NOTICE OF PROPOSED DEVELOPMENT

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

SITE:

6 LATEENA STREET, DODGES FERRY

PROPOSED DEVELOPMENT:

DEMOLITION OF EXISTING DWELLING, NEW DWELLING & VISITOR ACCOMMODATION

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

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

APPLICATION NO: **5.2026.162.1**
DATE: **5 JUNE 2026**

6 Lateena Street, Dodges Ferry

4-Jun-2026

50 m

N

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

Full description of Proposal:	*Use:* Private Residence & Visitor Accommodation *Development:* New Family Home & Visitor Accommodation- inc demolition of derelict structure *Large or complex proposals should be described in a letter or planning report.*
Design and construction cost of proposal:	$ 1,100,000

Is all, or some the work already constructed:	No: ☑ Yes: ☐

Location of proposed works:	Street address: 6 Lateena Street Suburb: Dodges Ferry Postcode: 7173 Certificate of Title(s) Volume: 229139 Folio: 01

Current Use of Site	Vacant Land (with old derelict structure)

Current Owner/s:	Name(s) Julie Barrett & Dion Perry

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/

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

Declarations and acknowledgements
• I/we confirm that the application does not contradict any easement, covenant or restriction specified in the Certificate of Title, Schedule of Easements or Part 5 Agreement for the land. • I/we consent to Council employees or consultants entering the site and have arranged permission and/or access for Council's representatives to enter the land at any time during normal business hours. • I/we authorise the provision of a copy of any documents relating to this application to any person for the purposes of assessment or public consultation and have permission of the copyright owner for such copies. • I/we declare that, in accordance with s52(1) of the *Land Use Planning and Approvals Act 1993*, that I have notified the owner(s) of the intention to make this application. • I/we declare that the information in this application is true and correct. *Details of how the Council manages personal information and how you can request access or corrections to it is outlined in Council's Privacy Policy available on the Council website.*
• I/we acknowledge that the documentation submitted in support of my application will become a public record held by Council and may be reproduced by Council in both electronic and hard copy format in order to facilitate the assessment process, for display purposes during public exhibition, and to fulfil its statutory obligations. I further acknowledge that following determination of my application, Council will store documentation relating to my application in electronic format only.
• Where the General Manager's consent is also required under s.14 of the *Urban Drainage Act 2013*, by making this application I/we also apply for that consent.

Applicant Signature:	Signature: ..... Date: 15.05.2026

Crown or General Manager Land Owner Consent
If the land that is the subject of this application is owned or administered by either the Crown or Sorell Council, the consent of the relevant Minister or the Council General Manager whichever is applicable, must be included here. This consent should be completed and signed by either the General Manager, the Minister, or a delegate (as specified in s52 (1D-1G) of the *Land Use Planning and Approvals Act 1993*). Please note: • If General Manager consent if required, please first complete the General Manager consent application form available on our website www.sorell.tas.gov.au • If the application involves Crown land you will also need a letter of consent. • Any consent is for the purposes of making this application only and is not consent to undertaken work or take any other action with respect to the proposed use or development.
I _____ being responsible for the administration of land at _____ declare that I have given permission for the making of this application for _____

Sorell Council
Development Application: 5.2026.162.1 - Development Application 6 Lateena Street, Dodges Ferry- P1.pdf
Plans Reference: P1
Date Received: 18/05/2026

Signature of General Manager, Minister or Delegate:	Signature: ..... Date: .....

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
229139	1
EDITION	DATE OF ISSUE
4	19-Sept-2003

SEARCH DATE : 15-May-2026
SEARCH TIME : 09.53 am

DESCRIPTION OF LAND

Parish of FORCETT, Land District of PEMBROKE
Lot 1 on Plan 229139
Derivation : Part of 547 acres Gtd to T MacDowell
Prior CT 2971/67

SCHEDULE 1

C457281 TRANSFER to ROBERT EDWARD WOOD Registered 19-Sept-2003 at 12.01 pm

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
A82971 FENCING CONDITION in Transfer

UNREGISTERED DEALINGS AND NOTATIONS

N131857 PRIORITY NOTICE reserving priority for 90 days APP SEC99 SHARON GAYLE JAMES-WOOD TRANSFER SHARON GAYLE JAMES-WOOD to DION MICHAEL PERRY and JULIE CHRISTINE BARRETT MORTGAGE DION MICHAEL PERRY and JULIE CHRISTINE BARRETT to NATIONAL AUSTRALIA BANK LIMITED Lodged by EB CONVEYANCING on 28-Jan-2026 BP: N131857

E451397 MORTGAGE to National Australia Bank Limited Lodged by DYE & DURHAM (NAB) on 10-Mar-2026 BP: N130755

N130755 STEPHEN CRAIG WOOD as personal representative of Robert Edward Wood Lodged by DYE & DURHAM (NAB) on 10-Mar-2026 BP: N130755

N131772 TRANSFER to DION MICHAEL PERRY and JULIE CHRISTINE BARRETT Lodged by DYE & DURHAM (NAB) on 10-Mar-2026 BP: N130755

ORIGINAL – NOT TO BE REMOVED FROM TITLES OFFICE

R.P. 1469

TASMANIA

REAL PROPERTY ACT, 1862, as amended

NOTE—REGISTERED FOR OFFICE CONVENIENCE TO REPLACE

Cert. of Title Vol. 883 Fol. 58

CERTIFICATE OF TITLE

Register Book Vol. 2971 Fol. 67

I certify that the person described in the First Schedule is the registered proprietor of an estate in fee simple in the land within described together with such interests and subject to such encumbrances and interests as are shown in the Second Schedule. In witness whereof I have hereunto signed my name and affixed my seal.

Recorder of Titles.

RECORDER OF TITLES TASMANIA

DESCRIPTION OF LAND

PARISH OF FORCETT LAND DISTRICT OF PEMBROKE
ONE ROOD FOURTEEN PERCHES AND TWO TENTHS OF A PERCH on the Plan hereon

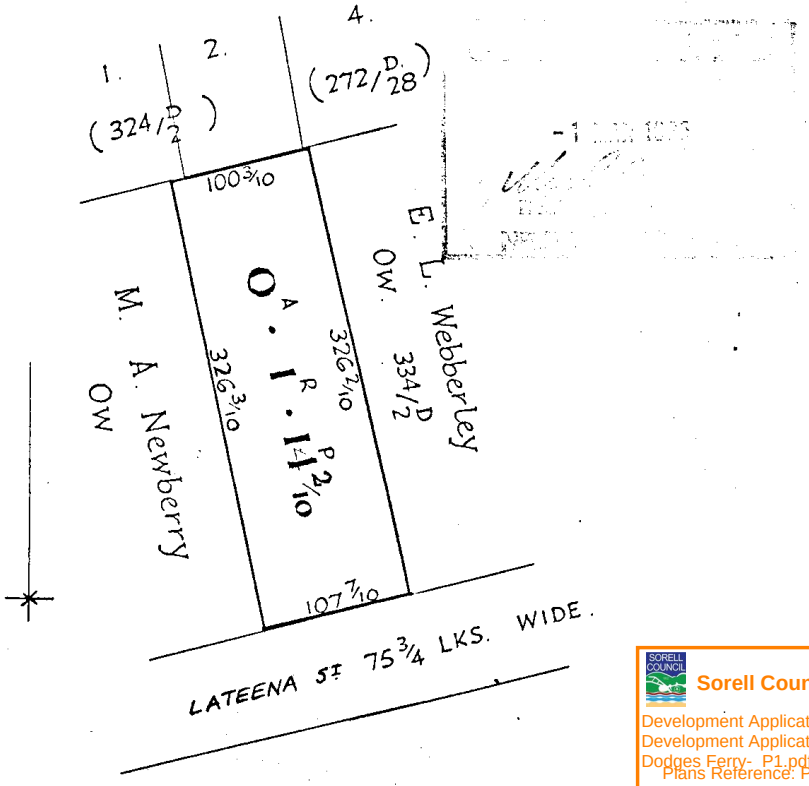
FIRST SCHEDULE (continued ~~overleaf~~)

ENTRY CANCELLED

ALBERT DALE SMITH of Moonah Instrument Technician

SECOND SCHEDULE (continued overleaf)

TRANSFER NO. A82971 was made SUBJECT TO fencing condition



REGISTERED NUMBER 229139

Lot 1 of this plan consists of all the land comprised in the above-mentioned cancelled folio of the Register.

OF THE RECORDER OF TITLES ARE NO LONGER SUBSISTING.

Part of 547 Acres Gtd. to T. MacDowell - Meas. in Links - 354/9D

FIRST Edition. Registered

Derived from C.T. Vol. 883 Fol. 58 - Transfer A194713 L.O. Winterborn

GLANVILLE
ARCHITECTS \ IDEAS \ SOLUTIONS

Senior Planner at Sorell Council
47 Cole St
Sorell 7172

Date: 11.05.2026

Re: Supporting letter for new dwelling at 6 Lateena St, Dodges Ferry.

To Whom it may concern,

This proposed dwelling and visitor accommodation is designed to blend in smoothly within the existing low density residential streetscape, from keeping overall heights down to almost 3m under the allowed maximum, Setbacks are all similar to the surrounding buildings (inc dwellings, visitor accomm and large sheds) with the majority over 5000 from side and rear boundaries, the visitor accommodation is closer to the side boundary but is less than 2.4m above the boundary NGL and thus will be very inobtrusive.

Front setback of the main dwelling is massive at over 25m, the visitor accommodation is closer (around 4m) which is very similar to many structures in the street (118 & 120 Carlton Beach Rd, 3 & 14 Lateena St all have front setbacks around that proposed).

Where these small discretions are proposed, the sun paths diagrams show that very little shadow will escape the boundaries, and where it does- it is cast onto driveways and solid walls, avoiding all windows and private open space.

The footprint of the overall development has been kept deliberately small (less than 20%) to ensure the finished product maintains a natural feel with heavily landscaped surrounds (leaning on a native planting pattern with little lawn and more random plantings to encourage birdlife and slower living).

Visitor accommodation pod has been designed to turn its back to the adjacent neighbours dwelling (8 Lateena), with no windows in this façade and the deck protected by a solid wall, insulation within the wall and the associated 100 cavity will prevent any internal noise escaping uphill, while most openings and outdoor spaces are also shaped to prevent noise intrusion.

The visitor accommodation is a small building (53sqm) and thus will be largely in keeping with many of the outbuildings that are very common in this area, this is still very much a residential site with the subtle accommodation building very much subservient to the centred main dwelling- carparking for both buildings ensures all traffic enters and exist in a forward direction.

Sincerely

Bruce Glanville (GLANVILLE architects \ ideas \ solutions)

Office 12, 370-380 Cambridge Rd, Mornington www.glanville.net.au bruce@glanville.net.au 0409 223 106

GLANVILLE
ARCHITECTS \ IDEAS \ SOLUTIONS

Tiara Williams at Sorell Council
47 Cole St
Sorell 7172

Date: 29.2026

Re: Updated Supporting letter for new dwelling at 6 Lateena St, Dodges Ferry.

Dear Tiara,

This proposed dwelling and visitor accommodation is designed to blend in smoothly within the existing low density residential streetscape, from keeping overall heights down to almost 3m under the allowed maximum, Setbacks are all similar to the surrounding buildings (inc dwellings, visitor accomm and large sheds) with the majority over 5000 from side and rear boundaries, the visitor accommodation is closer to the side boundary but is less than 2.4m above the boundary NGL and thus will be very inobtrusive.

Front setback of the main dwelling is massive at over 25m, the visitor accommodation is closer (around 4m) which is very similar to many structures in the street (118 & 120 Carlton Beach Rd, 3 & 14 Lateena St all have front setbacks around that proposed).

Where these small discretions are proposed, the sun paths diagrams show that very little shadow will escape the boundaries, and where it does- it is cast onto driveways and solid walls, avoiding all windows and private open space.

The siting of the visitor accommodation involves many factors- not limited to trying to separate the two buildings (and their private open spaces) by keeping as much distance apart as possible (main dwellings close to rear of lot, visitor accomm closer to front boundary), having the open spaces (decks etc) to the north of the living spaces (whilst also shielding them from neighbours for privacy both ways) and placement of wastewater system absorption beds within the site- these factors along with the existing generous setback of the lot boundary from the road (around 4m) and some early and dense front boundary planting will see the vis accomm blend smoothly into the existing streetscape.

The footprint of the overall development has been kept deliberately small (less than 20%) to ensure the finished product maintains a natural feel with heavily landscaped surrounds (leaning on a native planting pattern with little lawn and more random plantings to encourage birdlife and slower living).

Visitor accommodation pod has been designed to turn its back to the adjacent neighbours dwelling (8 Lateena), with no windows in this façade and the deck protected by a solid wall, insulation within the wall and the associated 100 cavity will prevent any internal noise escaping uphill, while most openings and outdoor spaces are also shaped to prevent noise intrusion.

The visitor accommodation is a small building (53sqm) and thus will be largely in keeping with many of the outbuildings that are very common in this area, this is still very much a residential site with the subtle accommodation building very much subservient to the centred main dwelling- carparking for both buildings ensures all traffic enters and exist in a forward direction.

The buildings have been designed to house permanently 4 people in the main house and a max of three in the visitor accommodation, in accordance with the Wastewater design and report from Onsite Assessments Tas.

Sincerely

Bruce Glanville (GLANVILLE architects \ ideas \ solutions)

Office 12, 370-380 Cambridge Rd, Mornington www.glanville.net.au bruce@glanville.net.au 0409 223 106

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

To: Julie Barrett & Dion Perry *Owner name*

[redacted] *Address*

[redacted] [redacted] *Suburb/postcode*

Form **35**

Designer details:

Name:	Richard Mason	Category:	Hydraulic Restricted
Business name:	Onsite Assessments Tas	Phone No:	0418 589 309
Business address:	20 Adelong Drive		
	Kingston 7050	Fax No:	
Licence No:	CC6057T	Email address:	

Details of the proposed work:

Owner/Applicant	Julie Barrett & Dion Perry	Designer's project reference No.	n/a
Address:	6 Lateena Street	C/T No:	229139/1
	Dodges Ferry 7173		

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

Description of work:

On site wastewater management system

Sorell Council
Development Application: 5.2026.162.1 - Development Application 6 Lateena Street, Dodges Ferry- P1.pdf
Plans Reference: P1
Date Received: 18/05/2026

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): *(X all applicable certificates)*

Certificate Type:	Certificate	Responsible Practitioner
	☐ Building design	Architect or Building Designer
	☐ Structural design	Engineer or Civil Designer
	☐ Fire Safety design	Fire Engineer
	☐ Civil design	Civil Engineer or Civil Designer
	✓ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Service Designer
	☐ Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐ Other (specify)	

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

Other details:
AWTS with subsurface irrigation.

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers: Appendix 4	Prepared by: Richard Mason	Date: 15/05/2026
Schedules:	Prepared by: Richard Mason	Date:
Specifications: Appendix 5	Prepared by: Richard Mason	Date: 15/05/2026
Computations: Pages 5-8	Prepared by: Richard Mason	Date: 15/05/2026

Standards, codes or guidelines relied on in design process:

AS/NZS1547.2012 On site domestic waste water management

National Construction Code 2022 Vol 3

Director's Guidelines for On-site Wastewater Management Systems, Director of Building Control (Tasmania), 2017.

Any other relevant documentation:

CBOS Certificates of accreditation:

Taylex ABS 1500 – DOC/20/89089
Fuji Clean ACE 1200 (8EP) – DOC/20/66067
UBI Aqua 6000 MKII – DOC/22/103618
EnviroTas AS - DOC/22/55457

Site & soil evaluation and design report - 6 Lateena Street, Dodges Ferry TAS 7173, by Richard Mason, Onsite Assessments Tas, dated 15/05/2026.

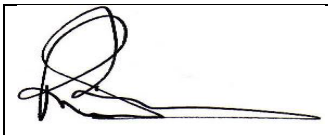
Form 55, dated 15/05/2026, certifying Site & Soil Evaluation etc Report.

Attribution as designer:

I, **Richard Mason** 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:	Richard Mason		15/05/2026
Licence No:	CC6157T		

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.

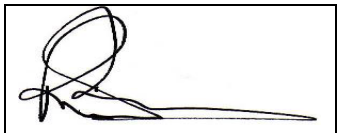
I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- [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 is 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 .....Richard Mason..... 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:	Richard Mason		15/05/2026

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: Julie Barrett & Dion Perry *Owner /Agent*

[redacted] *Address*

[redacted] *Suburb/postcode*

Form **55**

Qualified person details:

Qualified person: Richard Mason

Address: 20 Adelong Drive

Kingston

Phone No: 0418 589309

Fax No:

Licence No: CC6157T

Email address: richardmason@iprimus.com.au

Qualifications and Insurance details: BSc Environmental Sciences (Salford).

Arch Insurance Policy No. P0021114PI2022AU0

(description from Column 3 of the Director of Building Control's Determination)

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

(description from Column 4 of the Director of Building Control's Determination)

Details of work:

Address: 6 Lateena Street

Dodges Ferry 7173

Certificate of title No: 229139/1

The assessable item related to this certificate: Onsite wastewater management – Site and soil evaluation for onsite wastewater management capability;

(description of the assessable item being certified)

-

Certificate details:

Certificate type: On-site wastewater management - Site and soil evaluation

(description from Column 1 of Schedule 1 of the Director of Building Control's Determination)

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work: [ ]

or

a building, temporary structure or plumbing installation: [x]

In issuing this certificate the following matters are relevant –

Documents: AS/NZS 1547. 2012: On-site domestic-wastewater management.

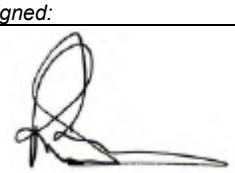
Relevant calculations:	
References:	AS/NZS 1547.2012: Onsite Domestic Wastewater Management. Directors Guidelines for on-site wastewater management systems

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

Site & soil evaluation and design report - Proposed on-site wastewater management system at 6 Lateena Street, Dodges Ferry TAS 7173, by Richard Mason, Onsite Assessments Tas, dated 15/05/2026.

Scope and/or Limitations

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		n/a	15/05/2026

Site & soil evaluation and design report.

Proposed on-site wastewater management system at 6 Lateena Street, Dodges Ferry TAS 7173

Richard Mason, Onsite Assessments Tas

20 Adelong Drive, Kingston

richardmason@iprimus.com.au

Mobile 0418 589309

SITE AND SOIL EVALUATION REPORT

Background

This report and design information has been provided to assist the client in considering suitable options for an on-site wastewater management system to service a proposed new residence.

The information provided in this Report provides Design Information, Plans and Specifications suitable for inclusion in supporting documentation to enable the client to apply for a Plumbing Permit for an on-site wastewater management system.

Please note:
This design is provided as a Deemed to Satisfy proposal, consistent with Clause A2G3 NCC 2022 Vol 3.

Part 1. Site and soil evaluation (S&SE)

Location: 6 Lateena Street, Dodges Ferry TAS 7173

PID: 5918590

Title Ref: 229139/1

Developer: Julie Barrett and Dion Perry

Project: New aerated wastewater treatment system and subsurface irrigation area to service a new residence.

Site area: approximately 1368m^2.

Soil Category:
(as stated in AS/NZS 1547-2012) Modified Emerson Test Required? N
1,…**2**,…3,…4,….**5**,…6 If Yes, result:

Soil Profile:
A Christie Post Driver Soil Sampling Kit, comprising CHPD78 Christie Post Driver with Soil Sampling Tube (50mm OD x 1.6m) and a Seca Mighty Probe (1200mm) were used to obtain undisturbed soil cores or soil depth information in the proposed land application area; this being considered sufficient to provide a representative picture of soil conditions; similar soil profiles are seen throughout the site.

Soil profiles observed mirrored those described by Doyle Soil following a visit in January 2026. Soil profile descriptions by Doyle Soil in their Test Hole 2 are reproduced below; this test hole is considered to be representative of the area between the western side of the proposed house and the boundary with 4 Lateena Street, where the main (150m^2) irrigation area will be located.

1. A1/A2 Horizon: 0 - 800mm: Very dark grey (10YR 3/1) grading to pale grey (10yr 6/3) Sand, poorly graded, dry loose. Category 1

2. A3 Horizon: 800-1200mm: Dark yellowish brown (10YR 4/6), Sand, poorly graded, slightly moist, medium dense. Category 1

3. B/C Horizon: Pale Olive (5YR 6/4) with common coarse yellowish-brown mottles, Loamy Sand, moderate course blocky, slightly moist soft friable, (Dense in situ). Category 2

4. CR Refusal on sandstone bedrock

The soil profile is classified as a Category 1 soil for the purposes of AS/NZS1547.2012 On-site domestic wastewater management for subsurface irrigation DIR selection.

The soil profile in the small irrigation area (54m^2) located upslope (East) of the driveway, between the primary and secondary residence is highly disturbed with uneven topography, there is strong evidence that soils have been excavated and redeposited on this area so that there is little evidence of the original profile having survived. This area will be excavated and levelled, with the importation of at least 500mm depth of sandy soil before installation of subsurface irrigation infrastructure.

Measured or Estimated Soil Permeability (m/d)

Estimated from textural classification.

A/B Horizon 3-5m/day

Effluent Application Rates

(This is a recommendation to the designer advising how many litres of effluent should be applied to the soil for every square metre of absorption trench or other land application system.)

AWTS & irrigation 2º treated effluent – 5mm/day

Absorption trench/bed - 20mm/day

Site characteristics and proposed development configuration preclude the use of in-ground trenches or beds.

Topography

The house site is located at approximately 20m ASL on westerly sloping land overlooking Red Ochre Beach.

The surface within and downslope of the proposed primary land application area slopes at 4°, towards the west. Slope in the secondary area is steeper at 6º.

Drainage lines / water courses: Nearest downslope water (shown on LISTmap) is the shoreline of Red Ochre Beach which lies 130m downslope to the west from the proposed land application area. Separation to the watercourse meets Acceptable Solutions as per the Director's Guidelines for on-site wastewater management systems.

Geology: Shown on LISTmap geological layer as Quaternary age sand gravel and mud of alluvial, lacustrine and littoral origin, overlying Triassic sandstone; this is supported by observations of soil profiles and excavated exposures on site.

Site History (land use)
Area cleared possibly for grazing, minor farming etc at time of settlement, more recently developed, probably in 1960s-1970s for suburban-density residential use; there are no known prior uses of the site which would compromise the installation and sustainable operation of an onsite wastewater management system.

The site was is currently occupied by a derelict house, possibly 50-60 years old, which has been relocated to the site from elsewhere; this building a supporting foundation wall structure will be demolished.

Site Exposure and Climate.

Aspect: Southerly aspect but largely exposed to day round sun.

Pre-dominant wind direction: North-westerly to south-westerly.

Climate: Annual rainfall averages 500mm/year (Hobart Airport), with maximum daily average temperature of 22.6ºC and minimum of 12.5ºC, resulting in an annual evapotranspiration of 600-800mm, giving a ET- Annual rainfall deficit of 100mm+, (ie ET exceeds rainfall).

Location of sensitive vegetation, high water table, swamps, waterways etc.

The native vegetation on this site has been cleared comprising mainly grasses and some shrubs etc.

Environmental Issues

Location of sensitive vegetation, high water table, swamps, waterways etc.

The vegetation on this site has been highly altered by the previous residential use, with all original native vegetation having been removed from the site; the operation of an on-site wastewater management system on this site would likely not result in harm to natural flora values.

There is a potentially active water bores depicted on the MRT Groundwater Information Portal approximately 90m cross-slope from the proposed land application area at 6 Reninna Street; this bore is 26m deep, with groundwater stuck a 18m. Given the extant high density of on-site wastewater management systems in the immediate area, the application of disinfected effluent by subsurface irrigation causes a negligible additional contamination risk to this borehole.

The site is in a near-waterfront coastal location, with HWM approximately 130m downslope from the edge of the land application area with average slope angle of 8º / 15% to water's edge; separation is consistent with Acceptable Solutions under the Director's Guidelines and again, presents a negligible increase in risk of contamination of this water body.

Drainage/Groundwater
Given the deep sandy profile across most of the site and application by shallow subsurface irrigation, cut-off drainage is not required.

Depth to seasonal groundwater (m)
Shallow groundwater or evidence thereof, was not detected in test borings to 1600mm depth; presence of shallow groundwater is not anticipated at this site.

Site Stability
Given the slope of 4-6º, landslip/instability is not considered to be an issue for this site; the site is not affected by any Landslide Code overlay under the Planning Scheme.

Part 2. On-site wastewater management system design (Deemed to satisfy).

On Site Wastewater Management System Options.
Given the soil profile constraints of the site, continued secondary treatment of wastewater is required prior to land disposal/absorption, by subsurface irrigation; the existing accredited aerated wastewater treatment system, producing disinfected, secondary treated effluent meets this requirement.

Aerated wastewater treatment system unit:
Developer proposes to install an accredited aerated wastewater management system unit; it is recommended that one of the following be installed:

Taylex ABS 1500 – DOC/20/89089
Fuji Clean ACE 1200 (8EP) – DOC/20/66067
UBI Aqua 6000 MKII – DOC/22/103618
EnviroTas AS - DOC/22/55457

Land Application Area
A main subsurface irrigation area (150m^2) will be established downslope (west) of the new house, with a smaller (50m^2), subsidiary area located upslope (east of the driveway, between the house and the secondary dwelling.

Water Supply
Rain water supply.

Loadings.
Accommodation comprises 3 bedrooms in the main residence and 2 bedrooms in the secondary residence for a total of 5 bedrooms, with design occupancy of 7 persons; adopted per capita wastewater loading is 120 litres per day, giving a total design hydraulic loading of 840 litres per day.

This assumes rainwater water supply as per AS/NZS1547.2012, Table H1.

Design Irrigation Rate
A DIR of 5.0mm/day appropriate for the predominant Category 1 A/B-horizon soil profile is applicable.
Wastewater Land Application Area.
Surface irrigation area required: where DIR = 5mm/day

= daily wastewater loading / Design irrigation rate for Cat 1 soil.

= 840 litres per day / 5mm day

= **168m^2**

The land application area will comprise 200m^2 in total (two zones of 150m^2 and 50m^2), giving an actual DIR of 4.2mm/day.

An indexing valve will be used to ensure that effluent is applied evenly to each irrigation area zone at a ratio of 3 : 1.

The land application area location will provide horizontal separation from downslope boundary which is consistent with Performance Criteria under the Director's Guidelines for on-site wastewater management systems 2017 ("the Guidelines".)

Irrigation area hydraulic design summary

Given that the land application area will be subdivided into two areas of 150m^2 and 50m^2 respectively, separate hydraulic designs are provided for each area.

Zone 1 – 150m^2

Design occupancy (equivalent)	Per capita loading (L/day)	Total daily loading	DIR (mm/day)	Required land application area	Required length dripper line at 1m spacings	Required lemgth dripper line at 0.5m spacings)
5.25	120	630	4.2	150	150	300
Length dripperline (m)	Dripper spacing	Dripper flow rate (l/hr)	Number of drippers	Total dripper flow rate L/hr	Total dripper flow rate (L/min)	
300	0.3	2.3	1000	2300	**38**	
Daily pump runtime (mins)	Annual pump runtime (hours)					
16.5	99.97826087					
Length supply pipe	Material supply pipe	ID pipe	Friction loss (m) at flow rate L/min	-		Head loss (m)
10	LDPE	32	0.23			0.23
Friction loss from other pipe fittings						Head loss (m)
25%			0.06			0.06
Type of filter	Make	Model	Friction loss (m) at flow rate L/min			Head loss (m)
disc	Netafim	1" (25mm)	0.422			0.422

Type of indexing valve	Model		Friction loss (m) at flow rate L/min			Head loss (m)
K Rain	4404		1.47			1.47
					Total Friction head (m)	**2.18**
Differential elevation in (m)	(pump to irrigation area)					
3					**Elevation head (m)**	**3**
Operating head of dripperline (m)					**Operating head (m)**	
10					10	**10**
Total	**Dynamic**	**Head**	**(TDH)**	**in m**		**15.18**
Required	**pump**	**capacity**	**(minimum)**	**38L/min**		**15.18 TDH**

Zone 2 – 50m²

Design occupancy (equivalent)	Per capita loading (L/day)	Total daily loading	DIR (mm/day)	Required land application area	Required length dripper line at 1m spacings	Required lemgth dripper line at 0.5m spacings)
1.75	120	210	4.2	50	50	100
Length dripperline (m)	Dripper spacing	Dripper flow rate (l/hr)	Number of drippers	Total dripper flow rate L/hr	Total dripper flow rate (L/min)	
100	0.3	2.3	333	767	**12.8**	
Daily pump runtime (mins)	Annual pump runtime (hours)					
16.51	100					
Length supply pipe	Material supply pipe	ID pipe	Friction loss (m) at flow rate L/min	-		Head loss (m)
25	LDPE	32	0.09			0.09

Friction loss from other pipe fittings						Head loss (m)
25%			0.02			0.02
Type of filter	Make	Model	Friction loss (m) at flow rate L/min			Head loss (m)
disc	Netafim	1" (25mm)	0.175			0.175
Type of indexing valve	Model		Friction loss (m) at flow rate L/min			Head loss (m)
K Rain	4404		1.47			1.47
					Total Friction head (m)	**1.76**
Differential elevation in (m)	(pump to irrigation area)					
4					**Elevation head (m)**	**4**
Operating head of dripperline (m)					**Operating head (m)**	
10					10	**10**
Total	**Dynamic**	**Head**	**(TDH)**	**in m**		**15.76**
Required	**pump**	**capacity**	**(minimum)**		**@ 12.8 L/min**	**15.76 TDH**

Pump selection
Irrigation pump fitted in the aerated wastewater treatment system unit must be capable of supplying at least 40L/min at a minimum head of 16m.

A Davey D42 A/B or equivalent will meet this requirement.

Upslope drainage of land application area.
Given the highly permeable soil profile on this site and effluent application by shallow subsurface irrigation, cut-off drainage is not required.

Compliance with statutory requirements.
The proposal meets the relevant provisions of the Director's Guidelines for on-site wastewater management systems as detailed below:

Compliance Table	Directors Guidelines for OSWM	
Acceptable Solutions	Performance Criteria	Compliance achieved by
5.1 To ensure sufficient land is available for sustainable onsite wastewater management for buildings.		
A1 A new dwelling must be provided with a land application area that complies with Table 3.	P1 A new dwelling must be provided with a land application area that meets all of the following: a) The land application area is sized in accordance with the requirements of AS/NZS 1547; and b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	P1(a) Land application area sized to AS/NZS1547.2012 Appendix M. P1(b) Risk assessment demonstrates that risk is acceptable.
5.2 To ensure sustainable onsite wastewater management for commercial and non-residential buildings (Class 3-9).		
A1 An onsite wastewater management system including the land application area for non-residential buildings must satisfy all of the following: (a) be sized based on the hydraulic and organic loadings contained in Table 4 and design loading or irrigation rates contained in AS/NZS 1547; (b) be located in accordance with clause 7.1	P1 An onsite wastewater management system including the land application area for non-residential building must satisfy all of the following: a) A site and soil evaluation and design report prepared by a suitably person determined by the Director demonstrating that the land application area is of sufficient size to treat and manage the wastewater generated from the proposed building within the property boundaries. b) The SSE report and system design demonstrates the design is consistent with AS/NZS 1547 and uses appropriate hydraulic and organic loading rates for the proposed activity. c) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable. d) The land application area is to be located in accordance with the acceptable solution or performance criteria specified in clause 7.1.	n/a
5.6 Area required for on-site wastewater management – building extensions, alterations or outbuildings (Building Class 1-10)		
A2 An outbuilding, addition or alteration to an existing building, or change of use of that building, must not encroach onto or be within 2m (if upslope) or 6m (if downslope) of an existing land	P2 An outbuilding addition or alteration to an existing building or change of use of that building, must be provided with a land application area (including land reserved for a future land application area) that	n/a

application area (including land reserved for a future land application area) or a wastewater treatment unit and comply with at least one of the following: a) not increase the number of bedrooms (or rooms reasonably capable of being used as a bedroom) or otherwise increase the potential volume of wastewater generated onsite; and b) not increase the number of bedrooms (or rooms reasonably capable of being used as a bedroom) or otherwise increase the potential volume of wastewater generated onsite to greater than that allowed for in the design of the existing OWMS.	meets all of the following: a) The land application area is of sufficient size to comply with the either Appendix L, M or N and setback distances are consistent with Appendix R of AS/NZS 1547; and b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	
7. Standards for Wastewater Land Application Areas		
A1 Horizontal separation distance from a building to a land application area must comply with one of the following: a) be no less than 6m; b) be no less than: (i) 3m from an upslope boundary or level building; (ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building; (iii) If secondary treated effluent and subsurface application, no less than 2m plus 0.25m for every degree of average gradient from a downslope building.	P1 The land application area is located so that the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low. Sorell Council Development Application: 5.2026.162.1 - Development Application 6 Lateena Street, Dodges Ferry- P1.pdf Plans Reference: P1 Date Received: 18/05/2026	A1(b)(iii) Secondary treatment, 4º slope to house at 4 Lateena Street; minimum separation 3m. Design provides 3m separation to carport. P1 Secondary treatment; LAA is 0.5m downslope of new buildings on the site. Footings are to be founded on underlying Triassic sandstone bedrock and effluent is applied by shallow subsurface irrigation. As foundation is hard rock, bearing capacity will not be affected.
A2 Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b) (a) be no less than 100m; or (b) be no less than the following: (i) if primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or (ii) if secondary treated effluent and subsurface application, 15m plus 2m for every degree of average	P2 Horizontal separation distance from downslope surface water to a land application area must comply with all of the following: a) Setbacks must be consistent with AS/NZS 1547 Appendix R; b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	A1(a) 130m from surface water.

gradient to down slope surface water.		
A3 Horizontal separation distance from a property boundary to a land application area must comply with either of the following: (a) be no less than 40m from a property boundary; or (b) be no less than: (i) 1.5m from an upslope or level property boundary; and (ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or (iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary.	P3 Horizontal separation distance from a property boundary to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	A3(b)(i) LAA 1.5m from cross-slope boundary. P3(a) 1.5m from downslope boundary – consistent with Appendix R P3(b) Risk assessment demonstrates that risk is acceptable.
A4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must be no less than 50m and not be within the zone of influence of the bore whether up or down gradient.	P4 Horizontal separation distance from downslope bore, well or similar water supply to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable.	A4 Nearest borehole is 90m cross-slope.
A5 Vertical separation distance between groundwater and a land application area must be no less than: (a) 1.5m if primary treated effluent; or (b) 0.6m if secondary treated effluent	P5 Vertical separation distance between groundwater and a land application area must comply with the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable	A5(b) Groundwater not encountered to refusal at 1600mm and is considered unlikely to be present. Land application area design, secondary treatment provides minimum of 1400+mm separation to this depth.
A6 Vertical separation distance between a limiting layer and a land application area must be no less than: (a) 1.5m if primary treated effluent; or (b) 0.5m if secondary treated effluent.	P6 Vertical setback must be consistent with AS/NZS1547 Appendix R.	A6(b) Refusal struck at 1600mm. Subsurface irrigation system provides minimum vertical separation of 1400mm to this depth.
A7 Nil	P7 A wastewater treatment unit must be located a sufficient distance from buildings or neighbouring properties so that emissions (odour, noise or aerosols) from the unit do not create an environmental nuisance to the residents	Aerated wastewater treatment system unit will not normally cause odour or noise or nuisance.

	of those properties	

Consistency with Appendix R, AS/NZS1547.2012 – recommended setback distances for land application systems.
Appendix R of AS/NZS1547.2012 ("the Standard"), provides, via Table R1, a range of acceptable setback distances from potentially sensitive site features, including surface water, property boundaries and impermeable soil or rock formations.

The applicable ranges of setback distances are varied according to site constraint factors in Table R2 and referenced in R1, as relevant against each site feature.

Table R2 provides a constraint scale (from lower to higher), for each constraint item.

The constraint factors etc relevant to this proposal, (ie separation surface water, groundwater and limiting layer together with commentary are provided below:

Assessment of setback distances and vertical separation against Appendix R

- **Property boundary -** Table R1 setback range from property boundaries is 1.5-50m with site constraint factors A, D, & J identified.
    - **A – microbial effluent quality**; range (low to high constraint) 10cfu - 10^6 cfu/100mL.

      Primary treatment, effluent quality predicted to to be in 10^1 cfu/10mL.

      Microbiological effluent quality is therefore considered to be a low constraint.
    - **D – Slope:**

      0-10% subsurface application (low) ----> >30% subsurface application (high)

      Slope to boundary averages 7% - low constraint.
    - **J – Application method**

      Drip or subsurface ---> surface application

      Effluent to be applied subsurface – low constraint.

Low constraint and moderate constraint issues substantially exceed high constraints issues for proximity of land application area to surface water at this site; it is therefore concluded that the proposal is substantially in accordance with Appendix R of AS/NZS1547.2012.

Risk assessment

This proposal meets all Acceptable Solutions under the Guidelines, with the exceptions of 5.1P1 and 7P3; the risk assessment process below as per Clause 5.5.3.2 of AS/NZS1547.2012 is therefore limited to consideration of these issues.

Each identified environmental aspect is subject to a qualitative risk analysis based on likelihood and consequences of environmental impact. The risk analysis matrix is as follows:

LIKELIHOOD	***CONSEQUENCES***				
	Catastrophic 1	Major 2	Moderate 3	Minor 4	Insignificant 5
A (almost certain)	Extreme	Extreme	High	High	Medium
B (likely)	Extreme	Extreme	High	High	Medium
C (possible)	Extreme	Extreme	High	Medium	Low
D (unlikely)	Extreme	High	Medium	Low	Low
E (rare)	High	Medium	Low	Low	Low

Criteria for the five categories of likelihood:

Almost certain: An environmental health impact is expected to occur in most circumstances.

Likely: An environmental health impact will probably occur in most circumstances

Possible: An environmental health impact could occur.

Unlikely: An environmental health impact could occur but is not expected.

Rare: An environmental health impact would occur only in exceptional circumstances.

Criteria for determining consequence to environmental health from an on-site wastewater management issue:

Catastrophic: Widespread, irreparable environmental damage; loss of human life or long term human health effects; serious litigation; over $1 million to manage consequences.

Major: Widespread, medium to long term impact; moderate human health impacts requiring medical treatment; major breach of legal requirements (prosecution); $50,000 to $1 million to manage consequences.

Moderate: Localised medium to long term impact; minor and reversible human health impacts treatable with first aid; moderate breach of legal requirements with fine (EIN/prosecution); $5,000 to $50,000 to manage consequences.

Minor: Localised short to medium term impact; no injury to people; minor breach of legal requirements (eg legal notice, EIN); $1000 to $5,000 to manage consequences.

Insignificant: Limited impact to a local area but no long-term effects; concern or complaints from neighbours; no injury to people; minor technical nonconformity but no legal nonconformity; less than $1000 cost to manage consequences.

Conducting a risk analysis results in the allocating of a risk level of *extreme*, *high*, *moderate* or *low* for each environmental aspect. Environmental health aspects with an *extreme* or *high* risk are considered to be *significant*, that is, they have or can have a significant environmental impact.

Issue	Potential impacts	Likeli hood	Conseq uence	Risk rating	Risk reduction measure (RRM) / factors	Rating after adoption of RRM
OSWMS component						
Size of land application area.	Insufficient reserve area – failure of irrigation system	C	3	M	Conservative application rate (irrigation) Dripper line may be replaced in situ in event of dripper blockage or localised soil clogging	Low
Proximity to downslope boundary	Overland flow across onto adjoining land	C	3	M	Low risk of land application area failure. Subsurface application Disinfection Conservative DLR Conservative LLR	L

Date of Site Visit: **05/02/2026**

Weather Conditions:
Overcast, warm and dry; 31mm of rainfall at Hobart Airport since 01/01/2026

Further Information.
For further detailed assessment and design information, together with operation and maintenance advice, please refer to the Appendices.

Statement.

I certify that this Site and Soil Evaluation and Design for an on-site wastewater management system for the proposed residential development at 6 Lateena Street, Dodges Ferry has been undertaken in accordance with the relevant provisions of AS/NZS 1547:2012. Onsite Domestic Wastewater Management, with respect to the design of on-site wastewater management systems requiring a Plumbing Permit.

The design of this on-site wastewater system is suitable for the residence referred to in this report.

It is not to be published or reproduced for the benefit of third parties unconnected with this development on this site by this developer without my explicit permission as author.

Please Note:

It is generally understood that the successful operation of an on-site wastewater disposal system is dependent upon a number of complex, interacting factors and that the operating life of in-ground absorption systems in particular may be limited. This system may require future maintenance or modification to ensure its continued satisfactory operation. The client is advised that such works are the responsibility of the property owner.

CONDITIONS OF INVESTIGATION

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This report contains observations & interpretations based often on limited subsurface evaluation. Where interpretative information or evaluation has been reported, this information has been identified accordingly & is presented based on professional judgement. OAT does not accept responsibility for variations between interpreted conditions & those that may be subsequently revealed by whatever means.

Due to the possibility of variation in subsurface conditions & materials, the characteristics of materials can vary between sample & observation sites. OAT takes no responsibility for changed or unexpected variations in ground conditions that may affect any aspect of the project. The classifications in this report are based on samples taken from specific sites. The information is not transferable to different sites, no matter how close (ie if the development site is moved from the original assessment site an additional assessment will be required).

It is recommended to notify the author should it be revealed that the sub-surface conditions differ from those presented in this report, so additional assessment & advice may be provided.

Investigations are conducted to standards outlined in relevant Australian Standards, codes and guidelines, including:

- AS1547-2012: Onsite Domestic Wastewater Management
- AS3959.2009: Construction of Buildings in Bushfire Prone Areas
- Director's Guidelines for on-site wastewater management systems. (CBOS)
- Director's Determination – Requirements for Building in Bushfire-Prone Areas. (CBOS)

All new developments should subject to strict site maintenance. Attention is drawn to the relevant appendices of this report.

Any assessment that has included an onsite wastewater system design will require a further site visit once the system has been installed if certification of an installation/works is required (to verify that the system has been installed as per OAT's design). An additional fee may apply for the site visit & issuing the certificate.

OAT is not responsible for the correct installation of wastewater systems. Any wastewater installation is the sole responsibility of the owner/agent and certified plumber. Any variation to the wastewater design must be approved by OAT, and an amended Special Plumbing Permit obtained, if required from the relevant council. The registered plumber must obtain a copy and carefully follow the details in the council issued Plumbing Permit. Certification of completion of works will be based on surface visual inspection only, to verify the location of the system. All underground plumbing works are the responsibility of the certified plumber.

Please Note:

It is generally understood that the successful operation of an on-site wastewater disposal system is dependent upon a number of complex, interacting factors and that the operating life of in-ground absorption systems in particular may be limited. This system may require future maintenance or modification to ensure its continued satisfactory operation. The client is advised that such works are the responsibility of the property owner.

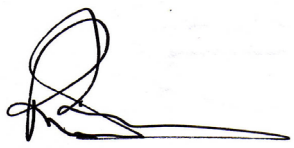
SITE ASSESSOR AND SYSTEM DESIGNER

NAME: Richard Mason, Environmental Health Professional & Accredited Building Services Hydraulic Designer.

NAME OF ORGANISATION: Onsite Assessment Tas.

ADDRESS: 20 Adelong Drive, Kingston, Tasmania, 7050

CONTACT DETAILS: 0418 589 309; richardmason@iprimus.com.au

SIGNED:  DATED: 15/05/2026

APPENDICES

1 - Site Location	**18**
2 – Site Photos	**19**
3 – Soil testing	**20**
4 – Design plans	**21**
5 – Design specifications	**25**
6 – Advice to project manager and installer	**27**
7 - Loading Certificate and O & M requirements	**28**
8 – Form 35	**33**
9 – Form 55	**35**

Appendix 1. Site Location

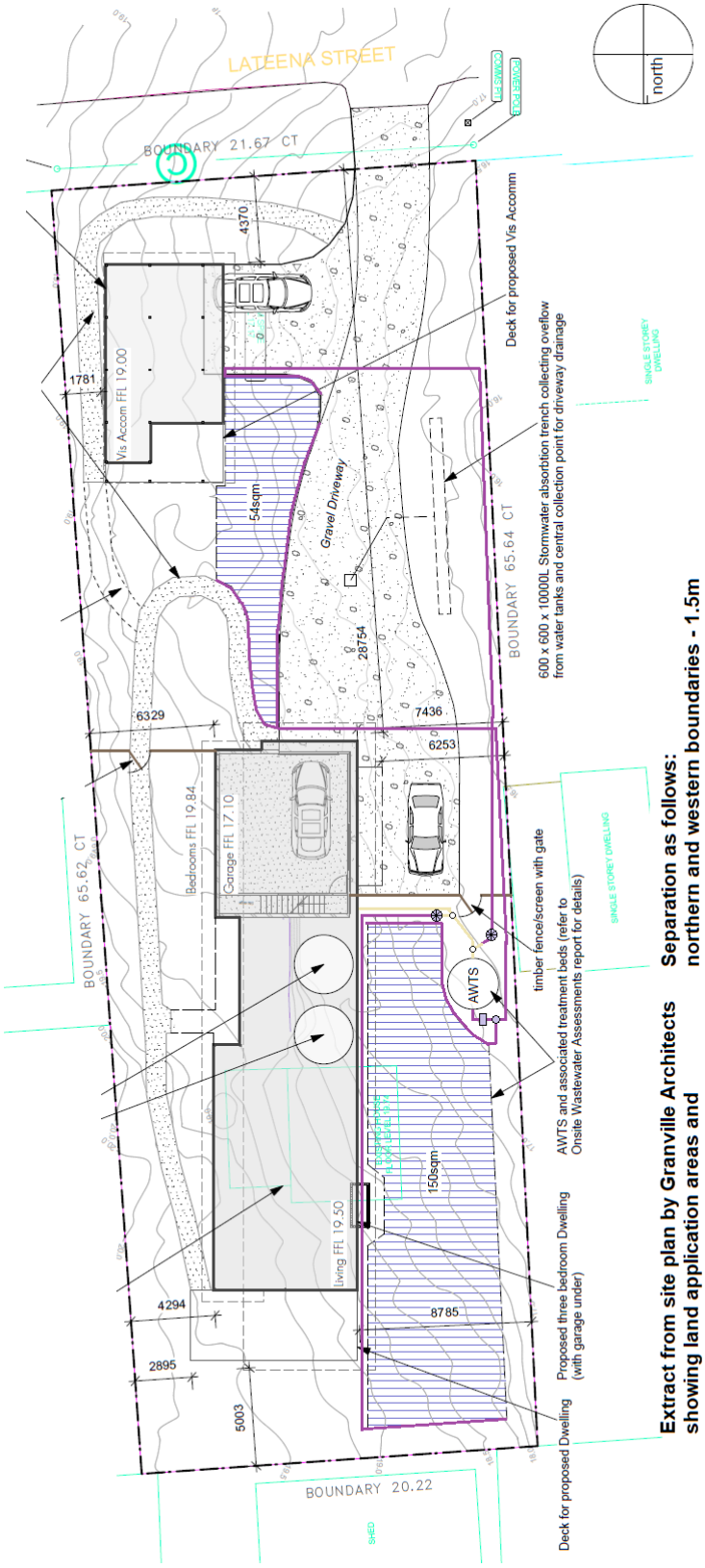
Appendix 2 - Site photos

(above) Views of proposed land application area

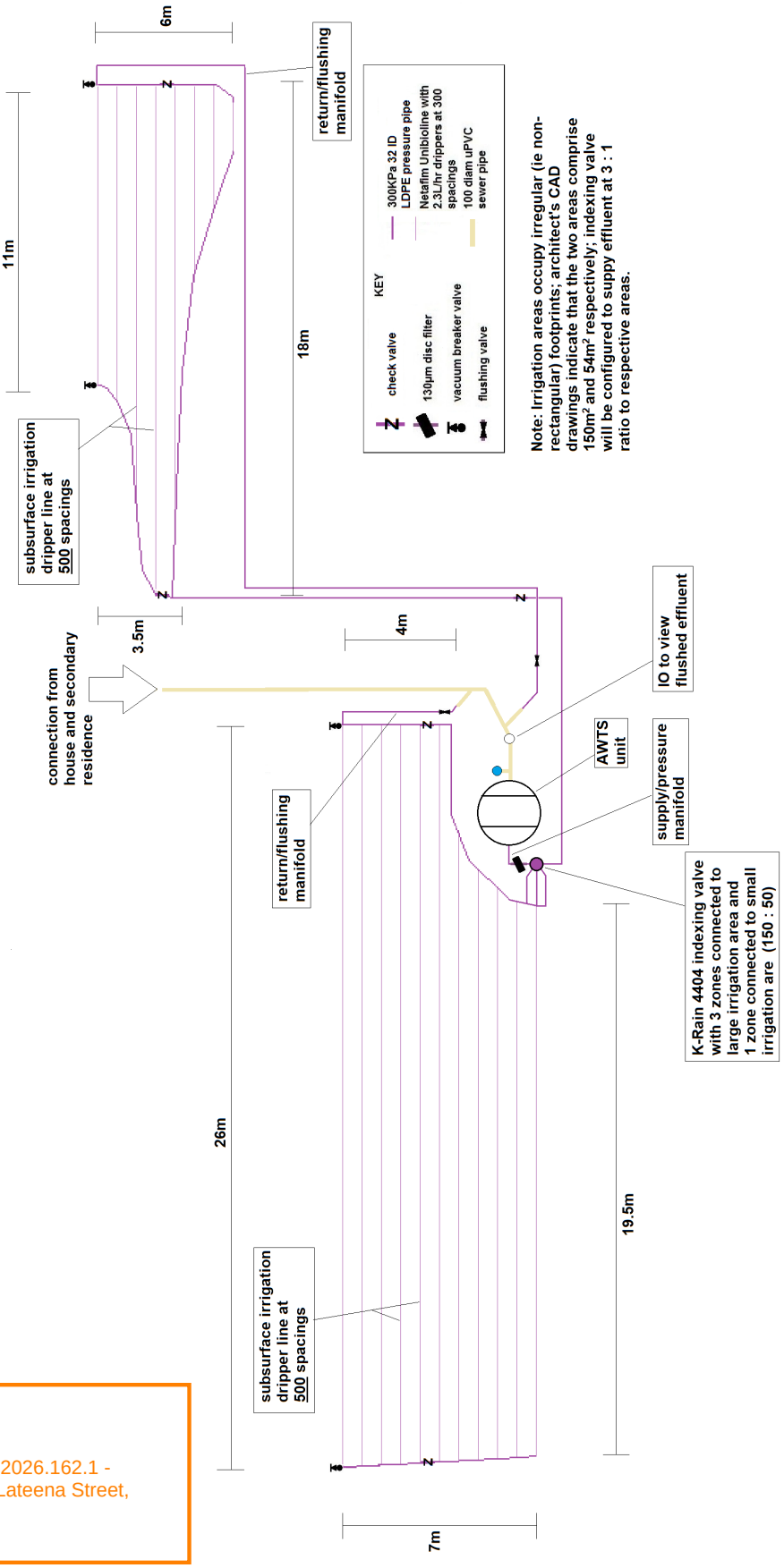
Appendix 3 – Soil testing

(above) – test cores from proposed land application area by Doyle Soil.

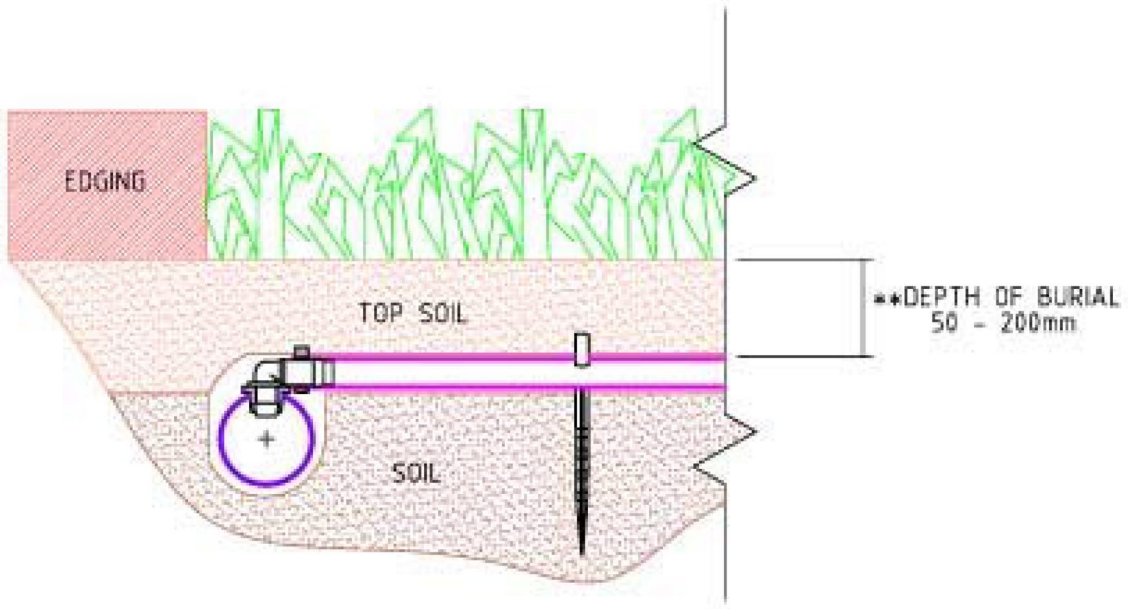
Appendix 4 - Design plans.



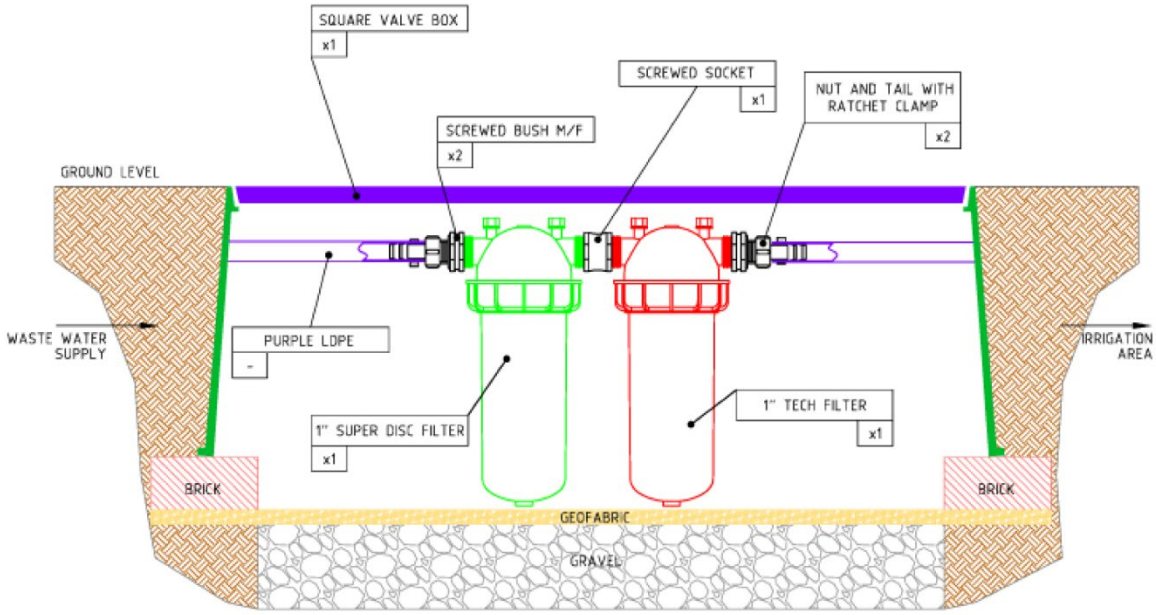
Site and drainage plan.



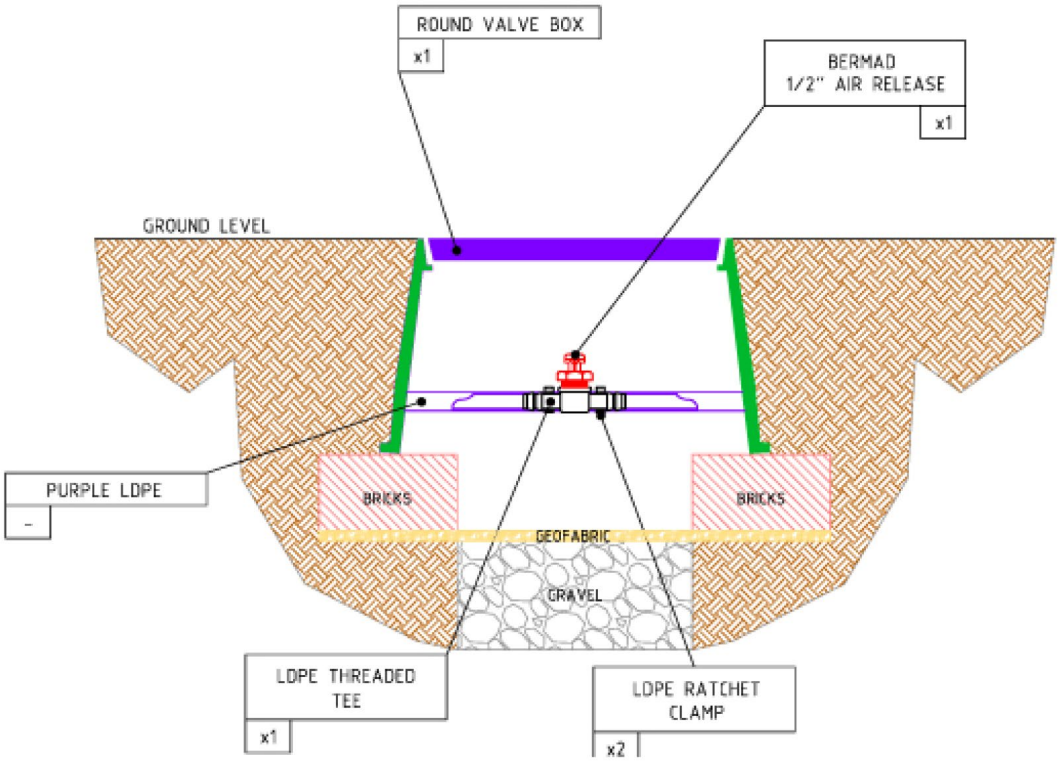
(above) On-site wastewater management system schematic.



Cross section through subsurface irrigation area



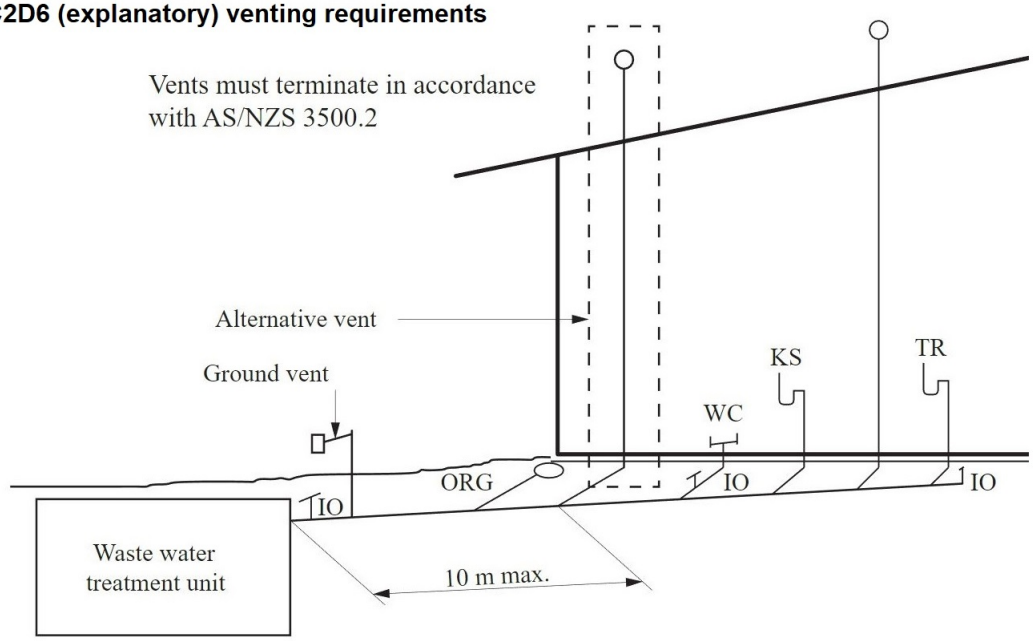
(above) Filter details



(above) Vacuum breaker valve details

Note: Installation and venting to be in accordance with NCC 2022 Vol 3 TAS C2D6 Venting requirements.

Tas Figure C2D6 (explanatory) venting requirements



Appendix 5 – Onsite wastewater management system design specifications.

1. Aerated wastewater management system unit to be installed.

2. Recommended AWTS units are:

   Taylex ABS 1500 – DOC/20/89089
   UBI Aqua 6000 MKII – DOC/22/103618
   EnviroTas AS - DOC/22/55457
   Fuji Clean ACE 1200 (8EP) – DOC/20/66067

3. Land application area will comprise approximately 204m^2 subsurface irrigation system, located as per site plan in Appendix 4 above.

4. Aerobic wastewater treatment unit to be vented in accordance with NCC 2022 Vol 3, Tas C2D6.

5. Supply manifold from aerobic wastewater treatment system to be fitted with a 130µm disc filter.

6. K-Rain 4404 (or similar) indexing valve to be installed and configured with modified supply manifold so as to distribute 75% of flow to large irrigation area and 25% to small irrigation area

7. Drip irrigation system is “UniBioline” by Netafim or Toro; 16-17mm OD polypipe with inbuilt 2.0- 2.3L/hr drip emitters, (or similar) laid at 500mm spacings.

8. Install irrigation dripper line laid installed at depth of 10mm in sandy topsoil.

9. Imported sandy loam topsoil to be laid level to depth of 200mm over small (54m^2) irrigation area as required to ensure at least 600mm depth of sandy soil.

10. Dripper line to be laid between Supply and Return manifolds, each comprising 32mm diameter lilac LD polyethylene pipe, as per irrigation area details in Appendix 4.

11. Vacuum breakers connected to highest points on each irrigation area as per attached plan in Appendix 4.

12. All valves and breakers to be placed in valve boxes with lilac screw-down covers flush to finished ground surface.

13. Supply manifolds connected to lowest point on irrigation area, return manifold runs from highest point on irrigation area zones.

14. Manual or automatic flushing valve to be provided in return line, discharging back to secondary settlement chamber of Aerated Wastewater Treatment unit.

15. Spread lawn grass seed over finished soil surface.

16. Condition and performance of wastewater land application area to be monitored and reported during routine quarterly maintenance inspections.

L7 CONSTRUCTION TECHNIQUES (AS/NZS1547.2012 On-site domestic wastewater management.)

L7.1 Good construction technique
The following excavation techniques shall be observed so as to minimise the risk of damage to the soil:

(a) Plan to excavate only when the weather is fine;

(b) Avoid excavation when the soil has a moisture content above the plastic limit. This can be tested by seeing if the soil forms a 'wire' when rolled between the palms;

(c) During wet seasons or when construction cannot be delayed until the weather becomes fine,
smeared soil surfaces may be raked to reinstate a more natural soil surface, taking care to use
fine tines and only at the surface;

(d) When excavating by machine, fit the bucket with 'raker teeth' if possible, and excavate in small
'bites' to minimise compaction; and

(e) Avoid compaction by keeping people off the finished trench or bed floor.

In particular for trenches and beds:

(f) If rain is forecast then cover any open trenches, to protect them from rain damage;

(g) Excavate perpendicular to the line of fall or parallel to the contour of sloping ground; and

(h) Ensure that the inverts are horizontal.

CL7.1
Damage can be done by:
(a) Smearing, where the soil surface is smoothed, filling cracks and pores;

(b) Compacting, where the soil porosity is reduced; and

(c) Puddling, where washed clay settles on the base of the trench to form a relatively impermeable layer.

In particular, cohesive soils, or soils containing a significant quantity of clay, are susceptible to damage by excavation equipment during construction.

Appendix 6 – Advice to Project manager.

Important notes for Project Manager.

It is vitally important to the future of the on-site wastewater management system to avoid damage to soil structure on the site, which would reduce soil permeability, leading to possible early failure of the effluent absorption trenches.

Actions that may damage soil structure include:

- Compaction, which reduces soil porosity;
- Smearing, where soil surfaces are smoothed, filling pores and cracks; and,

The Effluent Irrigation Area must be carefully constructed to ensure its optimal operation.

Project Manager Responsibilities.

The Project Manager must ensure that:

1. Before project construction work commences, the Effluent Absorption Area is properly identified on site and barricaded, fenced, roped or taped to prevent unauthorised access. This action should be documented both on the site plan and with the local Council.

2. Vehicles, earth-moving plant etc do not park or manoeuvre on the Effluent Absorption Area.

3. The Effluent Absorption Area is not used for the stockpiling of construction materials, excavated fill or other materials.

4. All water runoff resulting from the construction of driveways, cut & fill and other excavations is directed to discharge well away from and downslope of the Effluent Absorption Area.

Appendix 7 – Loading Certificate and Operation & Maintenance Requirements

A copy of the relevant aerobic wastewater treatment system Certificate of Accreditation and Owners' Manual is to be provided by the supplier; the home owner is advised to print two hard copies of the Accreditation publication, one of which should be submitted to the Council in support of the Special Plumbing Permit Application, and one copy of the Owners' Manual.

Both should be retained and read for familiarisation purposes and the recommendations therein carefully followed to ensure optimal, nuisance free operation of the system with minimal environmental health impacts.

This loading certificate is provided in accordance with Clause 7.4.2(d) of AS/NZS 1547.2012.

Loading Certificate for proposed aerobic wastewater treatment system with surface irrigation, servicing proposed residence at 6 Lateena Street, Dodges Ferry.

i. **System capacity** (medium-long term) – 7 persons / 840 litres/day.

ii. **Design criteria summary**:

- Effluent quality – secondary with disinfection
- Soil category - Category 1 (5mm/day DIR)
- Land application system - Subsurface irrigation (see Appendix M of AS/NZS1547.2012)

iii. Reserve area.

Effluent treated to secondary standard and irrigated subsurface; no additional land is available or required.

iv. Water efficient fittings etc

Design assumes use of water efficient fixtures and fittings, eg 3L/6L flush toilets, 9L/min (max) showerheads, aerator fittings on taps and clothes washing machines/dishwashers with WELSS star ratings of 4.5 stars or above. (see http://www.waterrating.gov.au/)

v. Variation from design flows etc.

The system should successfully manage additional peak loadings which may result from occasional social gatherings provided that this does not exceed use by more 40 persons in an 8-hour period or a total of 2 additional visitors temporarily resident (i.e. total of 9 persons) for a period not exceeding 14 days with return period of no less than 42 days. Visitors should be advised of the requirement to minimise time spent in showers; avoid running taps whilst cleaning teeth and other common-sense water conservation measures.

vi. Consequences of changing wastewater characteristics.

The home owner should avoid disposing of wastes which would be additional to those normally disposed in a household sewerage system; increases, in organic loadings such as from the use of sink-waste disposal units are to be avoided.

Use of household disinfectants or bactericides in anything more than small amounts and at recommended rates of dilution should also be avoided, as should the disposal of solvents and other chemicals or pharmaceuticals such as antibiotics or antimicrobials which may kill bacteria and other microorganisms required for effective wastewater treatment.

vii. **Consequences of overloading the system.**

Long term use by more than 7 residents or equivalent may result in hydraulic overloading of the irrigation system, run-off of effluent, public and environmental health nuisances, pollution of surface waters etc. Overloading may also result from such uses as residential childcare, home-catering and other wastewater-intensive home-based businesses etc.

viii. **Consequences of underloading the system.**

The system will work effectively with as few as one person in residence, however long periods of zero-occupancy may result in poor functioning of the system when normal use recommences.

If you plan to leave the building unoccupied for more than one month, please advise the maintenance contractor.

Similarly, if occupancy levels are suddenly changed such as if family or friends move in with you, or if usage changes markedly such as when changing from full time occupancy to part time usage, the maintenance contractor should also be advised.

ix. **Consequences of lack of operation, maintenance and monitoring attention.**

The AWTS requires regular 3 monthly maintenance by an authorised, trained technician, undertaken in accordance with a written maintenance contract. (Or at intervals specified in the aerobic wastewater treatment system unit's Certificate of Accreditation.)

Consequences of failure to observe the regular maintenance requirements may include any of the following:

- Spread of infectious diseases to your family and neighbours.
- Nuisance and unpleasant odours.
- Pollution of waterways, streams, beaches and shellfish beds.
- Contamination of bores, wells and groundwater.
- Excessive and unsightly weed growth.
- Alteration of local ecology

- **Operation & Maintenance Requirements**

- Aerated wastewater treatment system unit and irrigation area etc to be subject to a maintenance agreement with quarterly maintenance visits or as per accreditation conditions, by a suitably qualified and experienced person, in accordance with the Director's Determination - Accreditation and Maintenance of Plumbing Installations 2016

- Ensure that the AWTS unit is desludged by an authorised contractor at five yearly intervals. Failure to do this at the required frequency may result in carry-over of solids into the aerobic wastewater treatment and irrigation systems, causing failure of the land application area, which may then require expensive reconstruction works.

- Discourage access by visitors or pets to the land application area.
- Livestock should not be allowed on or near the irrigation area; if such animals are kept, the land application area should be fenced off to prevent system damage and/or soil compaction.
- Do not allow vehicles on or near the land application area.
- Keep any surface and sub-surface cut-off drain above the land application area open and clear of debris to prevent rainwater flowing into the effluent absorption area.
- Problems may occur with systems which have not been properly maintained and where absorption areas have become blocked or clogged. The warning signs are obvious and include:
- Effluent land application area is wet or soggy with wastewater ponding on the surface of the ground.
- “Sewage” smells near the aerobic wastewater treatment system.

Are you purchasing a new aerated waste water treatment system?

This guide will help you to choose the best system and contractor to suit your needs. Read on for handy tips and information designed to help you make an informed investment choice.

PROCESS IN BRIEF

Property requires an aerated waste water treatment system solution.

↓

Property owner engages an accredited designer to design a system to suit the owners land.

↓

Owner decides what brand of aerated waste water treatment system they wish to have.

↓

Design completed and submitted to council for approval.

↓

If system design is approved a plumbing permit will be issued to the owner by council.

↓

A licensed plumbing contractor is engaged by the owner to install the system.

↓

System is installed as per the approved plumbing permit or design.

↓

Installation is inspected by the designer upon completion and a completion certificate is sent to council to confirm the installation meets with the design requirements.

↓

Owner must enter into a maintenance contract with a service contractor and notify the council of such. The owner must also provide council with a copy of the maintenance contract.

↓

Quarterly servicing begins.

Department of Justice
Consumer, Building and Occupational Services
PO Box 56, Rosny TAS 7018
P: 1300 65 44 99
E: cbosinfo@justice.tas.gov.au
W: www.justice.tas.gov.au

This guide is a resource and reference document and is for general information only. Published April 2016

CBOS
Consumer Building and Occupational Services

A GUIDE TO PURCHASING, INSTALLING & MAINTAINING

AERATED WASTE WATER TREATMENT SYSTEMS

Department of Justice
Consumer, Building and Occupational Services

Tasmanian Government

OWNERSHIP

- Purchasing, installing and maintaining a waste water treatment system can be a significant up-front investment, and will have ongoing maintenance costs. We recommend that you choose a system and maintenance contractor which best suits your needs.
- An aerated waste water treatment system accepts normal domestic household waste from toilets, basins, showers, baths and kitchen sinks. It is designed to treat the waste and then distribute treated waste water on site to the garden area.
- It is important to understand that this treated water is not suitable for vegetable gardens or fruit trees or any other produce producing plants
- Even after treatment of the waste water, bare skin contact and contact by pets and livestock should be avoided.

WARNINGS

- Waste water treatment systems that are not working or are working incorrectly can be a serious health hazard.
- Ponding of water and leaking waste water distribution systems should be rectified immediately.
- Keep pets and children clear of waste water distribution areas.

RESPONSIBILITIES

- You, as the owner, will be responsible for the overall operation and monitoring of your system and for making sure the scheduled maintenance is carried out at regular intervals, such as quarterly.
- Your local council will issue a plumbing permit – with permit conditions attached – for your new installation. As long as you own the property you will be responsible for making sure these conditions are met.
- We recommend that you choose a suitable maintenance contractor to work with you to ensure you meet the permit conditions. Perhaps ask other owners who services their system.

INSTALLATION

- Before your system can be installed, an accredited designer will need to complete a design for the waste water system including the irrigation area. The design will require approval from your local authority (council).
- A licensed plumber must be used to install your waste water management system.

CHOOSING YOUR SYSTEM

- There are various waste water systems on the market for you to choose from. Ask your local council, accredited designer or plumbing contractor for some advice on a suitable system.

MAINTENANCE

- Aerated waste water treatment systems require regular maintenance, usually 4 services per year.
- Servicing needs to be carried out by a qualified person (ask your local council for a list of suitable maintenance contractors).
- You will need to enter into a formal maintenance contract with the maintenance contractor.
- You will need to agree on the service costs with the maintenance contractor. This amount should be contained within a Maintenance Service Contract.
- The local council will require a copy of the formal contract once it's been agreed to and signed by both parties.
- The local council will require a 'receipt of servicing' from your contractor after every service.
- You, as the owner, will also receive a copy of this service receipt.
- Generally a service of a typical aerated waste water treatment system takes between 0.5-1.0 hour to complete correctly.

MAINTENANCE CONTRACTORS AND CONTRACTS

- Seek good advice and be prepared to speak with more than one maintenance contractor.
- Maintenance contractors differ when it comes to terms and conditions within a contract, and these terms and conditions are often negotiable.
- You may wish to change contractors or your circumstances may change, which could require you to terminate the contract. Be aware that contractors offer varying exit options from the contract, and make sure you compare the contract exit options when deciding on a contractor.
- Contractors offer varying lengths of time for which the contract is active. You should compare contract lengths to ensure you are entering a contract with a timeframe appropriate for you.
- Make sure you understand all of the terms and conditions prior to signing the contract.
- Ensure that your contract contains all the basic terms including price, services to be provided and service intervals.

Clockwise from above: Example of an aerated waste water system being delivered. Example of a typical installation. Example of regular maintenance.

Appendix 8 – Form 55

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: Julie Barrett & Dion Perry *Owner /Agent*

[redacted] *Address*

[redacted] [redacted] *Suburb/postcode*

Form **55**

Qualified person details:

Qualified person: Richard Mason

Address: 20 Adelong Drive

Kingston

Phone No: 0418 589309

Fax No:

Licence No: CC6157T

Email address: richardmason@iprimus.com.au

Qualifications and Insurance details: BSc Environmental Sciences (Salford).

Arch Insurance Policy No. P0021114PI2022AU0

(description from Column 3 of the Director of Building Control's Determination)

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

(description from Column 4 of the Director of Building Control's Determination)

Details of work:

Address: 6 Lateena Street

Dodges Ferry 7173

Certificate of title No: 229139/1

The assessable item related to this certificate: Onsite wastewater management – Site and soil evaluation for onsite wastewater management capability;

(description of the assessable item being certified)

-

Certificate details:

Certificate type: On-site wastewater management - Site and soil evaluation

(description from Column 1 of Schedule 1 of the Director of Building Control's Determination)

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work: ☐

or

a building, temporary structure or plumbing installation: x

In issuing this certificate the following matters are relevant –

Documents: AS/NZS 1547. 2012: On-site domestic-wastewater management.

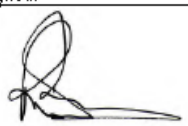
Relevant calculations:	
References:	AS/NZS 1547.2012: Onsite Domestic Wastewater Management. Directors Guidelines for on-site wastewater management systems

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

Site & soil evaluation and design report - Proposed on-site wastewater management system at 6 Lateena Street, Dodges Ferry TAS 7173, by Richard Mason, Onsite Assessments Tas, dated 15/05/2026.

Scope and/or Limitations

I certify the matters described in this certificate.

Qualified person:	*Signed:*	*Certificate No:*	*Date:*
		n/a	15/05/2026

Appendix 9 – Form 35

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

To: Julie Barrett & Dion Perry *Owner name*

[redacted]t *Address*

[redacted] [redacted] *Suburb/postcode*

Form **35**

Designer details:

Name:	Richard Mason	Category:	Hydraulic Restricted
Business name:	Onsite Assessments Tas	Phone No:	0418 589 309
Business address:	20 Adelong Drive		
	Kingston 7050	Fax No:	
Licence No:	CC6057T	Email address:	

Details of the proposed work:

Owner/Applicant	Julie Barrett & Dion Perry	Designer's project reference No.	n/a
Address:	6 Lateena Street	C/T No:	229139/1
	Dodges Ferry 7173		

Type of work: Building work ☐ Plumbing work [x] *(X all applicable)*

Description of work:

On site wastewater management system

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions): *(X all applicable certificates)*

Certificate Type:	Certificate	Responsible Practitioner
	☐ Building design	Architect or Building Designer
	☐ Structural design	Engineer or Civil Designer
	☐ Fire Safety design	Fire Engineer
	☐ Civil design	Civil Engineer or Civil Designer
	✓ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Service Designer
	☐ Plumbing design	Plumber-Certifier; Architect, Building Designer or Engineer
	☐ Other (specify)	

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

Other details:
AWTS with subsurface irrigation.

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers: Appendix 4	Prepared by: Richard Mason	Date: 15/05/2026
Schedules:	Prepared by: Richard Mason	Date:
Specifications: Appendix 5	Prepared by: Richard Mason	Date: 15/05/2026
Computations: Pages 5-8	Prepared by: Richard Mason	Date: 15/05/2026

Standards, codes or guidelines relied on in design process:

AS/NZS1547.2012 On site domestic waste water management

National Construction Code 2022 Vol 3

Director's Guidelines for On-site Wastewater Management Systems, Director of Building Control (Tasmania), 2017.

Any other relevant documentation:

CBOS Certificates of accreditation:

Taylex ABS 1500 – DOC/20/89089
Fuji Clean ACE 1200 (8EP) – DOC/20/66067
UBI Aqua 6000 MKII – DOC/22/103618
EnviroTas AS - DOC/22/55457

Site & soil evaluation and design report - 6 Lateena Street, Dodges Ferry TAS 7173, by Richard Mason, Onsite Assessments Tas, dated 15/05/2026.

Form 55, dated 15/05/2026, certifying Site & Soil Evaluation etc Report.

Attribution as designer:

I, **Richard Mason** 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:	Richard Mason		15/05/2026
Licence No:	CC6157T		

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.

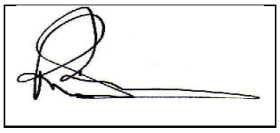
I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- [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 is 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 .....Richard Mason..... 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:	Richard Mason		15/05/2026

DOYLE SOIL CONSULTING

SITE AND SOIL EVALUATION REPORT

FOUNDATION AND WINDLOADING ASSESSMENT

6 Lateena St

Dodges Ferry 7173

January 2026

Doyle Soil Consulting: 6/76 Auburn Rd Kingston Beach 7050 – 0488 080 455 – robyn@doylesoilconsulting.com.au

SITE INFORMATION

Client: Julie Barret and Dion Perry

Address: 6 Lateena St, Dodges Ferry (CT 229139/1)

Site Area: Approximately 1368 m^2

Date of inspection: 09/01/2026

Building type: New house(s)

Services: Tank water supply and onsite wastewater management

Relevant Planning Overlays: Southern Beaches on-site Wastewater and Stormwater Management Specific Area Plan

Mapped Geology - Mineral Resources Tasmania 1:25 000 SE Sheet:
Qh = Sand gravel and mud of alluvial, lacustrine and littoral origin

Soil Depth: 0.85 - 1.6 m (SHALLOWEST TH/DCP to DEEPEST TH/DCP)

Subsoil Drainage: Moderately-well drained

Drainage lines/water courses: none applicable

Vegetation: *bush*

Rainfall in previous 7 days: Approximately 0.6 mm

Slope: Approximately 4° to the West

SITE ASSESSMENT AND SAMPLE TESTING

Site investigation and soil classification in accordance with AS 2870-2011 *Residential slabs and footings* and in accordance with AS 4055-2021 *Wind load for Housing.* Test holes were dug using a Christie Post Driver Soil Sampling Kit, comprising CHPD78 Christie Post Driver with Soil Sampling Tube (50 mm OD x 1600/2100 mm). For test hole and DCP locations, see Appendix 1.

- Three test hole (TH) cores:
  - TH1 with refusal at 1.6 m
  - TH2 with refusal at 1.6 m
  - TH3 with refusal at 0.85 m
- two Dynamic Cone Penetrometer (DCP) tests:
  - DCP1 with refusal at 1.2 m
  - DCP2 with refusal at 1.2 m
- Emerson Dispersion test on subsoils and linear shrinkage tests on all likely founding layers.

SOIL PROFILES – Test Hole 1

Depth (m)	Horizon	Description and field texture grade	USCS Class
0 – 0.6	A1/A2	Very dark grey (10YR 3/1) grading to to pale grey (10yr 6/3) **Sand,** poorly graded, dry loose	**SP**
0.6 – 1.1	A3	Dark yellowish brown (10YR 4/6), **Sand,** poorly graded, slightly moist, medium dense	**SP**
1.1 – 1.2	B2	Brown (10YR 5/3) with common coarse yellowish brown mottles, **Sandy Light Clay,** massive, moist firm consistency	**CL**
1.2 – 1.6	BC	Pale Olive (5YR 6/4) with common course yellowish brown mottles, **Loamy Sand,** moderate coarse blocky, slightly moist soft friable, (Dense *in situ*) **REFUSAL on sandstone bedrock**	**SC**

SOIL PROFILES – Test Hole 2

Depth (m)	Horizon	Description and field texture grade	USCS Class
0 – 0.8	A1/A2	Very dark grey (10YR 3/1) grading to pale grey (10yr 6/3) **Sand,** poorly graded, dry loose	**SP**
0.8 – 1.2	A3	Dark yellowish brown (10YR 4/6), **Sand,** poorly graded, slightly moist, medium dense	**SP**
1.2 – 1.6	BC	Pale Olive (5YR 6/4) with common coarse yellowish brown mottles, **Loamy Sand,** moderate course blocky, slightly moist soft friable, (Dense *in situ*) **REFUSAL on sandstone bedrock**	**SC**

SOIL PROFILES – Test Hole 3

Depth (m)	Horizon	Description and field texture grade	USCS Class
0 – 0.5	A1/A2	Very dark grey (10YR 3/1) grading to pale grey (10yr 6/3) **Sand,** poorly graded, dry loose	**SP**
0.5 – 0.6	A3	DYB (10YR 4/6), **Sand,** poorly graded, slightly moist, medium dense	**SP**
0.6 – 0.75	B2	Brown (10YR 5/3) with common coarse YB mottles, **Sandy Light Clay,** massive, moist firm consistency	**CL**
0.75 – 0.85	BC	Pale Olive (5YR 6/4) with common course yellowish brown mottles, **Loamy Sand,** moderate coarse blocky, slightly moist soft friable, (Dense in situ) **REFUSAL on sandstone bedrock**	**SC**

SITE AND SOIL COMMENTS

The soil are formed from windblown sands over clayey colluvium derived from lacustrine and littoral origin. The profiles are moderately deep with refusal occurring at approximately 0.85 to 1.6 m. The field textures of the soil profile are dominated by sand, which is unstructured. The DCP indicates a low bearing capacity to at least 1.1 to 1.2 m. Founding on the underlying, highly competent, bedrock, at approximately 0.85 to 1.6 m depth, is recommended.

LINEAR SHRINKAGE AND SOIL REACTIVITY

Samples of the clayey subsoils were tested for reactivity using the linear shrinkage test. Linear shrinkage provides an approximate guide to aid site classification (for foundations) based on the reactivity of clays. The results suggest the clays are slightly reactive (refer to tables below and *AS2870-2011 clause 2.1.2 table 2.1*).

TH #	Depth (m)	Length of mould (mm)	Longitudinal Shrinkage (LS) in mm	LS (%)	Soil Class
1+3	B2	125	3	2.4	S

DCP TESTS AND ESTIMATED BEARING CAPACITY

A minimum bearing capacity of 100 kPa is required for strip and pad footings and under the edge footings and associated slab foundations (refer to tables below and *AS2870-2011 clause 2.4.5*). We provide an estimated allowable soil bearing capacity based on a review of published literature relating field Dynamic Cone Penetrometer (DCP) readings to triaxial soil strength tests.

The DCP penetrometer is a method of estimating *in situ* strength of the soil. Soil moisture level at the time of measurement will greatly affect DCP readings. Moisture-related variability in soil bearing capacity is most pronounced in coherent soils (clays and silty clays) which may be stiff/hard when dry but become soft/firm when moist/slightly moist.

Surface layers (upper ~0.7 m) are subject to seasonal variation in soil moisture content, leading to possible higher DCP values in summer/drought conditions. Soil moisture below ~0.7 m will

vary less with the season, meaning DCP values; hence, soil-bearing capacity at these depths is likely to be representative of year-round conditions.

When estimating the suitable foundation depth, we take into account the interplay between soil bearing capacity and seasonally variable soil moisture conditions in the upper layers (refer to *soil consistency* in Soil Profile descriptions). The subsoils in the upper 0.7 m were slightly moist when tested (January '26).

The data from DCP1 using a Perth sand tip indicate the bearing capacity of the soil is at a *suitable* strength below 1.2 m. However, the highly competent bedrock at approximately 1.2 m would be the *recommended* foundation material.

The data from DCP2 indicate the bearing capacity of the soil is at a *suitable* strength below 1.0 m. However, the highly competent bedrock at approximately 1.2 m would be the *recommended* foundation material.

Based on the DCP data and core depths, the recommended foundation depth can range from approximately 0.85 to 1.6 m.

DCP 1				
Depth (mm)	DCP n-number (Blows/100 mm)	DCP Penetration Index (mm/Blow)	Estimated Allowable Bearing Capacity (kPa = n x 30)	Likely Variance (+/-)
0 - 100	1	100.0	30	10
100 - 200	1	100.0	30	10
200 - 300	1	100.0	30	10
300 - 400	2	50.0	60	20
400 - 500	2	50.0	60	20
500 - 600	3	33.3	90	30
600 - 700	5	20.0	150	50
700 - 800	6	16.7	180	60
800 - 900	7	14.3	210	70
900 - 1000	7	14.3	210	70
1000 - 1100	7	14.3	210	70
1100 - 1200	30	3.3	900	300

DCP 2				
Depth (mm)	DCP n-number (Blows/100 mm)	DCP Penetration Index (mm/Blow)	Estimated Allowable Bearing Capacity (kPa = n x	Likely Variance (+/-)
0 - 100	0	400.0	8	2.5
100 - 200	0	400.0	8	2.5
200 - 300	0	400.0	8	2.5
300 - 400	0	400.0	8	2.5
400 - 500	1	100.0	30	10
500 - 600	2	50.0	60	20
600 - 700	4	25.0	120	40
700 - 800	6	16.7	180	60
800 - 900	7	14.3	210	70
900 - 1000	7	14.3	210	70
1000 - 1100	19	5.3	570	190
1100 - 1200	30	3.3	900	300

EMERSON AGGREGATE DISPERSION TEST

Soils with an excess of exchangeable sodium ions on the cation exchange complex (clays), can cause clay dispersion. Under some circumstances, the presence of dispersive soils can also lead to significant erosion, and in particular, tunnels leading to eventual gully erosion. Dispersive clay subsoil materials can also cause sealing of the soil surface – if left out in wet weather, they then dry and set very hard in dry weather. A field survey of the property and the surrounding area found no erosion due to soil dispersion.

The subsoil was tested for dispersion using the Emerson Aggregate Test (EAT). Testing resulted in Emerson class 2(1), indicating presence of soils with slight dispersion characteristics. As such, exposure to rainfall may lead to spontaneous clay dispersion and erosion, as previously discussed.

To minimise this, we recommend coverage of exposed subsoil with topsoil or regular treatment with gypsum at 0.5 Kg/m^2 along with minimising subsoil disturbance whenever possible.

TH #	Depth (m)	Visual sign	Class
1 & 3	B2	Some dispersion (Slight milkiness immediately adjacent to aggregate)	2(1)

WIND CLASSIFICATION

The following wind classification for the site is in accordance with AS 4055-2021 (*Wind loads for Housing*). For structures other than class 1 and class 10 structures, or that exceed the geometric limits in Clause 1.2 of AS 4055-2021, the wind classification shall be calculated in accordance with AS 1170.2-2021 (*Structural Design Actions – Wind Actions)*.

The wind classification for the site, per AS 4055-2021:

Region:	**A**
Terrain Category:	**TC1 -within 500 m of open water**
Shielding Classification:	**NS**
Topographic Classification:	**T1 – Lower 3rd of slope feature**
Wind Classification:	**N3**
Design Wind Gust Speed ($V_{h,u}$):	**50 m/sec**

SITE CLASSIFICATION AND RECOMMENDATIONS

For standard foundations (100 kPa bearing capacity), the site meets the criteria for a **Class P** site classification, as set out in AS2870-2011 (construction). This classification is appropriate due to the presence of non-cohesive sands with low bearing capacity to approximately 0.8 m depth. Founding on the underlying and highly competent bedrockat approximately 1.2 m depth, is recommended.

Note 1 – In addition to the **Class P** site classification, the site/clays meets the reactivity levels of Class S or slightly reactive, with 0 – 20 mm the dominant reactivity of expected surface movement under normal soil moisture ranges for the location.

Note 2 – If founded entirely on the underlying competent bedrock (recommended), below approximately 1.2 m, and no part of the foundations, be it a slab, pier or footing, is in contact with/or is supported by the subsoils, then **Class A** would become an appropriate site classification.

Note 3 – All foundations require ongoing adequate drainage and vegetation management – please refer to the attached CSIRO foundation management BTF 18 sheet.

Note 4 – If any foundations are placed on FILL that is > 0.5 m in depth, then **Class P** is applicable.

Based on the upper 0.6 m of soil, all plumbing fixtures and fittings should be suitable for a **Class S** site, per *Appendix G AS/NZS 3500.2.2021*.

General Notes – Important points pertinent to the maintenance of foundation soil conditions

This report relates to the soil and site conditions on the property at the time of the site assessment. The satisfactory long-term performance of footings is dependent upon ongoing site maintenance by the owner.

Examples of abnormal moisture conditions developing after construction include the following:

A) The effect of trees too close to the footings.
B) Excessive or irregular watering of gardens adjacent to the footings.
C) Failure to maintain site drainage affecting footings.
D) Failure to repair plumbing leaks affecting footings.
E) Loss of vegetation from near the building.

All earthworks on site must comply with AS 3798-2007 Guidelines on Earthworks for commercial and residential developments.

REPORT LIMITATIONS

Whilst every attempt is made to describe sub-surface conditions, natural variation will occur that cannot be determined by limited investigative soil testing. Therefore, discrepancies are possible between test results and observations during construction. It is our intention to accurately indicate the most probable soil type(s) and conditions for the area assessed. However, due to the nature of sampling an area, variations in soil type, soil depth and site conditions may occur.

We accept no responsibility for any differences between what we have reported and actual site and soil conditions for particular regions we could not directly assess at the time of inspection.

It is recommended that during construction, Doyle Soil Consulting and/or the design engineer be notified of any major variation to the foundation conditions as predicted in this report. Any changes to the site through excavations may alter the site classification.

In these cases, it is expected that the owner consults the author for a reclassification. This report requires certification via a form 55 certificate from Doyle Soil Consulting to validate its contents.

Because site discrepancies may occur between this report and actual site conditions, it is a condition of certification of this report that the builder be provided with a copy of this report.

Rowan Mason
B.Agr.Sc.(Hons).
Soil Scientist

Robyn Doyle
B.Agr.Sc.
CPSS (Certified Prof Soil Scientist)
Soil Scientist and Wastewater Designer
Licence no. CC7418

APPENDIX 1 – Approximate test hole and DCP locations

APPENDIX 2 – Definitions of Soil Horizons

Horizon name	Meaning
A1	Dark topsoils, zone of maximum organic activity
A2 or E	Leached, light/pale washed-out sandy layer
A3 or AB	Transition from A to B, more like A
B1 or BA	Transition from A to B, more like B
B2	Main subsoils layer with brown colouration, accumulations of clay, humus, iron oxide, etc
B3	Transitional from B2 to C
C	Weakly weathered soil parent materials
Subscript	**Meaning**
r	Reducing conditions (anaerobic)
t	Enriched in translocated clay
s	Iron/aluminium oxide accumulations in subsoil
g	Mottled, suggesting periodic/seasonal wetness
m	Cemented layer (oxides, carbonates, humus, silica etc)
k	Calcium carbonate (lime) accumulation
h	Humus accumulation in subsoil

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Bruce Glanville *Owner name*

12, 370-380 Cambridge Rd *Address*

Mornington TAS 7018 *Suburb/postcode*

Qualified person details:

Qualified person: Robyn Doyle

Address: 6/76 Auburn Rd

Kingston Beach 7050

Phone No: 0488 080 455

Fax No:

Licence No: N/A

Email address: robyn@doylesoilconsulting.com.au

Qualifications and Insurance details: Certified Professional Soil Scientist (CPSS)
Professional Indemnity cover –

About Underwriting -Lloyd's of London
ENG 24 000305

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

Speciality area of expertise: Classification of foundation conditions according to AS2870-2011

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

Details of work:

Address: 6 Lateena St

Dodges Ferry TAS 7173

Lot No: 1

Certificate of title No: 2291391

The assessable item related to this certificate: Site and soil classification

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

Certificate details:

Certificate type: Foundation Classification

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

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)*

building work, plumbing work or plumbing installation or demolition work: X

or

a building, temporary structure or plumbing installation: ☐

In issuing this certificate the following matters are relevant –

Documents:	The attached Geotechnical Assessment Report for the address detailed above in, 'Details of Work'.
Relevant calculations:	Refer to above report.
References:	AS2870-2011 Residential slabs and footings AS1726-2017 Geotechnical site investigations CSIRO Building Technology File -18

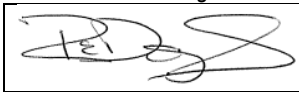
Substance of Certificate: *(what it is that is being certified)*

Site classification consistent with AS2870-2011.

Scope and/or Limitations

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

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		1925	13/01/2026

Foundation Maintenance and Footing Performance:
A Homeowner's Guide

CSIRO PUBLISHING

BTF 18-2011 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 2870-2011, 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, which may experience only slight ground movement from moisture changes
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes
H1	Highly reactive clay sites, which may experience high ground movement from moisture changes
H2	Highly reactive clay sites, which may experience very high ground movement from moisture changes
E	Extremely reactive sites, which may experience extreme ground movement from moisture changes

Notes

1. Where controlled fill has been used, the site may be classified A to E according to the type of fill used.
2. Filled sites. Class P is used for sites which include soft fills, such as clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soil subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise.
3. Where deep-seated moisture changes exist on sites at depths of 3 m or greater, further classification is needed for Classes M to E (M-D, H1-D, H2-D and E-D).

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.

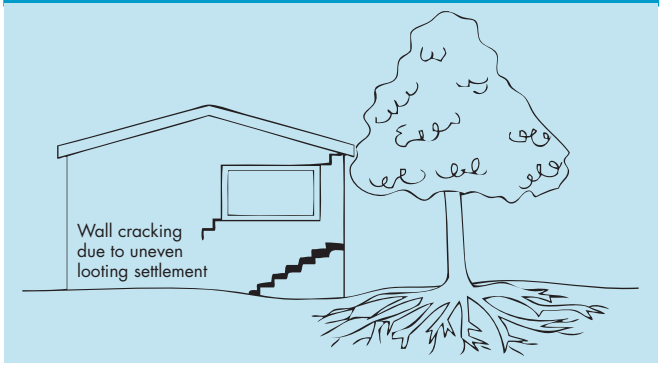
The first noticeable symptom may be that the floor appears slightly dished. This is often accompanied by some doors binding on the floor or the door head, together with some cracking of cornice mitres. In buildings with timber flooring supported by bearers and joists, the floor can be bouncy. Externally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

Trees can cause shrinkage and damage



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 causes 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 2870-2011.

AS 2870-2011 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

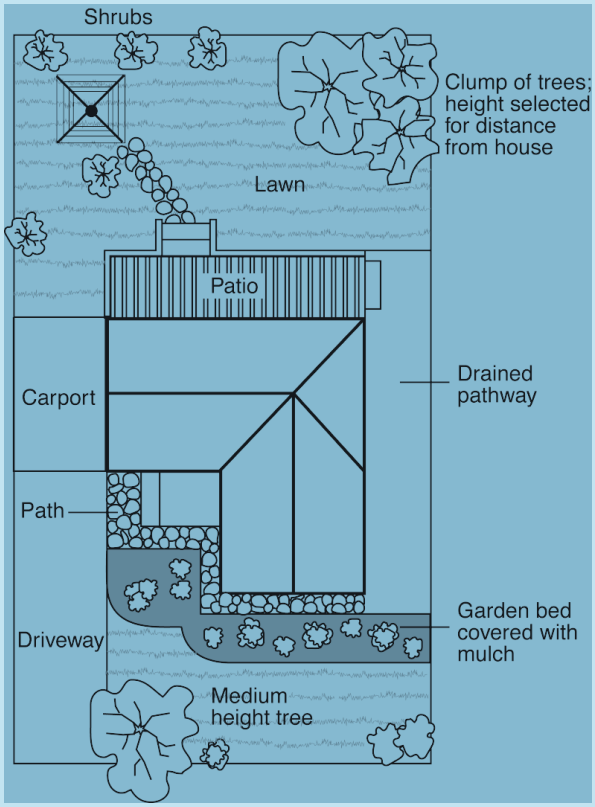
It is essential to remember that the soil that affects footings extends well beyond the actual building line. Watering of garden plants, shrubs and trees causes some of the most serious water problems.

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 should

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 depends on number of cracks	4

Gardens for a reactive site



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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PID: 5918590

Title Reference: 229139/1

Soil Classification: Class P (see Site Assessment from Doyle Soil Consult)

Energy Rating: **6*** (see report from Steve Glynn with BA docs)

Design Wind Speed: **N3**

Climate Zone: **7**

BAL: **NA**

Hazard Area: **NA**

Corrosion Level: **Medium**

Drawing List			
Sheet No.	**Sheet Name**	**Rev. No.**	**Rev Date**
A-01	Site Plan	None	
A-02	Dwelling Floor Plans	None	
A-03	Dwelling Elevations	None	
A-04	Vis Accomm Plan & Elevations	None	
A-05	Site Images	None	
A-06	Sun Path Diagrams	None	

6 Lateena St Res

New Dwelling, Visitor Accom Studio & Demolition of existing structure @ 6 Lateena St, Dodges Ferry

Gla2506 Planning Docs (DA)

GLANVILLE ARCHITECTS \ IDEAS \ SOLUTIONS
Office 12, 370-380 Cambridge Rd
Mornington 7018 0409 223 106
www.glanville.net.au
bruce@glanville.net.au
tas. architect 877, build. reg CC1128P

Site Coverage Calcs:

Block size: **1375sqm**
Floor Area: **195sqm** *(Dwelling),* **53.2sqm** *(Vis Accomm)*
Private Open Space: **250+sqm**
Site coverage: **274.9sqm (19.9%)**

Heights:
AHD levels as per site survey docs by ***Featherstone Survey***

Energy Efficiency Requirements:
Energy report from Steve Glynn to be supplied with Building Approval documents.

SWMP Notes:
All runoff and sediment control structures will be regularly checked and maintained in functional condition, particularly after rain.

All vegetation outside the excavation area will be retained.

Remaining disturbed areas will be revegetated immediately after construction is completed.

2 STOREY DWELLING

2 STOREY DWELLING

SHED

2/14000L Poly Water tanks beneath floor of living space

timber fence/screen with gate

informal link path

gravel paths with grades for compliant pedestrian access to both dwellings

Proposed two bedroom Visitor Accommodation

POWER POLE

Existing derelict structure to be demolished prior to construction starting

BOUNDARY 65.62 CT

1781

Vis Accom FFL 19.00

2895

4294

6329

Bedrooms FFL 19.84

Garage FFL 17.10

5003

54sqm

4370

BOUNDARY 21.67 CT

LATEENA STREET

SHED

BOUNDARY 20.22

Living FFL 19.50

EXISTING HOUSE FLOOR LEVEL 19.74

Gravel Driveway

28754

8785

150sqm

AWTS

6253

7436

COMMS PIT

POWER POLE

BOUNDARY 65.64 CT

Deck for proposed Vis Accomm

timber fence/screen with gate

600 x 600 x 10000L Stormwater absorbtion trench collecting oveflow from water tanks and central collection point for driveway drainage

Deck for proposed Dwelling

Proposed three bedroom Dwelling (with garage under)

AWTS and associated treatment beds (refer to Onsite Wastewater Assessments report for details)

SINGLE STOREY DWELLING

SINGLE STOREY DWELLING UNDER CONSTRUCTION

north

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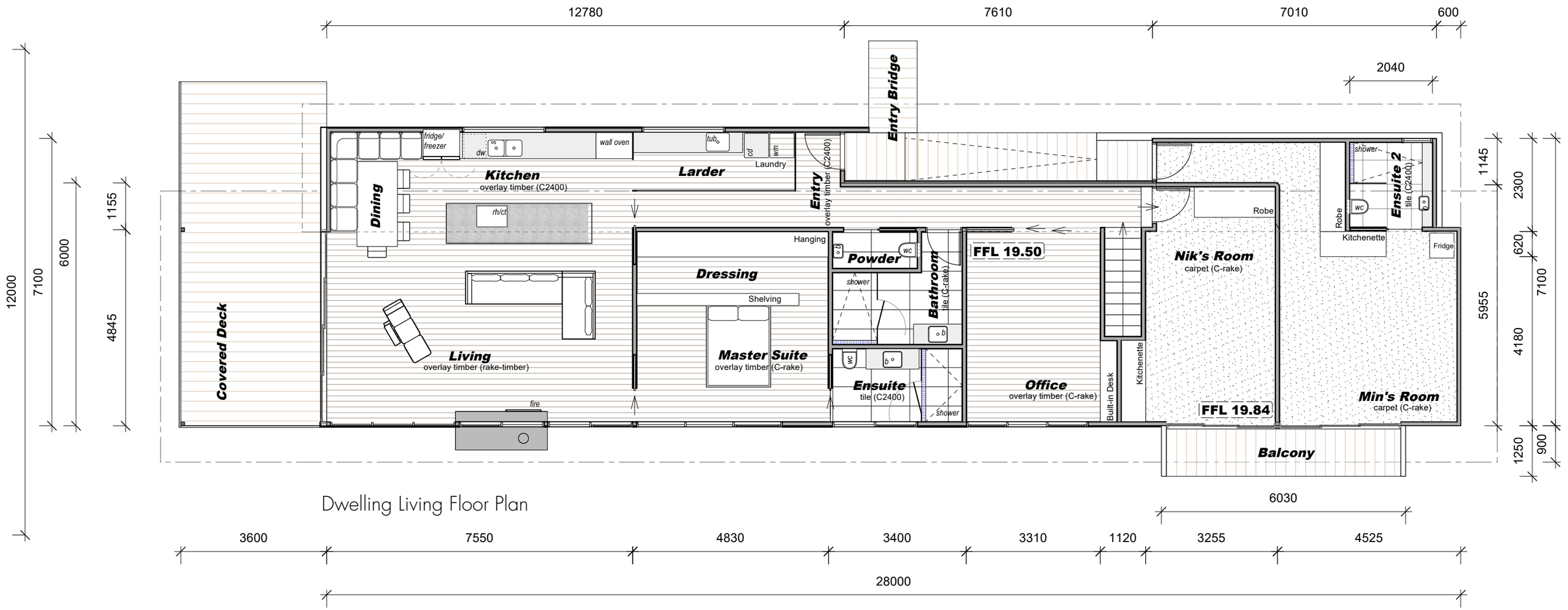
ISSUE | DATE | REVISION

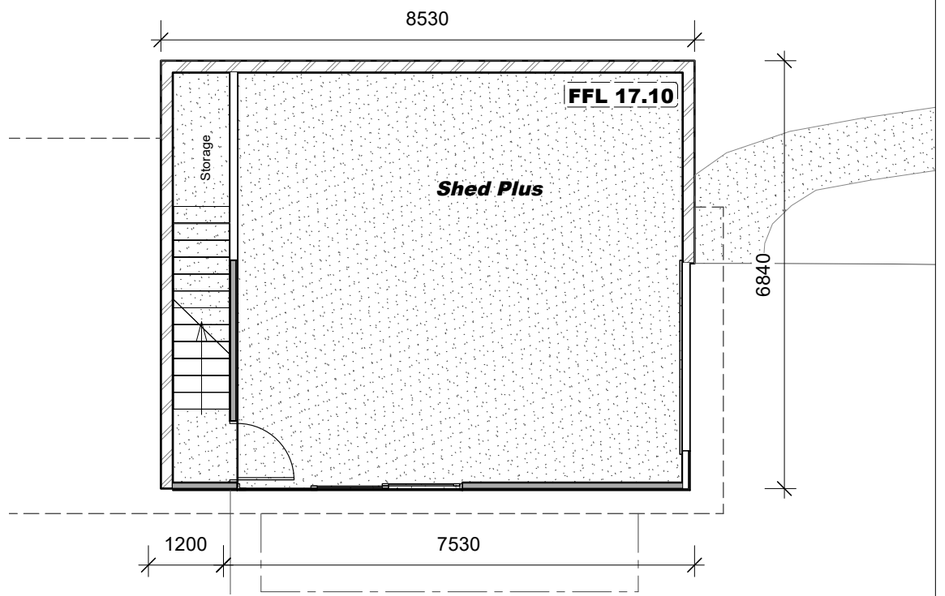
Sorell Council
Development Application: 5.2026.162.1 - Development Application 6 Lateena Street, Dodges Ferry- P1.pdf
Plans Reference: P1
Date Received: 18/05/2026

PROJECT: Dwelling & Vis Accomm @ 6 Lateena St, Dodges Ferry
PROJECT #: Gla2506
CLIENT: Julie Barrett and Dion Perry
DATE #: 12/05/2026
SCALE @ A3: 1:200
DRAWN: BG
REVISION:
DWG: Site Plan
DWG #: A-01



Dwelling Living Floor Plan

0 1 2 3 4 5 10



Dwelling Garage Plan

Vehicle Hardstand

sss	*Stainless Steel Sink*
wc	*Water Closet*
b	*Hand Basin*
ct	*Cooktop*
o	*Oven*
rh	*canopy Rangehood*
sh	*Shower (formed with fall)*
tub	*Laundry Tub*
p	*Pantry*
bath	*Bath Tub*
timber	*TasOak overlay boards*
c	*Ceiling Height (if flat or noted if raked)*

-Waterproof wet areas including necessary splashbacks in accordance with part 10.2 of NCC.

-Sub Floor Ventilation to Living Spaces to be in accordance with part 6.2 of NCC.

-All masonry to be constructed in compliance with part 5 of NCC.

-Floor insulation to be in accordance with part 13 of NCC.

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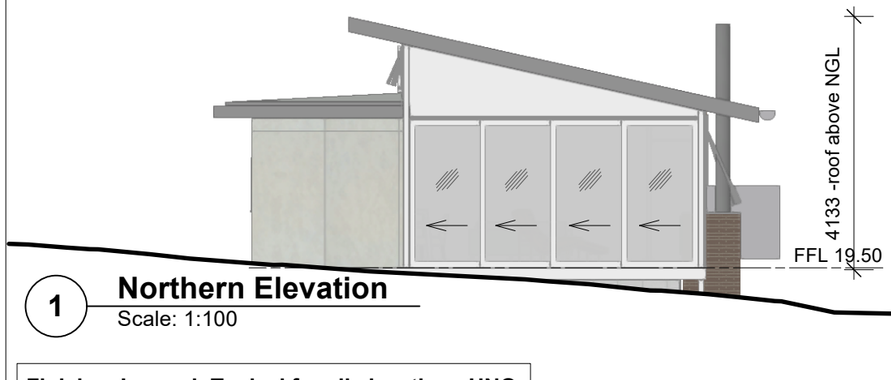
ISSUE DATE REVISION

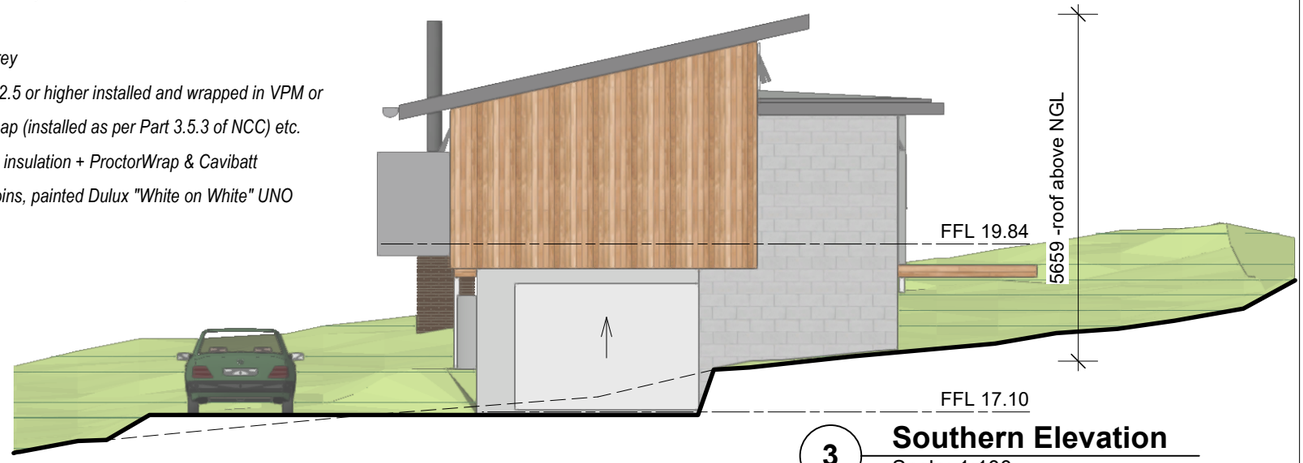
PROJECT Dwelling & Vis Accomm @ 6 Lateena St, Dodges Ferry
PROJECT # Gla2506
CLIENT Julie Barrett and Dion Perry
DATE # 12/05/2026
SCALE @ A3 1:100
DWG Dwelling Floor Plans
DRAWN BG
REVISION
DWG # A-02

Notes:

- *Exposed Steelwork waterproof primed immediately after erection, then painted Basalt*
- *Roof/Fascia/Gutter in Colorbond "Basalt"*
- *Windows and Doors Powdercoated Shale Grey*
- *All external walls to have bulk insulation of R2.5 or higher installed and wrapped in VPM or similar prior to placement of EasyLap or ShipLap (installed as per Part 3.5.3 of NCC) etc.*
- *All ceilings are to be insulated with R6.0 bulk insulation + ProctorWrap & Cavibatt*
- *6mm CFC Sheet Soffit lining, 2mm sealant joins, painted Dulux "White on White" UNO*



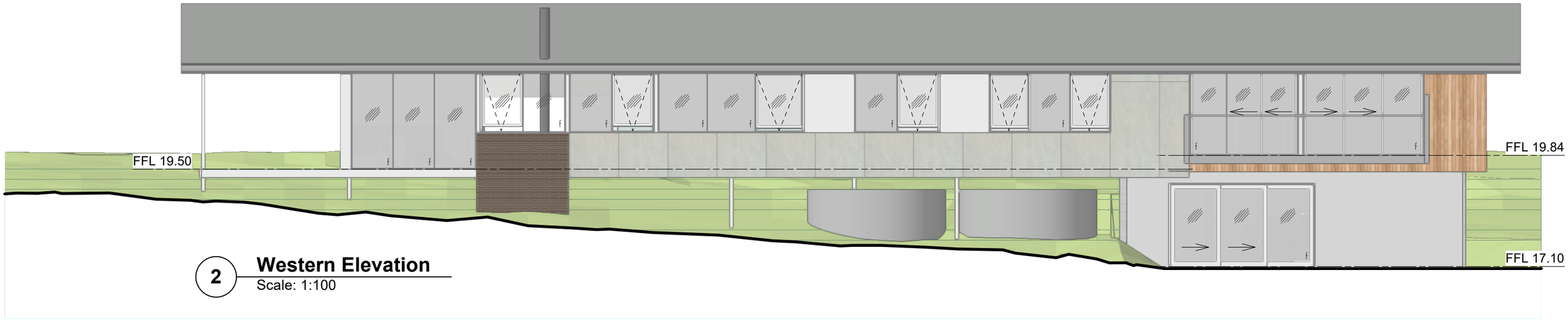
1 **Northern Elevation**
Scale: 1:100



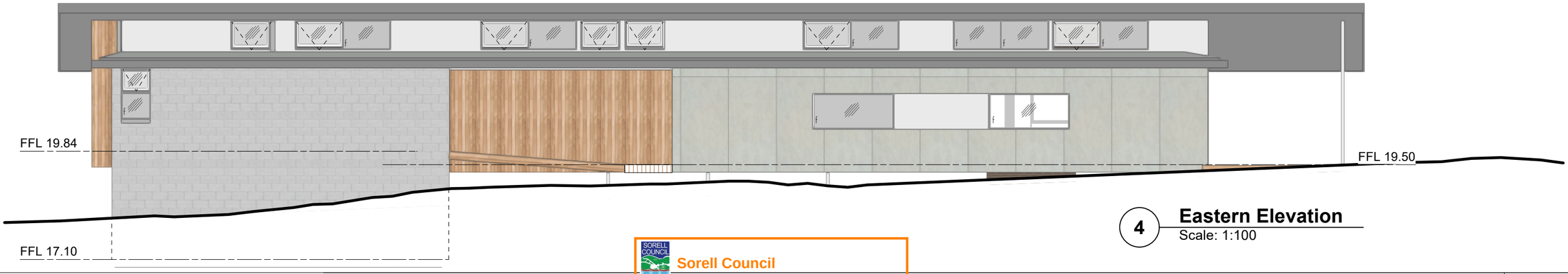
3 **Southern Elevation**
Scale: 1:100

Finishes Legend: Typical for all elevations UNO

- *Vertical Spotted Gum shiplap cladding (or equiv.)*
- *JH EasyLap CFC Sheeting, texture painted Tranquil Retreat*
- *6mm CFC Eave sheeting, painted Dulux White on White*
- *Island Graphite Eco Block*
- *Recycled Site demolition bricks- cut to Roman proportion*



2 **Western Elevation**
Scale: 1:100



4 **Eastern Elevation**
Scale: 1:100

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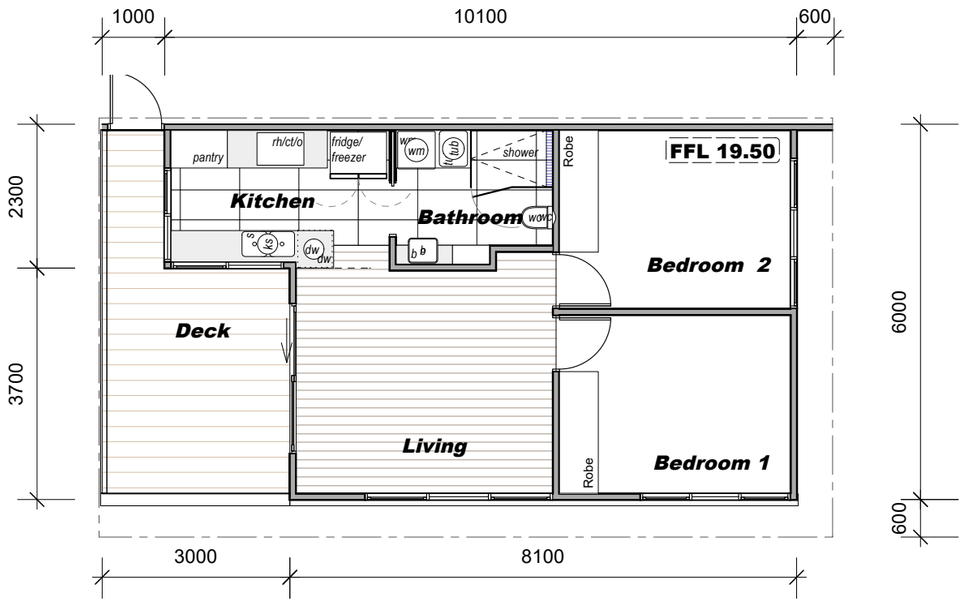
ISSUE | DATE | REVISION

PROJECT	Dwelling & Vis Accomm @ 6 Lateena St, Dodges Ferry	PROJECT #	Gla2506
CLIENT	Julie Barrett and Dion Perry	DATE # 12/05/2026	DWG # A-03
DWG	Dwelling Elevations	SCALE @ A3 1:100	
		DRAWN BG	
		REVISION	

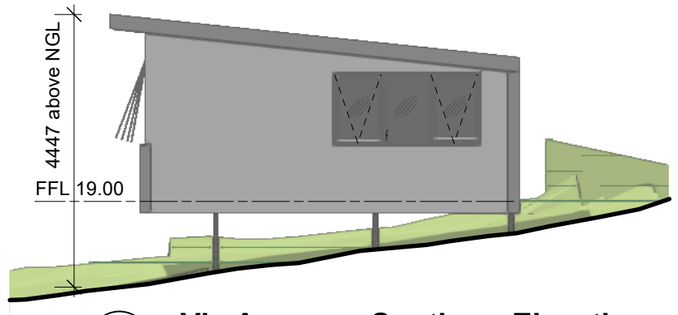


Visitor Accommodation Plan

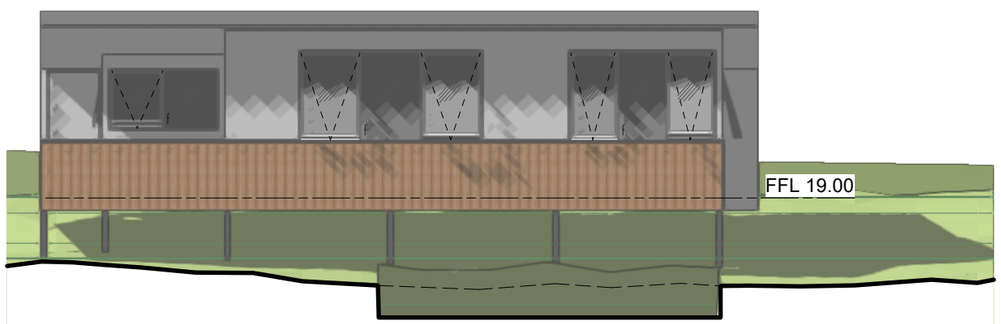
Finishes Legend: Typical for all elevations UNO

- *Vertical Spotted Gum shiplap cladding (or equiv.)*
- *JH EasyLap CFC Sheeting, texture painted Tranquil Retreat*
- *Vertical Colorbond CustomOrb Basalt*

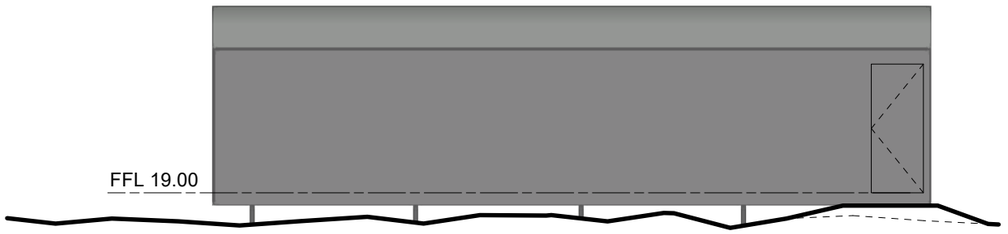
7 **Vis Accomm Northern Elevation**
Scale: 1:100



2 **Vis Accomm Southern Elevation**
Scale: 1:100



8 **Vis Accomm Western Elevation**
Scale: 1:100



6 **Vis Accomm Eastern Elevation**
Scale: 1:100

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Plans Reference: P1
Date Received: 18/05/2026

PROJECT Dwelling & Vis Accomm @ 6 Lateena St, Dodges Ferry
CLIENT Julie Barrett and Dion Perry
DWG Vis Accomm Plan & Elevations

DATE # 12/05/2026
SCALE @ A3 1:100
DRAWN BG
REVISION

PROJECT # Gla2506
DWG # A-04

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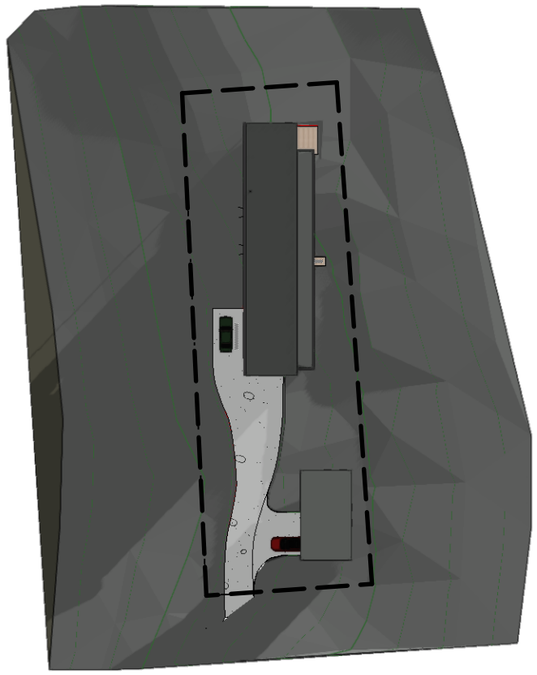
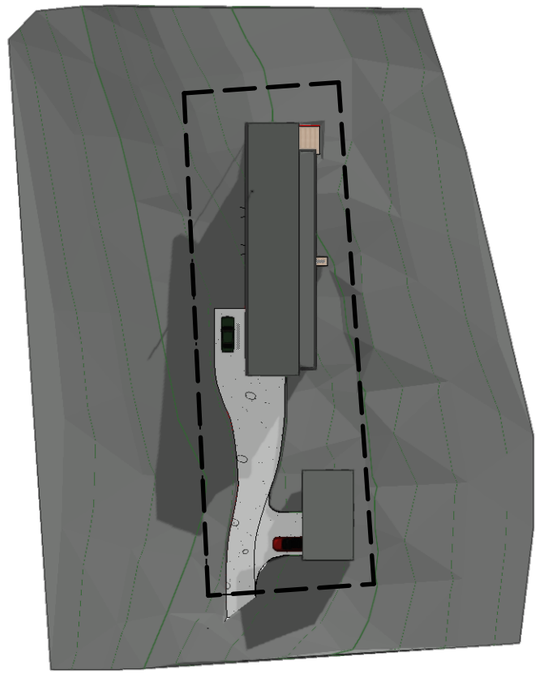
Plans Reference: P1
Date Received: 18/05/2026

PROJECT: Dwelling & Vis Accomm @ 6 Lateena St, Dodges Ferry
CLIENT: Julie Barrett and Dion Perry
DWG: Site Images

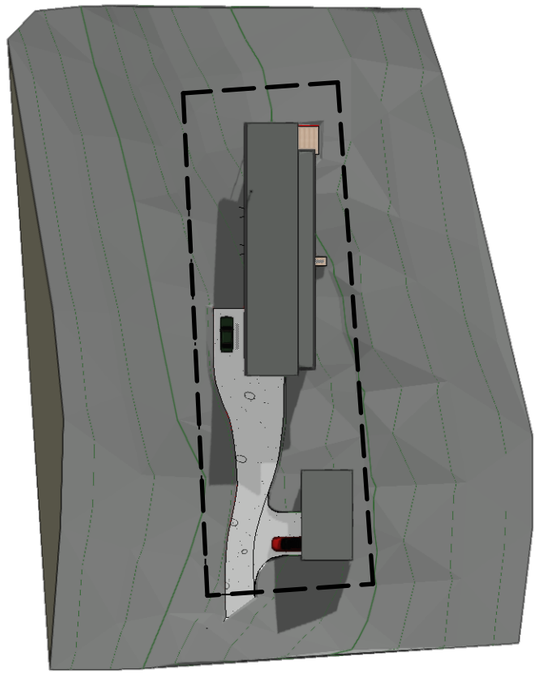
PROJECT # Gla2506
DATE # 12/05/2026
SCALE @ A3 NTS
DRAWN BG
REVISION
DWG # A-05



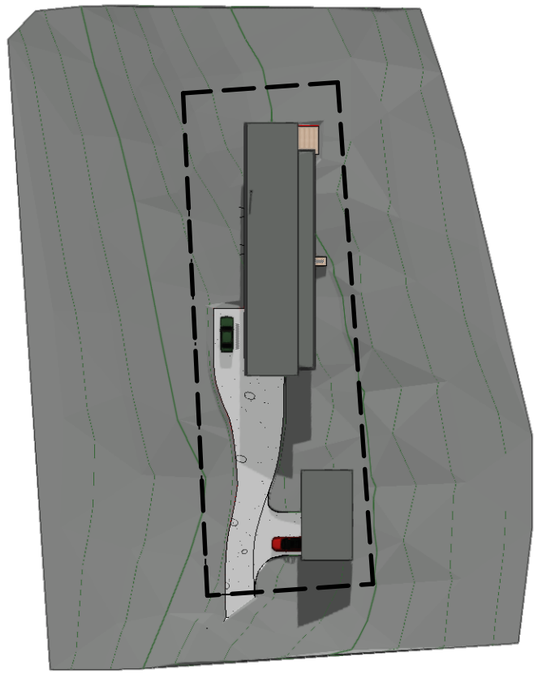
June 21st 9am



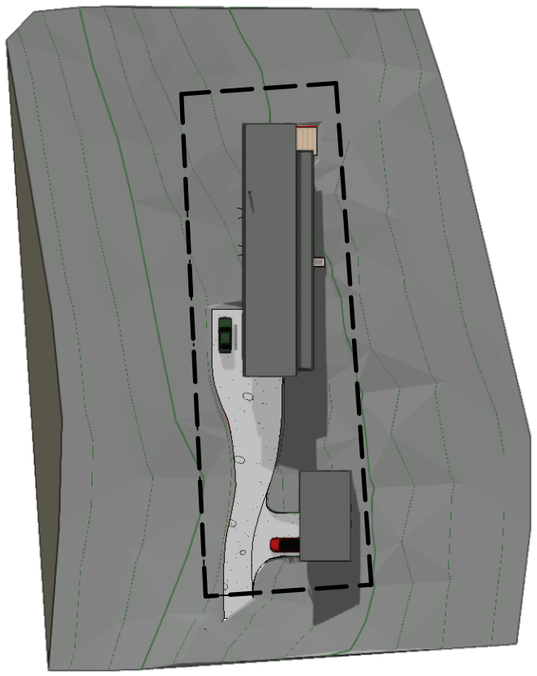
June 21st 10am



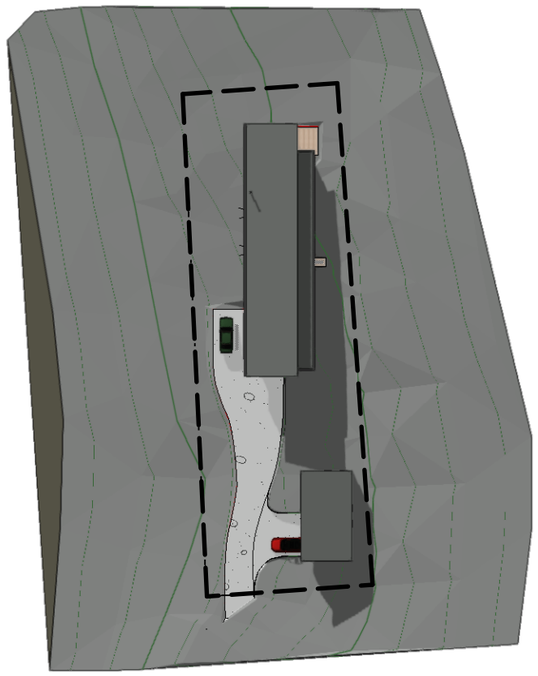
June 21st 11am



June 21st Noon

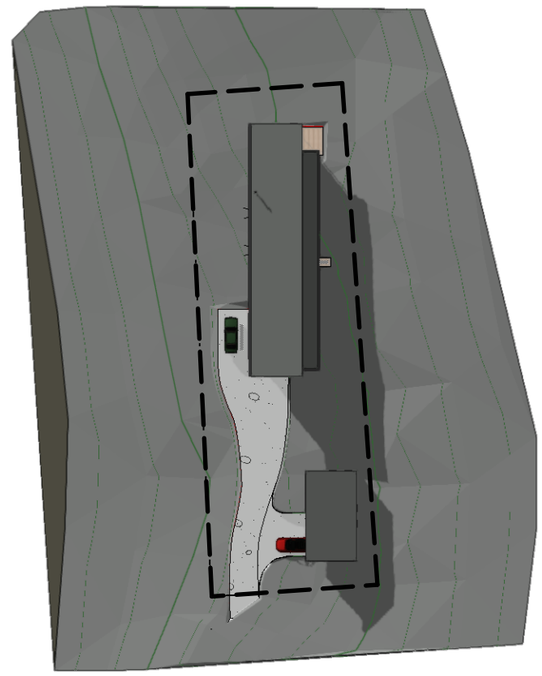


June 21st 1pm



June 21st 2pm

The sun path diagrams generated on June 21st show very little shadow escaping the subject site- Some shadow will be cast over 4 Lateena St early in the morning (when the sun is extremely low and has little heating value) but by 10am it has nearly fully retracted into 6 Lateena (as seen in the 11m image where it is now comfortably within the sites boundaries, for the rest of the day the shadow stays within the site until just poking it's head out at roughly 2.30 (which in the uphill boundary will mean the shadow doesn't extend anywhere near the dwewlling on 8 Lateena).
Thus it is clear that the proposed development of a single storey dwelling (with a garage tucked under the front portion of the dwelling where the land falls away) and a small visitor accommodation building will not generate substantial shadows that impact any of their neighbours.



June 21st 3pm

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PROJECT Dwelling & Vis Accomm @ 6 Lateena St, Dodges Ferry
CLIENT Julie Barrett and Dion Perry
DWG Sun Path Diagrams

DATE # 12/05/2026
SCALE @ A3 1:800
DRAWN BG
REVISION

PROJECT # Gla2506
DWG # A-06