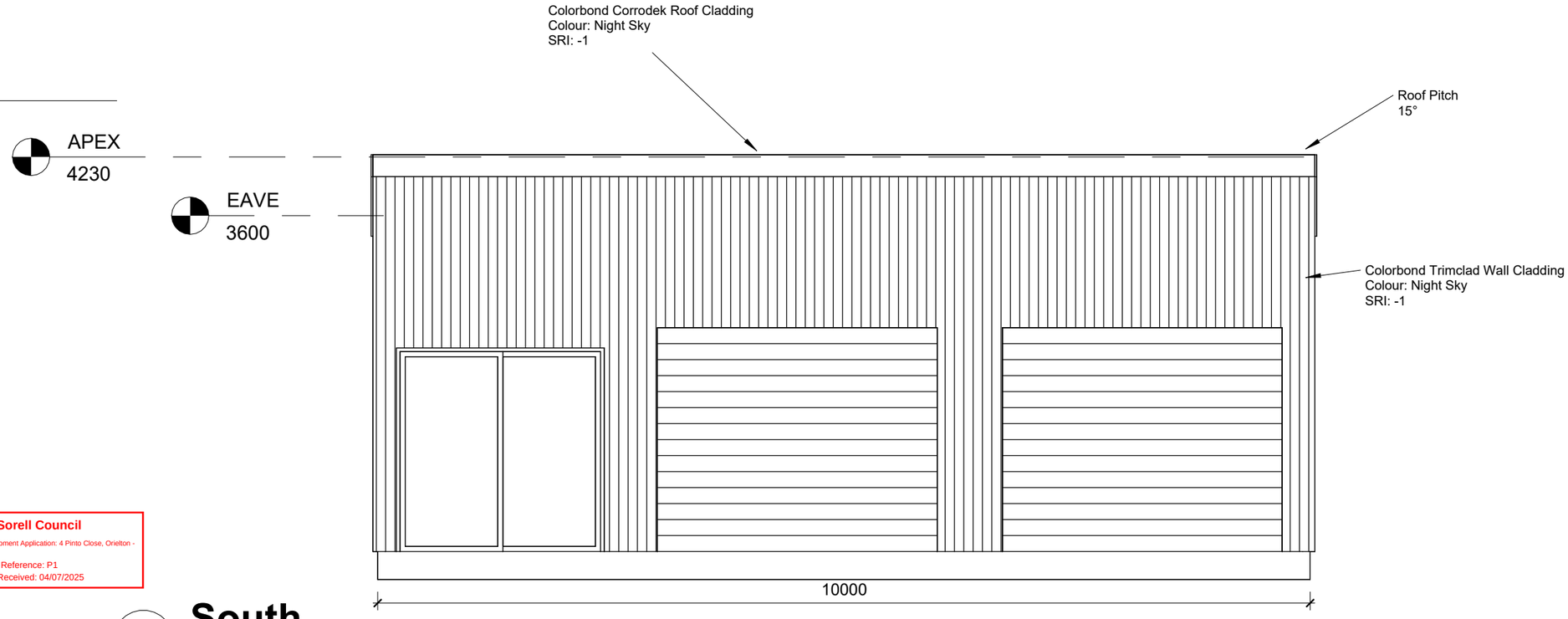
hobart@shedsnhomes.com.au

BLST Pty Ltd
ABN 52 660 422 159

CLIENT NAME: DARCY HALL		DRAWING TITLE: SHED ELEVATIONS			
PROJECT ADDRESS: 4 Pinto Close, Orielton	DATE: 25/06/2025	SCALE: 1 : 50			DRAWN BY: SH
PROJECT: New Residence, Shed and Ancillary Dwelling	REVISION No:	SHEET SIZE: A3	JOB No: SNH25-23		SHEET No: C4.2



1 East
1 : 50



2 South
1 : 50

DIMENSION NOTE:
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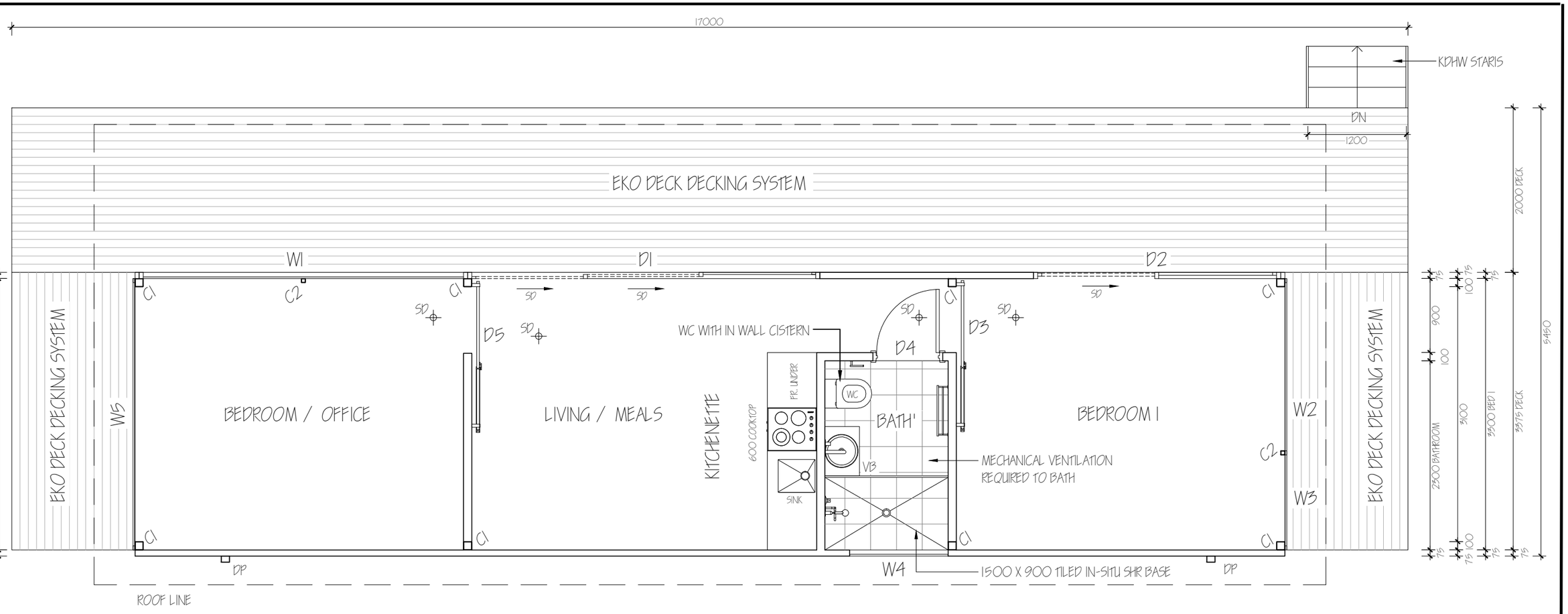
BLST Pty Ltd
ABN 52 660 422 159

CLIENT NAME: DARCY HALL			DRAWING TITLE: SHED ELEVATIONS		
PROJECT ADDRESS: 4 Pinto Close, Orielton	DATE: 25/06/2025	SCALE: 1 : 50			DRAWN BY: SH
PROJECT: New Residence, Shed and Ancillary Dwelling	REVISION No:	SHEET SIZE: A3	JOB No: SNH25-23		SHEET No: C4.3



PROPOSED FLOOR PLAN

1: 50

0 0.5 1.0 1.5 2.0

AREA:

Habitable Area	= 48.30m²
Deck	= 44.13m²
Total	= 92.43m²

LEGEND:

SD	=	SMOKE DETECTOR TO RELEVANT STANDARDS
C1	=	100 X 4mm SHS
C2	=	50 X 50mm SHS

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

WINDOW & DOOR SCHEDULE

	HEIGHT	WIDTH	DESCRIPTION
W1	2700	3900	FIXED GLASS PANEL
W2	FULL	3300	FIXED GLASS PANEL
W3	FULL	1200	SLASHLESS DOUBLE HUNG
W4	2400	1200	FIXED GLASS PANEL
W5	FULL	3300	FIXED GLASS PANEL
D1	2700	4288	STACK SLIDING DOOR
D2	2700	3060	SLIDING DOOR
D3	2100	800	BARN DOOR
D4	2100	850	770 INTERNAL DOOR
D5	2100	800	BARN DOOR

NOTES:
* Do not scale the drawings.
* Verify levels / dimensions on site prior to commencement, report any discrepancies / variations to designer.
* Materials / workmanship to comply with AS codes, BCA & relevant regulations.

REVISION NOTES

No.	Revision/Issue	Date

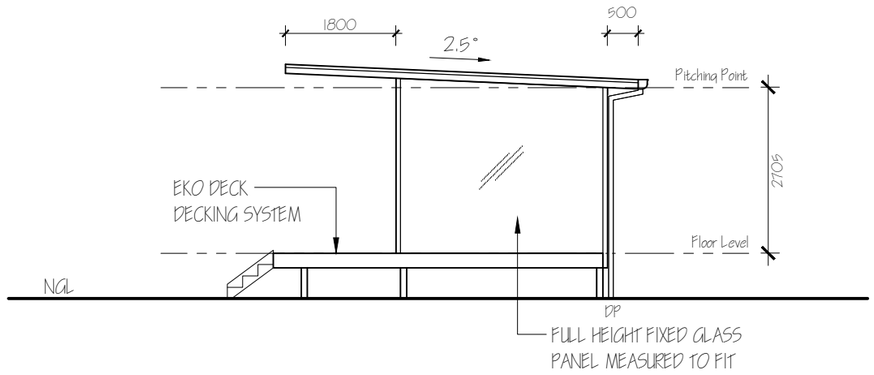
G.Hills&Partners ARCHITECTS
PO Box 910, KINGSTON, TAS 7051
P 03 6229 1799 E graham.hills@bigpond.com
Building Designer Accreditation No. CC2367B

Project Name and Address
PROPOSED ANCILLARY
4 Pinto Close, ORIELTON

Drawing Title
PROPOSED FLOOR PLAN

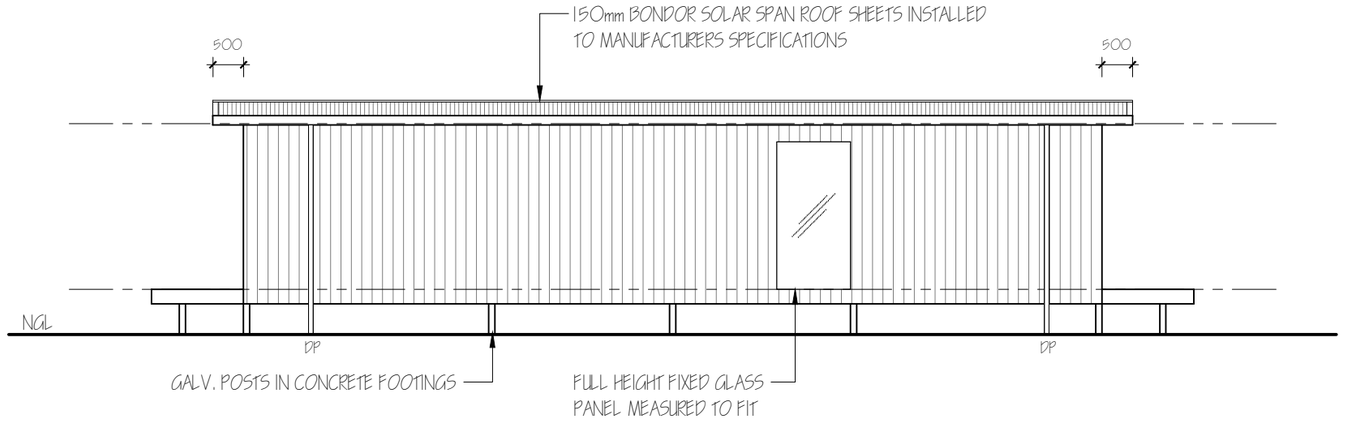
Client
D. Hall

DRAWING TYPE: Design Dev' Drawings
PROJECT No.: 22541
Date: 17-Jun-25
SHEET: DD02
Scale: 1:50
Size: A3
CHECKED: G. HILLS
DESIGN: G. HILLS
DRAWN: M. Kamankesh



RIGHT ELEVATION 1: 100

0 1 2 3 4



REAR ELEVATION 1: 100

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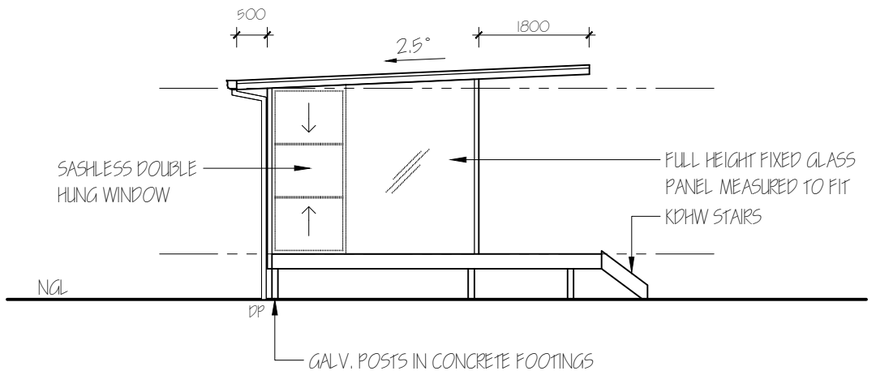
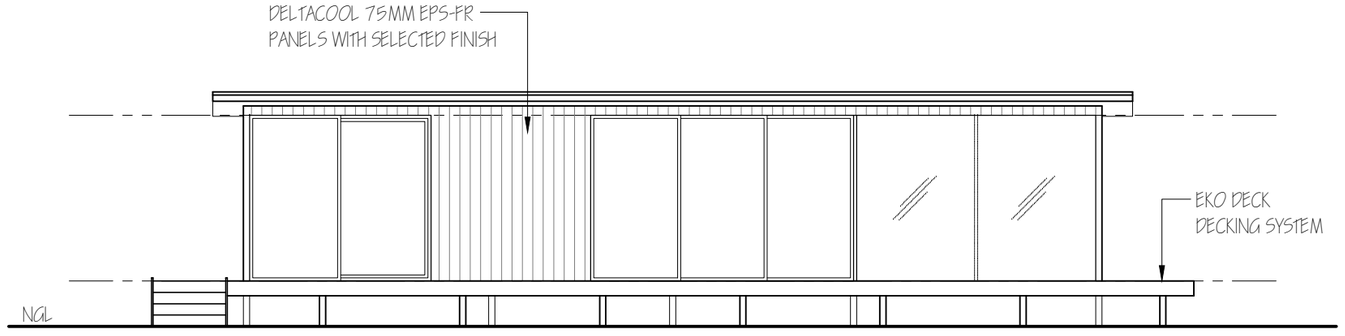


LEFT ELEVATION 1: 100

0 1 2 3 4



FRONT ELEVATION 1: 100

0 1 2 3 4

GLAZING NOTE:

DOUBLE GLAZED POWDER COATED ALUMINIUM FRAMED WINDOWS AND DOORS. THE BUILDER OR WINDOW SUPPLIER MUST ENSURE THE MINIMUM AND MAXIMUM VALUES OF THE ENERGY REPORT ARE MET. IF WINDOWS ARE SUPPLIED WHICH FALL OUTSIDE THESE PARAMETERS, THE HOUSE ENERGY RATING WILL BE AFFECTED.

BUILDER TO ENSURE GROUND LEVEL TO BE MAXIMUM 1000mm BELOW DECK FFL. OTHERWISE, A BALUSTRADE WILL BE REQUIRED AS PER AUSTRALIAN STANDARDS

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

NOTES:
* Do not scale the drawings.
* Verify levels / dimensions on site prior to commencement, report any discrepancies / variations to designer.
* Materials / workmanship to comply with AS codes, BCA & relevant regulations.

REVISION NOTES

No.	Revision/Issue	Date

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Project Name and Address
PROPOSED ANCILLARY
4 Pinto Close, ORIELTON

Drawing Title
PROPOSED ELEVATIONS

Client
D. Hall

DRAWING TYPE: Design Dev' Drawings
PROJECT No.: 22541
Date: 17-Jun-25
SHEET: DD03
CHECKED: G. HILLS
Scale: 1:100
Size: A3
DESIGN: G. HILLS
DRAWN: M. Kamankesh

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CONSULTANTS
Geotechnical & Environmental Services

SITE SOIL EVALUATION FOR FOUNDATIONS AND WASTEWATER

4 PINTO CLOSE - ORIELTON

PROPOSED DWELLINGS AND SHED

Client: Sheds n Homes

Certificate of Title: 186369/9

Investigation Date: 30/05/2025

Refer to this Report As

Enviro-Tech Consultants Pty. Ltd. 2025. Site Soil Evaluation for Foundations and Wastewater Report for a Proposed Dwellings and Shed, 4 Pinto Close - Orielton. Unpublished report for Sheds n Homes by Enviro-Tech Consultants Pty. Ltd., 30/05/2025.

Report Distribution

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Limitations of this report

In some cases, variations in actual Site conditions may exist between subsurface investigation boreholes. This report only applies to the tested parts of the Site at the Site of testing, and if not specifically stated otherwise, results should not be interpreted beyond the tested areas.

The Site investigation is based on the observed and tested soil conditions relevant to the inspection date and provided design plans (building footprints presented in Attachment A). Any site works which has been conducted which is not in line with the Site plans will not be assessed. Subsurface conditions may change laterally and vertically between test Sites, so discrepancies may occur between what is described in the reports and what is exposed by subsequent excavations. No responsibility is therefore accepted for any difference in what is reported, and actual Site and soil conditions for parts of the investigation Site which were not assessed at the time of inspection.

This report has been prepared based on provided plans detailed herein. Should there be any significant changes to these plans, then this report should not be used without further consultation which may include drilling new investigation holes to cover the revised building footprint. This report should not be applied to any project other than indicated herein.

No responsibility is accepted for subsequent works carried out which deviate from the Site plans provided or activities onsite or through climate variability including but not limited to placement of fill, uncontrolled earthworks, altered drainage conditions or changes in groundwater levels.

At the time of construction, if conditions exist which differ from those described in this report, it is recommended that the base of all footing excavations be inspected to ensure that the founding medium meets that requirement referenced herein or stipulated by an engineer before any footings are poured.

Investigation Summary

Site Classification

In accordance with AS2870 – 2011 and after thorough consideration of the known details pertaining to the proposed building and associated works (hereafter referred to as the Site), the geology, soil conditions, soil properties, and drainage characteristics of the Site have been classified as follows:

CLASS H1 indicates that the soil profiles around the proposed building area are highly reactive to soil moisture changes, with possible surface movement of 40 to 60 mm at some or all test locations.

Foundations

Concentrated loads including but not limited to slab edge or internal beam or strip footings shall be supported directly on piers or pads which are founded on the olive yellow gravelly silt (Layer 5) at m depth or greater (with an allowable bearing capacity of 400 kPa).

Wind Load Classification

The AS 4055-2021 Wind loads for Housing classification is summarised.

Region:	A
Terrain category:	TC1
Shielding Classification:	NS
Topographic Classification:	T0
Wind Classification:	N3
Design Wind Gust Speed ($V_{h,u}$) m/s	50

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

Kris Taylor, BSc (hons)

Environmental & Engineering Geologist

Site Investigation

The Site investigation is summarised in Table 1.

Table 1 Summary of Site Investigation

Client	**Sheds n Homes**
Project Address	4 Pinto Close - Orielton
Council	Sorell
Planning Scheme	Tasmanian Planning Scheme
Inundation, Erosion or Landslip Overlays	None
Proposed	Dwellings And Shed
Investigation	Fieldwork was carried out by an Engineering Geologist on the 30/5/2025
Site Topography	The building site has a very gentle slope of approximately 3% (2°) to the southwest
Site Drainage	The site receives overland flow runoff directly from the northeast.
Soil Profiling	Four investigation holes were direct push sampled from surface level around the proposed dwellings and shed (Appendix A):
Investigation Depths	The target excavation depth was estimated at 2.3 m. Borehole BH01 was direct push sampled to 2.3 m, borehole BH02 was direct push sampled to 2.3 m, borehole BH03 was direct push sampled to 2.3 m, and borehole BH04 was direct push sampled to 1.5 m (all ending on). Borehole logs and photos are presented in Appendix B & C.
Soil moisture and groundwater	All recovered soil at the site ranged from dry to slightly moist. Groundwater was encountered at 0.6 to 0.7 m below ground surface.
Geology	According to 1:250,000 Mineral Resources Tasmania geological mapping (accessed through The LIST), the geology comprises of: Cretaceous - Quaternary Dominantly non-marine sequences of gravel, sand, silt, clay and regolith.

Soil Profiles

The geology of the site has been documented and described according to Australian Standard AS1726 for Geotechnical Site Investigations, which includes the Unified Soil Classification System (USCS). Soil layers, and where applicable, bedrock layers, are summarized in Table 2.

Table 2 Soil Summary Table

#	Layer	Details	USCS	BH01	BH02	BH03	BH04
1	Silty Sandy CLAY	TOPSOIL: Silty Sandy CLAY, black, medium plasticity, fine grained sand, F-VSt	CI	0-0.2 DS@0.1	0-0.1	0-0.3	0-0.3
2	CLAY	CLAY with sand, dusky red, high plasticity, F-VSt	CH	0.2-0.7 DS@0.4	0.1-0.6	0.3-0.6	0.3-0.7
3	CLAY	CLAY trace sand, dark greyish brown, high plasticity, fine grained sand, S-VSt	CH	0.7-1.3 DS@1.1	0.6-0.9	0.6-1.1	0.7-1.1
4	Silty SAND	Silty SAND with clay, dark greyish brown, well sorted, fine to medium grained sand, MD-D	SM		0.9-1.6 DS@1.3		
5	Gravelly SILT	SOIL & COBBLES: Gravelly SILT trace sand, olive yellow, well sorted, low plasticity; angular gravel; 10% BASALT cobbles, VSt-H	ML	1.3-2.3 DS@1.8	1.6-2.3	1.1-2.3	1.1-1.5

Consistency[1] **VS** Very soft; **S** Soft; **F** Firm; **St** Stiff; **Vst** Very Stiff; **H** Hard. Consistency values are based on soil strengths AT THE TIME OF TESTING and is subject to variability based on field moisture condition
Density[2] **VL** Very loose; **L** Loose; **MD** Medium dense; **D** Dense; **VD** Very Dense
Rock Strength **EL** Extremely Low; **VL** Very Low; **L** Low; M Medium; **H** High; **VH** Very High; **EH** Extremely High
PL Point load test (lump)
DS Disturbed sample
PV Pocket vane shear test
FV Downhole field vane shear test
U50 Undisturbed 48mm diameter core sample collected for laboratory testing.
REF Borehole refusal
INF DCP has continued through this layer and the geology has been inferred.

[1] Soil consistencies are derived from a combination of field index, DCP and shear vane readings.
[2] Soil density descriptions presented in engineering logs are derived from the DCP testing.

Recommendations

General

For Class H1Sites, the designer should be a qualified engineer experienced in the design of footing systems for buildings.

Dispersive soils

Findings

The results presented in Appendix D indicate:

- Dispersion susceptibility: Two of the five soil layers are Class 1, indicating high dispersion risk (Layers 2 and 5 – CLAY at 0.4 m and Gravelly SILT at 1.8 m).
- Moderate risk layers: Three layers are Class 2, indicating moderate dispersion risk (Silty-Sandy CLAY at 0.1 m, CLAY at 1.1 m, and Silty SAND at 1.3 m).
- Stability trend: All tested layers show some level of dispersion risk, with high-risk soils found both near the surface and at depth, requiring careful management during excavation and drainage works.

Site specific recommendations

- No specific recommendations apply to manage soil dispersion.
- There is a low potential for tunnel development on the Site given the low gradient.

Plumbing

Refer to hydraulic design drawings for detailed plumbing advice and requirements.

Refer to Table 3 to assess soil movement (Ys) around pipework for different depth ranges.

*Table 3 Millimetres soil movement (Ys) for determining plumbing requirements for various soil depths **

Building	Profiles	P*	E Ys >75	H2 Ys 60-75	H1 Ys 40-60	M Ys 20-40	S Ys 0-20	A Ys 0
Residence	BH01 BH02	No			0-0.4	0.4-0.9	0.9-3	>3
Ancillary Dwelling	BH02, BH03	No			0-0.3	0.3-0.8	0.8-3	>3

* Depths in this table are based on surfaces at the time of testing and do not allow for the influence of any additional fill added to the soil profile unless the Iss calculation depth has been modified based on the proposed cut and fill (see 'Footing Minimum Target Depths'). Where additional fill is proposed (and not indicated in the attached plans) Enviro-Tech are to be advised of final FFL's so the Site classification can be recalculated according to the specific fill reactivity and thickness used in the design.

Class M

When pipework service trench basses fall within Class M depth range as shown in Table 3, and all plumbing recommendations herein have been implemented, all stormwater and sanitary plumbing drains should have fittings set at their midposition during installation to allow 0.5ys movement in any direction. Pipe wrappings can be used at critical points.

AS3500.2:2021 Appendix G of AS3500.2:2021 should be referred for general advice.

Site Drainage

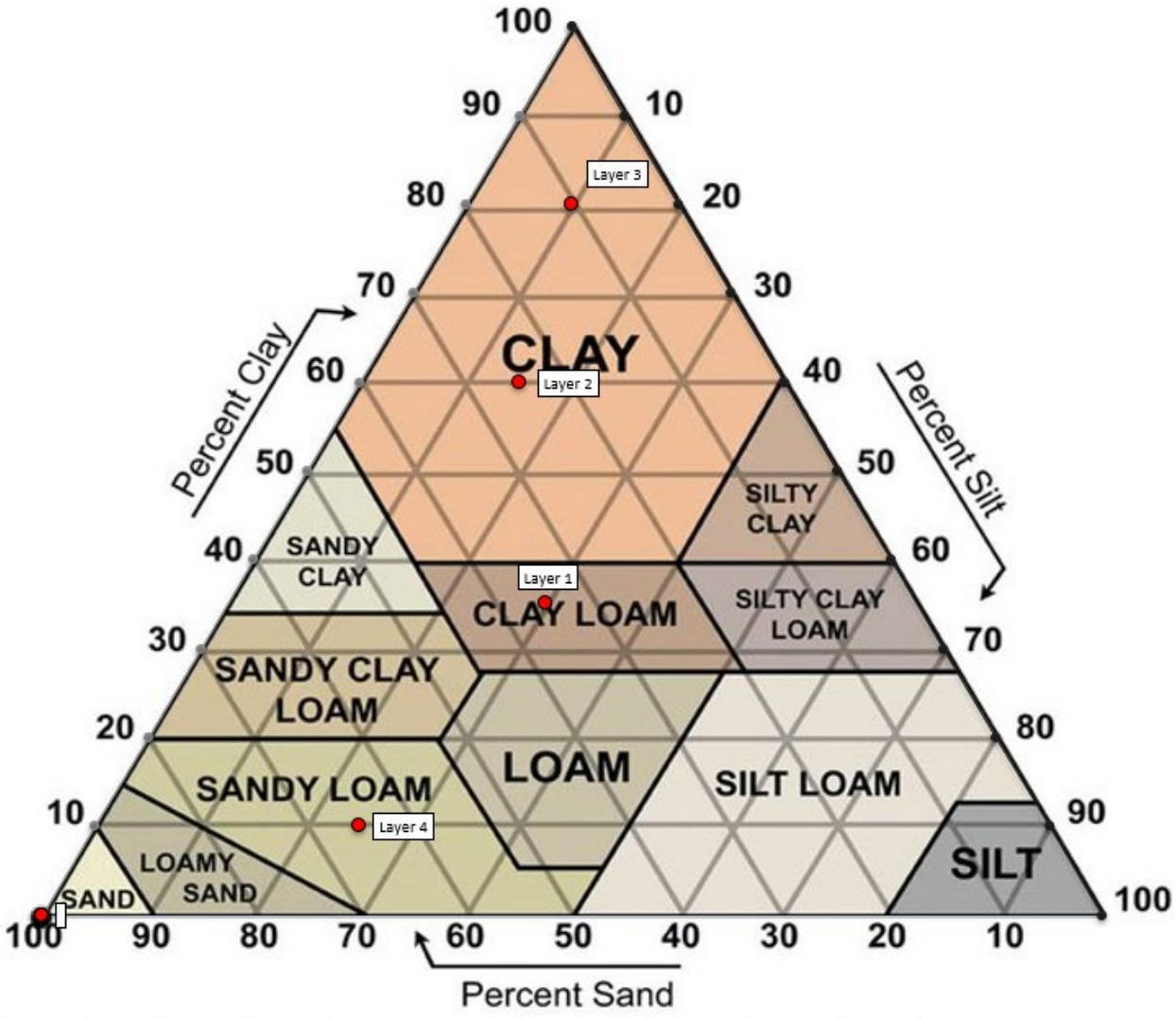
Surface drainage shall be considered in the design of the footing system, and necessary modifications shall be included in the design documentation. The surface drainage of the site shall be controlled from the beginning of the preparation and construction of the site. The drainage system shall be completed after the completion of the building construction.

Ideally, the areas around the footprint of the building should be graded or drained so that the water cannot pond against or near the building. As soon as footing construction has been completed, the ground immediately adjacent to the building should be graded to a uniform fall of 50mm minimum away from the building over the first metre. The final provision of paving to the edge of the building can greatly limit soil moisture variations due to seasonal wetting and drying.

Wastewater

The saturated soil permeability is estimated to be at a rate of 0.2mm per hour.

The soil is considered Category 6 based on limiting soil Layers 2 and 3.



Temporary Site Drainage

It is recommended that drainage protection works (cut off drains/mounds) are put in place above (upgradient of) the work area to prevent water and sediment from accumulating in and around footings and reduce the risk of erosion and instability around any proposed earth retaining structures.

Filling Works

- In the case where either of the following conditions occur, the Site is classified as Class P (AS2870 Clauses 2.5.2 and 2.5.3), in which case footings are to be designed in accordance with engineering specifications:
    - FILL OTHER THAN SAND exceeds 0.4 m depth.
    - SAND FILL exceeds 0.8 m depth.
- It is recommended that footing (edge beams, internal beams, and load support thickenings) concentrated loads are transferred through the fill to target founding layers.
- Subject to engineering advice, edge beams, internal beams, and load support thickenings may need to be founded on natural ground.
- SAND or FCR or FCR FILL is always recommended rather than fill containing SILT or CLAY.
- Compacted CLAY or SAND FILL on well drained slopes should not exceed 1V:2H unless supported by an engineered retaining wall.
- Compacted stable rock fill on well drained slopes should not exceed 2V:3H unless supported by an engineered retaining wall.
- Any proposed filling works must be in accordance with AS3798 'Earthworks for Residential and Commercial Developments'.
- Before placing fill for landscaping, all topsoil should be removed from the filled area.
- Ideally, the fill should be free draining and placed to prevent water ponding. The fill should be placed in layers no greater than 150mm height and suitably compacted.

Building Pad Preparation

Any organic matter or other deleterious materials will need to be removed from the building envelope.

Topsoil containing grass roots must be removed from the area on which the footing will rest.

Unless otherwise stated in an engineering report, fill or loose, soft, low bearing capacity soil should either be removed from the building pad, or otherwise footings or piers should ideally be established to the base of this material to support the proposed structure.

Earthworks should be carried out in accordance with AS3798 ‘Earthworks for Residential and Commercial Developments’. Unsuitable materials in structural fill are listed in AS2870 Section 4.3.

The base of the excavation must be generally level but may slope not more than 1:40 to allow excavations to drain.

Bored Pier Impediments - Obstructions

There were no obvious impediments to auguring such as cobbles or boulders obstructions.

Footing Preparation

Footing excavations must be free of loose earth, tree roots, mud or debris immediately before pouring concrete, ensuring the footing is appropriately seated on the target layer.

Foundation Maintenance

Details on appropriate site and foundation maintenance practises from the CSIRO BTF 18 Foundation Maintenance and Footing Performance: A Homeowner's Guide are presented in Appendix F of this report.

Kris Taylor, BSc (hons)

Environmental & Engineering Geologist

Notes About Your Assessment

The Site classification provided and footing recommendations including foundation depths are assessed based on the subsurface profile conditions present at the time of fieldwork and may vary according to any subsequent *Site works* carried out. *Site works* may include changes to the existing soil profile by cutting more than 0.5 m and filling more than 0.4 to 0.8 m depending on the type of material and the design of the footing. All footings must be founded through fill *other than* sand not exceeding 0.4 m depth or sand not exceeding 0.8 m depth, or otherwise a Class P applies (AS2870 Clauses 2.5.2 and 2.5.3).

For reference, borehole investigation depths relative to natural soil surface levels are stated in borehole logs where applicable.

In some cases, variations in actual Site conditions may exist between subsurface investigation boreholes. At the time of construction, if conditions exist which differ from those described in this report, it is recommended that the base of all footing excavations be inspected to ensure that the founding medium meets the requirement referenced herein or stipulated by an engineer before any footings are poured.

The site classification assumes that the performance requirements as set out in Appendix B of AS 2870 are acceptable and that site foundation maintenance is carried out to avoid extreme wetting and drying.

It is the responsibility of the homeowner to ensure that the soil conditions are maintained and that abnormal moisture conditions do not develop around the building. The following are examples of poor practises that can result in abnormal soil conditions:

- The effect of trees being too close to a footing.
- Excessive or irregular watering of gardens adjacent to the building.
- Failure to maintain Site drainage.
- Failure to repair plumbing leaks.
- Loss of vegetation near the building.

The pages that make up the last six pages of this report are an integral part of this report. The notes contain advice and recommendations for all stakeholders in this project (i.e. the structural engineer, builder, owner, and future owners) and should be read and followed by all concerned.

References

AS 1289.6.3.2-2003 Soil strength and consolidation tests - Determination of the penetration resistance of a soil - 9 kg dynamic cone penetrometer test, Standards Australia, Sydney, Retrieved from SAI Global

AS 1289.7.1.1-2003 Methods of testing soils for engineering purposes Method 7.1.1: Soil reactivity tests—Determination of the shrinkage index of a soil—Shrink-swell index, Standards Australia, Sydney, Retrieved from SAI Global

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AS4055 (2021). Australian Standard. Prepared by Committee BD-099, Wind Loads for Housing. Approved on behalf of the Council of Standards Australia on 1st June 2021 and published on 25th June 2021.

DPIPWE 2009. Dispersive Soils and their Management. Technical Reference Manual. Sustainable Land Use Department of Primary Industries Water and Environment.

Webster, S.L., Brown, R.W. and Porter, J.R. (1994) Force Projection Site Evaluation Using the Electric Cone Penetrometer (ECP) and the Dynamic Cone Penetrometer (DCP). Technical Report No. GL-94-17, Air Force Civil Engineering Support Agency, US Air Force, Tyndall Air Force Base, FL.

Appendix A Mapping

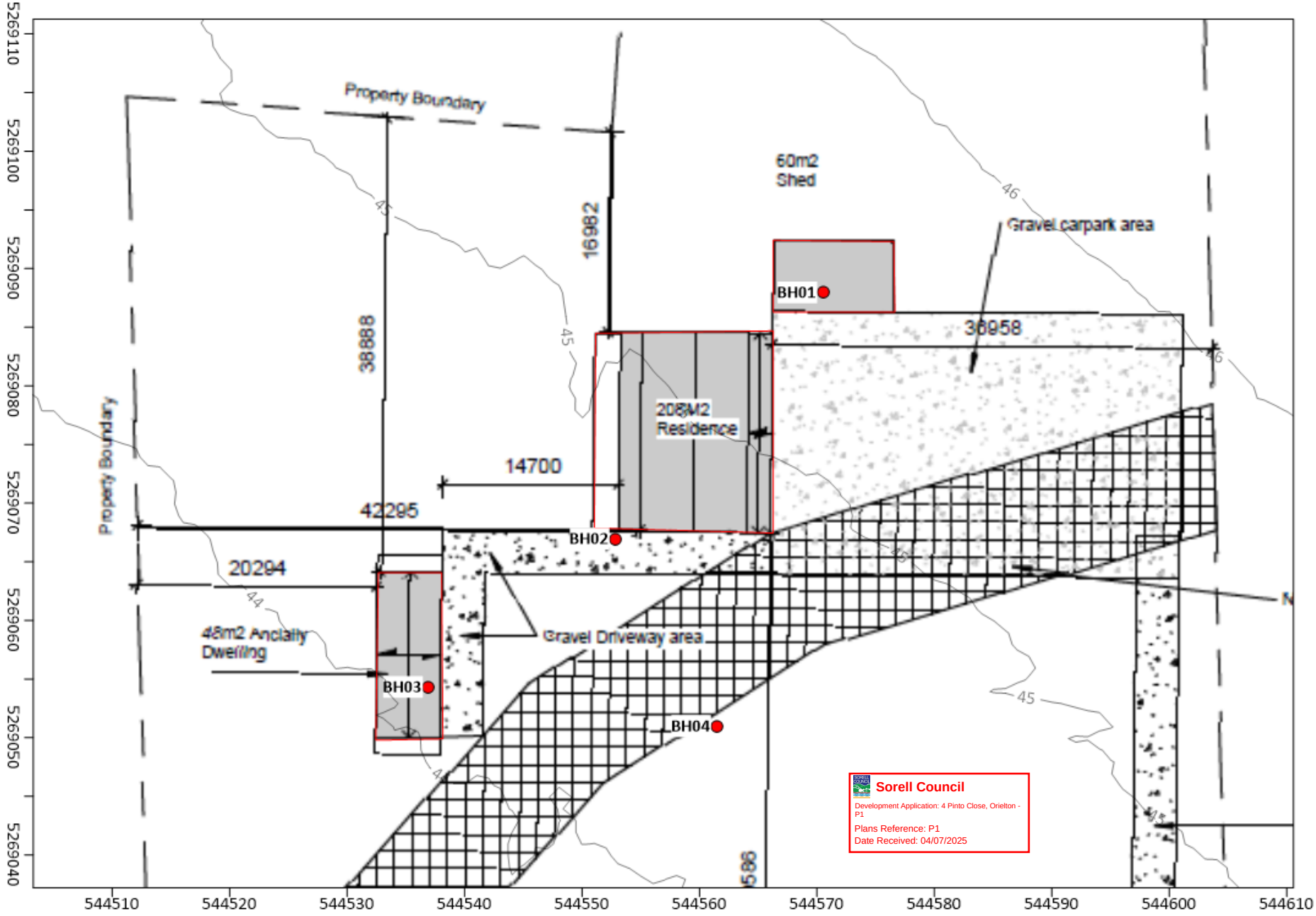

Figure 1 Site Borehole Locations

Appendix B Borehole Logs

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ASSESSMENT: Foundation Classification
STRUCTURE: Dwellings And Shed
EASTING: 544571 **HORIZONTAL**
NORTHING: 5269088 **ACCURACY:** 1m

HOLE ID NO.: BH01
DATE TESTED: 30/05/2025
LOGGED BY: M. Scalisi
ELEVATION: 44.00

LOCATION: 4 Pinto Close - Orielton
CLIENT: Sheds n Homes

EQUIPMENT: AMS Powerprobe 9120 RAP
NATURAL SURFACE (RL):

DEPTH (m)	GRAPHIC	DESCRIPTION	LAYER	DENSITY CONSISTENCY STRENGTH	MOISTURE INDEX	%	SAMPLES	TEST	Cu (kPa)	UCS (kg/cm²)	BLOW COUNT	DCP blows/100mm
0.0	CI	TOPSOIL: Silty Sandy CLAY, black, medium plasticity, fine grained sand	1	stiff	Dry	18	DS				3.0	
											2.9	
	CH	CLAY with sand, dusky red, high plasticity	2		Slightly Moist	19	DS				4.0	
0.5											2.8	
											8.0	
				stiff to very stiff							7.0	
											7.0	
	CH	CLAY trace sand, dark greyish brown, high plasticity, fine grained sand	3		Slightly Moist	31	DS				7.0	
1.0											7.0	
											5.0	
											3.0	
											3.0	
											3.0	
1.5											8.0	
	ML	SOIL & COBBLES: Gravelly SILT trace sand, olive yellow, well sorted, low plasticity	5	very stiff	Dry	14	DS				REF	
2.0												
		Borehole Ended At Target Depth End of borehole at 2.3m depth.										

GROUNDWATER: Not Encountered
TESTING: Penetrometer: AS 1289.6.3.2

PAGE 1 of 1

Where blows per 100mm are less than 1, distance travelled per penetrometer blow is measured and converted to blows per 100mm.
DS - Disturbed Sample; U50 - Undisturbed 50mm Core; FV - Field Vane (Ømm); PP - Pocket Penetrometer; CBR - Califronian Bearing Ratio: PV - Pocket Vane

enviro·tech CONSULTANTS

ASSESSMENT: Foundation Classification
STRUCTURE: Dwellings And Shed
EASTING: 544553 **HORIZONTAL**
NORTHING: 5269067 **ACCURACY:** 1m

HOLE ID NO.: BH02
DATE TESTED: 30/05/2025
LOGGED BY: M. Scalisi
ELEVATION: 45.00

LOCATION: 4 Pinto Close - Orielton
CLIENT: Sheds n Homes

EQUIPMENT: Core & Auger
NATURAL SURFACE (RL):

DEPTH (m)	GRAPHIC	DESCRIPTION	LAYER	DENSITY CONSISTENCY STRENGTH	MOISTURE INDEX %	SAMPLES	TEST	Cu (kPa)	UCS (kg/cm²)	BLOW COUNT	DCP blows/100mm
0.0	CI	TOPSOIL: Silty Sandy CLAY, black, medium plasticity, fine grained sand	1	stiff	Dry					3.0	
	CH	CLAY with sand, dusky red, high plasticity	2	firm to very stiff	Slightly Moist					5.0 2.9 5.0	
0.5										1.8 1.8	
	CH	CLAY trace sand, dark greyish brown, high plasticity, fine grained sand	3	soft to firm	Wet					0.9 0.8 1.7	
1.0	SM	Silty SAND with clay, dark greyish brown, well sorted, fine to medium grained sand	4	medium dense to dense	Moist	8	DS			5.0 5.0 13.0 12.0 12.0	
1.5	ML	SOIL & COBBLES: Gravelly SILT trace sand, olive yellow, well sorted, low plasticity	5	very stiff to hard	Dry					REF	
2.0		Borehole Ended At Target Depth End of borehole at 2.3m depth.									

GROUNDWATER: Encountered at 0.6 m Below Ground Surface
TESTING: Penetrometer: AS 1289.6.3.2

PAGE 1 of 1

Where blows per 100mm are less than 1, distance travelled per penetrometer blow is measured and converted to blows per 100mm.
DS - Disturbed Sample; U50 - Undisturbed 50mm Core; FV - Field Vane (Ømm); PP - Pocket Penetrometer; CBR - Califronian Bearing Ratio: PV - Pocket Vane

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ASSESSMENT: Foundation Classification
STRUCTURE: Dwellings And Shed
EASTING: 544537 **HORIZONTAL**
NORTHING: 5269054 **ACCURACY:** 1m

HOLE ID NO.: BH03
DATE TESTED: 30/05/2025
LOGGED BY: M. Scalisi
ELEVATION: 44.00

LOCATION: 4 Pinto Close - Orielton
CLIENT: Sheds n Homes

EQUIPMENT: AMS Powerprobe 9120 RAP
NATURAL SURFACE (RL):

DEPTH (m)	GRAPHIC	DESCRIPTION	LAYER	DENSITY CONSISTENCY STRENGTH	MOISTURE INDEX %	SAMPLES	TEST	Cu (kPa)	UCS (kg/cm²)	BLOW COUNT	DCP blows/100mm
0.0	CI	TOPSOIL: Silty Sandy CLAY, black, medium plasticity, fine grained sand	1	firm to very stiff	Dry					2.0 2.9 5.0	
0.5	CH	CLAY with sand, dusky red, high plasticity	2	firm to stiff	Moist		PP PP		2.0 1.1	2.8 1.8 1.8	
1.0	CH	CLAY trace sand, dark greyish brown, high plasticity, fine grained sand	3	soft to very stiff	Wet		PP		0.6	0.9 0.8 1.7	
1.5	ML	SOIL & COBBLES: Gravelly SILT trace sand, olive yellow, well sorted, low plasticity	5	hard	Dry					4.0 5.0 10.0 14.0 20.0	
2.0		Borehole Ended At Target Depth End of borehole at 2.3m depth.								REF	

DCP blows/100mm: 0 5 10 15 20

Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

GROUNDWATER: Encountered at 0.6 m Below Ground Surface

TESTING: Penetrometer: AS 1289.6.3.2

Where blows per 100mm are less than 1, distance travelled per penetrometer blow is measured and converted to blows per 100mm.

DS - Disturbed Sample; U50 - Undisturbed 50mm Core; FV - Field Vane (Ømm); PP - Pocket Penetrometer; CBR - Califronian Bearing Ratio: PV - Pocket Vane

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ASSESSMENT: Foundation Classification
STRUCTURE: Dwellings And Shed
EASTING: 544561 **HORIZONTAL**
NORTHING: 5269051 **ACCURACY:** 1m

HOLE ID NO.: BH04
DATE TESTED: 30/05/2025
LOGGED BY: M. Scalisi
ELEVATION: 44.00

LOCATION: 4 Pinto Close - Orielton
CLIENT: Sheds n Homes

EQUIPMENT: Power Auger
NATURAL SURFACE (RL):

DEPTH (m)	GRAPHIC	DESCRIPTION	LAYER	DENSITY CONSISTENCY STRENGTH	MOISTURE INDEX %	SAMPLES	TEST	Cu (kPa)	UCS (kg/cm²)	BLOW COUNT	blows/100mm 0 5 10 15 20
0.0	CI	TOPSOIL: Silty Sandy CLAY, black, medium plasticity, fine grained sand	1	stiff to very stiff	Dry						
0.5	CH	CLAY with sand, dusky red, high plasticity	2	firm to very stiff	Moist						
	CH	CLAY trace sand, dark greyish brown, high plasticity, fine grained sand	3	soft to very stiff	Wet						
1.0	ML	SOIL & COBBLES: Gravelly SILT trace sand, olive yellow, well sorted, low plasticity	5	very stiff to hard	Dry						
1.5		Refusal in very stiff to hard, olive yellow SOIL & COBBLES: Gravelly SILT trace sand End of borehole at 1.5m depth.									

GROUNDWATER: Encountered at 0.7 m Below Ground Surface
TESTING: Permeameter: AS 1289.6.7.3

Where blows per 100mm are less than 1, distance travelled per penetrometer blow is measured and converted to blows per 100mm.
DS - Disturbed Sample; U50 - Undisturbed 50mm Core; FV - Field Vane (Ømm); PP - Pocket Penetrometer; CBR - Califronian Bearing Ratio: PV - Pocket Vane

Appendix C Core Photographs

BH01

BH02

*** 1 metre core tray length**

BH03

BH04

*** 1 metre core tray length**

Appendix D Geotechnical Testing

Dynamic Cone Penetrometer (DCP)

Dynamic cone penetrometer (DCP) testing was conducted according to AS 1289.6.3.2 with the results presented in Appendix B.

Soil Dispersion (Emerson aggregate test)

Select soil samples were tested for dispersion susceptibility using the Emerson Class number method according to AS1289.3.8.1. The results presented in Table 4 demonstrate that:

- Dispersion susceptibility: Two of the five soil layers are Class 1, indicating high dispersion risk (Layers 2 and 5 – CLAY at 0.4 m and Gravelly SILT at 1.8 m).
- Moderate risk layers: Three layers are Class 2, indicating moderate dispersion risk (Silty-Sandy CLAY at 0.1 m, CLAY at 1.1 m, and Silty SAND at 1.3 m).
- Stability trend: All tested layers show some level of dispersion risk, with high-risk soils found both near the surface and at depth, requiring careful management during excavation and drainage works.

Table 4 Summary of the Emerson class results.

Layer	Soil	Depth	Sample ID	Emersion Class	Date Tested	Water	pH
1	Silty Sandy CLAY	0.1	BH01 0.1	Class 2	11/06/2025	DI 16°C	6.1
2	CLAY	0.4	BH01 0.4	Class 1	11/06/2025	DI 16°C	6.44
3	CLAY	1.1	BH01 1.1	Class 2	11/06/2025	DI 16°C	6.52
4	Silty SAND	1.3	BH02 1.3	Class 2	11/06/2025	DI 16°C	6.83
5	Gravelly SILT	1.8	BH01 1.8	Class 1	11/06/2025	DI 16°C	6.46

Permeameter Testing

Permeameter testing was carried out in borehole BH04. A soil auger was used to excavate the Soil to prepare for the test to ensure the soak well was effectively draining. Where applicable, the reported water table height has been used as the test depth. Results are presented Table 5.

Table 5 Permeameter testing results.

Borehole	Hole Depth (m)	Hole Diameter (mm)	Test Duration (min)	Flow Rate (cm3/min)	Ksat (m/day)	Ksat (mm/hr)
BH04	1.4	65	15.0	10.7	4.1E-03	0.2

Appendix E Geotechnical Interpretation

Footing Minimum Target Depths

Footing design for the proposed structures are to consider the depths of limiting layers at the base of potentially problematic soils. Where practical/allowable, thickened beams may be deepened through problematic soil layers according to engineering specifications (Table 6). Table 7 should be referred to where only 50kPa allowable bearing capacity is required.

Table 6 also presents a summary of the estimated soil depths and associated layers where less than 10mm of vertical soil movement can expected due to soil moisture fluctuations from normal seasonal wetting and drying cycles. Where 10mm tolerances are required, concentrated loads including but not limited to slab edge or internal beam or strip footings shall be supported directly on piers in accordance with minimum target layer depths presented in Table 6, with considerations given to required bearing capacities in accordance with Table 7.

Table 6 Soil characteristic surface movements and recommended footing minimum target depths

	Residence	Residence & Ancillary Dwelling	Ancillary Dwelling
Footing design parameters	**BH01**	**BH02**	**BH03**
Ys Calculation Depth	0m^	0m^	0m^
Surface movement Ys (mm)	55	45	50
Soil reactivity class	H1	H1	H1
Base of problem soil layer (m)*	-	0.8	0.8
Layer at base of problem soil*	-	3	3
Pier/Footing minimum target depth (m)#	>1.4^	>1.7^	1.2^
Pier/footing minimum target layer#	5	5	5
Allowable bearing capacity at min target depth (kPa) #	400	400	400

- No problem layers encountered

^ Calculations relative to surface of borehole at the time of investigation

~ Calculated based on revised soil profile depth/thickness following indicative cut and fill. Inferred fill reactivity indicated (Iss value) which is typically based on more reactive soils expected to be encountered within inferred cut.

* Base of problematic soil layer depth below top of borehole surface at the time of testing to achieve 100 kPa allowable bearing capacity or greater.

Target soil layer depth where Ys values from normal wetting and drying cycles are estimated at less than 10mm vertical movement. >minimum bored pier depths (see bearing capacity table for bored pier design depths).

Soil and Rock Allowable Bearing Capacity & End Bearing Capacity

Soil allowable bearing capacity was calculated from correlations with DCP blow counts. A recommended safety factor of 3 is applied in accordance with AS2870. Where high clay and silt content is observed in the soil, soil allowable bearing capacity is determined from undrained shear strengths using field vane correlated DCP values. Interpretive bearing capacity values are presented in Table 7.

Table 7 Soil allowable bearing capacities and problematic ground conditions.

Depth below investigation surface (m)	Allowable Bearing Capacity (kPa)		
	BH01	BH02	BH03
0	**110***	150	100
0.1	**130**	140	130
0.2	**140**	180	150
0.3	**210**	140	140
0.4	**250**	130	100
0.5	**300**	70~	70~
0.6	**280**	60~	60~
0.7	**280**	60~	60~
0.8	**250**	**110***	**100***
0.9	**210**	**170**	**150**
1	**160**	**340**	**280**
1.1	**140**	**>400**	**>400**
1.2	**200**	**>400**	**>400**
1.3	**240**	**>400**	**>400**
1.4	**REF**	**REF**	**REF**

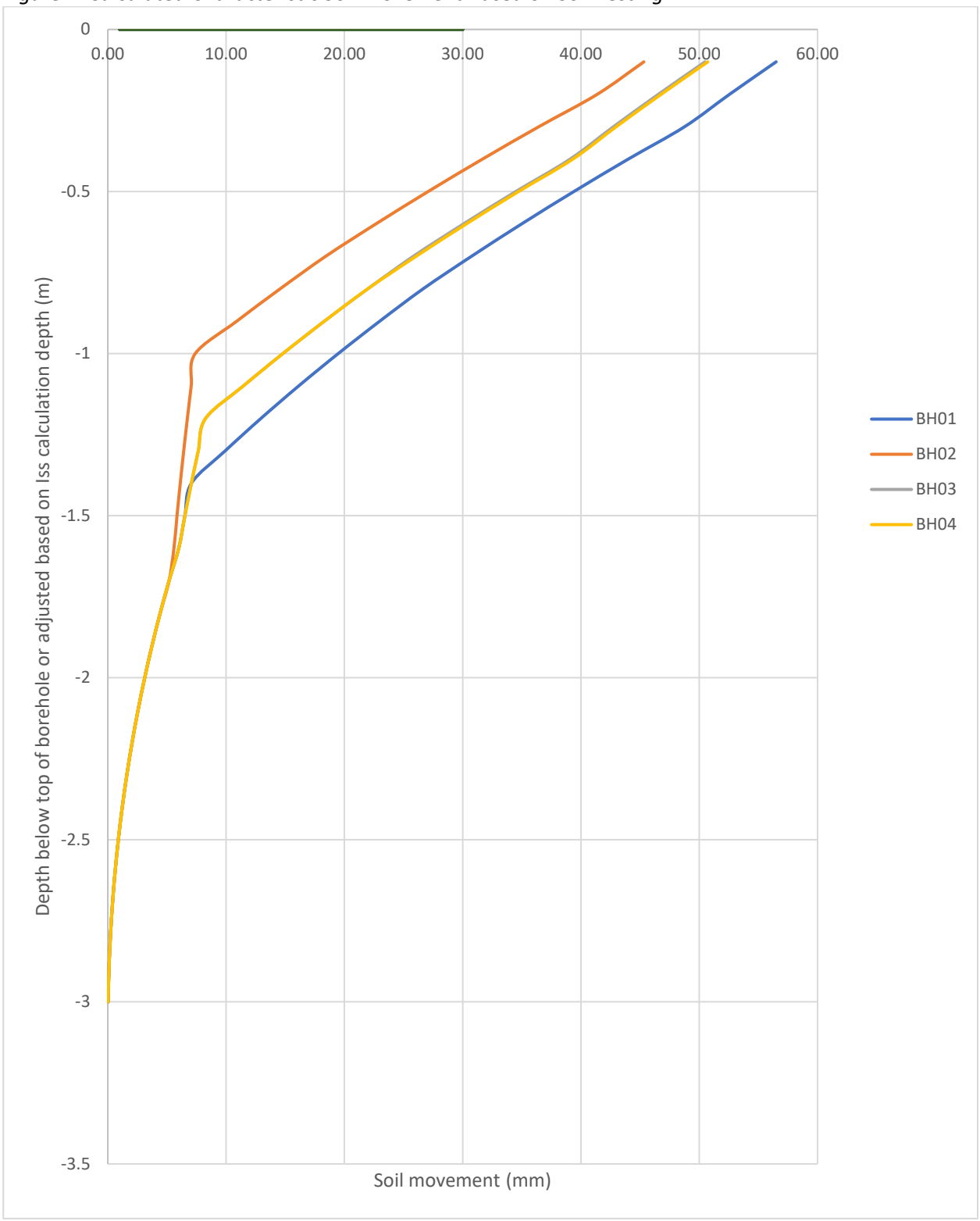
Correlations drawn from DCP and vane shear testing.
REF - Penetrometer Refusal
^ Footings to be founded through the FILL
~ Problematic soil layer attributed to loose, soft, or low allowable bearing capacity soil (<100 kPa)
*Soil layer expected at the base of problematic soil layers at test location (or at surface where problematic soils not encountered) to achieve 100 kPa allowable bearing capacity or greater.

Characteristic Surface Movement (Ys)

The characteristic surface movement (soil reactivity) is calculated according to AS 2870 Section 2.3. The calculations are based on Iss % testing results where applicable and are based on complete soil profiles for boreholes drilled within the building Site. In the case of where cut and fill are proposed and building finished floor levels (FFL) are made available, the Iss value is recalculated based on the FFL and estimated cut and fill as per Table 6.

According to AS 2870 Section 2.3, calculations consider the depth of groundwater and bedrock. Soil characteristic surface movements from normal wetting and drying cycles are presented in Figure 2.

Figure 2 Calculated Characteristic Soil Movement Based on Soil Testing



Foundation Maintenance and Footing Performance:
A Homeowner's Guide

CSIRO

BTF 18
replaces
Information
Sheet 10/91

Buildings can and often do move. This movement can be up, down, lateral or rotational. The fundamental cause of movement in buildings can usually be related to one or more problems in the foundation soil. It is important for the homeowner to identify the soil type in order to ascertain the measures that should be put in place in order to ensure that problems in the foundation soil can be prevented, thus protecting against building movement.

This Building Technology File is designed to identify causes of soil-related building movement, and to suggest methods of prevention of resultant cracking in buildings.

Soil Types

The types of soils usually present under the topsoil in land zoned for residential buildings can be split into two approximate groups – granular and clay. Quite often, foundation soil is a mixture of both types. The general problems associated with soils having granular content are usually caused by erosion. Clay soils are subject to saturation and swell/shrink problems.

Classifications for a given area can generally be obtained by application to the local authority, but these are sometimes unreliable and if there is doubt, a geotechnical report should be commissioned. As most buildings suffering movement problems are founded on clay soils, there is an emphasis on classification of soils according to the amount of swell and shrinkage they experience with variations of water content. The table below is Table 2.1 from AS 2870, the Residential Slab and Footing Code.

Causes of Movement

Settlement due to construction
There are two types of settlement that occur as a result of construction:

- Immediate settlement occurs when a building is first placed on its foundation soil, as a result of compaction of the soil under the weight of the structure. The cohesive quality of clay soil mitigates against this, but granular (particularly sandy) soil is susceptible.
- Consolidation settlement is a feature of clay soil and may take place because of the expulsion of moisture from the soil or because of the soil's lack of resistance to local compressive or shear stresses. This will usually take place during the first few months after construction, but has been known to take many years in exceptional cases.

These problems are the province of the builder and should be taken into consideration as part of the preparation of the site for construction. Building Technology File 19 (BTF 19) deals with these problems.

Erosion
All soils are prone to erosion, but sandy soil is particularly susceptible to being washed away. Even clay with a sand component of say 10% or more can suffer from erosion.

Saturation
This is particularly a problem in clay soils. Saturation creates a bog-like suspension of the soil that causes it to lose virtually all of its bearing capacity. To a lesser degree, sand is affected by saturation because saturated sand may undergo a reduction in volume – particularly imported sand fill for bedding and blinding layers. However, this usually occurs as immediate settlement and should normally be the province of the builder.

Seasonal swelling and shrinkage of soil
All clays react to the presence of water by slowly absorbing it, making the soil increase in volume (see table below). The degree of increase varies considerably between different clays, as does the degree of decrease during the subsequent drying out caused by fair weather periods. Because of the low absorption and expulsion rate, this phenomenon will not usually be noticeable unless there are prolonged rainy or dry periods, usually of weeks or months, depending on the land and soil characteristics.

The swelling of soil creates an upward force on the footings of the building, and shrinkage creates subsidence that takes away the support needed by the footing to retain equilibrium.

Shear failure
This phenomenon occurs when the foundation soil does not have sufficient strength to support the weight of the footing. There are two major post-construction causes:

- Significant load increase.
- Reduction of lateral support of the soil under the footing due to erosion or excavation.
- In clay soil, shear failure can be caused by saturation of the soil adjacent to or under the footing.

GENERAL DEFINITIONS OF SITE CLASSES

Class	Foundation
A	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites with only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which can experience moderate ground movement from moisture changes
H	Highly reactive clay sites, which can experience high ground movement from moisture changes
E	Extremely reactive sites, which can experience extreme ground movement from moisture changes
A to P	Filled sites
P	Sites which include soft soils, such as soft clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soils subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise

Tree root growth
Trees and shrubs that are allowed to grow in the vicinity of footings can cause foundation soil movement in two ways:

- Roots that grow under footings may increase in cross-sectional size, exerting upward pressure on footings.
- Roots in the vicinity of footings will absorb much of the moisture in the foundation soil, causing shrinkage or subsidence.

Unevenness of Movement

The types of ground movement described above usually occur unevenly throughout the building's foundation soil. Settlement due to construction tends to be uneven because of:

- Differing compaction of foundation soil prior to construction.
- Differing moisture content of foundation soil prior to construction.

Movement due to non-construction causes is usually more uneven still. Erosion can undermine a footing that traverses the flow or can create the conditions for shear failure by eroding soil adjacent to a footing that runs in the same direction as the flow.

Saturation of clay foundation soil may occur where subfloor walls create a dam that makes water pond. It can also occur wherever there is a source of water near footings in clay soil. This leads to a severe reduction in the strength of the soil which may create local shear failure.

Seasonal swelling and shrinkage of clay soil affects the perimeter of the building first, then gradually spreads to the interior. The swelling process will usually begin at the uphill extreme of the building, or on the weather side where the land is flat. Swelling gradually reaches the interior soil as absorption continues. Shrinkage usually begins where the sun's heat is greatest.

Effects of Uneven Soil Movement on Structures

Erosion and saturation
Erosion removes the support from under footings, tending to create subsidence of the part of the structure under which it occurs. Brickwork walls will resist the stress created by this removal of support by bridging the gap or cantilevering until the bricks or the mortar bedding fail. Older masonry has little resistance. Evidence of failure varies according to circumstances and symptoms may include:

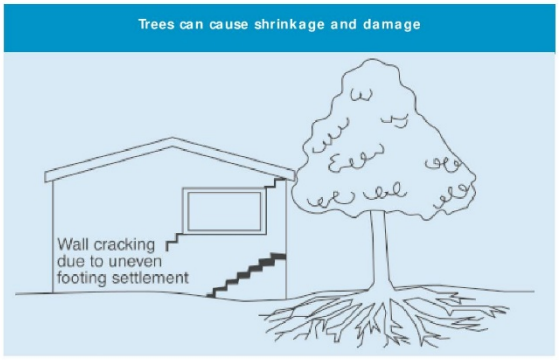
- Step cracking in the mortar beds in the body of the wall or above/below openings such as doors or windows.
- Vertical cracking in the bricks (usually but not necessarily in line with the vertical beds or perpends).

Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

Seasonal swelling/shrinkage in clay
Swelling foundation soil due to rainy periods first lifts the most exposed extremities of the footing system, then the remainder of the perimeter footings while gradually permeating inside the building footprint to lift internal footings. This swelling first tends to create a dish effect, because the external footings are pushed higher than the internal ones.

The first noticeable symptom may be that the floor appears slightly dished. This is often accompanied by some doors binding on the floor or the door head, together with some cracking of cornice mitres. In buildings with timber flooring supported by bearers and joists, the floor can be bouncy. Externally there may be visible dishing of the hip or ridge lines.

As the moisture absorption process completes its journey to the innermost areas of the building, the internal footings will rise. If the spread of moisture is roughly even, it may be that the symptoms will temporarily disappear, but it is more likely that swelling will be uneven, creating a difference rather than a disappearance in symptoms. In buildings with timber flooring supported by bearers and joists, the isolated piers will rise more easily than the strip footings or piers under walls, creating noticeable doming of flooring.



As the weather pattern changes and the soil begins to dry out, the external footings will be first affected, beginning with the locations where the sun's effect is strongest. This has the effect of lowering the external footings. The doming is accentuated and cracking reduces or disappears where it occurred because of dishing, but other cracks open up. The roof lines may become convex.

Doming and dishing are also affected by weather in other ways. In areas where warm, wet summers and cooler dry winters prevail, water migration tends to be toward the interior and doming will be accentuated, whereas where summers are dry and winters are cold and wet, migration tends to be toward the exterior and the underlying propensity is toward dishing.

Movement caused by tree roots
In general, growing roots will exert an upward pressure on footings, whereas soil subject to drying because of tree or shrub roots will tend to remove support from under footings by inducing shrinkage.

Complications caused by the structure itself
Most forces that the soil causes to be exerted on structures are vertical – i.e. either up or down. However, because these forces are seldom spread evenly around the footings, and because the building resists uneven movement because of its rigidity, forces are exerted from one part of the building to another. The net result of all these forces is usually rotational. This resultant force often complicates the diagnosis because the visible symptoms do not simply reflect the original cause. A common symptom is binding of doors on the vertical member of the frame.

Effects on full masonry structures
Brickwork will resist cracking where it can. It will attempt to span areas that lose support because of subsided foundations or raised points. It is therefore usual to see cracking at weak points, such as openings for windows or doors.

In the event of construction settlement, cracking will usually remain unchanged after the process of settlement has ceased.

With local shear or erosion, cracking will usually continue to develop until the original cause has been remedied, or until the subsidence has completely neutralised the affected portion of footing and the structure has stabilised on other footings that remain effective.

In the case of swell/shrink effects, the brickwork will in some cases return to its original position after completion of a cycle, however it is more likely that the rotational effect will not be exactly reversed, and it is also usual that brickwork will settle in its new position and will resist the forces trying to return it to its original position. This means that in a case where swelling takes place after construction and cracking occurs, the cracking is likely to at least partly remain after the shrink segment of the cycle is complete. Thus, each time the cycle is repeated, the likelihood is that the cracking will become wider until the sections of brickwork become virtually independent.

With repeated cycles, once the cracking is established, if there is no other complication, it is normal for the incidence of cracking to stabilise, as the building has the articulation it needs to cope with the problem. This is by no means always the case, however, and monitoring of cracks in walls and floors should always be treated seriously.

Upheaval caused by growth of tree roots under footings is not a simple vertical shear stress. There is a tendency for the root to also exert lateral forces that attempt to separate sections of brickwork after initial cracking has occurred.

The normal structural arrangement is that the inner leaf of brickwork in the external walls and at least some of the internal walls (depending on the roof type) comprise the load-bearing structure on which any upper floors, ceilings and the roof are supported. In these cases, it is internally visible cracking that should be the main focus of attention, however there are a few examples of dwellings whose external leaf of masonry plays some supporting role, so this should be checked if there is any doubt. In any case, externally visible cracking is important as a guide to stresses on the structure generally, and it should also be remembered that the external walls must be capable of supporting themselves.

Effects on framed structures
Timber or steel framed buildings are less likely to exhibit cracking due to swell/shrink than masonry buildings because of their flexibility. Also, the doming/dishing effects tend to be lower because of the lighter weight of walls. The main risks to framed buildings are encountered because of the isolated pier footings used under walls. Where erosion or saturation cause a footing to fall away, this can double the span which a wall must bridge. This additional stress can create cracking in wall linings, particularly where there is a weak point in the structure caused by a door or window opening. It is, however, unlikely that framed structures will be so stressed as to suffer serious damage without first exhibiting some or all of the above symptoms for a considerable period. The same warning period should apply in the case of upheaval. It should be noted, however, that where framed buildings are supported by strip footings there is only one leaf of brickwork and therefore the externally visible walls are the supporting structure for the building. In this case, the subfloor masonry walls can be expected to behave as full brickwork walls.

Effects on brick veneer structures
Because the load-bearing structure of a brick veneer building is the frame that makes up the interior leaf of the external walls plus perhaps the internal walls, depending on the type of roof, the building can be expected to behave as a framed structure, except that the external masonry will behave in a similar way to the external leaf of a full masonry structure.

Water Service and Drainage

Where a water service pipe, a sewer or stormwater drainage pipe is in the vicinity of a building, a water leak can cause erosion, swelling or saturation of susceptible soil. Even a minuscule leak can be enough to saturate a clay foundation. A leaking tap near a building can have the same effect. In addition, trenches containing pipes can become watercourses even though backfilled, particularly where broken rubble is used as fill. Water that runs along these trenches can be responsible for serious erosion, interstrata seepage into subfloor areas and saturation.

Pipe leakage and trench water flows also encourage tree and shrub roots to the source of water, complicating and exacerbating the problem.
Poor roof plumbing can result in large volumes of rainwater being concentrated in a small area of soil:

- Incorrect falls in roof guttering may result in overflows, as may gutters blocked with leaves etc.
- Corroded guttering or downpipes can spill water to ground.
- Downpipes not positively connected to a proper stormwater collection system will direct a concentration of water to soil that is directly adjacent to footings, sometimes causing large-scale problems such as erosion, saturation and migration of water under the building.

Seriousness of Cracking

In general, most cracking found in masonry walls is a cosmetic nuisance only and can be kept in repair or even ignored. The table below is a reproduction of Table C1 of AS 2870.

AS 2870 also publishes figures relating to cracking in concrete floors, however because wall cracking will usually reach the critical point significantly earlier than cracking in slabs, this table is not reproduced here.

Prevention/ Cure

Plumbing
Where building movement is caused by water service, roof plumbing, sewer or stormwater failure, the remedy is to repair the problem. It is prudent, however, to consider also rerouting pipes away from the building where possible, and relocating taps to positions where any leakage will not direct water to the building vicinity. Even where gully traps are present, there is sometimes sufficient spill to create erosion or saturation, particularly in modern installations using smaller diameter PVC fixtures. Indeed, some gully traps are not situated directly under the taps that are installed to charge them, with the result that water from the tap may enter the backfilled trench that houses the sewer piping. If the trench has been poorly backfilled, the water will either pond or flow along the bottom of the trench. As these trenches usually run alongside the footings and can be at a similar depth, it is not hard to see how any water that is thus directed into a trench can easily affect the foundation's ability to support footings or even gain entry to the subfloor area.

Ground drainage
In all soils there is the capacity for water to travel on the surface and below it. Surface water flows can be established by inspection during and after heavy or prolonged rain. If necessary, a grated drain system connected to the stormwater collection system is usually an easy solution.

It is, however, sometimes necessary when attempting to prevent water migration that testing be carried out to establish watertable height and subsoil water flows. This subject is referred to in BTF 19 and may properly be regarded as an area for an expert consultant.

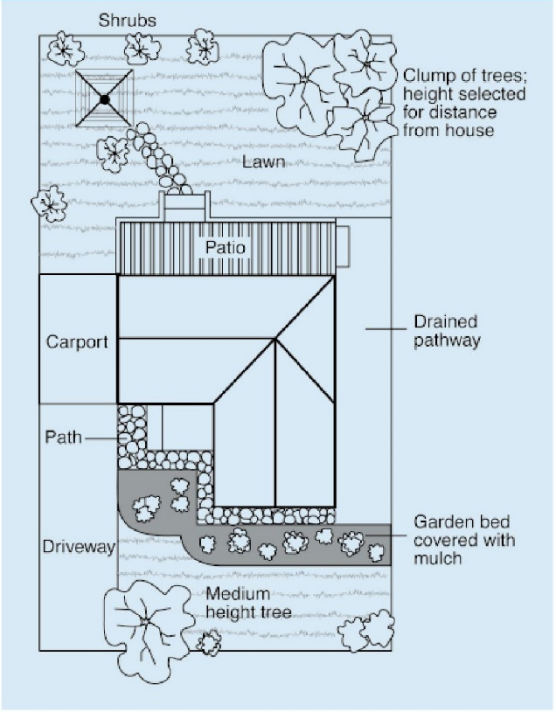
Protection of the building perimeter
It is essential to remember that the soil that affects footings extends well beyond the actual building line. Watering of garden plants, shrubs and trees causes some of the most serious water problems.

For this reason, particularly where problems exist or are likely to occur, it is recommended that an apron of paving be installed around as much of the building perimeter as necessary. This paving

CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS

Description of typical damage and required repair	Approximate crack width limit (see Note 3)	Damage category
Hairline cracks	<0.1 mm	0
Fine cracks which do not need repair	<1 mm	1
Cracks noticeable but easily filled. Doors and windows stick slightly	<5 mm	2
Cracks can be repaired and possibly a small amount of wall will need to be replaced. Doors and windows stick. Service pipes can fracture. Weathertightness often impaired	5–15 mm (or a number of cracks 3 mm or more in one group)	3
Extensive repair work involving breaking-out and replacing sections of walls, especially over doors and windows. Window and door frames distort. Walls lean or bulge noticeably, some loss of bearing in beams. Service pipes disrupted	15–25 mm but also depend on number of cracks	4

Gardens for a reactive site



should extend outwards a minimum of 900 mm (more in highly reactive soil) and should have a minimum fall away from the building of 1:60. The finished paving should be no less than 100 mm below brick vent bases.

It is prudent to relocate drainage pipes away from this paving, if possible, to avoid complications from future leakage. If this is not practical, earthenware pipes should be replaced by PVC and backfilling should be of the same soil type as the surrounding soil and compacted to the same density.

Except in areas where freezing of water is an issue, it is wise to remove taps in the building area and relocate them well away from the building – preferably not uphill from it (see BTF 19).

It may be desirable to install a grated drain at the outside edge of the paving on the uphill side of the building. If subsoil drainage is needed this can be installed under the surface drain.

Condensation
In buildings with a subfloor void such as where bearers and joists support flooring, insufficient ventilation creates ideal conditions for condensation, particularly where there is little clearance between the floor and the ground. Condensation adds to the moisture already present in the subfloor and significantly slows the process of drying out. Installation of an adequate subfloor ventilation system, either natural or mechanical, is desirable.

Warning: Although this Building Technology File deals with cracking in buildings, it should be said that subfloor moisture can result in the development of other problems, notably:

- Water that is transmitted into masonry, metal or timber building elements causes damage and/or decay to those elements.
- High subfloor humidity and moisture content create an ideal environment for various pests, including termites and spiders.
- Where high moisture levels are transmitted to the flooring and walls, an increase in the dust mite count can ensue within the living areas. Dust mites, as well as dampness in general, can be a health hazard to inhabitants, particularly those who are abnormally susceptible to respiratory ailments.

The garden
The ideal vegetation layout is to have lawn or plants that require only light watering immediately adjacent to the drainage or paving edge, then more demanding plants, shrubs and trees spread out in that order.

Overwatering due to misuse of automatic watering systems is a common cause of saturation and water migration under footings. If it is necessary to use these systems, it is important to remove garden beds to a completely safe distance from buildings.

Existing trees
Where a tree is causing a problem of soil drying or there is the existence or threat of upheaval of footings, if the offending roots are subsidiary and their removal will not significantly damage the tree, they should be severed and a concrete or metal barrier placed vertically in the soil to prevent future root growth in the direction of the building. If it is not possible to remove the relevant roots without damage to the tree, an application to remove the tree should be made to the local authority. A prudent plan is to transplant likely offenders before they become a problem.

Information on trees, plants and shrubs
State departments overseeing agriculture can give information regarding root patterns, volume of water needed and safe distance from buildings of most species. Botanic gardens are also sources of information. For information on plant roots and drains, see Building Technology File 17.

Excavation
Excavation around footings must be properly engineered. Soil supporting footings can only be safely excavated at an angle that allows the soil under the footing to remain stable. This angle is called the angle of repose (or friction) and varies significantly between soil types and conditions. Removal of soil within the angle of repose will cause subsidence.

Remediation

Where erosion has occurred that has washed away soil adjacent to footings, soil of the same classification should be introduced and compacted to the same density. Where footings have been undermined, augmentation or other specialist work may be required. Remediation of footings and foundations is generally the realm of a specialist consultant.

Where isolated footings rise and fall because of swell/shrink effect, the homeowner may be tempted to alleviate floor bounce by filling the gap that has appeared between the bearer and the pier with blocking. The danger here is that when the next swell segment of the cycle occurs, the extra blocking will push the floor up into an accentuated dome and may also cause local shear failure in the soil. If it is necessary to use blocking, it should be by a pair of fine wedges and monitoring should be carried out fortnightly.

This BTF was prepared by John Lewer FAIB, MIAMA, Partner, Construction Diagnosis.

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In issuing this certificate the following matters are relevant –

Documents:

Enviro-Tech Consultants Pty. Ltd. 2025. Site Soil Evaluation for Foundations and Wastewater Report for a Proposed Dwellings And Shed, 4 Pinto Close - Orielton. Unpublished report for Sheds n Homes by Enviro-Tech Consultants Pty. Ltd., 30/05/2025.

Site 'On-site wastewater design report' (CKEMP Design)

References:

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

- An assessment of Site and soil conditions for on-site wastewater management and design

Scope and/or Limitations

*Site and soil evaluation by Enviro-Tech Consultants Pty. Ltd.
Land application system design is assessed in a separate 'On-site wastewater report' by a licensed building service designer:
- Chris Fysh Licensed Building Services Designer - Civil / Hydraulic (License No: 479819732)

I certify the matters described in this certificate.

Qualified person:

Signed: 

Certificate No:

Date: 30/05/2025

ON-SITE WASTEWATER REPORT

Sheds N Homes

4 Pinto Close - Orielton

Fysh Design Reference: ***CKD-HYD-287***

Date:23/06/2025

Rev 0 – For Approval

TABLE OF CONTENTS

1. INTRODUCTION AND SCOPE OF ENGAGEMENT

Fysh Design has been engaged to provide a design for a new wastewater system for the proposed 2-bedroom dwelling at 4 Pinto Close, Orielton

The proposed dwelling will have **3 bedrooms.**

The following report outlines the methodology and assumptions used for the proposed AWTS secondary treatment system.

2. WASTEWATER DESIGN

Site Conditions

Client: Sheds N Homes

Address: 4 **Pinto Close, Orielton**

Site Area – Approx 10000m2

Building Type – Proposed residential dwelling

Drainage lines & Water Courses – Free drainage with overland flow run off directly from the northeast, no groundwater encountered.

Vegetation – Mixed native grass species, native trees, bushland

Rainfall in the previous 7 days – 67.8mm (Campania Weather Station)

Average slope approx. Gentle slope of 3% (2 Deg) to the Southwest

Wind Classification

Direction – Southwest

Region – A

Wind Classification N2

Domestic water supply – Rainwater Tank Supply

Background Information

Mapped Geology – Mineral Resources Tasmania 1:250,000

Rock Type – Cretaceous – Quaternary Gravel Sand Silt Clay

Soil Depth – 2.3 – 1.5m refusal found. (soil and cobbles)

Landslide Zoning None

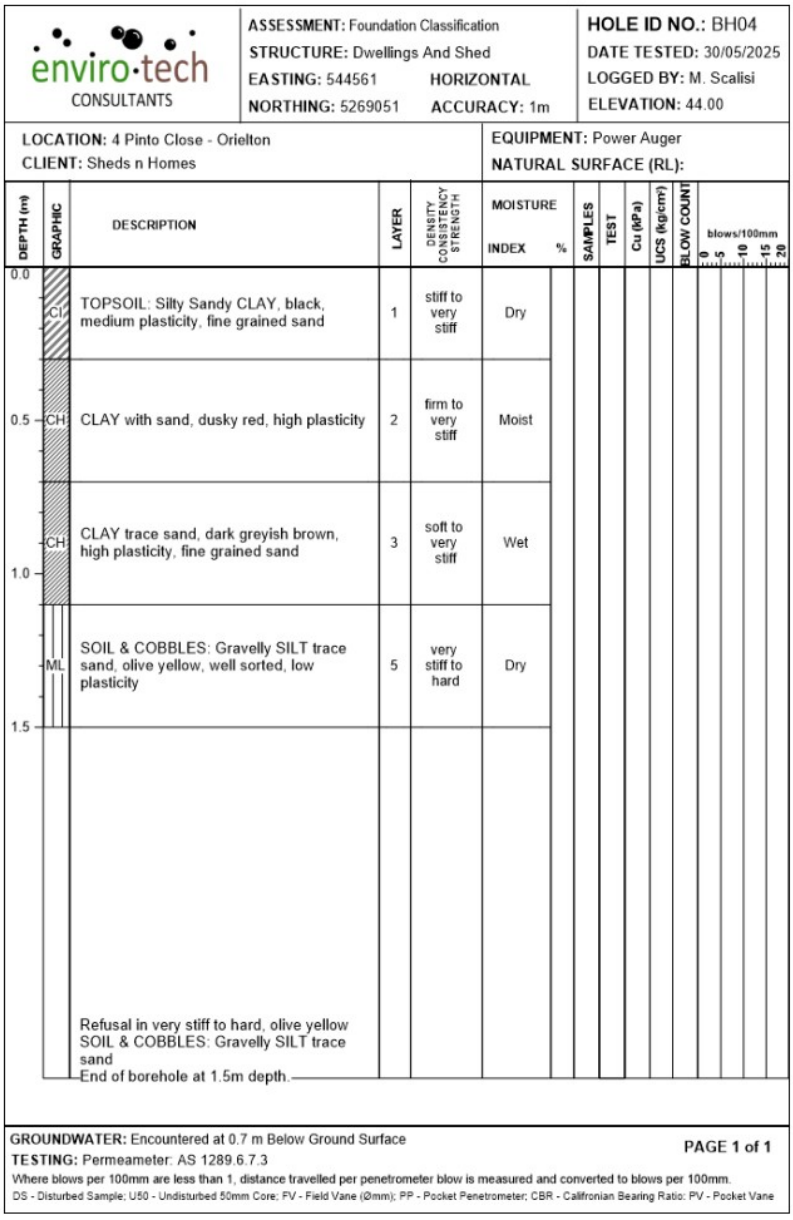
Flood Prone Zoning - None

Local Rainfall Data – Annual rainfall approx. 480.5mm (Richmond Weather Station)

Local Services – Onsite wastewater disposal, Rainwater Tank Water supply

A site and soil report were conducted by Enviro-Tech Soil Consultants on the 30th of May (see attached with compiled documents) Figure 1 below displays the soil profile and properties analysed by Enviro-Tech Soil Consultants.

Four auger holes were completed to identify the profile and variation in soil materials on site. Test Hole BH04 was drilled within the approximate location where the existing wastewater irrigation line system is, in accordance with AS1547.2012 (refer to figure 04)



enviro·tech CONSULTANTS

ASSESSMENT: Foundation Classification
STRUCTURE: Dwellings And Shed
EASTING: 544561 **HORIZONTAL**
NORTHING: 5269051 **ACCURACY:** 1m

HOLE ID NO.: BH04
DATE TESTED: 30/05/2025
LOGGED BY: M. Scalisi
ELEVATION: 44.00

LOCATION: 4 Pinto Close - Orielton
CLIENT: Sheds n Homes

EQUIPMENT: Power Auger
NATURAL SURFACE (RL):

DEPTH (m)	GRAPHIC	DESCRIPTION	LAYER	DENSITY CONSISTENCY STRENGTH	MOISTURE INDEX %	SAMPLES	TEST	Cu (kPa)	UCS (kg/cm²)	BLOW COUNT	blows/100mm 0 5 10 15 20
0.0	CI	TOPSOIL: Silty Sandy CLAY, black, medium plasticity, fine grained sand	1	stiff to very stiff	Dry						
0.5	CH	CLAY with sand, dusky red, high plasticity	2	firm to very stiff	Moist						
	CH	CLAY trace sand, dark greyish brown, high plasticity, fine grained sand	3	soft to very stiff	Wet						
1.0	ML	SOIL & COBBLES: Gravelly SILT trace sand, olive yellow, well sorted, low plasticity	5	very stiff to hard	Dry						
1.5		Refusal in very stiff to hard, olive yellow SOIL & COBBLES: Gravelly SILT trace sand End of borehole at 1.5m depth.									

GROUNDWATER: Encountered at 0.7 m Below Ground Surface
TESTING: Permeameter: AS 1289.6.7.3
Where blows per 100mm are less than 1, distance travelled per penetrometer blow is measured and converted to blows per 100mm.
DS - Disturbed Sample; U50 - Undisturbed 50mm Core; FV - Field Vane (Ømm); PP - Pocket Penetrometer; CBR - Californian Bearing Ratio; PV - Pocket Vane

PAGE 1 of 1

Figure 1, Bore Hole 04 Soil Profile data

BH04

* 1 metre core tray length

Figure 2 – Bore Hole 01 Soil Samples

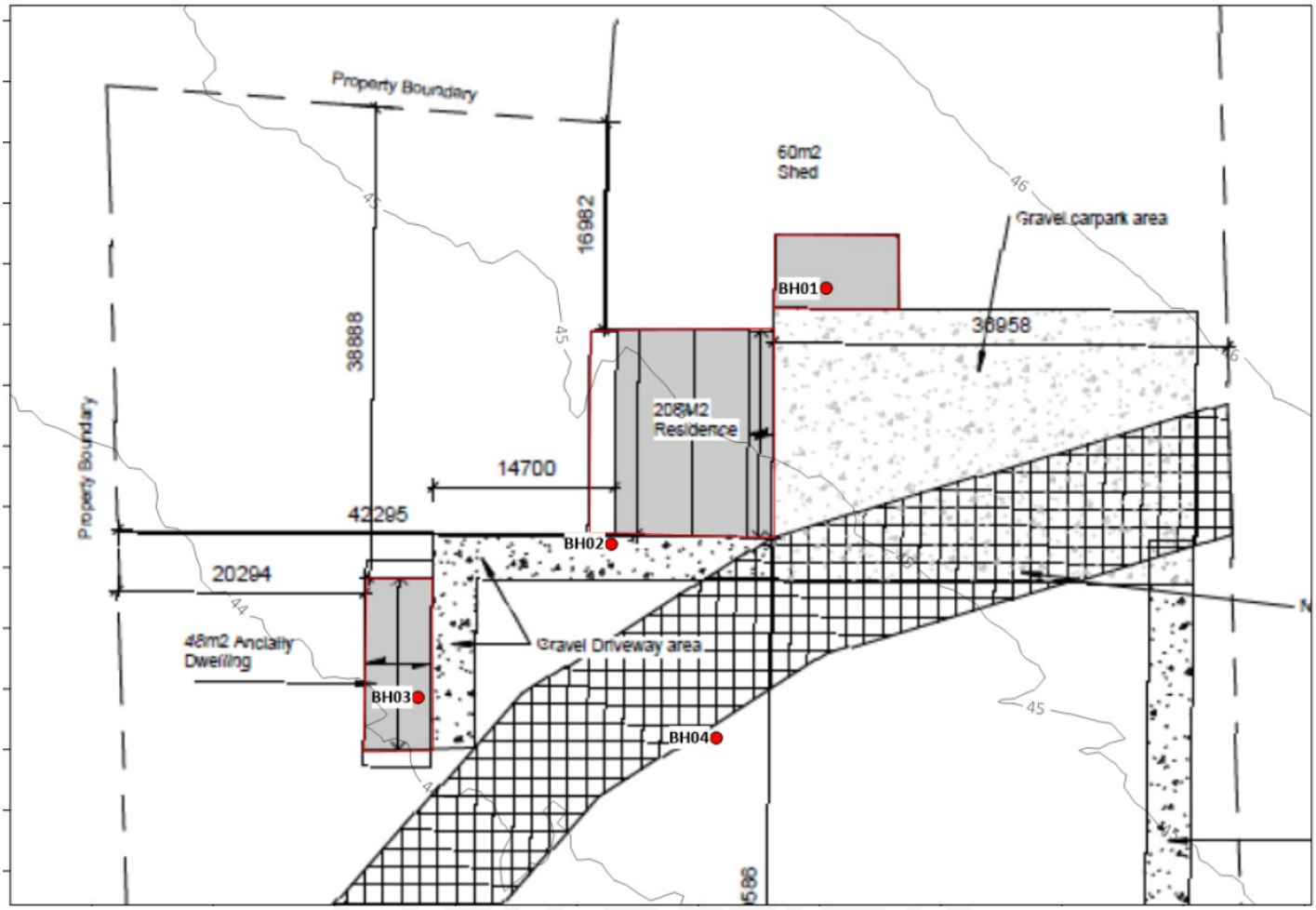


Figure 3 – Bore Hole Location

Wastewater Loading Certificate for system design (As per Clause 7.4.2(d) of AS1547/2012) (Proposed)

Proposed System Capacity – 5 people @ 120 L/Person/Day **(As per Table 1 of Tasmanian directors' determination for wastewater, for a 3-bedroom dwelling**

Summary of Design Criteria (Proposed) – *DIR 2.0/m2/day (Secondary Treatment DIR Rating)*

Q = Design Flow = 600L/Day

Q/ (DIRxLine) separation (1m)

600 / (2.0x1.0) = 300m Long (Minimum rounded required)

This calculation is based on the top 250mm layer of soil tested is Sand and topsoil with Heavy Clay below **(Category 6)**

Water Supply – Rainwater Tank supply

Reserve area use - (unused backyard area)

Consequences of changes in loading capacity – A proposed Fuji Clean Ace1200 Poly or Concrete system (or approved equivalent) the Fuji Clean Ace1200 Poly Secondary treatment system has an additional peak load capacity of 600L per day with demands only requiring 600L per day, with an overall capacity of 1200L per day. Irrigation area has some redundancy and have been sized conservatively with slope etc.

Consequences of overloading the system – A proposed Fuji Clean Ace1200 Poly or Concrete system (or approved equivalent) the Fuji Clean Ace1200 Poly Secondary treatment system has an additional peak load capacity of 600L per day with demands only requiring 600L per day, with an overall capacity of 1200L per day. Irrigation area has some redundancy and have been sized conservatively with slope etc.

Consequences of underloading the system – No odour should occur due to 2 stage solid break down of the proposed system utilizing secondary treatment, so long as the proposed system is maintained by qualified contractor on a quarterly basis.

Consequences poor maintenance or attention – Refer to maintenance section of report.

Other Design considerations

- Use water saving fixtures.
- Remove excess fats and grease from kitchen dishes.
- Ensure no solids are put into the system.
- Food disposal system not to be used.
- Do not dispose of sanitary nappies or napkins to the system.
- Use biodegradable detergents.
- Do not dispose of powerful chemicals, bleaches, or whiteners etc down drain system.
- Spread load of washing machine and dishwasher routines throughout the day

Wastewater Classification and Recommendations

According to AS1547.2012 for on-site wastewater management the natural site soil in the property is classified as Heavy Clay **(Category 6).**

Table J1 of AS1547.2012 indicates based on 3 bedroom in the main dwelling, a conservative population of up to 5 people loading has been adopted.

Table J1 of AS1547.2012 indicates based on 3 bedroom in the proposed dwelling a conservative population of up to 5 people loading has been adopted. It is proposed all outflow from the proposed building is connected via a DN100 Gravity line to a proposed Fuji Clean Ace1200 AWTS system (or approved equivalent) then outflows via pumped discharged to adequately sized sub surface irrigation system

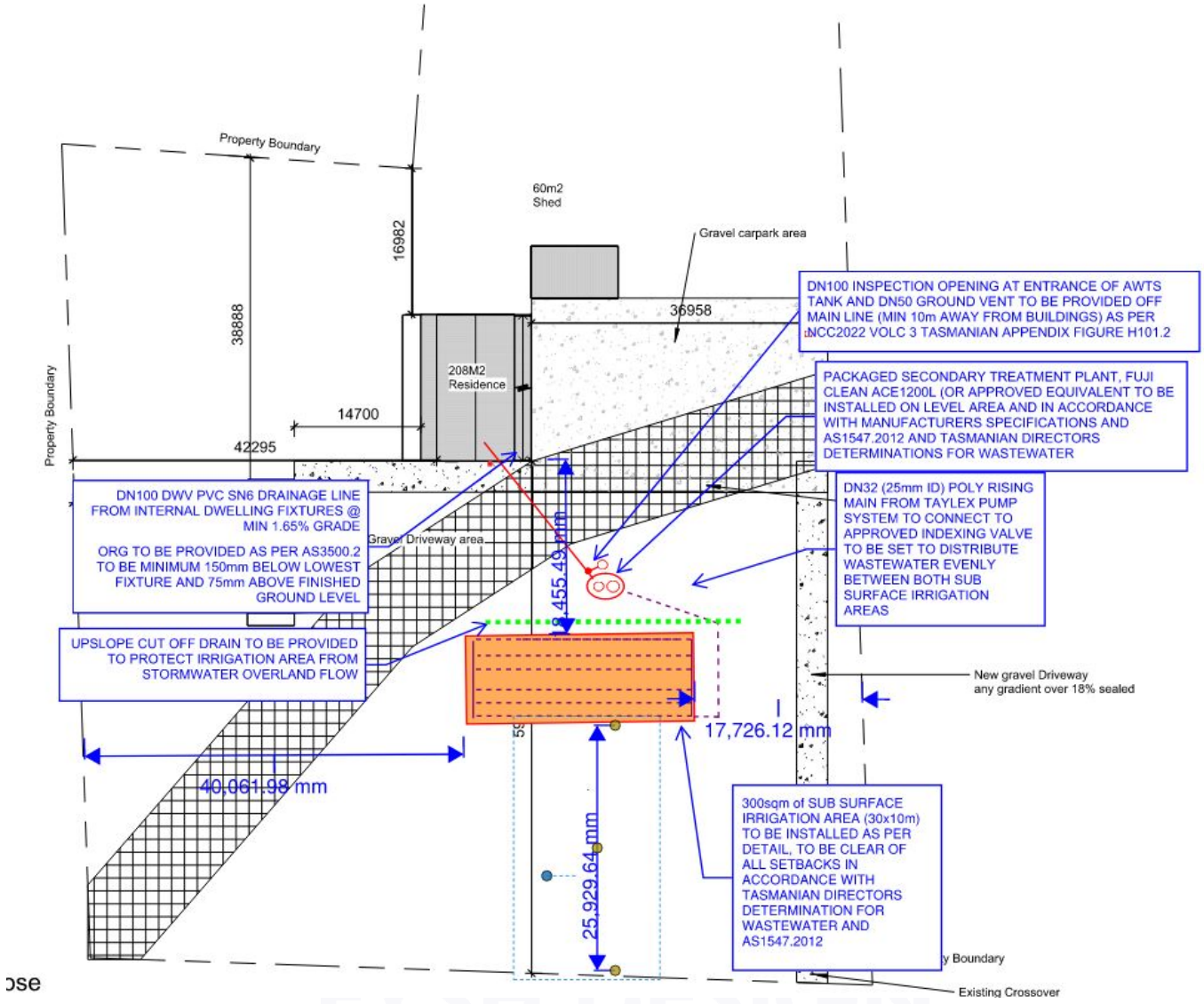
An upslope cut off drain table drain is recommended upslope for the irrigation area for peak rainfall events, to prevent water egress into the irrigation area (as per detail)

A DIR of 2.0/mm/day, **Category 6** rating has been applied to this rating due utilizing existing 200mm of natural topsoil layer, and a 250mm thick layer of imported well-structured sandy loam **or mulch** on top of proposed poly irrigation area. For calculations, please refer to the trench summary reports.

Please see design / construction details at the end of the report for further details on the sub surface area

Wastewater Site Layout

Figure 5: RECOMMENDED SUB SURFACE IRRIGATION LAYOUT



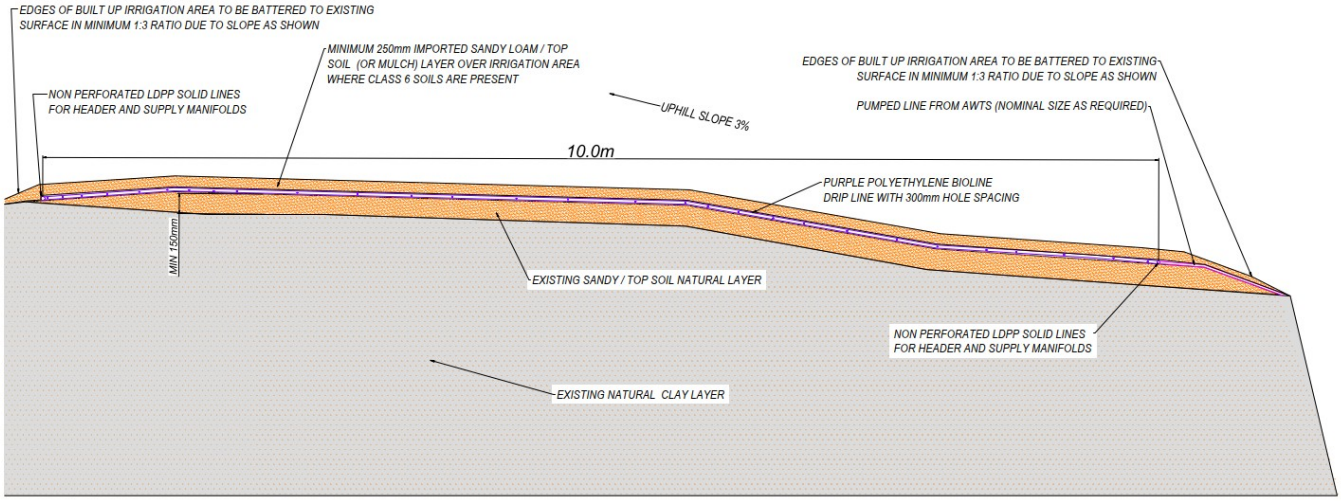


Figure 6: RECCOMENDED IRRIGATION CROSS SECTION DETAIL

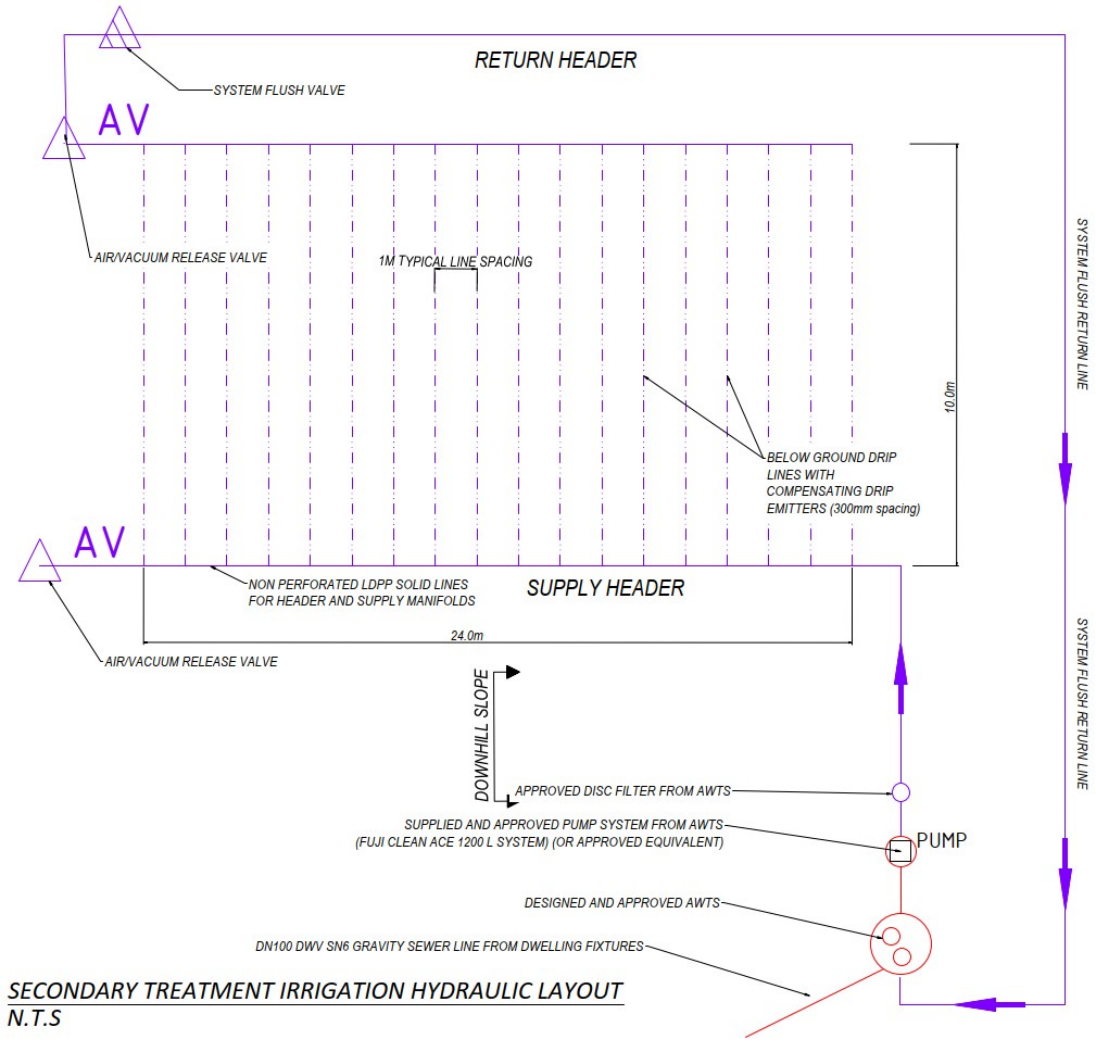


Figure 7: PROPOSED WASTEWATER IRRIGATION LAYOUT

- Treatment Sub surface irrigation area dimensions of up to 1 x 30m Long x 10m wide x 0.3m deep (240m2 Total)
- Sub surface Irrigation area to be excavated to a max grade of 10% across the entire footprint, battered at min 1 in 4 to existing surface where required.
- Base of irrigation area to be excavated level and spearing and compaction MUST be avoided.
- All works onsite to comply with AS3500.2, NCC2022, AS1547.2012 and all council regulations.

Tasmanian directors' determination guideline requirements for on-site wastewater management – building extensions, alterations, or outbuildings.

- A2 acceptable solution has been satisfied due to a new treatment system within the existing site (New Dwelling)

Tasmanian directors' determination guideline requirements for Wastewater (standards for wastewater land application areas)

- A1 acceptable solution has been satisfied as no downstream building present
- A2 acceptable solution has been satisfied with over 100m distance to a downslope waterway. **Satisfied**
  A3 acceptable solution has been satisfied with over 40m distance to a downslope boundary. **As per A3 (iii) directors' determination for wastewater 1.5m plus 1.0m for every degree of gradient (2 degree) = 1.5 + 2 x 1 = 3.5m - Satisfied**
- A4 acceptable solution has been as no water bore detected on site. (Ref Enviro-tech Report)
- A5 acceptable solution has been satisfied as site is free draining and no ponding groundwater on site due to soil properties.
- A6 acceptable solution has been satisfied as due to secondary treatment sub surface irrigation achieving 500mm distance from bedrock with sub surface irrigation

3. TRENCH 3 LOADING

Fysh Design

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report
Wastewater Design

Assessment for	Sheds n Homes	Assess. Date	15-Apr-25
	4 Pinto Close, Orielton	Ref. No.	CKD-HYD-287
Assessed site(s)	4 Pinto Close, Orielton	Site(s) inspected	19-Jun-25
Local authority	Sorell Council	Assessed by	Chris Fysh

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 = 600 (using the 'No. of bedrooms in a dwelling' method)
Septic tank wastewater volume (L/day) = 200
Sullage volume (L/day) = 400
Total nitrogen (kg/year) generated by wastewater = 2.2
Total phosphorus (kg/year) generated by wastewater = 0.7

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)	40	35	36	40	37	34	41	47	40	47	44	52
Adopted rainfall (R, mm)	40	35	36	40	37	34	41	47	40	47	44	52
Retained rain (Rr, mm)	36	32	32	36	33	31	37	42	36	42	40	47
Max. daily temp. (deg. C)	23	22	21	18	15	13	13	13	16	17	19	21
Evapotrans (ET, mm)	153	135	124	66	32	16	23	36	55	91	99	133
Evapotr. less rain (mm)	**117**	**104**	**92**	**30**	**-1**	**-14**	**-14**	**-6**	**19**	**49**	**59**	**86**

Annual evapotranspiration less retained rain (mm) = 520

Soil characterisitics

Texture = Heavy Clays Category = 6 Thick. (m) = 1.5
Adopted permeability (m/day) = 0.6 Adopted LTAR (L/sq m/day) = 2 Min depth (m) to water = 15

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:	Trickle irrigation
Site modifications or specific designs:	Not needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	30
Width (m) =	10
Depth (m) =	0.25
Total disposal area (sq m) required =	300
comprising a Primary Area (sq m) of:	300
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
LTAR is based on secondary treatment effluent (2.0DIR reduced) sub surface Irrigatoin rate Based on a 2 bedrooms with a conservative rate of 5 people at 120 L per day on rainwater tank supply (Category 6 soil)

Figure 8: WASTEWATER ASSESSMENT REPORT

Fysh Design

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Site Capability Report

Wastewater Design

Assessment for	Sheds n Homes 4 Pinto Close, Orielton	Assess. Date Ref. No.	15-Apr-25 CKD-HYD-287
Assessed site(s)	4 Pinto Close, Orielton	Site(s) inspected	19-Jun-25
Local authority	Sorell Council	Assessed by	Chris Fysh

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
A	Expected design area	sq m	240		High		
	Density of disposal systems	/sq km	1		Very low		
	Slope angle	degrees	2		Very low		
	Slope form	Straight simple			Low		
	Surface drainage	Good			Very low		
	Flood potential	Site floods <1:100 yrs			Very low		
	Heavy rain events	Infrequent			Moderate		
A	Aspect (Southern hemi.)	Faces SE or SW			High		
	Frequency of strong winds	Infrequent			Moderate		
	Wastewater volume	L/day	480		Low		
	SAR of septic tank effluent		0.8		Very low		
	SAR of sullage		1.9		Low		
	Soil thickness	m	1.5		Very low		
	Depth to bedrock	m	1.5		Moderate		
A	Surface rock outcrop	%	5		High		
	Cobbles in soil	%	5		Low		
	Soil pH		4.5		Moderate		
	Soil bulk density	gm/cub. cm	1.2		Very low		
A	Soil dispersion	Emerson No.	3		High		
	Adopted permeability	m/day	0.6		Very low		
	Long Term Accept. Rate	L/day/sq m	2				

Figure 9: SITE CAPABILITY REPORT

Fysh Design

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Environmental Sensitivity Report

Wastewater Design

Assessment for	Sheds n Homes 4 Pinto Close, Orielton	Assess. Date Ref. No.	15-Apr-25 CKD-HYD-287
Assessed site(s)	4 Pinto Close, Orielton	Site(s) inspected	19-Jun-25
Local authority	Sorell Council	Assessed by	Chris Fysh

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
	Cation exchange capacity	mmol/100g	100		Low		
	Phos. adsorp. capacity	kg/cub m	1		Moderate		
	Annual rainfall excess	mm	-520		Very low		
	Min. depth to water table	m	15		Very low		
	Annual nutrient load	kg	2.8		Very low		
	G'water environ. value	Indust non-sensit			Very low		
	Min. separation dist. required	m	1		Very low		
	Risk to adjacent bores						Factor not assessed
	Surf. water env. value	Indust non-sensit			Very low		
	Dist. to nearest surface water	m	500		Low		
	Dist. to nearest other feature	m	55		Low		
	Risk of slope instability	Very low			Very low		
	Distance to landslip	m	1000		Very low		

Figure 10: ENVIROMENTAL SENSITIVITY REPORT

4. MAINTENANCE AND MONITORING

- 4.1 Each installation must be serviced and monitored at not less than 3 monthly intervals in accordance with the conditions of accreditation, the conditions of permit / maintenance specified in a Schedule of Maintenance and manufacturer's requirements.
- Notes:
- (1) Only a licensed plumber and or his or her qualified technician can carry out the maintenance and required monitoring of the system other than electrical work unless licensed to do so.
- (2) The licensed plumber and his or her technician may need to complete training by the supplier before carrying out any maintenance on the system. The licensed plumber and their technician must comply with the applicable Directors Determination with regard to the training, reporting requirements and qualifications required to carry out servicing on the STS.
- (3) The maintenance and monitoring intervals may be combined provided the monitoring frequency remains at 3-month intervals.
- 4.2 The owner of the system must enter into and maintain a maintenance contract with a suitable licenced plumbing contractor.
- 4.3 The owner must notify the council that a maintenance contract is in place for the maintenance of the STS.
- 4.4 The system must be operated and maintained to ensure it performs continuously and without any intervention between inspections carried out by the plumber.
- 4.5 A service report is to be prepared by the plumber 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 including the associated land application 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:
- 4.10.1 Reporting on weather conditions, ambient temperature, effluent temperature
- 4.10.2 Odour
- 4.10.3 Check and test pump
- 4.10.4 Check and test air blower, fan or air venturi and clean/replace air filters
- 4.10.5 Check and test alarm system
- 4.10.6 Check slime growth on membranes and report the on condition of membranes
- 4.10.7 Check and report operation of sludge return, sludge level and de-sludging
- 4.10.8 Check and record water meter reading (if fitted)
- 4.10.9 Check and record operation of irrigation area, irrigation fittings Department of Justice – Certificate of Accreditation Doc/20/66067 Date of Issue: 14/08/20 Director of Building Control Page 13 of 20 Delegate of Minister for Building and Construction

4.10.10 Check and clean/replace irrigation filters.

4.10.11 Check and report on water quality (testing for pH, Turbidity, EC and dissolved oxygen)
4.10.12 Check, and replenish chlorine disinfection system.

4.10.13 Cleaning of the following items at above the waterline – I. clarifier II. pipework III. valves IV. walls of chambers.

Maintenance requirements for wastewater septic tanks

Visual inspection is to be performed annually, and pumped out regularly, once scum and sludge occupy two thirds of the tank volume and reduces settling volume below 24 hours retention, at no less than 2.5 - 3-year intervals.

Any visible wet spots or uneven grass colour can show signs of pipe blockage, blocked or damage irrigation lines shall be replaced if required.

5. CONCLUSION

This report has demonstrated that the proposed development at 43 Pinto Close Orielton, complies with the onsite wastewater quality conditions of Sorell Council plumbing and environmental requirements.

Please contact cfysh@fyshdesign.com.au if you require any additional information.

Yours sincerely

Chris Fysh

Director

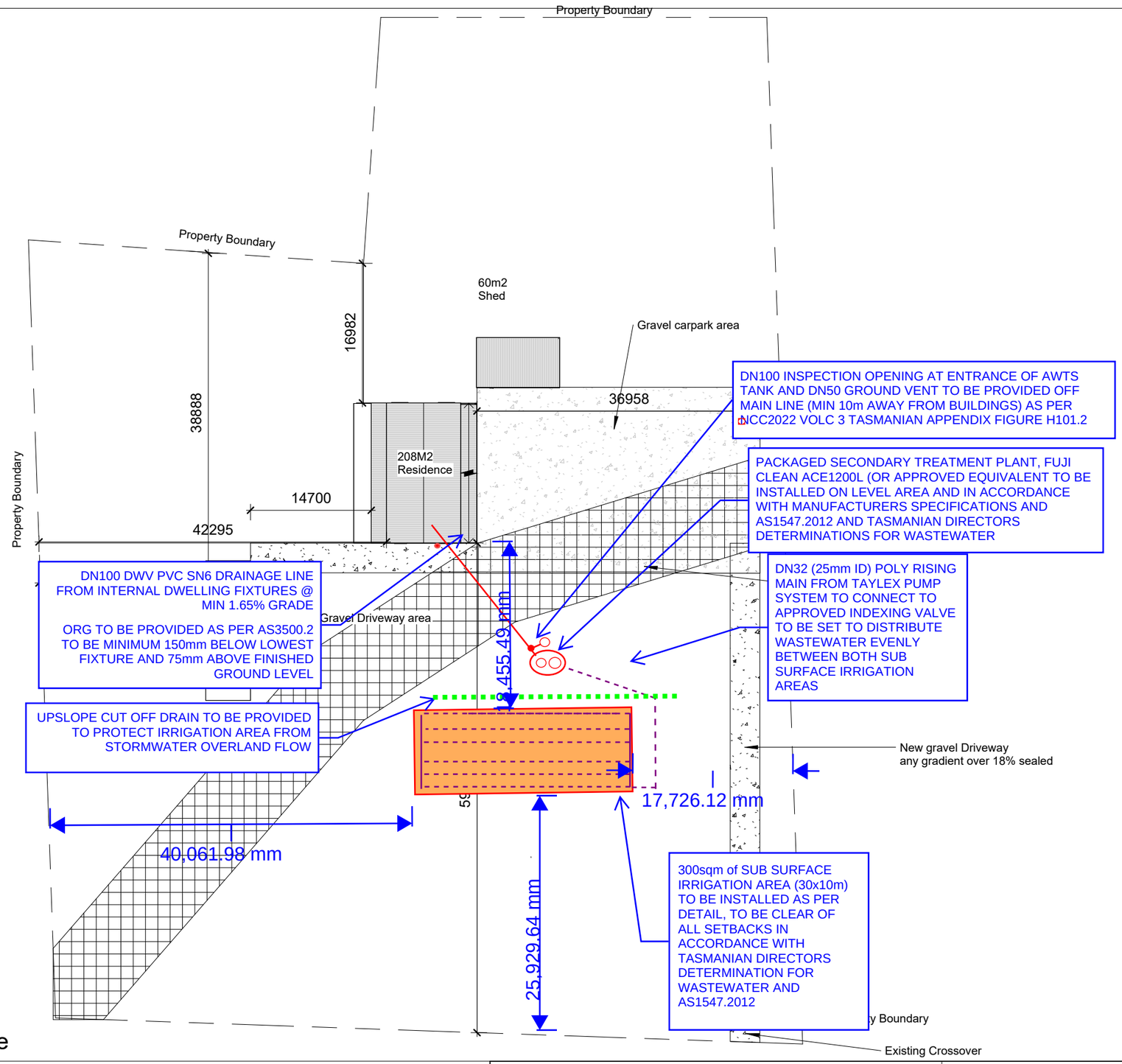
Fysh Design

Building Services Designer Licence: 479819732

Mob: 0414 149 394

Email: cfysh@fyshdesign.com.au

FYSH DESIGN
CIVIL HYDRAULIC



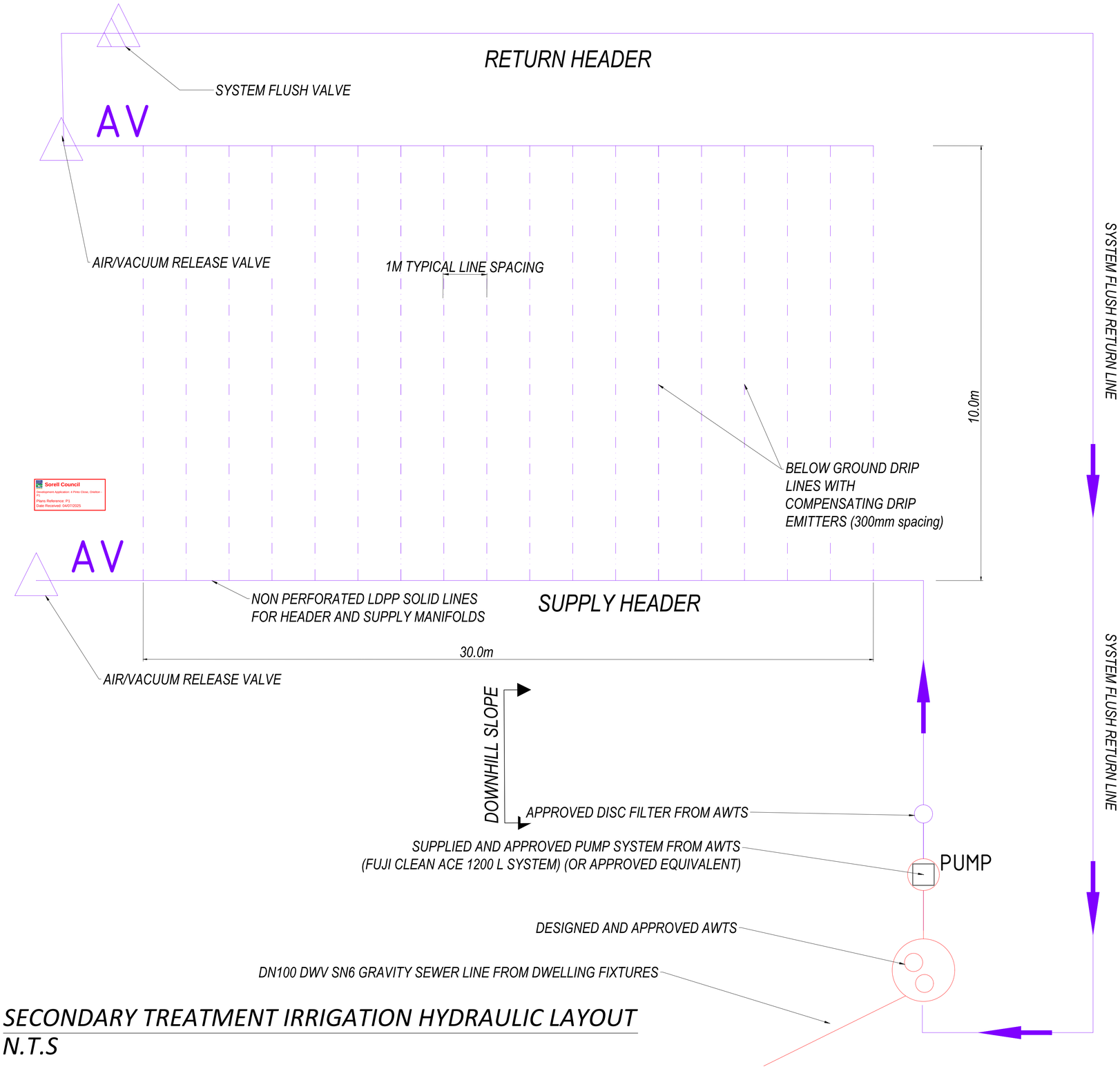
Sorell Council
Development Application: 4 Pinto Close, Orielton - P1
Plans Reference: P1
Date Received: 04/07/2025

DIMENSION NOTE:
Use written diemtnions only. Do no scale from drawings. All figured dimensions are to be used as a guide only. It is imperative that all dimensions, setouts and levels be confirmed onsite by the builder, Surveyor or Sub Contractor prior to the commencement of work, manufacture or installaion; and the Builder, Sub Contractor and/or manufacturer ensures a full set of plans are on hand and reference has been made to the general notes

DRAWING NOTE:

SHEDS n HOMES
SHEDS. MADE. TOUGH.
57 Cove Hill Road
Bridgewater TAS 7030
(03) 6263 6545
hobart@shedsnhomes.com.au
BLST Pty Ltd
ABN 52 660 422 159

CLIENT NAME: DARCY HALL			DRAWING TITLE: SITE PLAN		
PROJECT ADDRESS: 4 Pinto Close, Orielton		DATE: 16/05/2025	SCALE: 1 : 500		DRAWN BY: SH
PROJECT: New residece, shed and ancillary dwelling	REVISION No: R2	SHEET SIZE: A3	JOB No: SNH25-023	SHEET No: C2.0	



SECONDARY TREATMENT IRRIGATION HYDRAULIC LAYOUT
N.T.S

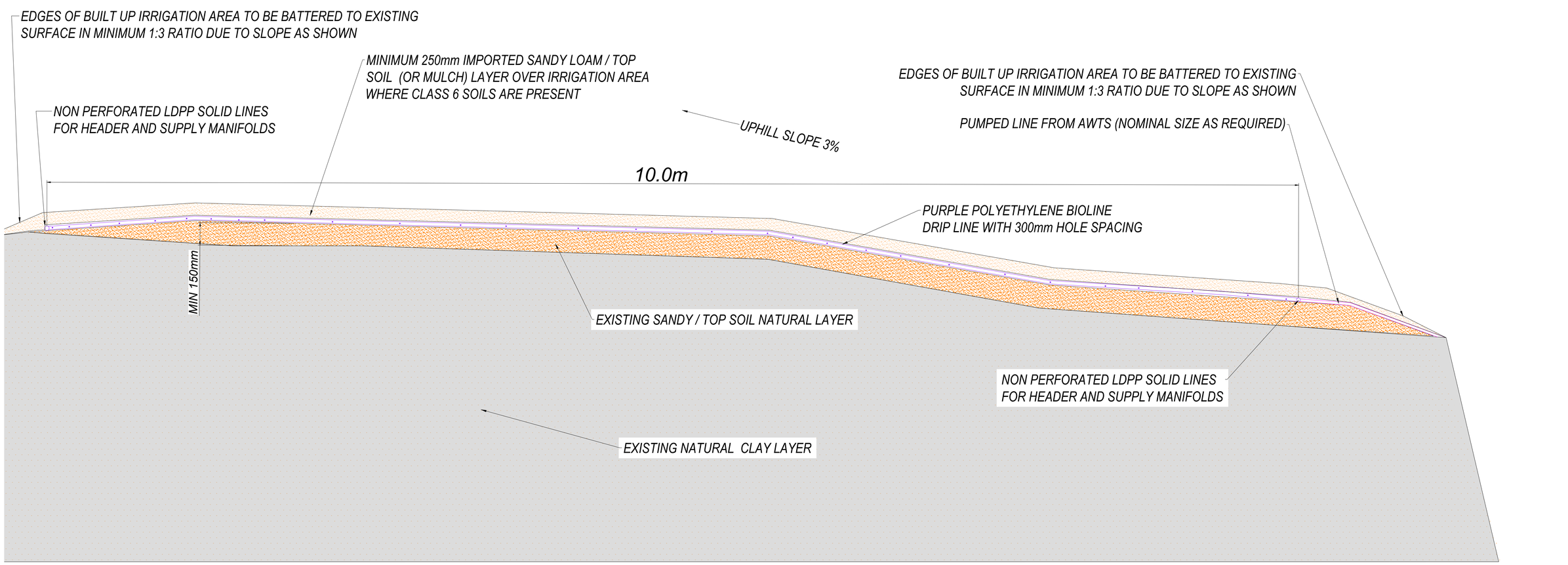
REV	DESCRIPTION	DATE
0	FOR APPROVAL CF	19/06/2025

FYSH DESIGN
UNIT 4, 160 BUNGANA WAY
CAMBRIDGE TAS, 7170
PH: 0414 149 394
ACCREDITATION: BSD LICENCE NO. 47981973Z

WASTEWATER DESIGN
CLIENT: SHEDS N HOMES
4 PINTO CLOSE, ORIELTON
DRAWING TITLE
ONSITE WASTEWATER CROSS SECTION

SCALE 1:100
DESIGNED CF | DRAWN CF
PROJECT CKD-HYD-289 | SHEET NO. H01
SCALE AS NOTED
REVISION 0

DIAL BEFORE YOU DIG



SECONDARY TREATMENT IRRIGATION CROSS SECTION DETAIL
N.T.S

DESIGN NOTES:

1. ONE 5mm HOLE AT CENTER OF INVERT OF EACH PIPE TO ALLOW FOR DRAINAGE BETWEEN PUMP CYCLES
2. GEOTEXTILE FOR FILTER CLOTH TO BE PLACED OVER THE DISTRIBUTION PIPES TO PREVENT CLOGGING OF THE PIPES AND AGGREGATE - THE SIDES OF THE BED SHOULD ALSO BE LINED WITH HDPE LINER
3. FINIAL FINISHED SURFACE WITH SANDY LOAM TO BE A MINIMUM OF 150mm ABOVE AGGREGATE WITH TURF COVER OR MULCHED WITH APPROPRIATE VEGETATION (EG NATIVE GRASSES AND SMALL SHRUBS AT 1 PLANT PER 1m2)
4. THE TURF OR VEGETATION IS AN ESSENTIAL COMPONENT OF THE SYSTEM AND MUST BE MAINTAINED WITH REGULAR MOWING AND OR TRIMMING AS NEEDED
5. THE DISTRIBUTION PIPE GRID MUST BE ABSOLUTELY LEVEL TO ALLOW EVEN DISTRIBUTION OF EFFLUENT AROUND THE ABSORPTION AREA - IT IS RECOMMENDED THAT THE LEVEL BE VERIFIED BY RUNNING WATER INTO THE SYSTEM BEFORE BACKFILLING AND COMMISSIONING TRENCH
6. ALL WORKS ON SITE TO COMPLY WITH AS3500, AS1547.2012, NCC VOL 3 2019
7. PUMP TO BE CAPABLE OF DELIVERING THE TOTAL FLOW RATE REQUIRED AT ALL LATERALS WHILST PROVIDING A 1.5m RESIDUAL HEAD (SQUIRT HEIGHT) AT THE HIGHEST ORIFICE (WITH NO MORE THAN 15% VARIATION IN SQUIRT HEIGHT ACROSS THE ENTIRE BED
8. FOR BEDS WITH INDIVIDUAL LATERALS, NO MORE THAN 15m LONG, IT IS ACCEPTABLE TO ADOPT A FLOW RATE 4-5L/MIN/LINEAL METER. TOTAL DYNAMIC HEAD (INCLUDING FRICTION LOSS) WILL NEED TO BE DETERMINED ON A SITE- SPECIFIC BASIS
9. INDIVIDUAL FLUSH POINTS MUST BE INSTALLED FOR EACH LATERAL. THIS MAY BE A SCREW CAP FITTING ON A 90 DEGREE ELBOW LEVEL WITH THE BED SURFACE OR PRESSURE CONTROLLED FLUSH VALE INSIDE AN IRRIGATION BOX

REV	DESCRIPTION	DATE
0	FOR APPROVAL CF	19/06/2025

REV	DESCRIPTION	DATE

FYSH DESIGN
UNIT 4, 160 BUNGANA WAY
CAMBRIDGE TAS, 7170
PH: 0414 149 394
ACCREDITATION: BSD LICENCE NO. 479819732

NORTH

WASTEWATER DESIGN

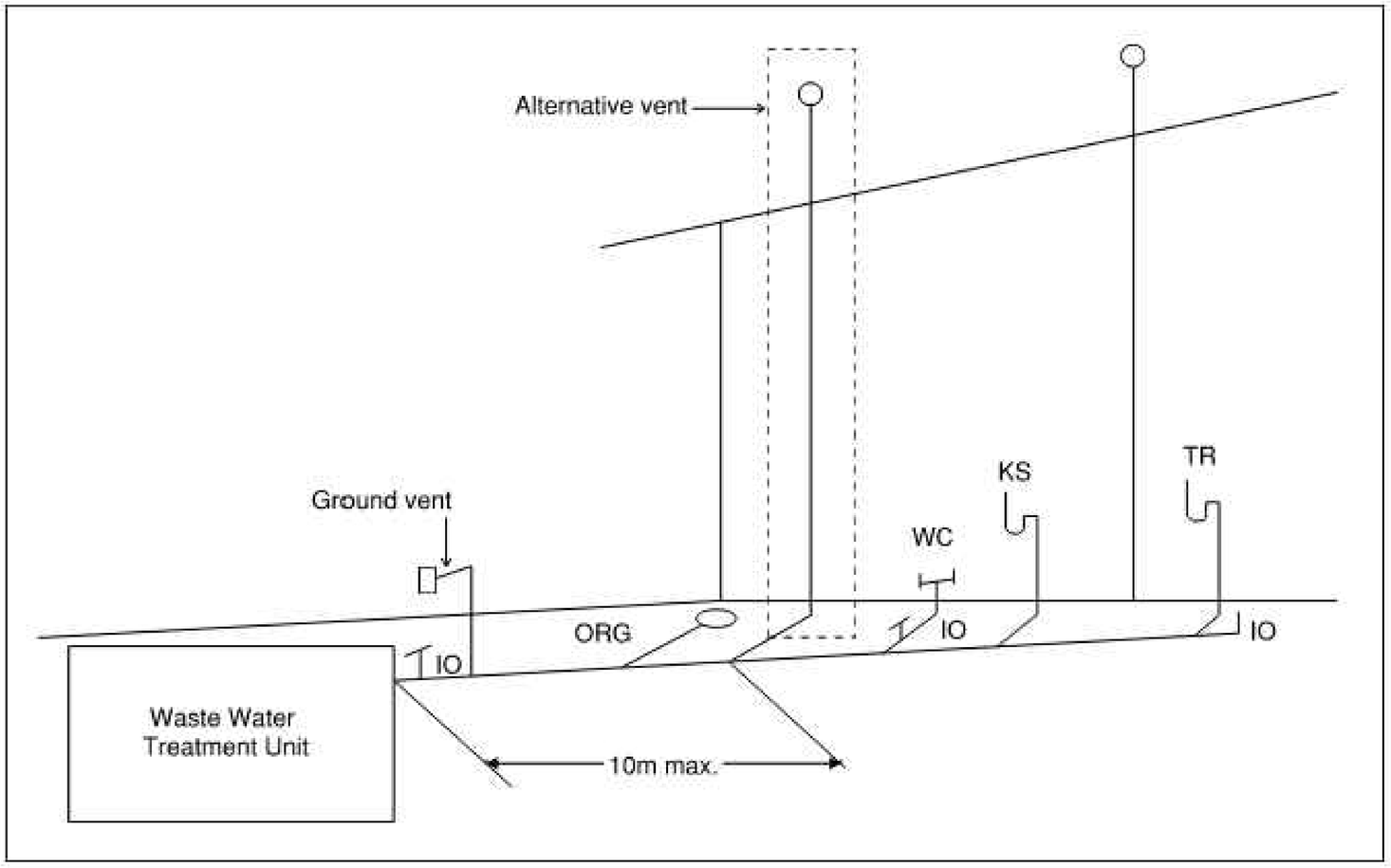
CLIENT: SHEDS N HOMES
4 PINTO CLOSE, ORIELTON

DRAWING TITLE
ONSITE WASTEWATER PLAN AND NOTES

SCALE 1:100

DESIGNED	DRAWN	SCALE
CF	CF	AS NOTED
PROJECT	SHEET NO.	REVISION
CKD-HYD-289	H02	0

DIAL BEFORE YOU DIG



TAS FIGURE H101.2 ALTERNATIVE VENTING ARRANGEMENTS

VENTS MUST TERMINATE IN ACCORDANCE WITH AS3500.2

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 ONSITE WASTEWATER MANAGEMENT SYSTEM. USE OF A GROUND VENT IS NOT RECOMMENDED

INSPECTION OPENINGS MUST BE LOCATED AT THE INLET TO AN ONSITE WASTEWATER MANAGEMENT SYSTEM TREATMENT UNIT AND THE POINT OF CONNECTION TO THE LAND APPLICATION SYSTEM AND MUST TERMINATE AS CLOSE AS PRACTICAL 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 UNITS MUST TERMINATE AT OR ABOVE FINISHED SURFACE LEVEL

ALTERNATIVE VENT IS THE PREFERRED ARRANGEMENT WHERE POSSIBLE.

TASMANIAN WASTEWATER VENTING REQUIREMENTS DETAIL

REV	DESCRIPTION		DATE
0	FOR APPROVAL	CF	19/06/2025

REV	DESCRIPTION	DATE

FYSH DESIGN
UNIT 4, 160 BUNGANA WAY
CAMBRIDGE TAS, 7170

PH: 0414 149 394

ACCREDITATION: BSD LICENCE NO. 479819732

NORTH

WASTEWATER DESIGN

CLIENT: SHEDS N HOMES
4 PINTO CLOSE, ORIELTON

DRAWING TITLE

ONSITE WASTEWATER PLAN AND NOTES

SCALE 1:100

DESIGNED	DRAWN	SCALE	REVISION
CF	CF	AS NOTED	0
PROJECT	SHEET NO.		
CKD-HYD-289	H01		