# NOTICE OF PROPOSED DEVELOPMENT

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

## SITE:
## 5 TERN CIRCLE, PRIMROSE SANDS

## PROPOSED DEVELOPMENT:
## DWELLING

The relevant plans and documents can be inspected at the Council Offices at 47 Cole Street, Sorell during normal office hours, or the plans may be viewed on Council's website at www.sorell.tas.gov.au until **Thursday 15th January 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 General Manager. Representations must be received no later than **Thursday 15th January 2026.**

**APPLICATION NO:** **5.2025.208.1**
**DATE:** **19 DECEMBER 2025**

5 Tern Circle, Primrose Sands

18-Dec-2025


**Annotations**

- Polygon6
- Polygon5
- Polygon4
- Polygon3
- Polygon2

**Surrounding Properties for PID: 5951972**

- Property

**Surrounding Properties for PID: 5956941**

- Property

**Surrounding Properties for PID: 5964343**

- Property

**Surrounding Properties for PID: 3306996**

- Property

**Surrounding Properties for PID: 3042628**

- Property

**Surrounding Properties for PID: 2243743**

- Property

**Roads**

- DSG Roads
- Council Roads

**Property**

- property
- Titles

SORELL COUNCIL

**Disclaimer**

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

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

| | |
|---|---|
| Full description of Proposal: | *Use:* **Residence**<br>*Development:* **Proposed New Dwelling**<br>*Large or complex proposals should be described in a letter or planning report.* |
| Design and construction cost of proposal: | $ **700,000** |

| | |
|---|---|
| Is all, or some the work already constructed: | No: ☒ Yes: ☐ |

| | |
|---|---|
| Location of proposed works: | Street address: **5 Tern Circle**<br>Suburb: **Primrose Sands** Postcode: **7173**<br>Certificate of Title(s) Volume: **180633** Folio: **3** |

| | |
|---|---|
| Current Use of Site | **Vacant Lot** |

| | |
|---|---|
| Current Owner/s: | Name(s) **The Lawrence Family Trust - Nathan Lawrence** |

| | | |
|---|---|---|
| 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.<br>• 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.<br>• 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.<br>• 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.<br>• I/we declare that the information in this application is true and correct.<br><br>*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: ...**05-08-25**..... |

| 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*).<br><br>Please note:<br>• If General Manager consent if required, please first complete the General Manager consent application form available on our website www.sorell.tas.gov.au<br>• If the application involves Crown land you will also need a letter of consent.<br>• 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<br><br>administration of land at _____<br><br>declare that I have given permission for the making of this application for<br><br>_____ |

Sorell Council
Development Application: 5.2025.208.1 - Development Application - 5 Tern Circle, Primrose Sands P1.pdf
Plans Reference:P1
Date Received:6/08/2025

| | |
|---|---|
| **Signature of General Manager, Minister or Delegate:** | Signature: ..... Date: ..... |

# RESULT OF SEARCH

RECORDER OF TITLES

*Issued Pursuant to the Land Titles Act 1980*

Tasmanian Government

SEARCH OF TORRENS TITLE

| VOLUME | FOLIO |
|---|---|
| 180633 | 3 |
| EDITION | DATE OF ISSUE |
| 2 | 21-Mar-2022 |

SEARCH DATE : 23-Apr-2024
SEARCH TIME : 09.01 PM

## DESCRIPTION OF LAND

Parish of CARLTON Land District of PEMBROKE
Lot 3 on Sealed Plan 180633
Derivation : Part of Lot 31145, 1072 Acres Gtd. to E J Kennedy
Prior CT 153771/1

## SCHEDULE 1

M948139 TRANSFER to ANGIE ABDILLA Registered 21-Mar-2022 at noon

## SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP180633 COVENANTS in Schedule of Easements
SP180633 FENCING PROVISION in Schedule of Easements
SP153771 COVENANTS in Schedule of Easements
SP 12392 & SP153771 FENCING PROVISION in Schedule of Easements
SP 12392 & SP106200 COUNCIL NOTIFICATION under Section 468(12) of the Local Government Act 1962
E247627 AGREEMENT pursuant to Section 78 of the Land Use Planning and Approvals Act 1993 Registered 09-Mar-2021 at noon
E299701 MORTGAGE to Commonwealth Bank of Australia Registered 21-Mar-2022 at 12.01 PM

## UNREGISTERED DEALINGS AND NOTATIONS

N193585 PRIORITY NOTICE reserving priority for 90 days
D/MORTGAGE Commonwealth Bank of Australia to Angie Abdilla
TRANSFER Angie Abdilla to Nathan Alexander Kyle Lawrence and Aidan Jarrod Jonathan Lawrence as trustees for The Lawrence Family Trust Lodged by PAGE SEAGER on 10-Apr-2024 BP: N193585

# RESULT OF SEARCH

RECORDER OF TITLES

*Issued Pursuant to the Land Titles Act 1980*

Tasmanian Government

SEARCH OF TORRENS TITLE

| VOLUME | FOLIO |
|---|---|
| 180633 | 3 |
| EDITION | DATE OF ISSUE |
| 3 | 08-June-2024 |

SEARCH DATE : 05-Dec-2025
SEARCH TIME : 06.28 pm

## DESCRIPTION OF LAND

Parish of CARLTON Land District of PEMBROKE
Lot 3 on Sealed Plan 180633
Derivation : Part of Lot 31145, 1072 Acres Gtd. to E J Kennedy
Prior CT 153771/1

## SCHEDULE 1

N193578 TRANSFER to NATHAN ALEXANDER KYLE LAWRENCE and AIDAN JARROD JONATHAN LAWRENCE Registered 08-June-2024 at 12.01 pm

## SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP180633 COVENANTS in Schedule of Easements
SP180633 FENCING PROVISION in Schedule of Easements
SP153771 COVENANTS in Schedule of Easements
SP 12392 & SP153771 FENCING PROVISION in Schedule of Easements
SP 12392 & SP106200 COUNCIL NOTIFICATION under Section 468(12) of the Local Government Act 1962
E247627 AGREEMENT pursuant to Section 78 of the Land Use Planning and Approvals Act 1993 Registered 09-Mar-2021 at noon

## UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

| SCHEDULE OF EASEMENTS | Registered Number |
|---|---|
| **NOTE:** THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED. | SP 180633 |



## EASEMENTS AND PROFITS

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

Lot 1 is subject to a right of carriageway (appurtenant to lot 2) over the land marked RIGHT OF WAY (PRIVATE) VARIABLE WIDTH passing through that lot on the plan —

Lot 2 is together with a right of carriageway over the land marked RIGHT OF WAY (PRIVATE) VARIABLE WIDTH on the plan —

## COVENANTS

The owners of the lots on the plan are affected by covenants created by and more fully set forth in Sealed Plan 153771 to observe the following stipulations-

1. Not to keep a cat as a pet on such lot
2. Not to remove any trees from such lot except in accordance with the Tree Preservation provisions of the Sorell Planning Scheme 1993

## FENCING PROVISION

In respect to the lots on the plan the vendor (Peter William Simmonds) shall not be required to fence

Signed by PETER WILLIAM SIMMONDS being the registered )
proprietor of Folio 153771-1 in the presence of- )
Witness: ..... )
Print Full Name: KATHRYN CLARE LUCASSEN
Postal Address: 8148 SOUTH ARM RD
SOUTH ARM TAS 702



(USE ANNEXURE PAGES FOR CONTINUATION)

| | |
|---|---|
| SUBDIVIDER: P W SIMMONDS<br>FOLIO REF: 153771-1<br>SOLICITOR & REFERENCE: TFR LAWYERS (JU) | PLAN SEALED BY: SORELL COUNCIL<br>DATE: 26.11.20<br>SA-2017-0021 REF NO.<br>..... Council Delegate |

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

OWNER: PETER WILLIAM SIMMONDS

FOLIO REFERENCE: CT.153771–1

GRANTEE: PART OF LOT 31145 (1072 ACRES) GRANTED TO EDMUND JOHN KENNEDY

## PLAN OF SURVEY

BY SURVEYOR TIMOTHY LEIGH GOWLLAND
ROGERSON AND BIRCH SURVEYORS
UNIT 1 – 2 KENNEDY DRIVE, CAMBRIDGE PARK
PH 6248–5898 MOB. 0419–594–966

LAND DISTRICT OF PEMBROKE
PARISH OF CARLTON

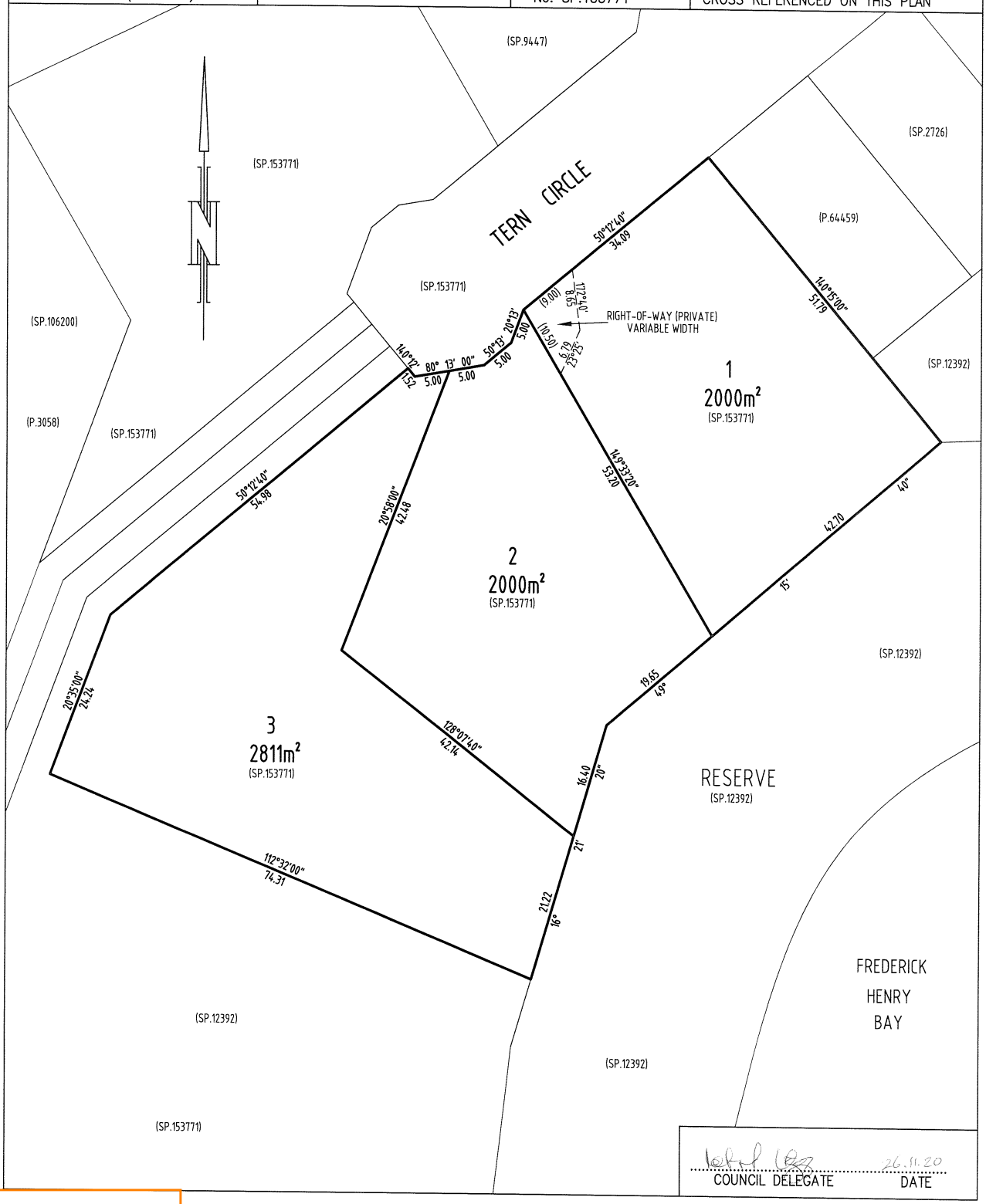
SCALE 1: 500 LENGTHS IN METRES

REGISTERED NUMBER
**SP180633**

~~APPROVED~~ 3 MAR 2021
EFFECTIVE FROM ~~3 MAR 2021~~

Recorder of Titles

| MAPSHEET MUNICIPAL CODE No. 124 (5425–54) | LAST UPI No.2899929 | LAST PLAN No. SP.153771 | ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN |
|---|---|---|---|




COUNCIL DELEGATE 26.11.20 DATE

OWNER: PETER WILLIAM SIMMONDS

FOLIO REFERENCE: CT.153771–1

GRANTEE: PART OF LOT 31145 (1072 ACRES) GRANTED TO EDMUND JOHN KENNEDY

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EFFECTIVE FROM ~~3 MAR 2021~~

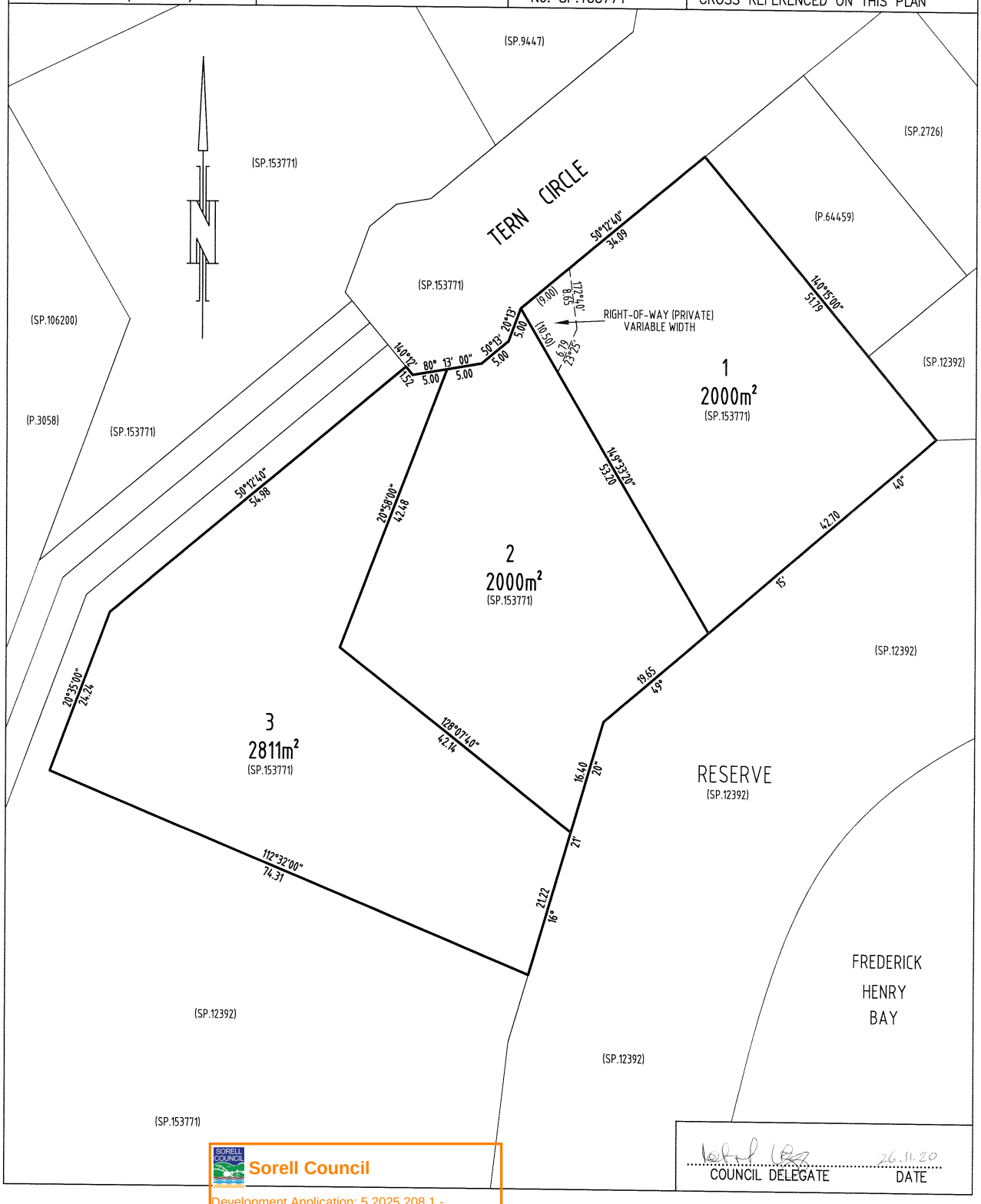
Recorder of Titles

MAPSHEET MUNICIPAL CODE No. 124 (5425–54)

LAST UPI No.2899929

LAST PLAN No. SP.153771

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN




Sorell Council

Development Application: 5.2025.208.1 - Development Application - 5 Tern Circle, Primrose Sands P1.pdf
Plans Reference:P1
Date Received:6/08/2025

26.11.20
COUNCIL DELEGATE DATE

**From:** [redacted]
**To:** [redacted]
**Subject:** Re: 5.2025.208.1 - Request For Information - 5 Tern Circle, Primrose Sands
**Date:** Friday, 5 December 2025 7:12:14 PM
**Attachments:** 5 Tern Circle Primrose Sands - Landslide Risk Assessment Report-collated.pdf
5 Tern Circle Primrose Sands Stormwater Collated.pdf
ScheduleOfEasements-180633-3.pdf
FolioText-180633-3.pdf
FolioPlan-180633-3.pdf
#ATT1621 - LAWRENCE FAMILY TRUST - DA.pln - 5_12_2025.pdf

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Hi Vicki,

I hope you've been well since we last spoke and thanks for your patience with receiving these plans.

Further to the RFI that you sent through in August, we have now received all of the completed reports and I've attached a copy of these to this email for your reference.

I have outlined my responses next to each of your points below, just for your reference, but please don't hesitate to let me know if there's anything else I can do to assist, otherwise if you are happy to progress this onto the advertising stage, that'd be greatly appreciated.

- Planning:

1. A complete copy of the Certificate of Title for the site, noting that the Schedule of Easements and Section 78 Agreement, E247627, are additionally required. **The schedule of easements has also been obtained and attached as requested and we have also attached an updated title. Please note that the section 78 agreement was no longer present on the updated title, most likely as the purchase of the lot had been processed. In addition, the E247626 was not available for purchase on the list website (when I searched those documents related to this property), but I have obtained all of the available documents from The List and attached them here. I trust this is ok.**

2. Amended elevations that include reference to natural ground level, and show the maximum proposed height of the dwelling above natural ground level. **The proposed max heights have been nominated on the northern and southern elevations, with additional dimensions and the RL levels changed to note NGL, where applicable.**

3. Elevations of the proposed retaining wall to show the extent of cut and fill proposed. **An additional elevation of the entire driveway has now been provided with height dimensions for you to review, with the max height of 2195 adjacent to the house.**

4. On the basis that significant works (being excavation of greater than 1m in depth) are proposed in relation to the retaining wall and driveway construction, a landslip hazard report is required to address the requirements of Clauses C15.5.1(P1.1, P1.2) and C15.6.1(P1.1, P1.2 & P1.3) of the Tasmanian Planning Scheme – Sorell (the Scheme). **Now attached from Robyn Doyle.**

Plumbing:

5. Provide a report from a suitably qualified person demonstrating that the site is suitable for an on-site stormwater management system having regard to clause S2.7.2P1. - **Now attached from Robyn Doyle.**

6. Demonstrate compliance with clause P1 of the stormwater management code, in particular provide details of the stormwater soakage device for the rain water tank overflow, surface drains and retaining wall. **Now attached from Robyn Doyle.**

Environmental Health:
7. Provide a Site & Soil Evaluation Report in accordance with AS/NZS 1547-2012 detailing the site and soil conditions and the suitability for onsite wastewater disposal. The Report should be prepared by a suitably qualified person such as an Engineer, Geologist, Environmental Health Officer or a Soil Scientist. **Now attached from Robyn Doyle.**

8. Demonstrate Compliance with SOR – S2.7.1 A1 or P1 – Southern Beaches On-Site Wastewater Management Code of the Tasmanian Planning Scheme - Sorell by providing a plan indicating the location of the proposed wastewater land application area. **Now attached from Robyn Doyle.**

Thanks Vicki &

Kind Regards,

Nik Valentine

**Sorell Council**
Development Application: 5.2025.208.1 - Response to Request For Information - 5 Tern Circle, Primrose Sands P2.pdf
Plans Reference: P2
Date received: 8/12/2025

**Attic Building Design** | Design - Drafting - Planning
VIC: 33 Sackville St, Collingwood, 3066
TAS: Po Box 5, Dodges Ferry, 7173
0423 107 119 | theattic.net.au

On Fri, 15 Aug 2025 at 15:52, Vicki Foster <vicki.foster@sorell.tas.gov.au> wrote:

> Good afternoon,
>
> Please find attached **Request for Information** Letter for the above address.
>
> Please submit your additional information to the Sorell Council via:
>
> - email to sorell.council@sorell.tas.gov.au (in .pdf or .docx format not exceeding 20MB);
> - hard copy form in person at the Council chambers, 47 Cole Street, Sorell; or
> - hard copy form by post to PO Box 126, Sorell, TAS 7172.
>
> Additional information submitted in any other way will not be accepted.

Please note that if additional information is lodged by 4.30pm on a day that the Council is open for business, the information will be accepted on that day. In any other case, the information will be accepted on the next day the Council is open for business.

Kind regards,

Logo

**Vicki Foster**

Customer & Business Support Officer

47 Cole Street, P.O. Box 126, Sorell, TAS 7172

www.sorell.tas.gov.au

**T:** 03 6269 0000 | **F:** 03 6269 0014

DOYLE SOIL CONSULTING

# SITE AND SOIL EVALUATION REPORT

# ONSITE WASTEWATER ASSESSMENT

**5 Tern Circle**

**Primrose Sands**



**October 2025**

**ATTENTION:**
**Printed Copies of this report must be printed in colour, and in full.**
**No responsibility is otherwise taken for its contents**

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

## SITE INFORMATION

**Client:** Ronald and Gayle Lawrence

**Address:** 5 Tern Circle, Primrose Sands (CT 180633/3)

**Site Area:** Approximately 2800 $m^2$

**Date of inspection:** 12/09/2025

**Building type:** New house

**Services:** Tank water supply and onsite wastewater management

**Relevant Planning Overlays:** Southern beaches onsite wastewater and stormwater management specific area plan, low landslip hazard band

**Mapped Geology** - Mineral Resources Tasmania 1:50 000 Sorell sheet:
**Qhw** = Quaternary windblown sand deposits. (Jurassic dolerite at depth)

**Soil Depth:** > 2.6 m

**Subsoil Drainage:** Well drained

**Drainage lines/water courses:** Fredrick Henry Bay 80 m southeast

**Vegetation:** cleared bush – mostly bracken at time of visit

**Rainfall in previous 7 days**: Approximately 14 mm

**Slope at proposed LAA:** Approximately 10° to the SE

## SITE ASSESSMENT AND SAMPLE TESTING

Site and soil assessment in accordance with AS1547-2012 *Onsite domestic wastewater assessment and design*.

Emerson Dispersion test on subsoils.

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).

## SITE AND SOIL COMMENTS

The soil profiles are formed from windblown sands deposits. The profiles are deep, with no refusal occurring at approximately 2.6 m (Appendix 2 – DCP). For land application purposes, the soil profiles are 'Cat. 1' material.

**Site constraints** (to be addressed by suitably designed OWMS):

- Landslide hazard overlay (LOW) over much of the site
- Moderate 10° at proposed LAA

**Site strengths:** (to be exploited by suitably designed OWMS):

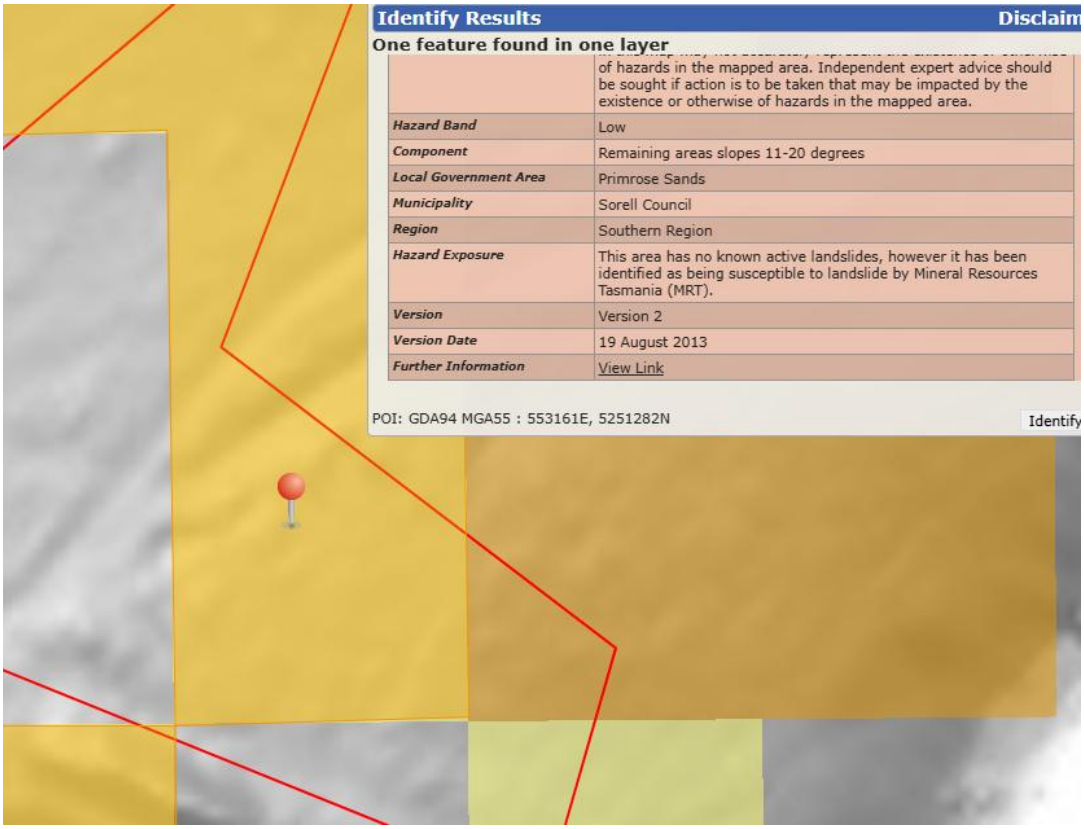
- Deep soil: > 2.6 m
- Sand (Cat. 1) soil materials
- Fall from dwelling to OWMS
- Low average annual rainfall (504 mm/annum at Dodges Ferry BOM station)
- Estimated maximum linear loading rate (LLR) of 70 L/m/day - per Table 2.2, *Designing and Installing Onsite Wastewater Systems* (SCA, 2012)

The site constraints may be addressed by installing a dual purpose septic tank (with outlet filter) and land application, via a distribution box, by 24 $m^2$ of in-ground absorption trenching.

The site Plan indicates how the LAA may be located outside of the Low Landslide hazard area. Risk assessment completed to address P2 of the *Directors Guidelines 2016* - Risk Considered low. The deep windblown sand deposits will provide a high level of soil treatment. There will be at least 2.4 m of unsaturated sand soil below the base of each absorption trench and distribution along the length of all trenching will be provided via distribution box after the septic tank and levelled slotted pipe installed in the upper of the trench aggregate.

For long term performance of the proposed system, the owner should familiarise themselves with the requirements and limitations of septic tank systems. Sections 3-5 of *The Easy Septic Guide* (https://www.olg.nsw.gov.au/wp-content/uploads/Easy-septic-guide.pdf) provide a good outline for owners.

# COMMENTS ON LANDSLIDE HAZARD OVERLAY




The parts of the site have a *Low landslip hazard overlay*. These areas have been classified based on the following component: *Remaining areas slopes 11-20 degrees* - rather than the nature of the underlying regolith (see above screen shot from LISTmap).

The soils at the site comprise deep, free-draining windblown sands. Slope angles across most of the site very between approximately 10 and 12 degrees. The slope angle in area of proposed development (building and wastewater/stormwater absorption trenches) is approximately 10 degrees.

The angle of repose (steepest angle loose, dry sand can naturally hold without slumping) of fine grained sand is approximately 30-34 degrees. The slope angles onsite are far below this. Further, the angle of repose increases when sands become moistened (though not saturated), due to capillary cohesion.

The likelihood of large, deep-seated landslides occurring at the site is unlikely due the moderate slope angles and the free draining nature of the deep sandy soils. Added moisture from wastewater/stormwater absorption trenches may even stabilise the mostly dry sands.

Retaining and reinstating vegetation on site will be important to stabilise the loose sandy soils from erosion, caused by wind and rain, rather than mass movement/landsliding.

## SOIL PROFILES – Test Hole 1


| Depth (m) | Horizon | Description and field texture grade | Soil Cat. |
|---|---|---|---|
| 0 – 0.4 | A1 | Very dark grey (10YR 3/1), **Sand**, poorly graded, slightly moist consistency | **1** |
| 0.4 – 0.8 | A2 | Greyish brown (10YR 5/2), **Sand**, poorly graded, slightly moist loose | **1** |
| 0.8 – 1.4 | $B2_{hs}$ | Very dark brown (10YR 2/2) grading to dark brown (7.5YR 3/2), **Sand**, poorly graded, medium dense consistency | **1** |
| 1.4 – 1.8 | C | Brown (10YR 5/3), **Sand**, poorly graded, dry medium dense (few iron and humus cemented nodules)<br><br>**No Refusal** | **1** |

## SOIL PROFILES – Test Hole 2

| Depth (m) | Horizon | Description and field texture grade | Soil Cat. |
|---|---|---|---|
| 0 – 0.4 | A1 | Very dark grey (10YR 3/1), **Sand**, poorly graded, slightly moist consistency | **1** |
| 0.4 – 0.6 | A2 | Greyish brown (10YR 5/2), **Sand**, poorly graded, slightly moist loose | **1** |
| 0.6 – 0.9 | $B2_{s}$ | Dark brown (7.5YR 3/2) grading to Light brown (7.5YR 6/4), **Sand**, poorly graded, dry loose consistency | **1** |
| 0.9 – 1.6 | $2B2_{hs}$ | Dark brown (7.5YR 3/2), **Sand**, poorly graded, dry medium dense consistency | **1** |
| 1.6 – 1.8 | C | Brown (10YR 5/3), **Sand**, poorly graded, dry medium dense (few iron and humus cemented nodules)<br><br>**No Refusal** | **1** |

# SOIL PROFILES – Test Hole 3


| Depth (m) | Horizon | Description and field texture grade | Soil Cat. |
|---|---|---|---|
| 0 – 0.4 | A1 | Very dark grey (10YR 3/1), **Sand**, poorly graded, slightly moist consistency | **1** |
| 0.4 – 0.8 | A2 | Greyish brown (10YR 5/2), **Sand**, poorly graded, slightly moist loose | **1** |
| 0.8 – 1.8 | C | Brown (10YR 5/3), **Sand**, poorly graded, dry medium dense (few iron and humus cemented nodules)<br><br>**No Refusal** | **1** |

| Key to Soil Horizon Nomenclature | |
|---|---|
| **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 |

## WASTEWATER LAND APPLICATION AREA SETBACKS

Required setback from upslope foundations: 3 m

*Adopted* setback from downslope surface water: 63 m

Required setback from downslope boundary: 29 m

Required setback from upslope and side boundaries: 1.5 m

Required vertical setback to bedrock: 0.5 m below the LAA (Table R1 of AS1547-2012)

## WASTEWATER CLASSIFICATION AND DESIGN

According to AS1547-2012, the soil is **category 1** (Sand).

Primary treatment recommended.

Wastewater loading: 6 persons @ 120 L/day - 720 L/day.

Design Loading Rate (DLR): 30 mm/day for LAA.

Total minimum Land Application Area required: 24 $m^2$ of absorption trench.

The proposed three-bedroom house required a design flow allowance of 720 L/day. A dual-purpose septic tank (min 3000 L) with outlet filter is required.

Using a DLR of 30 mm/day, a total minimum absorption area of 24 $m^2$ is required. This may be installed as two absorption trenches, **14.0 m long x 0.9 m wide x 0.4 m deep**. A minimum separation of 3 m between the terraced trenches is recommended.

Use a 2-outlet distribution box with **Tuf-Tite® Speed Levellers™** on each outlet (product info attached) to ensure even distribution between the trenches. Trench bases are to be **levelled** prior to backfilling with aggregate and installing the drilled distribution pipes.

Feed to the centre of each trench. For distribution use 100 mm PVC pipe **installed level** in the upper 150 mm of the aggregate. Pre-drill pipes with 10 mm holes at 4 and 8 o'clock approximately 300 mm spacing. Local topsoil should be mounded over the trenches to min. 200 mm depth. Deep-rooted grass species planted to aid in evapotranspiration.

The trenches are to be installed in-line with the contour. This design layout results in an estimated LLR of 51 L/m which is far less than the maximum calculated LLR (70 L/m) discussed in Site and Soil Comments. Therefore (at and below the design hydraulic load of 720 L/day), seepage from upslope trenches should not the effect the downslope trenches and all effluent applied to the soil should remain subsurface at and below the specified design loading rate

The finished LAA shall not be subjected to vehicular or livestock traffic. This may compromise the absorptive capacity of the system. Install adequate fencing/protection if necessary.

A 100% reserve area is set aside for future wastewater requirements (see Site Plan).

Compliance with *the Directors Guidelines 2016* is shown in the attached table for acceptable criteria. It is recommended that during construction Doyle Soil Consulting be notified of any major variation to the soil conditions or loading rate as predicted in this report.

# Compliance with Southern Beaches On-site Wastewater Management Specific Area Plan

**SOR-S2.6.1: Uses within the Southern Beaches On-site Wastewater Management Specific Area Plan**

| Acceptable Solutions: | Comment: |
|---|---|
| **A1**<br>No change, expansion, or intensification of residential or business use on the site. | Non-compliance – new build on site |

| Performance Criteria | Comment: |
|---|---|
| **P1**<br>The change, expansion, or intensification of a residential or business use on the site does not cause any adverse environmental impact or impact on public health, having regard to: | |
| (a) the extent and nature of the land available on the property to accommodate an on-site wastewater management system (including the land application area) for the proposed development; and | Complies – large area available, large distance to downslope features and deep, dry sand soil profiles. Water shedding landform. |
| (b) the land application area is setback a sufficient distance from watercourses, property boundaries and groundwater. | Complies – all setbacks are consistent with the Directors Guidelines 2016, except to downslope surface water – Risk assessment completed and attached - risk considered LOW. |

**SOR – S2.7 Development Standards for Buildings and Works**

SOR-S2.7.1 On-site wastewater

| Acceptable Solutions | Comment: |
|---|---|
| **A1**<br>Development must: | |
| (a) not cover more than 20% of the site. | Complies |
| (b) not be located on land shown on an overlay map, as within: | |
| (i) a flood-prone hazard area. | Complies |
| (ii) a landslip hazard area. | Complies |
| (iii) a coastal erosion hazard area. | Complies |
| (iv) a waterway and coastal protection area; or | Complies |
| (v) a coastal inundation hazard area. | Complies |

| | |
|---|---|
| (c) be located on a site with a soil depth of at least 1.5m. | |
| (d) be located on a site where the average gradient of the land does not exceed 10%; | Complies |
| (e) and in the case of a dwelling, provide 65m$^2$ of land for wastewater land application area per bedroom which is located at least 1.5m from an upslope or side slope boundary and 5m from a downslope boundary. | Non-compliance therefore P1 must be addressed<br>Non-compliance therefore P1 must be addressed. |

| **Performance Criteria** | **Comment:** |
|---|---|
| **P1**<br>The site must provide sufficient area for management of on-site wastewater, having regard to: | |
| (a) the topography of the site. | Complies – naturally water shedding |
| (b) the capacity of the site to absorb wastewater. | Complies – deep, dry, highly permeable sands |
| (c) the size and shape of the site. | Complies - large area available, large distance to downslope features |
| (d) the existing buildings and any constraints imposed by existing development. | Complies – none existing |
| (e) the area of the site to be covered by the proposed development. | Complies – small proportion covered |
| (f) the provision for landscaping, vehicle parking, driveways, and private open space. | Complies – all upslope of LAA |
| (g) any adverse impacts on the quality of ground, surface, and coastal waters. | Complies - The deep windblown sand deposits will provide a high level of soil treatment. There will be at least 2.4 m of unsaturated sand soil below the base of each absorption trench and distribution along the length of all trenching will be provided via distribution box after the septic tank and levelled slotted pipe installed in the upper of the trench aggregate. |
| (h) any adverse environmental impact on surrounding properties and the locality; | Complies – see above |
| (i) any written advice from a suitably qualified person (onsite wastewater management) about the adequacy of the | |

| | |
|---|---|
| on-site wastewater management system. | Complies – see above |

| **Acceptable Solutions** | **Comment:** |
|---|---|
| **A2**<br>An outbuilding, driveway or parking area or addition or alteration to a building must not encroach onto an existing land application area. | Complies – N/A |

Doyle Soil should be notified before the plumber commences work. The plumber is to provide photos of the installation, showing:

- The depth and width of the trench with tape measure
- The base of trench excavated level
- Geotextile fabric down all sides of the trench
- Slotted/drilled distribution pipe placement
- Geotextile fabric over gravel
- Topsoil seeded with grass over
- Filter in the outlet of the septic tank

A Form 71b and as-installed plan should accompany these photos. Doyle Soil will not be providing a certificate of compliance until all have been sited.

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

**Rowan Mason**
B.Agr.Sc.(hons)
**Soil Scientist**

# APPENDIX 1 – TRENCH™

**Doyle Soil Consulting**

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

## Assessment Report

| | | | |
|---|---|---|---|
| Assessment for | Ronald and Gale Lawrence | Assess. Date | 3-Oct-25 |
| | | Ref. No. | |
| Assessed site(s) | 5 Tern Circle, Primrose Sands | Site(s) inspected | 12-Sep-25 |
| Local authority | Sorell Council | Assessed by | R Doyle |

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

**Wastewater Characteristics**

Wastewater volume (L/day) used for this assessment = 720 (using the 'No. of bedrooms in a dwelling' method)

Septic tank wastewater volume (L/day) = 240

Sullage volume (L/day) = 480

Total nitrogen (kg/year) generated by wastewater = 5.3

Total phosphorus (kg/year) generated by wastewater = 1.3

**Climatic assumptions for site** (Evapotranspiration calculated using the crop factor method)

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean rainfall (mm) | 39 | 32 | 45 | 35 | 42 | 53 | 33 | 49 | 46 | 44 | 43 | 43 |
| Adopted rainfall (R, mm) | 39 | 32 | 45 | 35 | 42 | 53 | 33 | 49 | 46 | 44 | 43 | 43 |
| Retained rain (Rr, mm) | 31 | 25 | 36 | 28 | 34 | 43 | 27 | 39 | 37 | 35 | 34 | 34 |
| Max. daily temp. (deg. C) | 24 | 23 | 21 | 18 | 15 | 13 | 12 | 13 | 15 | 17 | 19 | 21 |
| Evapotrans (ET, mm) | 156 | 123 | 104 | 70 | 47 | 31 | 35 | 50 | 74 | 102 | 118 | 149 |
| Evapotr. less rain (mm) | **125** | **98** | **68** | **42** | **13** | **-11** | **8** | **10** | **37** | **67** | **83** | **115** |

Annual evapotranspiration less retained rain (mm) = 655

**Soil characterisitics**

Texture = Sand Category = 1 Thick. (m) = 3

Adopted permeability (m/day) = 2.5 Adopted LTAR (L/sq m/day) = 30 Min depth (m) to water = 3

**Proposed disposal and treatment methods**

| | |
|---|---|
| Proportion of wastewater to be retained on site: | All wastewater will be disposed of on the site |
| The preferred method of on-site primary treatment: | In dual purpose septic tank(s) |
| The preferred method of on-site secondary treatment: | In-ground |
| The preferred type of in-ground secondary treatment: | Trench(es) |
| The preferred type of above-ground secondary treatment: | None |
| Site modifications or specific designs: | Not needed |

**Suggested dimensions for on-site secondary treatment system**

| | |
|---|---|
| Total length (m) = | 18 |
| Width (m) = | 0.9 |
| Depth (m) = | 0.4 |
| Total disposal area (sq m) required = | 48 |
| comprising a Primary Area (sq m) of: | 24 |
| and a Secondary (backup) Area (sq m) of: | 24 |

Sufficient area is available on site

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

Comments

The Adopted DLR for the category 1 soil is 30 mm/day and a LAA area of 20 sq m is required. The system should therefore have the capacity to cope with predicted climatic and loading events.

**Doyle Soil Consulting**

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

# Site Capability Report

| | | | |
|---|---|---|---|
| Assessment for | Ronald and Gale Lawrence | Assess. Date | 3-Oct-25 |
| | | Ref. No. | |
| Assessed site(s) | 5 Tern Circle, Primrose Sands | Site(s) inspected | 12-Sep-25 |
| Local authority | Sorell Council | Assessed by | R Doyle |

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

| Alert | Factor | Units | Value | Confid level | Limitation Trench | Limitation Amended | Remarks |
|---|---|---|---|---|---|---|---|
| | Expected design area | sq m | 1,000 | | Moderate | | |
| | Density of disposal systems | /sq km | 10 | | Very low | | |
| | Slope angle | degrees | 10 | | Moderate | | |
| | Slope form | Straight simple | | | Low | | |
| | Surface drainage | Good | | | Very low | | |
| | Flood potential | Site floods <1:100 yrs | | | Very low | | |
| | Heavy rain events | Very rare | | | Very low | | |
| A | Aspect (Southern hemi.) | Faces SE or SW | | | High | | |
| | Frequency of strong winds | Common | | | Low | | |
| | Wastewater volume | L/day | 600 | | Moderate | | |
| | SAR of septic tank effluent | | 1.0 | | Low | | |
| | SAR of sullage | | 2.5 | | Moderate | | |
| | Soil thickness | m | 3.0 | | Very low | | |
| | Depth to bedrock | m | 3.0 | | Very low | | |
| | Surface rock outcrop | % | 0 | | Very low | | |
| | Cobbles in soil | % | 0 | | Very low | | |
| | Soil pH | | 6.0 | | Low | | |
| | Soil bulk density | gm/cub. cm | 1.4 | | Very low | | |
| | Soil dispersion | Emerson No. | 8 | | Very low | | |
| AA | Adopted permeability | m/day | 2.5 | | Very high | | |
| A | Long Term Accept. Rate | L/day/sq m | 30 | | High | | |

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

Comments

The site is limited by to downslope surface water and a LOW landslide hazard overlay. Site is considered very capable onsite wastewater management - the deep sands will provide a high level of soil treatment. There will be at least 2.4 m of unsaturated sand soil below the base of each absorption trench and distribution along the length of all trenching will be provided via distribution box after the septic tank and levelled slotted pipe installed in the upper of the trench aggregate.

Risk Assessment completed for Minimum adopted separation to top of cliff above surface water = 63 m. Risk considered LOW (assessment attached)

**Doyle Soil Consulting**

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

# Environmental Sensitivity Report

| | | | |
|---|---|---|---|
| Assessment for | Ronald and Gale Lawrence | Assess. Date | 3-Oct-25 |
| | | Ref. No. | |
| Assessed site(s) | 5 Tern Circle, Primrose Sands | Site(s) inspected | 12-Sep-25 |
| Local authority | Sorell Council | Assessed by | R Doyle |

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

| Alert | Factor | Units | Value | Confid level | Limitation Trench | Limitation Amended | Remarks |
|---|---|---|---|---|---|---|---|
| AA | Cation exchange capacity | mmol/100g | 10 | | Very high | | |
| A | Phos. adsorp. capacity | kg/cub m | 0.2 | | High | | |
| | Annual rainfall excess | mm | -655 | | Very low | | |
| | Min. depth to water table | m | 3 | | Very low | | |
| | Annual nutrient load | kg | 5.5 | | Low | | |
| | G'water environ. value | Agric non-sensit | | | Low | | |
| | Min. separation dist. required | m | 29 | | Moderate | | |
| | Risk to adjacent bores | | | | | | Factor not assessed |
| A | Surf. water env. value | Recreational | | | High | | |
| A | Dist. to nearest surface water | m | 63 | | High | | |
| | Dist. to nearest other feature | m | 41 | | Moderate | | |
| | Risk of slope instability | | Low | | Low | | |
| | Distance to landslip | m | 500 | | Very low | | |

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

Comments

There will be a low environmental risk due to the deep and free-draining nature of the soil. Risk Assessment completed for Minimum adopted separation to top of cliff above surface water = 63 m. Risk considered LOW (assessment attached)

# APPENDIX 2 – Dynamic Cone Penetrometer (DCP) Test Data

The data indicate windblown sands are deeper than 2.6 m deep at the site.

| 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 | 2 | 50.0 | 60 | 20 |
| 300 - 400 | 2 | 50.0 | 60 | 20 |
| 400 - 500 | 1 | 100.0 | 30 | 10 |
| 500 - 600 | 1 | 100.0 | 30 | 10 |
| 600 - 700 | 1 | 100.0 | 30 | 10 |
| 700 - 800 | 3 | 33.3 | 90 | 30 |
| 800 - 900 | 3 | 33.3 | 90 | 30 |
| 900 - 1000 | 5 | 20.0 | 150 | 50 |
| 1000 - 1100 | 5 | 20.0 | 150 | 50 |
| 1100 - 1200 | 4 | 25.0 | 120 | 40 |
| 1200 - 1300 | 4 | 25.0 | 120 | 40 |
| 1300 - 1400 | 5 | 20.0 | 150 | 50 |
| 1400 - 1500 | 4 | 25.0 | 120 | 40 |
| 1500 - 1600 | 5 | 20.0 | 150 | 50 |
| 1600 - 1700 | 5 | 20.0 | 150 | 50 |
| 1700 - 1800 | 5 | 20.0 | 150 | 50 |
| 1800 - 1900 | 7 | 14.3 | 210 | 70 |
| 1900 - 2000 | 8 | 12.5 | 240 | 80 |
| 2000 - 2100 | 10 | 10.0 | 300 | 100 |
| 2100 - 2200 | 12 | 8.3 | 360 | 120 |
| 2200 - 2300 | 12 | 8.3 | 360 | 120 |
| 2300 - 2400 | 12 | 8.3 | 360 | 120 |
| 2400 - 2500 | 12 | 8.3 | 360 | 120 |
| 2500 - 2600 | 12 | 8.3 | 360 | 120 |

| **Acceptable Solutions** | **Performance Criteria** | **Compliance** |
|---|---|---|
| A1<br>Horizontal separation distance from a building to a land application area must comply with one of the following:<br><br>a) be no less than 6m; or<br>b) be no less than:<br>i) 3m from an upslope building or level building;<br>ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building;<br>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<br>The land application area is located so that<br><br>a) the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low.; and<br><br>b) is setback a sufficient distance from a downslope excavation around or under a building to prevent inadequately treated wastewater seeping out of that excavation | Complies with A1 (b) (i)<br>Land application area will be located with a minimum separation distance of 3m from an upslope or level building. |
| A2<br>Horizontal separation distance from downslope surface water to a land application area must comply<br>with (a) or (b)<br><br>a) be no less than 100m; or<br>b) be no less than the following:<br>i) if primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or<br>ii) if secondary treated effluent and subsurface application, 15m plus 2m for every degree of average gradient to down slope surface water. | P2<br>Horizontal separation distance from downslope<br>surface water to a land application area must comply with all of the following:<br><br>a) Setback must be consistent with AS/NZS 1547 Appendix R;<br><br>b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable. | Non-compliance with A2 (b) (i)<br>- separation distance of 100 m to top of cliff above surface water required. Minimum 63 m separation to top of cliff above surface water adopted.<br><br>Complies with P3<br><br>a) low constraint ratings outnumber the high constraint ratings. As such, the adopted setback distance of 63 m to the top of cliff above surface water is considered consistent with AS/NZS 1547:2012 Appendix R.<br><br>b) Risk to environmental and public health considered LOW with the proposed level of treatment and method of application – See |

| | | |
|---|---|---|
| | | Risk Assessment below |
| A3<br>Horizontal separation distance from a property boundary to a land application area must comply with<br>either of the following:<br><br>a) be no less than 40m from a property boundary; or<br><br>b) be no less than:<br><br>i) 1.5m from an upslope or level property boundary; and<br><br>ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or<br><br>iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary. | P3<br>Horizontal separation distance from a property boundary to a land application area must comply with all of the following:<br><br>a) Setback must be consistent with AS/NZS 1547 Appendix R; and<br><br>b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable. | Complies with A3 (b) (i)<br>Land application area will be located with a minimum separation distance of 1.5m from an upslope or level property boundary<br><br>Complies with A3 (b) (ii)<br>Land application area will be located with a minimum separation distance of 41 m of downslope property boundary (29 m required) |
| A4<br>Horizontal separation distance from a downslope bore, well or similar water supply to a land<br>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<br>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following:<br><br>a) Setback must be consistent with AS/NZS 1547 Appendix R; and<br><br>b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable | No bore or well identified within 50m |

| | | |
|---|---|---|
| A5<br>Vertical separation distance between groundwater and a land application area must be no less than:<br>a) 1.5m if primary treated effluent; or<br>b) 0.6m if secondary treated effluent | P5<br>Vertical separation distance between groundwater and a land application area must comply with the following:<br>a) Setback must be consistent with AS/NZS 1547 Appendix R; and<br>b) A risk assessment completed in accordance with appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable | No groundwater encountered. |
| A6<br>Vertical separation distance between a limiting layer and a land application area must be no less than:<br>a) 1.5m if primary treated effluent; or<br>b) 0.5m if secondary treated effluent | P6<br>Vertical setback must be consistent with AS/NZS1547 Appendix R. | Complies - No limiting layer identified above 2.6 m depth. |
| A7<br>nil | P7<br>A wastewater treatment unit must be located a sufficient distance from buildings or neighbouring properties so that emissions (odour, noise or aerosols) from the unit do not create an environmental nuisance to the residents of those properties | Complies with P7. |

## Selection of Appropriate Setback Distances

Appendix R (AS/NZS1547:2012) "provides a guide on the setback distances that may be applied to land application areas, based on the site constraints identified during the site and soil evaluation".

***Table 1**: adapted from Table R1 (AS/NZS1547:2012) - Guidelines for horizontal and vertical setback distances. The specific site features with setback distances (from the proposed LAA) which do not comply with the Acceptable Solutions in Section 3 of the Director's Guidelines are highlighted in yellow. Use in conjunction with Table 2.*

| **Site feature** | **Setback distance range (m)** | **Site constraint items of specific concern** (from Table 2) | **Min setback distance to satisfy relevant Acceptable Solutions (TAS guidelines)** | **Adopted setback distance** (m) |
|---|---|---|---|---|
| | ***Horizontal setback distance*** (m) | | | |
| **Property boundary** | 1.5 – 50 | A, D, J | N/A | N/A |
| **Buildings/houses** | 2.0 –> 6 | A, D, J | N/A | N/A |
| **Surface water** | 15 –100 | A, B, D, E, F, G, J | 100 m to top of cliff above surface water | 63 m to top of cliff above surface water |
| **Bore, well** | 15 – 50 | A, C, H, J | N/A | N/A |
| **Recreational areas (Children's play areas, swimming pools and so on)** | 3 – 15 | A, E, J | N/A | N/A |
| **In-ground water tank** | 4 – 15 | A, E, J | N/A | N/A |
| **Retaining wall and Embankments, escarpments, cuttings** | 3.0 m or 45° angle from toe of wall (whichever is greatest) | D, G, H | N/A | N/A |
| | ***Vertical setback distance** (m)* | | | |
| **Groundwater** | 0.6- >1.5 | A, C, F, H, I, J | N/A | N/A |
| **Hardpan or bedrock** | 0.5 –> 1.5 | A, C, J | N/A | N/A |

***Table 2**: adapted from Table R2 (AS/NZS1547:2012) – Site constraint scale for development of setback distances. The constraint items of specific concern are highlighted in yellow.*

| Item | Site/system feature | **Constraint scale** (see Note 1)<br>LOWER ⟷ HIGHER<br>**Examples of constraint factors** (see Note 2) | | Sensitive features | Comment | Constraint Rating |
|---|---|---|---|---|---|---|
| A | Microbial quality of effluent | Effluent quality consistently producing ≤ 10 cfu/100 mL E. coli (secondary treated effluent with disinfection) | Effluent quality consistently producing ≥ $10^6$ cfu/100 mL E. coli (for example, primary treated effluent) | Groundwater and surface pollution hazard, public health hazard | 1° treated effluent, outlet filter, | High |
| B | Surface water | Category 1 to 3 soils, no surface water down gradient within > 100 m, low rainfall area | Category 4 to 6 soils, permanent surface water <50 m down gradient,<br>high rainfall area, high resource/environmental value | Surface water pollution hazard for low permeable soils, low lying or poorly draining areas | Cat. 1 soil, 63 m to top of cliff above surface water | Med<br>(i.e. Low & High) |
| C | Groundwater | Category 5 and 6 soils, low resource/environmental value | Category 1 and 2 soils,<br>gravel aquifers,<br>high resource/environmental value | Groundwater pollution hazard | N/A | N/A |
| D | Slope | 0 – 6% (surface effluent application)<br>0 – 10% (subsurface effluent application) | > 10% (surface effluent application),<br>> 30% subsurface effluent application | Off-site export of effluent, erosion | Approx. 18% slope at LAA, subsurface application into deep sands | Low |
| E | Position of land application area in landscape. | Downgradient of surface water, property boundary, recreational area | Upgradient of surface water, property boundary, recreational area | Surface water pollution hazard, off-site export of effluent | Up gradient of boundary and surface water boundary | High |
| F | Drainage | Category 1 and 2 soils, gently sloping area | Category 6 soils, sites with visible seepage, moisture tolerant vegetation, low lying area | Groundwater pollution hazard | 0.5m of Cat. 1 soil. overlying Cat. 6. | Low |
| G | Flood potential | Above 1 in 20 year flood contour | Below 1 in 20 year flood contour | Off-site export of effluent, system failure, mechanical faults | Water ‘shedding’ landform. Deeps and highly permeable sand | Low |

| Item | Site/system feature | Constraint scale (see Note 1)<br>LOWER ⟷ HIGHER<br>Examples of constraint factors (see Note 2) | | Sensitive features | Comment | Constraint Rating |
|---|---|---|---|---|---|---|
| H | Geology and soils | Category 3 and 4 soils, low porous regolith, deep, uniform soils | Category 1 and 6 soils, fractured rock, gravel aquifers, highly porous regolith | Groundwater pollution hazard for porous regolith and permeable soils | N/A | N/A |
| I | Landform | Hill crests, convex side slopes, and plains | Drainage plains and incise channels | Groundwater pollution hazard, resurfacing hazard | N/A | N/A |
| J | Application method | Drip irrigation or subsurface application of effluent | Surface/above ground application of effluent | Off-site export of effluent, surface water pollution | Subsurface application | Low |

**Conclusion**: The low constraint ratings outnumber the high constraint ratings. As such, the adopted setback distance of 63 m to the top of cliff above surface water is considered consistent with AS/NZS 1547:2012 Appendix R.

# Risk Assessment

This risk assessment is completed to address (only) those sections of Section 3 of the *Director's Guidelines for Onsite Wastewater Management Systems* requiring performance criteria.

The below risks are assessed using the following risk assessment matrix (likelihood x consequence) to assess the level of risk for the specific OWMS design factors. Risk assessment per the qualitative environmental and public health risk assessment criteria detailed in the *Australian Guidelines for Water Recycling - element 2 (non-potable water)*.

| Design factor requiring risk assessment | Potential impacts | Likelihood | Consequence | Risk level | Risk reduction measures (RRM) | Risk level after implementing RRM |
|---|---|---|---|---|---|---|
| **Setback distance to downslope surface water (top of cliff)** | **Surface water pollution hazard** | **B** | **2** | **Low** | **Primary treatment, outlet filter, trenches installed into very dry sand deposits > 2.6 m deep.** | **Low** |

**Comments:**

**The deep windblown sand deposits will provide a high level of soil treatment. There will be at least 2.4 m of unsaturated sand soil below the base of each absorption trench and distribution along the length of all trenching will be provided via distribution box after the septic tank and levelled slotted pipe installed in the upper of the trench aggregate.**

## Qualitative measures of likelihood

| Level | Descriptor | Likelihood description |
|---|---|---|
| **A** | Rare | May occur only in exceptional circumstances. May occur once in 100 years |
| **B** | Unlikely | Could occur within 20 years or in unusual circumstances |
| **C** | Possible | Might Occur or should be expected to occur within a 5 – 10 year period |
| **D** | Likely | Will probably occur within a 1 – 5 year period |
| **E** | Almost Certain | Is expected to occur with a probability of multiple occurrences within a year |

## Qualitative measures of consequence / impact

| Level | Descriptor | Consequence / impact description |
|---|---|---|
| **1** | Insignificant | Insignificant impact or not detectable |
| **2** | Minor | Health – Minor impact for small population<br>Environment – Potentially harmful to local ecosystem with local impacts contained to site |
| **3** | Moderate | Health – Minor impact for a large population<br>Environment – Potentially harmful to regional ecosystem with local impacts primarily contained to the site |
| **4** | Major | Health – Major impact for a small population<br><br>Environment – Potentially lethal to local ecosystems; predominantly local, but potential for off-site impacts |
| **5** | Catastrophic | Health – Major impact for large population<br>Environment – Potentially lethal to regional ecosystem or threatened species; widespread on-site and off-site impacts |

## Qualitative risk Assessment

| Likelihood | 1 (insignificant) | 2 (minor) | 3 (moderate) | 4 (major) | 5 (catastrophic) |
|---|---|---|---|---|---|
| **A (rare)** | Low | Low | Low | High | High |
| **B (unlikely)** | Low | Low | Moderate | High | Very high |
| **C (possible)** | Low | Moderate | High | Very high | Very high |
| **D (likely)** | Low | Moderate | High | Very high | Very high |
| **E (almost certain)** | Low | Moderate | High | Very high | Very high |

Note: level of health and environmental risk is specific to the definitions of likelihood and consequence defined in the above, and respective Qualitative Measures tables.

# CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

**Section 321**

Form **55**

To: Attic Building Design *Owner name*

PO Box 5 *Address*

Dodges Ferry TAS 7173 *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: Site and Soil evaluation and land application system design

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

## Details of work:

Address: 5 Tern Circle

Primrose Sands TAS 7173

Lot No: 3

Certificate of title No: 180633/3

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

Including
Characterisation of wastewater and predicted hydraulic loadings
Selection of land application area
Determination of design loading rate

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

## Certificate details:

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

*(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: | AS/NZS 1547-2012 On-Site Domestic Wastewater Management |
| Relevant calculations: | |
| References: | AS1547-2012 On-Site Domestic Wastewater Management<br>Directors Guidelines for On-Site wastewater Management Systems - CBOS -2017 |

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

Site and soil evaluation

*Scope and/or Limitations*

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

**I certify the matters described in this certificate.**

| | *Signed:* | *Certificate No:* | *Date:* |
|---|---|---|---|
| Qualified person: |  | 1837 | 24/09/2025 |

Andrew Brian

# CERTIFICATE OF THE RESPONSIBLE DESIGNER

**Section 94**
**Section 106**
**Section 129**
**Section 155**

Form **35**

To: Attic Building Design *Owner name*
PO Box 5 *Address*
Dodges Ferry TAS 7173 *Suburb/postcode*

## Designer details:

Name: Robyn Doyle
Category: Bldg srvcs dsgnr-hydraulic domestic
Business name: Doyle Soil Consulting
Phone No: 0488080455
Business address: 6/76 Auburn Rd
Kingston Beach 7050
Fax No:
Licence No: CC7418
Email address: robyn@doylesoilconsulting.com.au

## Details of the proposed work:

**Owner/Applicant** Ronald and Gayle Lawrence
Designer's project reference No. 2025-9
**Address:** 5 Tern Circle
Lot No: 3
Primrose Sands TAS 7173

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

**Description of work:**
On-site wastewater Design

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

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

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

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

Other details:

## Design documents provided:

The following documents are provided with this Certificate –

*Document description:*

| | | |
|---|---|---|
| Drawing numbers: | Prepared by: Doyle Soil Consulting | Date: September 2025 |
| Schedules: | Prepared by: | Date: |
| Specifications: | Prepared by: Doyle Soil Consulting | Date: September 2025 |
| Computations: | Prepared by: | Date: September 2025 |
| Performance solution proposals: | Prepared by: | Date: |
| Test reports: | Prepared by: Doyle Soil Consulting | Date: September 2025 |

## Standards, codes or guidelines relied on in design process:

AS1547-2012 On site domestic wastewater management.

National Construction Code 2022 Vol 3

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

## Any other relevant documentation:

Site and soil evaluation and design report -Proposed onsite wastewater management system by Robyn Doyle

## Attribution as designer:

I, Robyn Doyle, 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: | R Doyle |  | 24/09/2025 |
| Licence No: | CC7418 | | |

## Assessment of Certifiable Works: (TasWater)

**Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.**

**If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.**

**TasWater must then be contacted to determine if the proposed works are Certifiable Works.**

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

- [X] The works will not increase the demand for water supplied by TasWater
- [X] The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- [X] The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- [X] The works will not damage or interfere with TasWater's works
- [X] The works will not adversely affect TasWater's operations
- [X] The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- [X] I have checked the LISTMap to confirm the location of TasWater infrastructure
- [X] If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

## Certification:

I, ……Robyn Doyle……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: | Robyn Doyle |  | 24/09/2025 |

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## AS1547:2012 – Loading Certificate – Septic System Design

This loading certificate is provided in accordance with Clause 7.4.2(d) of AS/NZS 1547:2012 and sets out the design criteria and the limitations associated with the use of the system.

**Site Address:** 5 Tern Circle, Primrose Sands

**System Capacity:** 6 people @ 120 L/person/day

**Summary of Design Criteria**

**DLR:** 30 L/m$^2$/day.

**Absorption area:** 24 m$^2$

**Reserve area location /use:** area assigned

**Water-saving features fitted:** Standard fixtures

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

**Typical loading change consequences:** Expected to be minimal due to capacity of system and site area (provided loading changes within 25 % of design)

**Overloading consequences:** Continued overloading may cause hydraulic failure of the absorption area and require upgrading/extension of the area. Risk considered acceptable

**Underloading consequences:** Lower than expected flows will have minimal consequences on system operation unless the house has long periods of non-occupation. Under such circumstances additional maintenance of the system may be required. Risk considered acceptable.

**Maintenance recommendations (by owner):** The septic tank must be de-sludged at approximately every 3 years depending on occupation. Septic tank outlet filter should be cleaned every 6 months.

**Lack of maintenance / monitoring consequences:** Issues of underloading/overloading and condition of the absorption area require monitoring and maintenance, if not completed system failure may result in unacceptable health and environmental risks. Septic tank de-sludging must also be monitored to prevent excessive sludge and scum accumulation. Monitoring and servicing by the property owner required to ensure compliance.

**Other considerations:** Owners/occupiers must be aware of the operational requirements and limitations of the system (by owner owner's agent if letting). The absorption area must not be subject to traffic by vehicles or heavy stock and should be fenced off if deemed necessary to avoid this. The absorption area must be maintained with adequate grass cover to assist in evapotranspiration of treated effluent. kept out of the system. Consult Sections 3-5 of *The Easy Septic Guide* (https://www.olg.nsw.gov.au/wp-content/uploads/Easy-septic-guide.pdf).

# TERRACED TRENCH DETAIL

## 5 Tern Circle, Primrose Sands

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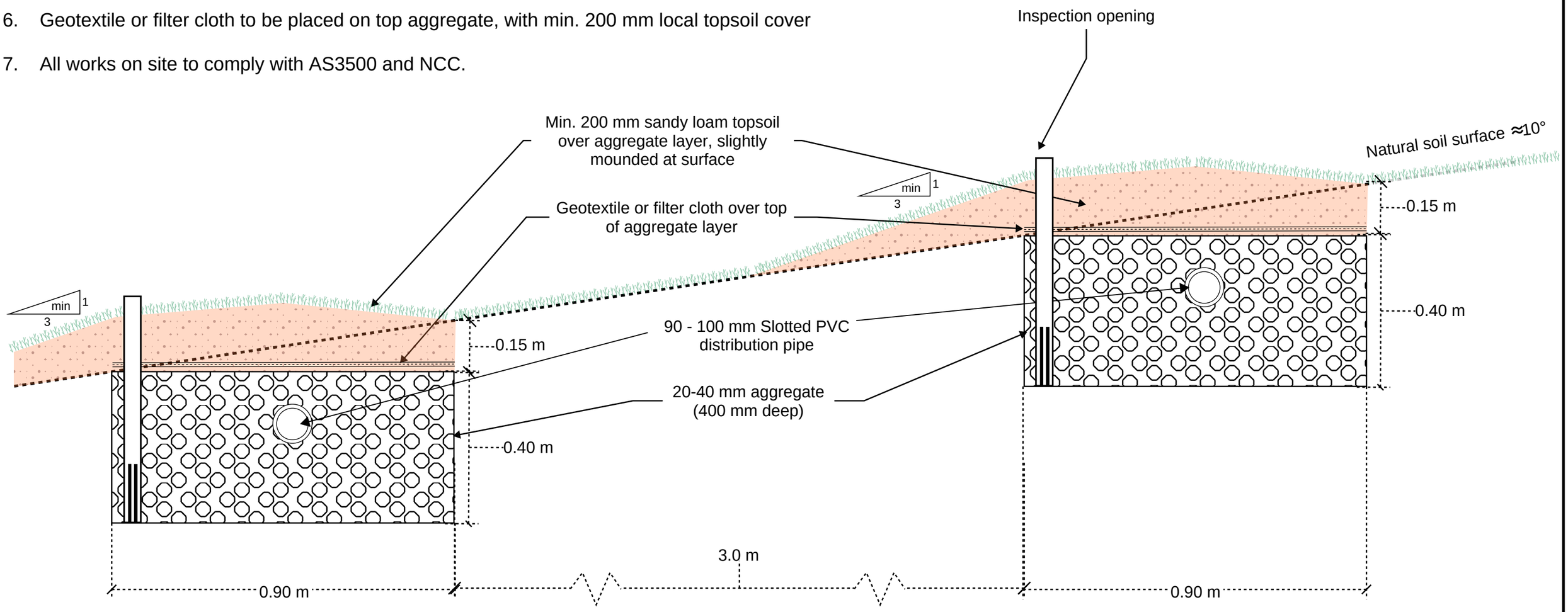
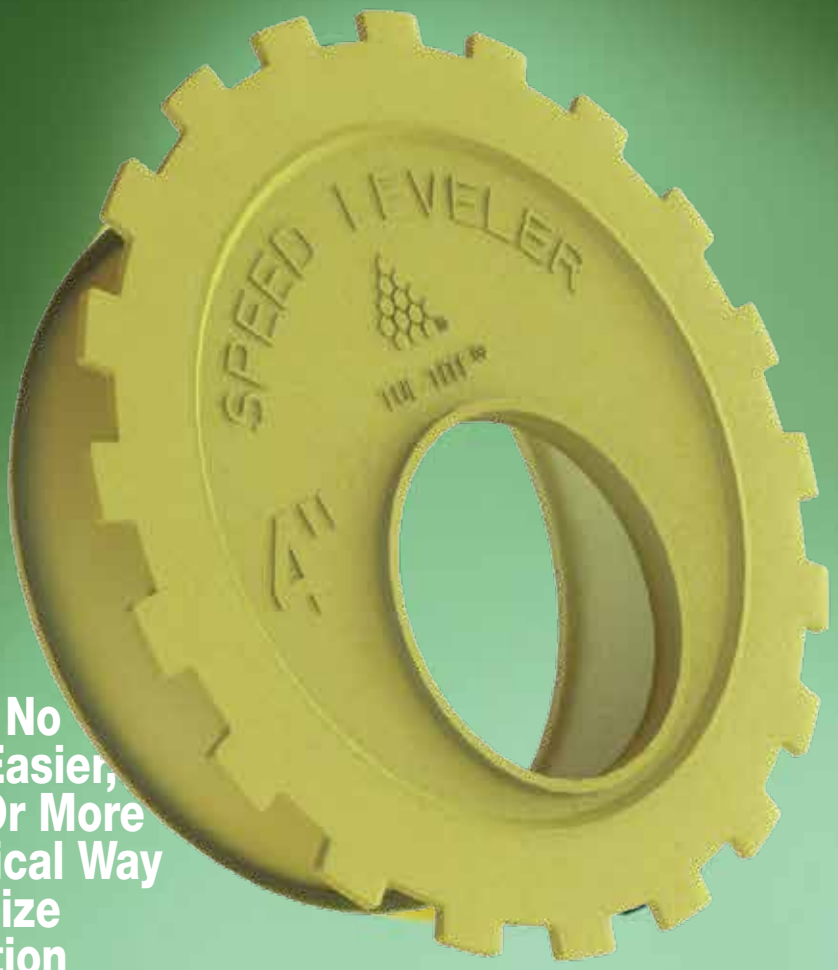
**Design notes:**

1. Two terraced absorption trenches, each dimensions of 11 000 mm long by 900 mm wide by 400 mm deep
2. Base of the trench to be excavated level
3. Fill with 20 - 40 mm aggregate to 400 mm
4. 90-100mm slotted pipe in the top 100mm of the aggregate layer and fed, via splitter box
5. Inspection opening to be placed on downslope side of the trench and perforated in lower section
6. Geotextile or filter cloth to be placed on top aggregate, with min. 200 mm local topsoil cover
7. All works on site to comply with AS3500 and NCC.



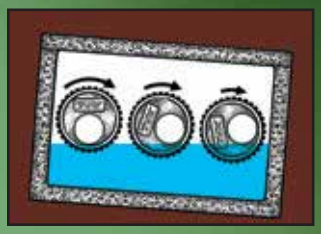
# TUF-TITE®

# Speed Levelers™




### Tough Problem

The distribution box is out of alignment. Effluent does not flow equally into the outlet pipes.



### TUF-TITE Solution

Insert Tuf-Tite Speed Levelers into the outlet pipes. Simply adjust each Leveler so the flow is equally distributed.


## There Is No Faster, Easier, Better, Or More Economical Way To Equalize Distribution Box Flow

There's no need to dig up and re-level tilted distributions boxes. Or to struggle with makeshift pipe dams. Now, with Tuf-Tite Speed Levelers, you can do the job in a fraction of the time, for a fraction of the cost.

**For all size and shape concrete distributions boxes, as well as polyethylene boxes from Tuf-Tite.**

### For 3" or 4" PVC pipes

Speed Levelers are precision engineered to fit commonly used Schedule 40 Thick-Wall, SDR 35 (3034), and 2729 Thin-Wall PVC pipes. Simply press the Levelers into the pipe ends. They fit water-tight. No tools are necessary.

### Non-corrosive Polyethylene

Tuf-Tite Speed Levelers are molded of specially formulated polyethylene that is highly chemical resistant. They are actually more corrosion resistant than the PVC pipe in which they're used.

### They're hand-adjustable

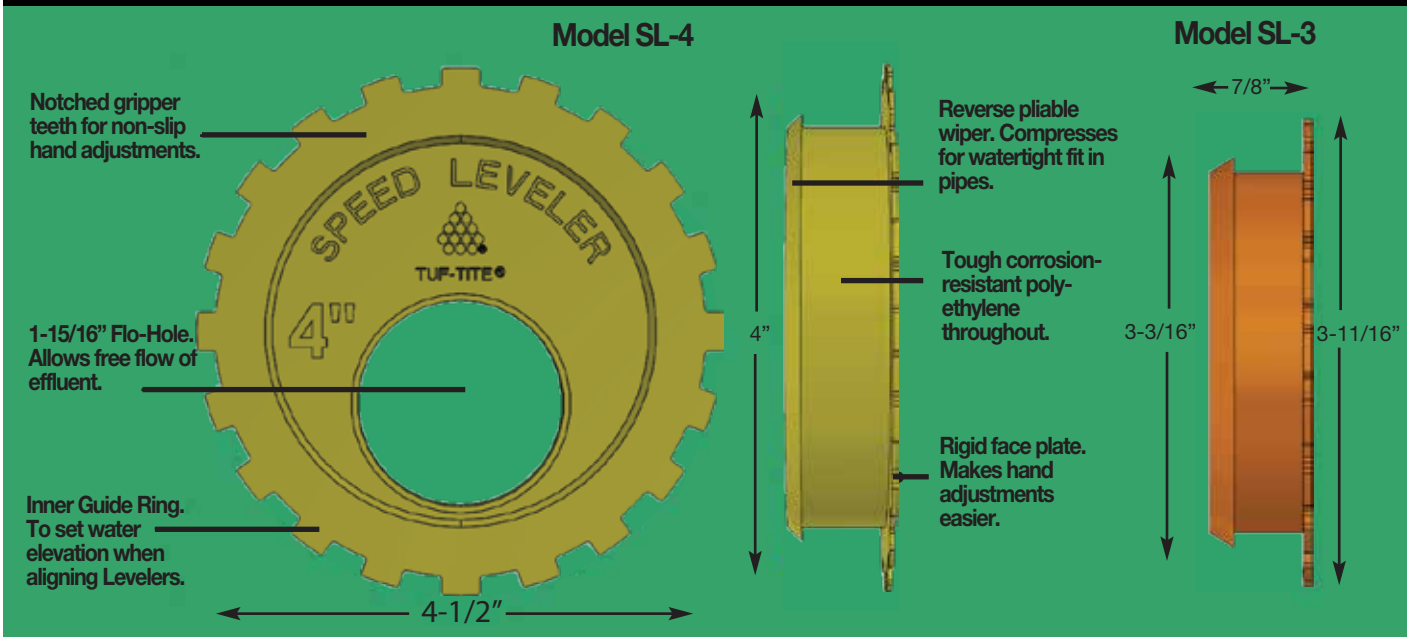
Easily rotate Speed Levelers by hand. The Flo-Hole can be positioned to admit effluent at the precise level you desire. The range of settings is infinitely variable. And Levelers can be reset easily, anytime.

### Tested. Proved. Preferred

Test after test show that Tuf-Tite Speed Levelers significantly improve distribution in gravity-flow septic systems. There simply is no other way this can be accomplished as effectively, quickly, easily, or economically.

# TUF-TITE® Speed Levelers™ SL-4

One size fits all 4" PVC pipe. Model SL-3, for 3" PVC pipe, also available.



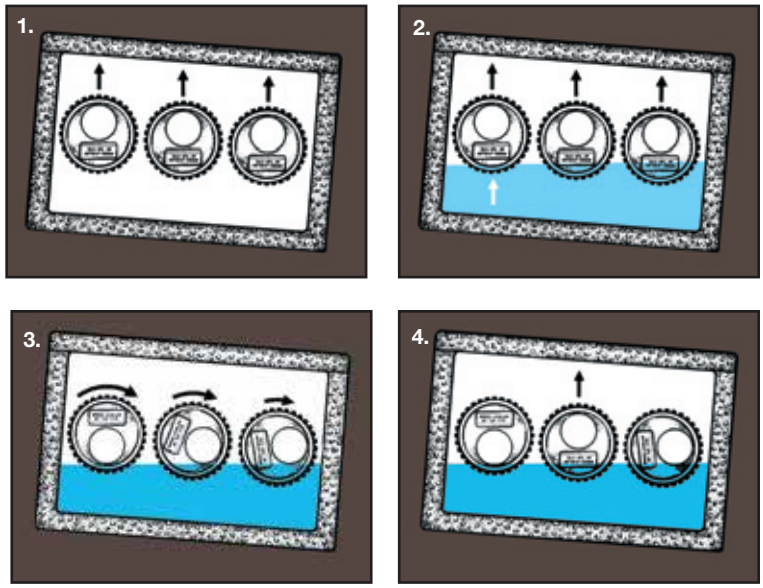

## HOW TO SET SPEED LEVELERS

1. Insert a Speed Leveler into each outlet pipe inside the Distribution Box. Rotate each Leveler until the Flo-Hole is at the 12 o'clock position.

2. Start filling the Distribution Box with water. Stop when the water level touches the "Inner Guide Ring" of the highest Speed Leveler.

3. Rotate all the Speed Levelers until each of the Flo-Holes is aligned just above the water level. Slowly add more water to see if it enters all the Flo-Holes simultaneously. Make fine-tune adjustments if necessary.

4. You can alternate fields, or rest failed lines anytime. Simply rotate the Leveler on the appropriate pipe until the Flo-Hole is at the 12 o'clock position to stop the flow.

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Drainage and Septic Products


**Tuf-Tite® Corporation**
1200 Flex Ct.
Lake Zurich, IL 60047

www.tuf-tite.com


*Water-tight Lids and Risers by Tuf-Tite®*

W00 WINDOW ID
D00 DOOR ID
MB METER BOX
HW HOT WATER SYSTEM
[CS] CONCRETE SLAB
[PC] POLISHED CONCRETE
[TF] TIMBER FLOOR
[C] CARPET
[T] TILES

**ADDITIONAL NOTES:**
PROPOSED SHOWER(S) TO BE ENCLOSED U.N.O

# TERN CIRCLE

Low Landslide overlay

Low Landslide overlay

Medium Landslide overlay

Proposed New Electric Gate & 2.4m High

Gate

New Post & Wire Fence

Hard Stand For Fire Truck

New Retaining Walls For Driveway Where Required To Achieve Relevant Cross-Falls

Builder To Ensure Fence Is Non-Climbable From Adjacent Property / Access Way

Proposed Dedicated 10,000L Fire Fighting Water Tank

438.93 sq m

New 2.1m High Retaining Walls For Driveway Where Required To Achieve Relevant Cross-Falls 2.1m Adjacent To Dwelling For Approx. 15m Only Tapering To A Lower Height Towards Entrance

Builder To Ensure Fence Is Non-Climbable From Adjacent Property / Access Way

17.95 m

Proposed New Residence

305.45 sq m

3.00 m

Proposed Water Tank Locations

Peg: 33.54

Peg: 24.15

Leaning Gum Tree

1.50 m

Post & Wire Fence ±15 Yrs

R/S in conc. RL: 37.61

R/S in headwall RL: 39.47

Dual purpose septic tank

Designs of onsite wastewater management systems are site-specific. Installer to refer closely to DSC report and design spec sheets. Contact the system designer with any questions or proposed changes to the system prior to proceeding with changes. Failure to do so may prevent designer certification/sign-off

Robyn Doyle
Building Services Designer
Hydraulic
CC7418

20/10/2025

Prepared by
Rowan Mason

3/10/25

DOYLE SOIL CONSULTING

**NOTE:**
MECHANICAL VENTILATION TO BE PROVIDED IN ACCORDANCE WITH PART 3.8.5 of BCA/NCC TO AMENITY AREAS, WHERE NATURAL VENTILATION IS NOT ACHIEVABLE.

## Stormwater Design

Roof area storm water overflow via a DN 90-100 pipe to one trench 20 m long by 1.5 m wide by 0.6 m deep

Driveway stormwater overflow via grated drains to a two-way flow splitter box to two absorption trenches each
14 m long by 1.5 m wide by 0.6 m deep

## Wastewater Design

Dual-purpose septic tank (min 3000L) with outlet filter. Location on plan nominal only.

Distribution box with Tuff-tite® speed levellers on each outlet.

Land Application Area: 24 m²
- installed as two absorption trenches
- each dims: 14.0m x 0.9 m x 0.4 m
- centre-feed each length of slotted pipe
- 3 m separation between trenches recommended

Never drive on the finished absorption bed. Landscape or fence-off to reduce the risk of vehicular traffic.

Min 100 m downslope water setback
MIn 29 m downslope boundary setback
Min 1.5 m boundary setbacks
Min 3.0 m setback from upslope foundations

Refer to DSC report

Medium landslide hazard area
Low landslide hazard area
Approximate test hole locations

**THE LAWRENCE FAMILY TRUST**

**NEW RESIDENCE**
**5 TERN CIRCLE,**
**PRIMROSE SANDS, TAS 7173**
DATE: **5/8/2025** SIZE: **A2** SCALE:**1:250**
JOB: **#ATT1620** DRAWN: **N VALENTINE**
EMAIL: **NIK@THEATTIC.NET.AU**

**PROPOSED SITE PLAN LG 3**

DOYLE SOIL CONSULTING

# LANDSLIDE ASSESSMENT REPORT

## 5 Tern Circle

## Primrose Sands

**November 2025**



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

## Founding Statement

Dr Richard Doyle is a highly qualified geologist, geomorphologist and soil scientist with over 40 years work experience in earth sciences. He has a B.Sc. (Hons) in geology and physical geography (Victoria University of Wellington, NZ), an M.Sc. in geology awarded with distinction specialising in geomorphology, erosion and soil development (Victoria University of Wellington, NZ) and a PhD in soil science from UTAS. Dr Doyle is a Certified Professional Soil Scientist (CPSS) of the Australian Society of Soil Science of which he is former state and national president. He has authored numerous landslides risk, coastal erosion, inundation and other earth-based risk assessments for Tasmanian councils and has over 100 scientific publications in journals, books and conference proceedings. He has been an expert witness in numerous court cases, tribunals and mediation hearings.

## BACKGROUND

Doyle Soil Consulting has been engaged by Ronald and Gayle Lawrence to assess the site at 5 Tern Circle, Primrose Sands for compliance with the relevant sections of provision C15.0 (Landslide Hazard Code) of the Tasmanian Planning Scheme. Recommended hazard reduction measures are provided to reduce and maintain the landslide risk associated with the works to a 'tolerable risk'.

According to preliminary plans, provided by Attic Building Design, the proposed dwelling will be located outside of the Landslide Hazard overlay. Plans also indicate a steep driveway cutting, up to 2.1 m deep, is located within the Landslide Hazard overlay. Parts of the onsite wastewater and stormwater absorption trenches area also located within the Landslide Hazard overlay.

# Site Information

**Client:** Ronald and Gayle Lawrence

**Address:** 5 Tern Circle, Primrose Sands (CT 180633/3)

**Site Area:** Approximately 2800 $m^2$

**Date of inspection:** 12/09/2025

**Building type:** New house

**Services:** Tank water supply and onsite wastewater management

**Relevant Planning Overlays:** Southern beaches onsite wastewater and stormwater management specific area plan, low landslip hazard band

**Mapped Geology** - Mineral Resources Tasmania 1:50 000 Sorell sheet: **Qhw** = Quaternary windblown sand deposits. (Jurassic dolerite at depth)

**Soil Depth:** > 2.6 m

**Subsoil Drainage:** Well drained

**Drainage lines/water courses:** Fredrick Henry Bay 80 m southeast

**Vegetation:** cleared bush – mostly bracken at time of visit

**Rainfall in previous 7 days**: Approximately 14 mm

**Slope:** Approximately 12-18° to the ESE

# Introduction

Part of the proposed development at 5 Tern Circle, Primrose Sands is located in a Low Landslide Hazard Band overlay (figure 1). This includes parts of the driveway and associated cutting (up to 2.1 m deep), the wastewater absorption trenches and the stormwater absorption trenches.

According to Mineral Resources Tasmania (MRT), the overlay areas have no known active landslides but are identified as *susceptible* to land sliding. These areas are so classified due to slope angle – in this case: “Remaining areas slopes 11 – 20 degrees”.

This report addresses the surrounding landform, soil materials and local geomorphology to assess the potential for landslip to occur before, during and after, construction. The associated likelihood and risks with the potential landslide hazard are examined and best practice

mitigation measures are recommended to ensure a tolerable risk can be achieved and maintained.

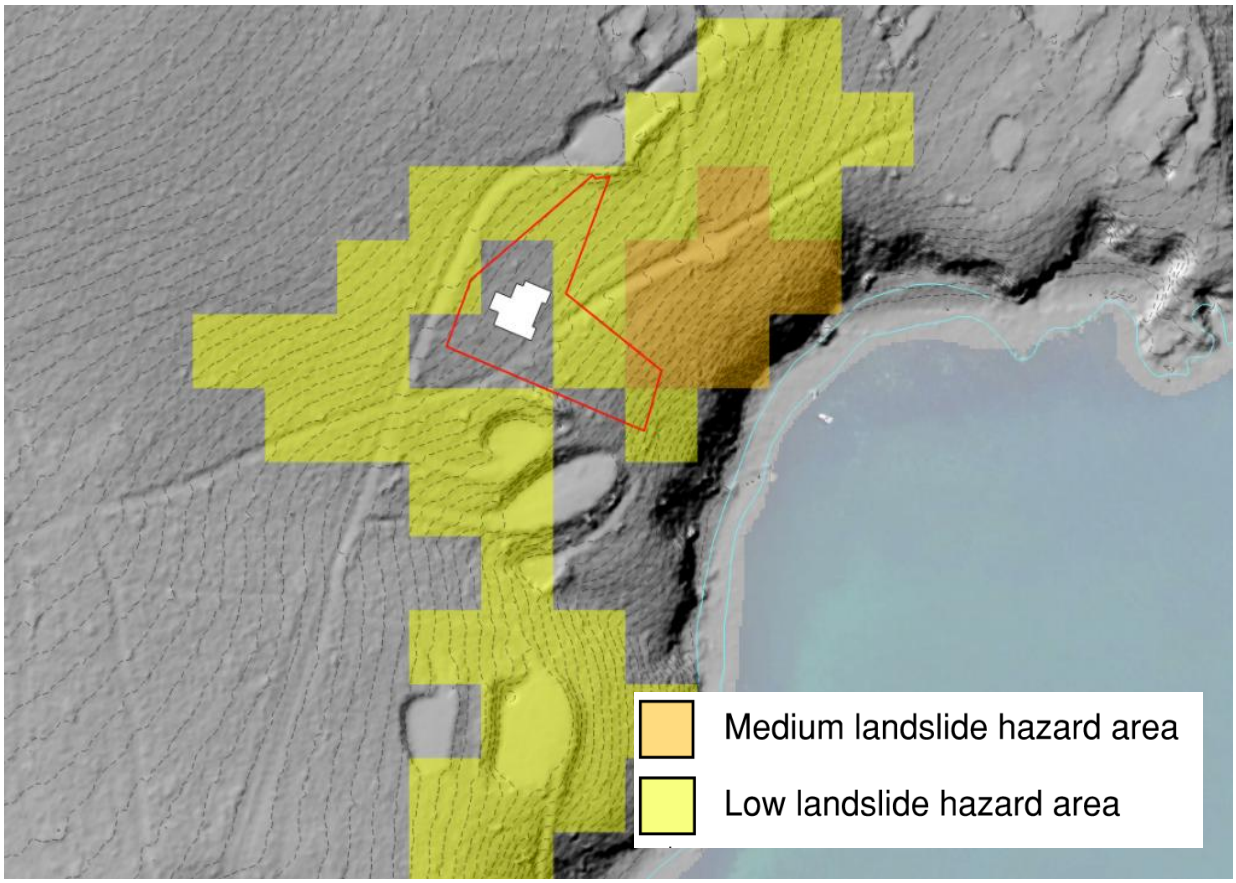



*Figure 1: Extent of the Landslide Hazard Area 'Low' overlay at 5 Tern Circle, Primrose Sands. White polygon = building envelope.*

## Geomorphology, Soils and Geology

The landform at the property is slightly concave (cross-slope) with waxing 12 - 18° slopes and steep cliff at the coastline further downslope (Appendix 3). The aspect is ESE. Deep Quaternary windblown sand deposits overly Jurassic dolerite bedrock at unknown depth below 2.6 m. The hard dolerite bedrock is forms steep cliffs at the coastline below. A qualitative surface flow accumulation model indicates the site is subject to very little run on water. The upslope road/driveway intercepts and directs water shed to areas south of the property.

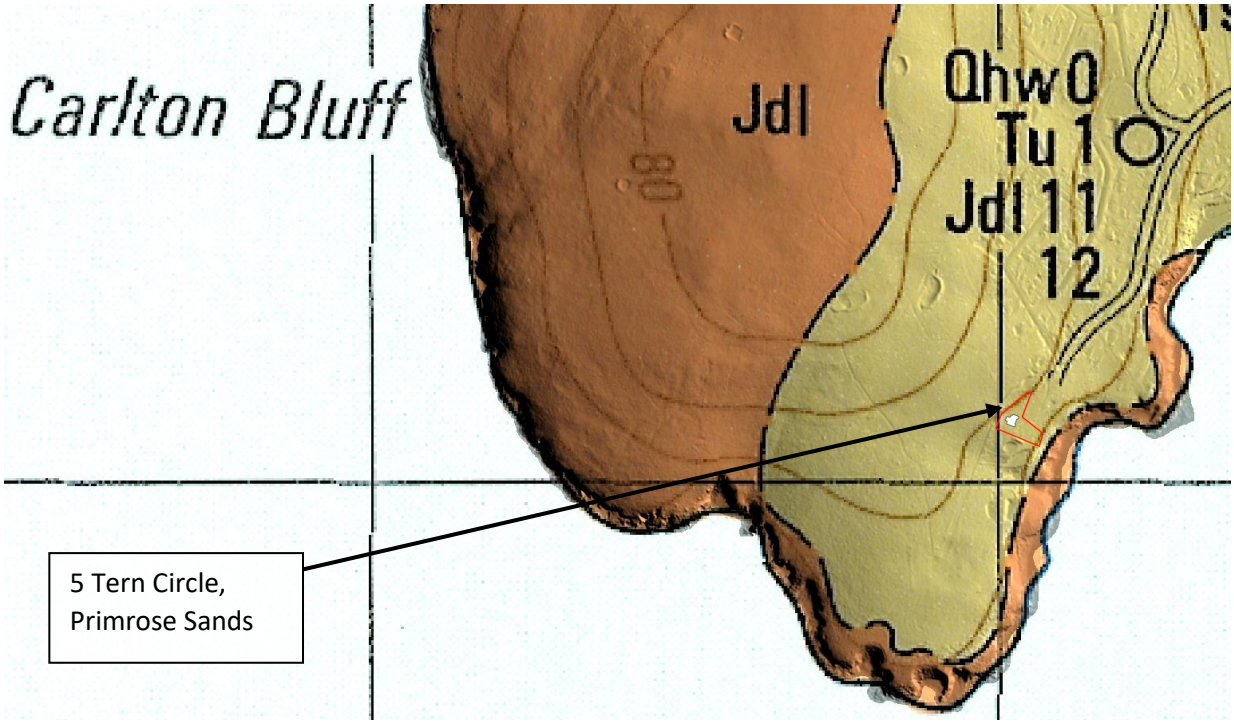



*Figure 2: MRT 1:50,000 Sorell Sheet of the environs around 5 Tern Circle, Primrose ands. Jdl (orange) = areas mapped as Jurassic dolerite, Qhw (yellow) = areas mapped as Quaternary windblown sand deposits.*

The natural soil profiles in the development area consist of fine, loose, poorly graded aeolian sands which are non-reactive and non-dispersive. The soil profile is very deep with no DCP refusal occurring above 2.6 m depth. The soil materials have low bearing capacity to at least 2.2 m depth. The deeper more competent material at and below approximately 2.2 m depth is the recommended foundation material.

The sands had a dry to very slightly moist, loose consistency to 2.0 m depth, demonstrating the free draining nature of the material.

## Geotechnical Assessment of Slope Stability

The proposed development at 5 Tern Circle, Primrose Sands has a Landslide Hazard Area (Low hazard band) overlay. The overlay is produced by:

- Recording observations of land instability in and surrounding the study area (the landslide database).
- Analysis of the processes that control each landslide type.
- Computer-assisted modelling that simulates each of the landslide processes to predict areas that could be affected by future landslides.

The proposed development area falls under the Tasmanian Planning Scheme - Sorell - State Planning Provisions Code C15.0 Landslide Hazard Code.

According to section C15.2, This Code applies to:

a) Use or development of land within a landslip hazard area; or
b) Use or development of land identified in a report, that is lodged with an application or required in response to a request under section 54 of the Act, as having the potential to cause or contribute to a landslip.

The site is assessed according to C15.6.1 (Building and works within a landslip hazard area).

## Potential for Mass Movement of Soil Materials at The Site

The free draining, poorly graded sands at the site are unlikely to be affected landslip triggers caused by soil water fluxes. As such, there is a low likelihood of large, deep-seated, landslides occurring at the site and with the proposed works.

There is potential for localised slumping of the loose sands if the deep driveway cutting is overly steepened or poorly retained.

Capillary cohesion may stabilise the mostly dry sands in the areas around the wastewater/stormwater absorption trenches.

Retaining and reinstating vegetation on site will be important to stabilise the loose sandy soils from erosion, caused by wind and rain, rather than mass movement/landsliding.

The site appears stable regarding land sliding with no evidence of active instability, therefore, the geotechnical risk associated with instability in the natural soil and geological materials confirms the LOW ranking for this hazard, so long as the building is founded, i.e., piers onto the competent materials is constructed as recommended.

The loose sandy soils may be subject to wind, sheet and rill erosion if exposed i.e., left bare of vegetation for extended periods, and therefore minimal soil disturbance and maintenance of vegetation cover will be needed during and after foundation excavations to minimise surface soil erosion.

## Measures to Mitigate Against Instability

Cuts into non-cohesive sands should utilise a gentle (i.e., 1V:3H) batter angle or be retained with suitably engineered retaining structures to mitigate risk of slope undermining.

The existing trees and other vegetation should be retained where possible as vegetation helps stabilise soils and associated slopes. Supplementary planting of vegetation and jute-mesh or similar cover is recommended following construction – particularly on the driveway cutting.

We suggest that appropriate sediment and erosion control measures be in place during all phases of construction.

The risk of land instability should be reduced via use of current best practice for construction on sloping site. Refer to the extract on *Good Hillside Construction Practice* from the *Australian Geomechanics Society* (Appendix 2) and *CSIRO BTF-18.*

## Compliance with: TPS code C15.6.1 (Building and Works Within a Landslip Hazard Area)

**Objective:**

That building and works on land within a landslip hazard area can:

a) minimise the likelihood of triggering a landslip event; and
b) achieve and maintain a tolerable risk from a Landslip.

| **Acceptable Solution A1** | **Comments** |
|---|---|
| No acceptable solution. | |

| **Performance Solution P1** | **Comments** |
|---|---|
| P1.1<br>Building and works within a landslip hazard area must minimise the likelihood of triggering a landslip event and achieve and maintain a tolerable risk from landslip, having regard to: | |
| i. the type, form, scale and intended duration of the development; | **i)**<br>- The risk of deep-seated landsliding i.e., 3 – 10 m of soft regolith, is low due to the gently sloping and free-draining sands on site and underlying competent dolerite bedrock.<br>- The form of any mass movement on site would likely be restricted to localised slumping of loose sands where cuttings are overly steepened or poorly retained. |
| ii. whether any increase in the level of risk from a landslip requires any specific hazard reduction or protection measures; | **ii)**<br>- All cuttings require min 1:3 (V:H) sloping batter or engineered retaining walls. They need to be topsoiled and revegetated with hardy local species, jute-mesh or similar may be required to stabilise the soil from water and wind erosion.<br>- All cuts greater than 2 m depth require an engineered retaining wall |
| iii. any advice from a state authority, regulated entity or a council; and | **iii)**<br>N/A |
| iv. the advice contained in a landslip hazard report. | **iv)**<br>Follow advice provided in Landslide hazard report provided by Doyle Soil Consulting. |
| A landslip hazard report also demonstrates that the buildings and works do not cause or contribute to landslip on the site, on | |

| | |
|---|---|
| adjacent land or public infrastructure.<br><br>v. If landslip reduction or protection measures are required beyond the boundary of the site the consent in writing of the owner of that land must be provided for that land to be managed in accordance with the specific hazard reduction or protection measures. | **v)** landslip reduction or protection measures are not required beyond the boundary of the site. |

## Landslide Risk Analysis

This qualitative risk assessment of land sliding relates to the *likelihood* of occurrence of any form of mass movement and the *consequences* to life, property and services of the mass movement. See Risk Tables (Appendix 1).

The *likelihood* of occurrence of any form of mass movement (e.g., soil creep, debris flow, slumping, landslide, rock fall etc) is *likely* (but confined to localised slumping of loose sands). This can be reduced to a *possible* likelihood by following the recommendations in this report.

The *consequences* to life, property and services of such mass movement are *low* if the site is appropriately developed as specifically outlined in this report.

The qualitative risk of landsliding at the site is *very low / tolerable*

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

**Dr Richard Doyle**
B.Sc.(Hons), M.Sc.(Geol), Ph.D. (Soil Sci.), CPSS
(Certified Prof Soil Scientist)
**Geologist and Soil Scientist**

# Appendix 1 – Risk tables

Extracted from *Australian Geomechanics Journal Volume 42 No.1 March 2007 - Australian GeoGuide LR7 (Landslide Risk)*.

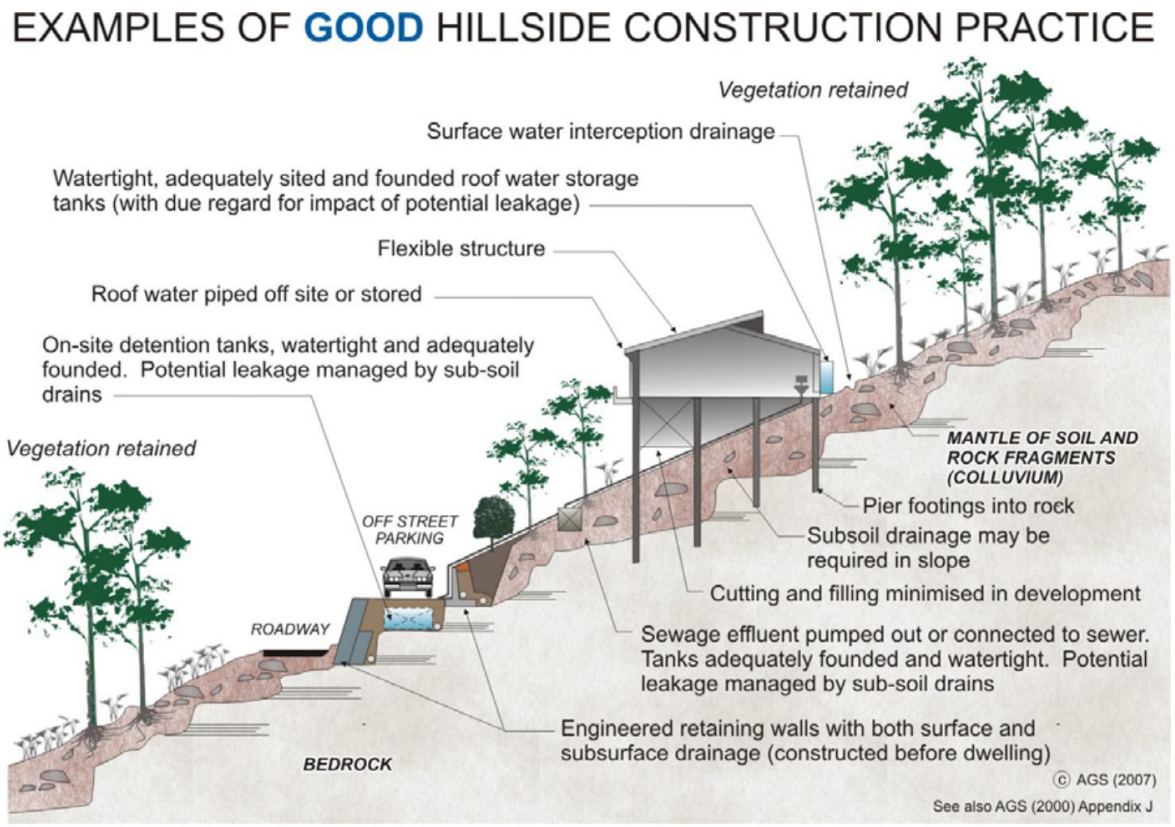
| TABLE 1: RISK TO PROPERTY | | |
|---|---|---|
| **Qualitative Risk** | | **Significance - Geotechnical engineering requirements** |
| Very high | VH | **Unacceptable** without treatment. Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to Low. May be too expensive and not practical. Work likely to cost more than the value of the property. |
| High | H | **Unacceptable** without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to acceptable level. Work would cost a substantial sum in relation to the value of the property. |
| Moderate | M | **May be tolerated** in certain circumstances (subject to regulator's approval) but requires investigation, planning and implementation of treatment options to reduce the risk to Low. Treatment options to reduce to Low risk should be implemented as soon as possible. |
| Low | L | **Usually acceptable** to regulators. Where treatment has been needed to reduce the risk to this level, ongoing maintenance is required. |
| Very Low | VL | **Acceptable**. Manage by normal slope maintenance procedures. |

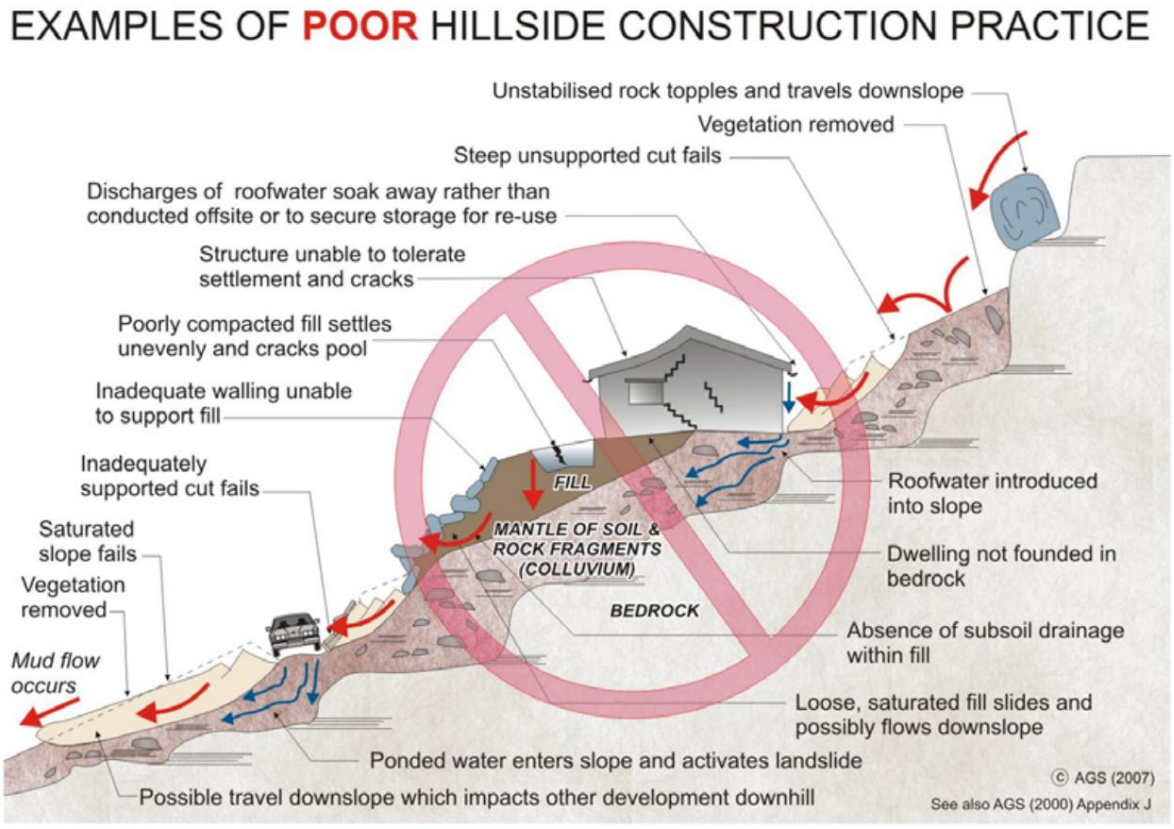
| TABLE 2: LIKELIHOOD | |
|---|---|
| Likelihood | Annual Probability |
| Almost Certain | 1:10 |
| Likely | 1:100 |
| Possible | 1:1,000 |
| Unlikely | 1:10,000 |
| Rare | 1:100,000 |
| Barely Credible | 1:1,000,000 |

| TABLE 3: RISK TO LIFE | |
|---|---|
| **Risk** (deaths per participant per year) | **Activity/Event Leading to Death** (NSW data unless noted) |
| 1:1,000 | Deep sea fishing (UK) |
| 1:1,000 to 1:10,000 | Motor cycling, horse riding, ultra-light flying (Canada) |
| 1:23,000 | Motor vehicle use |
| 1:30,000 | Fall |
| 1:70,000 | Drowning |
| 1:180,000 | Fire/burn |
| 1:660,000 | Choking on food |
| 1:1,000,000 | Scheduled airlines (Canada) |
| 1:2,300,000 | Train travel |
| 1:32,000,000 | Lightning strike |

# Appendix 2 – Guidelines for hillside construction

Extracted from *Australian Geomechanics Journal Volume 42 No.1 March 2007 - Australian GeoGuide LR8 (Construction Practice)*.

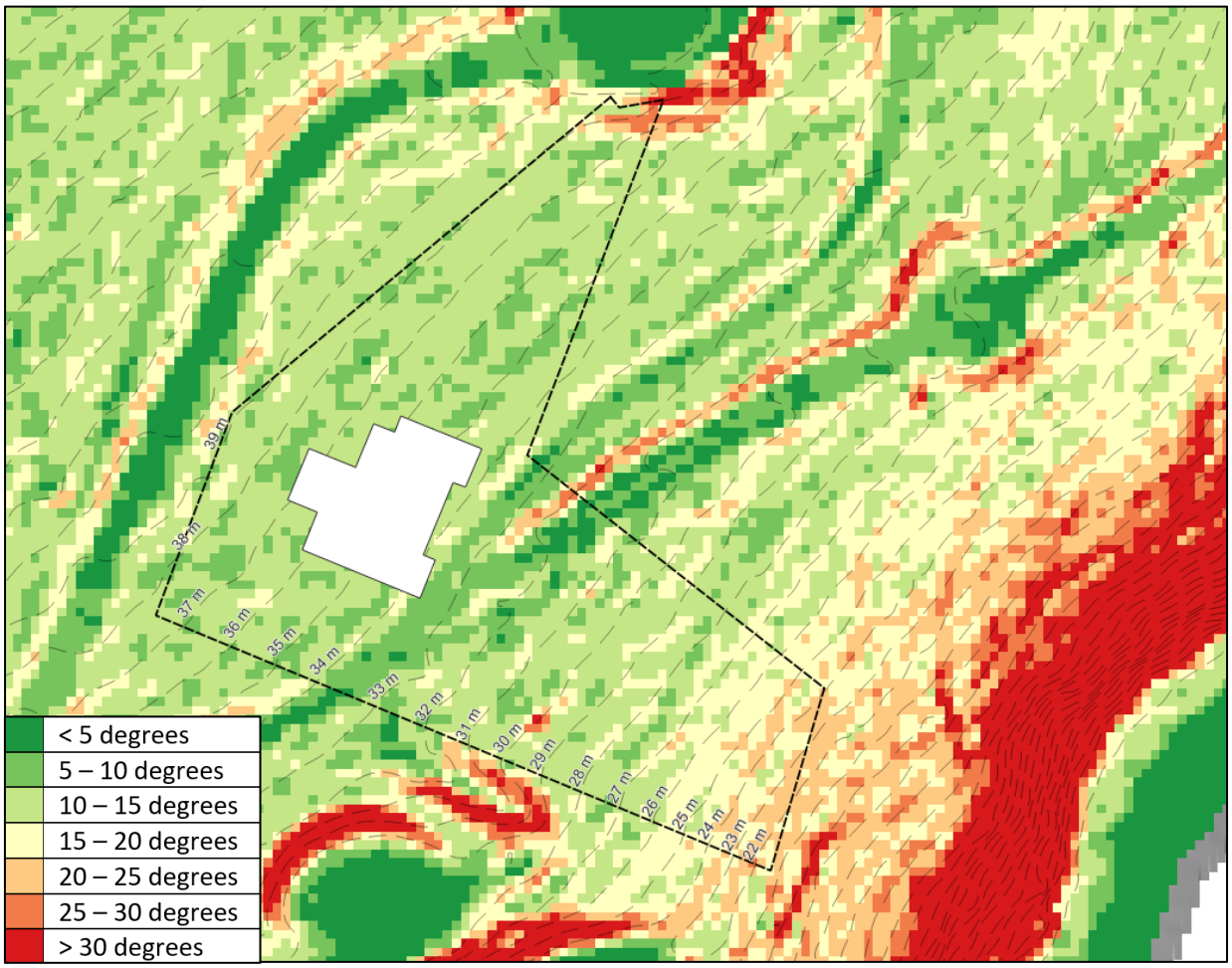


# Appendix 3 – Slope Map

Generated using QGIS with open source 1m Digital Elevation Model (DEM) data (source: elevation.fsdf.org.au) and cadastre shape data (source: maps.thelist.tas.gov.au/listmap).

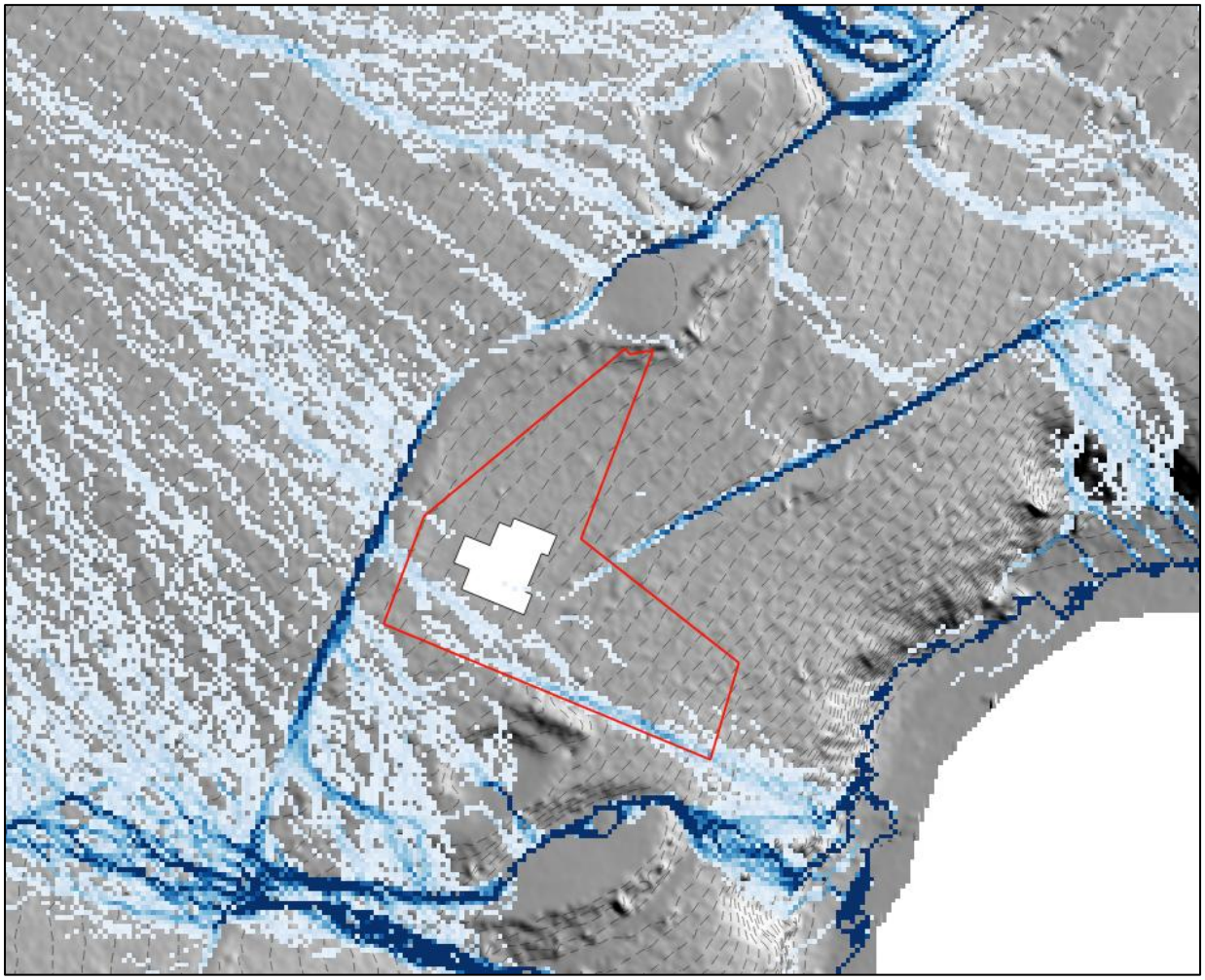
1m pixels on the slope map.



# Appendix 4 – Surface Water Flow Accumulation Model

Surface water flow accumulation model (qualitative) for the environs around 5 Tern Circle, Primrose Sands.

Generated using QGIS with open source 1m Digital Elevation Model (DEM) data (source: elevation.fsdf.org.au) and cadastre shape data (source: maps.thelist.tas.gov.au/listmap).



# Appendix 5 – Site Assessment and Sample Testing

A geotechnical site investigation in accordance with AS1726-2017.

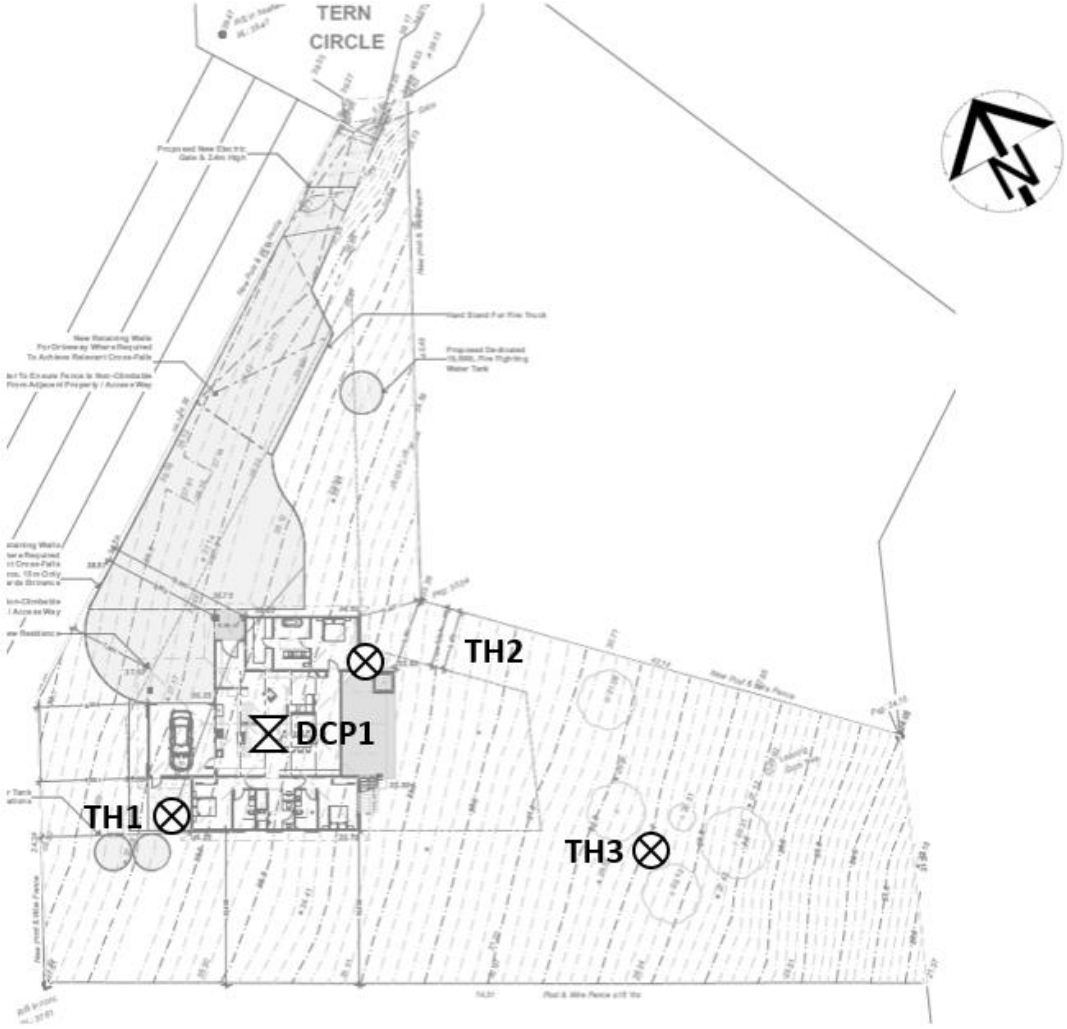
Two three test hole cores with no refusal at 1.8 m

Dynamic Cone Penetrometer (DCP) test between TH1

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)

Test hole and DCP locations shown in Appendix 7.

# Appendix 6 – Approximate Test Hole and DCP Locations



# Appendix 7 – SOIL PROFILES – Test Holes 1 - 3


## Test Hole 1

| Depth (m) | Horizon | Description and field texture grade | USCS Class |
|---|---|---|---|
| 0 – 0.4 | A1 | Very dark grey (10YR 3/1), **Sand**, poorly graded, slightly moist consistency | **SP** |
| 0.4 – 0.8 | A2 | Greyish brown (10YR 5/2), **Sand**, poorly graded, slightly moist loose | **SP** |
| 0.8 – 1.4 | $B2_{hs}$ | Very dark brown (10YR 2/2) grading to dark brown (7.5YR 3/2), **Sand**, poorly graded, medium dense consistency | **SP** |
| 1.4 – 1.8 | C | Brown (10YR 5/3), **Sand**, poorly graded, dry medium dense (few iron and humus cemented nodules)<br><br>**No Refusal** | **SP** |

## Test Hole 2

| Depth (m) | Horizon | Description and field texture grade | USCS Class |
|---|---|---|---|
| 0 – 0.4 | A1 | Very dark grey (10YR 3/1), **Sand**, poorly graded, slightly moist loose consistency | **SP** |
| 0.4 – 0.6 | A2 | Greyish brown (10YR 5/2), **Sand**, poorly graded, slightly moist loose | **SP** |
| 0.6 – 0.9 | $B2_{s}$ | Dark brown (7.5YR 3/2) grading to Light brown (7.5YR 6/4), **Sand**, poorly graded, dry loose consistency | **SP** |
| 0.9 – 1.6 | $2B2_{hs}$ | Dark brown (7.5YR 3/2), **Sand**, poorly graded, dry medium dense consistency | **SP** |
| 1.6 – 1.8 | C | Brown (10YR 5/3), **Sand**, poorly graded, dry medium dense (few iron and humus cemented nodules)<br><br>**No Refusal** | **SP** |

# Test Hole 3


| Depth (m) | Horizon | Description and field texture grade | USCS Class |
|---|---|---|---|
| 0 – 0.4 | A1 | Very dark grey (10YR 3/1), **Sand**, poorly graded, slightly moist consistency | **SP** |
| 0.4 – 0.8 | A2 | Greyish brown (10YR 5/2), **Sand**, poorly graded, slightly moist loose | **SP** |
| 0.8 – 1.8 | C | Brown (10YR 5/3), **Sand**, poorly graded, dry medium dense (few iron and humus cemented nodules)<br><br>**No Refusal** | **SP** |

# Appendix 8 – DCP Data Table

Note: DCP1 was completed using a Perth Sand Tip. The data from DCP1 indicate the bearing capacity of the soil is at a *suitable* strength below 1.5 m. However, the deeper and more dense, probable sands below approximately 2.2 m depth would be the *recommended* foundation material.

| 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 | 2 | 50.0 | 60 | 20 |
| 300 - 400 | 2 | 50.0 | 60 | 20 |
| 400 - 500 | 1 | 100.0 | 30 | 10 |
| 500 - 600 | 1 | 100.0 | 30 | 10 |
| 600 - 700 | 1 | 100.0 | 30 | 10 |
| 700 - 800 | 3 | 33.3 | 90 | 30 |
| 800 - 900 | 3 | 33.3 | 90 | 30 |
| 900 - 1000 | 5 | 20.0 | 150 | 50 |
| 1000 - 1100 | 5 | 20.0 | 150 | 50 |
| 1100 - 1200 | 4 | 25.0 | 120 | 40 |
| 1200 - 1300 | 4 | 25.0 | 120 | 40 |
| 1300 - 1400 | 5 | 20.0 | 150 | 50 |
| 1400 - 1500 | 4 | 25.0 | 120 | 40 |
| 1500 - 1600 | 5 | 20.0 | 150 | 50 |
| 1600 - 1700 | 5 | 20.0 | 150 | 50 |
| 1700 - 1800 | 5 | 20.0 | 150 | 50 |
| 1800 - 1900 | 7 | 14.3 | 210 | 70 |
| 1900 - 2000 | 8 | 12.5 | 240 | 80 |
| 2000 - 2100 | 10 | 10.0 | 300 | 100 |
| 2100 - 2200 | 12 | 8.3 | 360 | 120 |
| 2200 - 2300 | 12 | 8.3 | 360 | 120 |
| 2300 - 2400 | 12 | 8.3 | 360 | 120 |
| 2400 - 2500 | 12 | 8.3 | 360 | 120 |
| 2500 - 2600 | 12 | 8.3 | 360 | 120 |

# CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

**Section 321**

Form **55**

To: Attic Building Design *Owner name*
PO Box 5 *Address*
Dodges Ferry TAS 7173 *Suburb/postcode*

## Qualified person details:

Qualified person: Richard 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: Geologist and Soil Scientist PhD
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: Geotechnical

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

## Details of work:

Address: 5 Tern Circle
Primrose Sadns 7173
Lot No: 3
Certificate of title No: 180633/3

The assessable item related to this certificate: Site assessment for slope stability

*(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: Geotechnical Assessment

*(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: | AS1726-2017 Geotechnical site investigations |

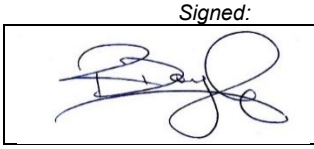
*Substance of Certificate:* *(what it is that is being certified)*

Geotechnical Assessment -Site and soil classification

*Scope and/or Limitations*

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

**I certify the matters described in this certificate.**

| | *Signed:* | *Certificate No:* | *Date:* |
|---|---|---|---|
| Qualified person: |  | 1837-2 | 11/11/2025 |

DOYLE SOIL CONSULTING

# Storm Water Retention and Management

**Client:** Ronald and Gayle Lawrence

**Address:** 5 Tern Circle, Primrose Sands (CT 180633/3)

**Site Area:** Approximately 2800 $m^2$

**Date of inspection:** 12/09/2025

**Building type:** New house

**Services:** Tank water supply and onsite wastewater management

**Relevant Planning Overlays:** Southern beaches onsite wastewater and stormwater management specific area plan, low landslip hazard band

**Mapped Geology** - Mineral Resources Tasmania 1:50 000 Sorell sheet:
**Qhw** = Quaternary windblown sand deposits. (Jurassic dolerite at depth)

**Soil Depth:** > 2.6 m

**Subsoil Drainage:** Well drained

**Drainage lines/water courses:** Fredrick Henry Bay 80 m southeast

**Vegetation:** cleared bush – mostly bracken at time of visit

**Rainfall in previous 7 days**: Approximately 14 mm

**Slope:** Approximately 11 – 12° to the SE



## SITE AND SOIL CONDITIONS

The site consists of moderately sloping land with an aspect facing southeast. A new stormwater design is required for the proposed house (roof area of 306 $m^2$) and sealed drive (440 $m^2$). A summary of the IFD rainfall data for Primrose Sands is presented in Appendix 1.

The soil is derived from Quaternary sands and the soil profile is dominated by deep sands to > 2 m. The soil has an estimated subsoil permeability of 2 m/day. There is a a large area of land available for stormwater dispersal. A moderation factor of 0.5 has been used.

## STORMWATER CALCULATIONS

Stormwater runoff from impervious surfaces on site (roof area) is calculated according to the rational method taken from *Australian Rainfall and Runoff (ARR).*

Where the flowrate Q = 0.000278 x C x I x A

C = Runoff coefficient (taken as 0.90 for roof and 0.75 for gravel)

I = Intensity of rainfall

A = Catchment area

All 1:20yr scenarios (5 minutes to 72 hours) have been calculated in the attached spreadsheet. The Intensity Frequency Duration (IFD) data generated for the site is shown in the attached charts and table.

## For the proposed roof area of approximately 306 $m^2$.

The required stormwater trench area to accommodate the calculated stormwater overflow from the roof area from the stormwater worksheet attached is 30 $m^2$. The absorption area can be installed as one trench 20 m long by 1.5 m wide by 0.6 m deep.

## For the proposed drive area of approximately 440 $m^2$.

The required stormwater trench area to accommodate the calculated stormwater overflow from the driveway area from the stormwater worksheet attached is 42 $m^2$. The absorption area can be installed as two trenches each 14 m long by 1.5 m wide by 0.6 m deep.

## SOR-S2.7.2 Stormwater management

| **Acceptable Solutions** | **Comment:** |
|---|---|
| **A1**<br>Development must be capable of connecting by gravity to a public stormwater system. | Non-compliance therefore P1 must be met |

| **Performance Criteria** | **Comment:** |
|---|---|
| **P1**<br><br>Development must be capable of accommodating an on-site stormwater management system adequate for the development, having regard to: | |
| (a) topography of the site; | Complies -there is a low landslide hazard overlay , however there is a low risk of mass movement due to the deep permeable sands |
| (b) the size and shape of the site; | Complies |
| (c) soil conditions; | Complies |
| (d) any existing buildings and any constraints imposed by existing development on the site; | N/A |
| (e) any area of the site covered by impervious surfaces; | Complies |
| (f) any watercourses on the land; | N/A |
| (g) stormwater quality and quantity management targets identified in the *State Stormwater Strategy 2010*; and any advice from a suitably qualified person on the seasonal water table at the site, risks of inundation, land instability or coastal erosion. | Complies |

## STORMWATER DISPOSAL

It is recommended that one 20 m long by 1.5 m wide by 0.6 m deep absorption bed be installed for the roof overflow, and two 14 m x 1.5 m x 0.6 m trenches be installed for the driveway overflow. as per the attached design specs.

The resultant stormwater retention area/volume should therefore be sufficient to handle all ARI 1:20 events.

The stormwater trenches will be located within the low landslide hazard area. The deep permeable sands are stable and there is a low risk of mass movement. The risk assessment prepared for the wastewater applies to the stormwater design also.

Please contact us if you have any further questions.


**Robyn Doyle CPSS**
B.Agr.Sc.

*Director Lithos Group P/L, t/a Doyle Soil Consulting*
**Soil Scientist and Wastewater Designer**

# STORMWATER CALCULATIONS -Roof

## Calculation of Dimensions for Soakage Area -Roof

| | | | | | | |
|---|---|---|---|---|---|---|
| **Location** | **5 Tern Circle Primrose Sands** | | | | | |
| **Client** | **Lawrence Family Trust** | | | Base Area | 30 | $m^2$ |
| **Job Code** | | | | Peak Area infiltration | 55.8 | $m^2$ |
| Catchment Area | 306 | $m^2$ | | Storage Volume | 18 | $m^3$ |
| C | 1 | Runoff Coeff. | | Perimeter of Inf A | 43 | m |
| Soil $K_h$ | 83.333 | | | Emptying Time | 218 | minutes |
| Moderating Factor (U) | 0.5 | | | | 3.63 | hours |
| Width of Infiltration Area | 1.5 | m | | | 0.15 | days |
| Length of Infiltration Area | 20 | m | | | | |
| Depth of storage | 0.6 | m | | | | |
| Porosity | 35% | % | | 35% | 20mm Clean | |
| ARI | 1:20 | | | 95% | Atlantis Cell | |

| Storm Duration (minutes) | Storm Mean Intensity (mm/hr) | Volume in ($m^3$) | Volume out ($m^3$) | Storage Volume Required ($m^3$) | Percentage of storage provided (%) | |
|---|---|---|---|---|---|---|
| 1 | 141 | 0.720 | 0.030 | 0.690 | 913% | OK |
| 2 | 112 | 1.143 | 0.060 | 1.084 | 581% | OK |
| 3 | 101 | 1.547 | 0.089 | 1.457 | 432% | OK |
| 4 | 93 | 1.899 | 0.119 | 1.780 | 354% | OK |
| 5 | 86.6 | 2.210 | 0.149 | 2.061 | 306% | OK |
| 10 | 65.3 | 3.333 | 0.298 | 3.035 | 208% | OK |
| 15 | 53.1 | 4.065 | 0.447 | 3.619 | 174% | OK |
| 20 | 45.2 | 4.614 | 0.596 | 4.018 | 157% | OK |
| 25 | 39.6 | 5.053 | 0.745 | 4.308 | 146% | OK |
| 30 | 35.5 | 5.436 | 0.894 | 4.542 | 139% | OK |
| 45 | 27.6 | 6.339 | 1.341 | 4.999 | 126% | OK |
| 60 | 23.1 | 7.074 | 1.787 | 5.287 | 119% | OK |
| 90 | 18.1 | 8.315 | 2.681 | 5.633 | 112% | OK |
| 120 | 15.3 | 9.371 | 3.575 | 5.796 | 109% | OK |
| 180 | 12.2 | 11.209 | 5.362 | 5.846 | 108% | OK |
| 270 | 9.86 | 13.588 | 8.044 | 5.544 | 114% | OK |
| 360 | 8.52 | 15.655 | 10.725 | 4.930 | 128% | OK |
| 540 | 6.94 | 19.128 | 16.087 | 3.041 | 207% | OK |
| 720 | 5.99 | 22.013 | 21.450 | 0.563 | 1119% | OK |
| 1080 | 4.8 | 26.460 | 32.175 | 0.000 | | OK |
| 1440 | 4.05 | 29.767 | 42.900 | 0.000 | | OK |
| 1800 | 3.51 | 32.248 | 53.625 | 0.000 | | OK |
| 2160 | 3.1 | 34.177 | 64.350 | 0.000 | | OK |
| 2880 | 2.51 | 36.896 | 85.800 | 0.000 | | OK |
| 3600 | 1.8 | 33.074 | 107.250 | 0.000 | | OK |
| 4320 | 1.39 | 30.649 | 128.699 | 0.000 | | OK |

# STORMWATER CALCULATIONS -Driveway

## Calculation of Dimensions for Soakage Area -Driveway

| | | | | | | |
|---|---|---|---|---|---|---|
| **Location** | **5 Tern Circle Primrose Sands** | | | | | |
| **Client** | **Lawrence Family Trust** | | | Base Area | 42 | $m^2$ |
| **Job Code** | | | | Peak Area infiltration | 77.4 | $m^2$ |
| Catchment Area | 440 | $m^2$ | | Storage Volume | 25.2 | $m^3$ |
| C | 1 | Runoff Coeff. | | Perimeter of Inf A | 59 | m |
| Soil $K_h$ | 83.333 | | | Emptying Time | 219 | minutes |
| Moderating Factor (U) | 0.5 | | | | 3.65 | hours |
| Width of Infiltration Area | 1.5 | m | | | 0.15 | days |
| Length of Infiltration Area | 28 | m | | | | |
| Depth of storage | 0.6 | m | | | | |
| Porosity | 35% | % | | 35% | 20mm Clean | |
| ARI | 1:20 | | | 95% | Atlantis Cell | |

| Storm Duration (minutes) | Storm Mean Intensity (mm/hr) | Volume in ($m^3$) | Volume out ($m^3$) | Storage Volume Required ($m^3$) | Percentage of storage provided (%) | |
|---|---|---|---|---|---|---|
| 1 | 141 | 1.035 | 0.041 | 0.993 | 888% | OK |
| 2 | 112 | 1.644 | 0.083 | 1.561 | 565% | OK |
| 3 | 101 | 2.224 | 0.124 | 2.099 | 420% | OK |
| 4 | 93 | 2.730 | 0.166 | 2.564 | 344% | OK |
| 5 | 86.6 | 3.178 | 0.207 | 2.971 | 297% | OK |
| 10 | 65.3 | 4.792 | 0.415 | 4.378 | 201% | OK |
| 15 | 53.1 | 5.846 | 0.622 | 5.224 | 169% | OK |
| 20 | 45.2 | 6.635 | 0.829 | 5.805 | 152% | OK |
| 25 | 39.6 | 7.266 | 1.036 | 6.229 | 142% | OK |
| 30 | 35.5 | 7.816 | 1.244 | 6.573 | 134% | OK |
| 45 | 27.6 | 9.115 | 1.866 | 7.250 | 122% | OK |
| 60 | 23.1 | 10.172 | 2.487 | 7.685 | 115% | OK |
| 90 | 18.1 | 11.956 | 3.731 | 8.224 | 107% | OK |
| 120 | 15.3 | 13.475 | 4.975 | 8.500 | 104% | OK |
| 180 | 12.2 | 16.117 | 7.462 | 8.654 | 102% | OK |
| 270 | 9.86 | 19.538 | 11.194 | 8.345 | 106% | OK |
| 360 | 8.52 | 22.511 | 14.925 | 7.586 | 116% | OK |
| 540 | 6.94 | 27.504 | 22.387 | 5.117 | 172% | OK |
| 720 | 5.99 | 31.653 | 29.850 | 1.803 | 489% | OK |
| 1080 | 4.8 | 38.046 | 44.775 | 0.000 | | OK |
| 1440 | 4.05 | 42.802 | 59.700 | 0.000 | | OK |
| 1800 | 3.51 | 46.369 | 74.625 | 0.000 | | OK |
| 2160 | 3.1 | 49.143 | 89.550 | 0.000 | | OK |
| 2880 | 2.51 | 53.054 | 119.400 | 0.000 | | OK |
| 3600 | 1.8 | 47.558 | 149.249 | 0.000 | | OK |
| 4320 | 1.39 | 44.070 | 179.099 | 0.000 | | OK |

# Appendix 1 Summary from the IFD Rainfall Data System -Primrose Sands -Bureau of Meteorology

## Location

**Label:** 5 Tern Circle Primrose Sands
**Easting:** 553146
**Northing:** 5251300
**Zone:** 55
**Latitude:** Nearest grid cell: 42.8875 (S)
**Longitude:** Nearest grid cell: 147.6625 (E)


## IFD Design Rainfall Intensity (mm/h)

Issued: 03 October 2025

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

Table | Chart

Unit: mm/h

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

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

## Location


**Label:** 5 Tern Circle Primrose Sands
**Easting:** 553146
**Northing:** 5251300
**Zone:** 55
**Latitude:** Nearest grid cell: 42.8875 (S)
**Longitude:** Nearest grid cell: 147.6625 (E)

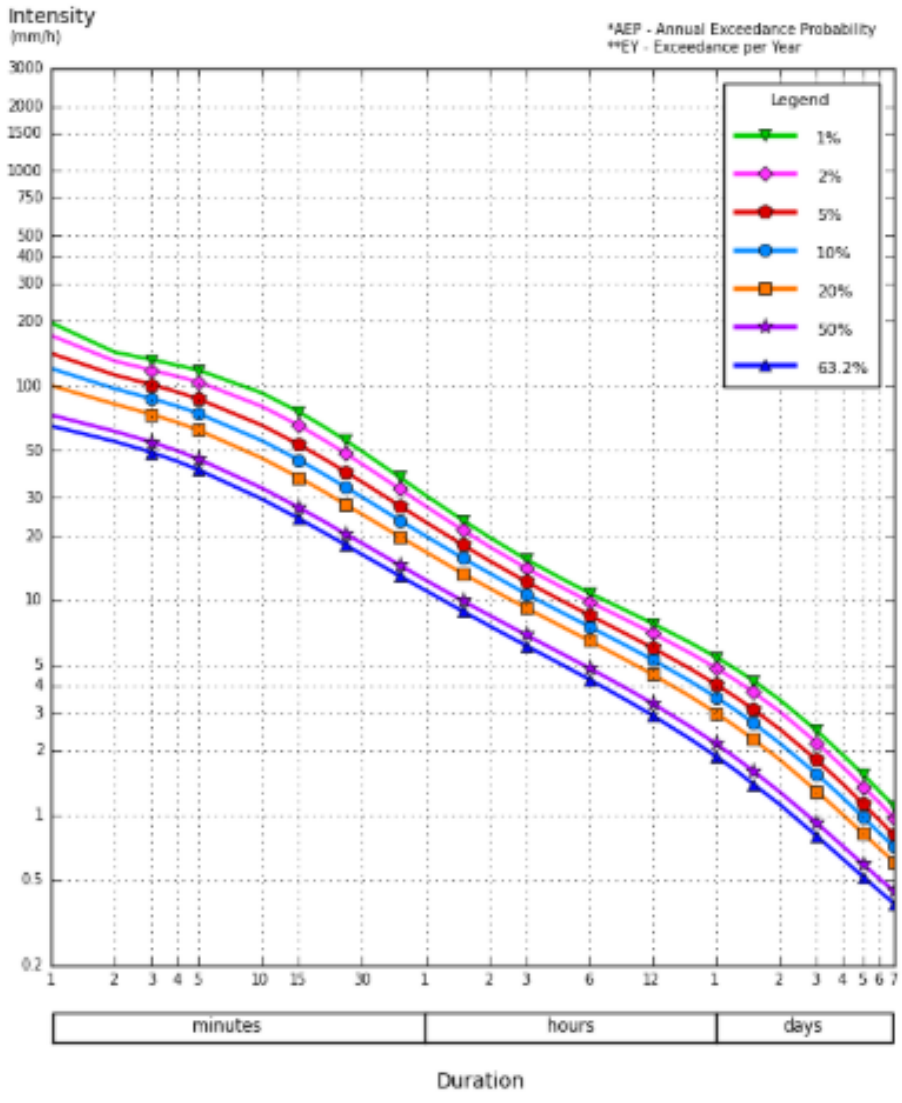
## IFD Design Rainfall Intensity (mm/h)

Issued: 03 October 2025

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

Table | Chart

Unit: mm/h



# CERTIFICATE OF THE RESPONSIBLE DESIGNER

**Section 94**
**Section 106**
**Section 129**
**Section 155**

Form **35**

To: Attic Building Design *Owner name*
PO Box 5 *Address*
Dodges Ferry TAS 7173 *Suburb/postcode*

## Designer details:

Name: Robyn Doyle
Category: Bldg srvcs dsgnr-hydraulic domestic
Business name: Doyle Soil Consulting
Phone No: 0488080455
Business address: 150 Nelson Rd
Mount Nelson 7007
Fax No:
Licence No: CC7418
Email address: robyn@doylesoilconsulting.com.au

## Details of the proposed work:

**Owner/Applicant** Attic Building Design
Designer's project reference No. 2025-10
**Address:** 5 Tern Circle
Lot No: 3
Primrose Sands 7173

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

**Description of work:**
Wastewater Design

Sorell Council
Development Application: 5.2025.208.1 - Response to Request For Information - 5 Tern Circle, Primrose Sands P2.pdf
Plans Reference: P2
Date received: 8/12/2025

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

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

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

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

Other details:

## Design documents provided:

The following documents are provided with this Certificate –

*Document description:*

| | | |
|---|---|---|
| Drawing numbers: | Prepared by: Doyle Soil Consulting | Date: October 2025 |
| Schedules: | Prepared by: | Date: |
| Specifications: | Prepared by: Doyle Soil Consulting | Date: October 2025 |
| Computations: | Prepared by: | Date: |
| Performance solution proposals: | Prepared by: | Date: |
| Test reports: | Prepared by: Doyle Soil Consulting | Date: October 2025 |

## Standards, codes or guidelines relied on in design process:

AS1547-2012 On site domestic wastewater management.

AS3500 (Parts 0-5)-2013 Plumbing and drainage set.

## Any other relevant documentation:

Site and Soil Evaluation Report



## Attribution as designer:

I, Robyn Doyle, 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: | R Doyle |  | 20/10/2025 |
| Licence No: | CC7418 | | |

## Assessment of Certifiable Works: (TasWater)

**Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.**

**If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.**

**TasWater must then be contacted to determine if the proposed works are Certifiable Works.**

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

- [X] The works will not increase the demand for water supplied by TasWater
- [X] The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- [X] The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- [X] The works will not damage or interfere with TasWater's works
- [X] The works will not adversely affect TasWater's operations
- [X] The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- [X] I have checked the LISTMap to confirm the location of TasWater infrastructure
- [X] If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater.

## Certification:

I, ……Robyn Doyle……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: | Robyn Doyle |  | 20/10/2025 |

# CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

**Section 321**

To: SORELL COUNCIL *Owner /Agent*

*Address*

*Suburb/postcode*

Form **55**

## Qualified person details:

Qualified person: LEIGH SALTMARSH

Address: 10 RYDE STREET

NORTH HOBART 7000

Phone No:

Fax No:

Licence No: CC2663J

Email address: info@lsandne.com

Qualifications and Insurance details: CIVIL
SURA PROFESSIONAL RISKS

Speciality area of expertise: STRUCTURAL / CIVIL ENGINEER

## Details of work:

Address: 5 Tern Circle

Primrose Sands

Lot No:

Certificate of title No:

The assessable item related to this certificate: STORMWATER ABSORPTION TRENCH

## Certificate details:

Certificate type: PLUMBING WORK

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: Report: Storm Water detention and Management Doyle Soil Consulting.
Drawings: Site Stormwater Plan & Trench Details by Doyle Soil Consulting.

Relevant calculations:

References: AS3500 (Parts 0-5)-2015 Plumbing & Drainage set.

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

Stormwater Absorption trench.

*Scope and/or Limitations*

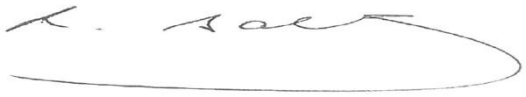
The hydraulic design of the above elements is based on report provided by DSC (estimated permeability 83.3 mm/hr with a moderation of 1.0 and a catchment area of 306 & 440 $m^2$ for the proposed development.

S&E recommends that inspections are carried out by the local authority to ensure installation has been carried out in accordance with Doyle Soil Consulting report.

We must be advised of any proposed alterations to the certified drawings or design discrepancies due to variations of levels or site conditions to those contained in the referenced documents.

We have not been engaged to undertake inspections of the above certified elements.

**I certify the matters described in this certificate.**

Qualified person: 

Certificate No: 25354-55 SW

Date: 17/10/2025

# LOW DENSITY RESIDENTIAL
# TASMANIAN PLANNING SCHEME
# USE STANDARDS

| SCHEME | PROVISION | | ACCEPTABLE SOLUTION | | PERFORMANCE CRITERIA | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|---|---|---|
| 10.3.1 | Discretionary Use | A1 | Hours of operation for a use listed as Discretionary, excluding Emergency Services or Residential use, must be within:<br>(a) 8.00am to 6.00pm Monday to Friday;<br>(b) 9.00am to 12.00 noon Saturday; and<br>(c) nil on Sunday and public holidays. | P1 | Hours of operation for a use listed as Discretionary, excluding Emergency Services or Residential use, must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to:<br>(a) the timing, duration or extent of vehicle movements; and<br>(b) noise or other emissions. | **COMPLIES** | The proposal complies given the exclusion of the ancillary dwelling (residence). |
| | | A2 | External lighting for a use listed as Discretionary, excluding Residential use:<br>(a) must not operate within the hours of 7.00pm to 7.00am, excluding any security lighting; and<br>(b) security lighting must be baffled so that direct light does not extend into the adjoining property. | P2 | A use listed as Discretionary must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to:<br>(a) the intensity and scale of the use;<br>(b) the emissions generated by the use;<br>(c) the type and intensity of traffic generated by the use;<br>(d) the impact on the character of the area; and<br>(e) the need for the use in that location. | **COMPLIES** | The proposal complies given the exclusion of the ancillary dwelling (residence). |
| | | A3 | Commercial vehicle movements and the unloading and loading of commercial vehicles for a use listed as Discretionary, excluding Emergency Services or Residential use, must be within the hours of:<br>(a) 7:00am to 5:00pm Monday to Friday;<br>(b) 9:00am to 12 noon Saturday; and<br>(c) nil on Sunday and public holidays. | P3 | Commercial vehicle movements and the unloading and loading of commercial vehicles for a use listed as Discretionary, excluding Emergency Services or Residential use, must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to:<br>(a) the time and duration of commercial vehicle movements;<br>(b) the number and frequency of commercial vehicle movements;<br>(c) the size of commercial vehicles involved;<br>(d) manoeuvring required by the commercial vehicles, including the amount of reversing and associated warning noise;<br>(e) any existing or proposed noise mitigation measures between the vehicle movement areas and sensitive use;<br>(f) potential conflicts with other traffic; and<br>(g) existing levels of amenity. | **COMPLIES** | The proposal complies given the exclusion of the ancillary dwelling (residence). |
| | | A4 | No Acceptable Solution. | P4 | A use listed as Discretionary must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to:<br>(a) the intensity and scale of the use;<br>(b) the emissions generated by the use;<br>(c) the type and intensity of traffic generated by the use;<br>(d) the impact on the character of the area; and<br>(e) the need for the use in that location. | **PERFORMANCE CRITERIA APPLIES** | (a) The proposed new dwelling will not cause any loss of amenity to the neighbouring dwellings, given the setback of the adjacent properties, the size of the new structure and the location of the proposed dwelling.<br><br>(b) No significant emissions will be generated by the use of the new dwelling, other than those normal to a residence.<br><br>(c) The intensity of the traffic generated by the proposed use will only be marginally increased with the new dwelling, as expected with a proposed residence, so it's estimated that this will not have any significant impact on the traffic within the area.<br><br>(d) There will be no perceived impact on the character of the area, given that this development is in line with many other properties within the immediate and local neighbourhood area.<br><br>(e) There is a significant need for new dwellings (and housing in general) within the local area, given the shortage of housing within this council, so we believe that the proposed use is valid within this location. |



**THE LAWRENCE FAMILY TRUST**

**NEW NEW RESIDENCE**
**5 TERN CIRCLE,**
**PRIMROSE SANDS, TAS 7173**

DATE: **5/12/2025** SIZE: **A2** SCALE:
JOB: **#ATT1620** DRAWN: **N VALENTINE**
EMAIL: **NIK@THEATTIC.NET.AU**

# LOW DENSITY RESIDENTIAL
# TASMANIAN PLANNING SCHEME
# DEVELOPMENT STANDARDS FOR BUILDINGS AND WORKS

| SCHEME | PROVISION | | ACCEPTABLE SOLUTION | | PERFORMANCE CRITERIA | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|---|---|---|
| 10.4.2 | **Building Height** | **A1** | A dwelling must have a building height not more than 8.5m. | **P1** | The height of dwellings must be compatible with the streetscape and not cause an unreasonable loss of amenity to adjoining properties having regard to:<br>(a) the topography of the site;<br>(b) the height of buildings on the site and adjacent properties;<br>(c) the bulk and form of existing and proposed buildings;<br>(d) sunlight to habitable rooms and private open space of dwellings; and<br>(e) any overshadowing of adjoining properties. | **COMPLIES** | The proposed structure will be under the required height limit of 8.5m, with a maximum height of 7.6-7.8 at the highest point (from NGL). |
| 10.4.3 | **Setback** | **A1** | Dwellings, excluding protrusions that extend not more than 0.9m into the frontage setback, must have a setback from a frontage not less than 8m. | **P1** | The siting of a dwelling must be compatible with the streetscape and character of development existing on established properties in the area, having regard to:<br>(a) the topography of the site;<br>(b) the setbacks of surrounding buildings;<br>(c) the height, bulk and form of existing and proposed buildings;<br>(d) the appearance when viewed from roads and public open space adjacent to the site; and<br>(e) the safety of road users. | **COMPLIES** | The proposed new dwelling will comply with these setback requirements. |
| | | **A2** | Dwellings, excluding outbuildings with a building height of not more than 2.4m and protrusions that extend not more than 0.9m horizontally from the building, must have a setback from side and rear boundaries of not less than 5m. | **P2** | The siting of a dwelling must not cause an unreasonable loss of amenity to adjoining properties, having regard to:<br>(a) the topography of the site;<br>(b) the size, shape and orientation of the site;<br>(c) the setbacks of surrounding buildings;<br>(d) the height, bulk and form of existing and proposed buildings;<br>(e) the existing buildings and private open space areas on the site;<br>(f) sunlight to private open space and windows of habitable rooms on adjoining properties; and<br>(g) the character of development existing on established properties in the area. | **COMPLIES** | The proposed new dwelling will comply with these setback requirements. |



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**5 TERN CIRCLE,**
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## LOW DENSITY RESIDENTIAL
## TASMANIAN PLANNING SCHEME
## DEVELOPMENT STANDARDS FOR BUILDINGS AND WORKS

| SCHEME | PROVISION | | ACCEPTABLE SOLUTION | | PERFORMANCE CRITERIA | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|---|---|---|
| 10.4.4 | **Site Coverage** | **A1** | Dwellings must have a site coverage of not more than 30%. | **P1** | The site coverage of dwellings must be consistent with that existing on established properties in the area, having regard to:<br>(a) the topography of the site;<br>(b) the capacity of the site to absorb runoff;<br>(c) the size and shape of the site;<br>(d) the existing buildings and any constraints imposed by existing development;<br>(e) the provision for landscaping and private open space;<br>(f) the need to remove vegetation; and<br>(g) the site coverage of adjacent properties. | **COMPLIES** | The proposed new dwelling will not cause the site coverage to exceed 30%, so this development will therefore comply. |
| 10.4.5 | **Frontage Fences** | **A1** | No Acceptable Solution. | **P1** | A fence (including a free-standing wall) for a dwelling within 4.5m of a frontage must:<br>(a) provide for security and privacy, while allowing for passive surveillance of the road; and<br>(b) be consistent with the height and transparency of fences in the street, having regard to:<br>(i) the topography of the site; and<br>(ii) traffic volumes on the adjoining road. | **COMPLIES** | The proposed development will comply, inclusive of the new swinging gate at the front of the property (for security purposes). |



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## CODE OVERLAY - NATURAL ASSETS CODE
## WATERWAY AND COSTAL PROTECTION AREA
## TASMANIAN PLANNING SCHEME

| CODE | PROVISION | | ACCEPTABLE SOLUTION | PERFORMANCE CRITERIA | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|---|---|
| 7.6 | **Development Standards** | **A1** | Buildings and works within a waterway and coastal protection area must:<br>(a) be within a building area on a sealed plan approved under this planning scheme;<br>(b) in relation to a Class 4 watercourse, be for a crossing or bridge not more than 5m in width; or<br>(c) if within the spatial extent of tidal waters, be an extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway that is not more than 20% of the area of the facility existing at the effective date. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |
| | | **A2** | Buildings and works within a future coastal refugia area must be located within a building area on a sealed plan approved under this planning scheme. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |
| | | **A3** | Development within a waterway and coastal protection area or a future coastal refugia area must not involve a new stormwater point discharge into a watercourse, wetland or lake. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |
| | | **A4** | Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |
| | | **A5** | Coastal protection works or watercourse erosion or inundation protection works must not occur within a waterway and coastal protection area or a future coastal refugia area. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |



**THE LAWRENCE FAMILY TRUST**

**NEW NEW RESIDENCE**
**5 TERN CIRCLE,**
**PRIMROSE SANDS, TAS 7173**

DATE: **5/12/2025** SIZE: **A2** SCALE:
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## CODE OVERLAY - NATURAL ASSETS CODE
## PRIORITY VEGETATION AREA
## TASMANIAN PLANNING SCHEME

| CODE | PROVISION | | ACCEPTABLE SOLUTION | PERFORMANCE CRITERIA | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|---|---|
| 7.6 | **Development Standards** | **A1** | Buildings and works within a waterway and coastal protection area must:<br>(a) be within a building area on a sealed plan approved under this planning scheme;<br>(b) in relation to a Class 4 watercourse, be for a crossing or bridge not more than 5m in width; or<br>(c) if within the spatial extent of tidal waters, be an extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway that is not more than 20% of the area of the facility existing at the effective date. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |
| | | **A2** | Buildings and works within a future coastal refugia area must be located within a building area on a sealed plan approved under this planning scheme. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |
| | | **A3** | Development within a waterway and coastal protection area or a future coastal refugia area must not involve a new stormwater point discharge into a watercourse, wetland or lake. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |
| | | **A4** | Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |
| | | **A5** | Coastal protection works or watercourse erosion or inundation protection works must not occur within a waterway and coastal protection area or a future coastal refugia area. | | **COMPLIES** | The proposed development is exempt as per 7.2.1 (xii) |



**THE LAWRENCE FAMILY TRUST**

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## CODE OVERLAY - SAFEGUARDING OF AIRPORTS CODE
## AIRPORT OBSTACLE LIMITATION AREA
## TASMANIAN PLANNING SCHEME

| CODE | PROVISION | | ACCEPTABLE SOLUTION | | PERFORMANCE CRITERIA | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|---|---|---|
| 16.6 | **Development Standards** | **A1** | Buildings and works within an airport obstacle limitation area associated with a Commonwealth-leased airport that exceed the specified height limit shown on the airport obstacle limitation area overlay applicable for the site of the development must have approval from the relevant Commonwealth department under the Airports Act 1996 (Commonwealth). | **P1** | No Performance Criterion. | **COMPLIES** | The proposed development will not exceed the relevant height limit and therefore this will comply. |
| | | **A2** | No Acceptable Solution. | **P1** | Buildings and works within an airport obstacle limitation area associated with a non-Commonwealth-leased airport that exceed the specified height limit shown on the airport obstacle limitation area overlay applicable for the site of the development must not create an obstruction or hazard for the operation of aircraft, having regard to any advice from:<br>(a) Airservices Australia;<br>(b) the Civil Aviation Safety Authority; and<br>(c) the airport operator. | **COMPLIES** | The proposed development will not exceed the relevant height limit and therefore this will comply. |



**THE LAWRENCE FAMILY TRUST**

**NEW NEW RESIDENCE**
**5 TERN CIRCLE,**
**PRIMROSE SANDS, TAS 7173**

DATE: **5/12/2025** SIZE: **A2** SCALE:
JOB: **#ATT1620** DRAWN: **N VALENTINE**
EMAIL: **NIK@THEATTIC.NET.AU**

# CODE OVERLAY - LANDSLIP HAZARD CODE
# LOW & MEDIUM LANDSLIP HAZARD BAND
# TASMANIAN PLANNING SCHEME

| CODE | PROVISION | ACCEPTABLE SOLUTION | PERFORMANCE CRITERIA | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|---|
| 15.6.1 | **Development Standards** | **A1** No Acceptable Solution. | **P1.1** Building and works within a landslip hazard area must minimise the likelihood of triggering a landslip event and achieve and maintain a tolerable risk from landslip, having regard to:<br><br>(a) the type, form, scale and intended duration of the development;<br><br>(b) whether any increase in the level of risk from a landslip requires any specific hazard reduction or protection measures;<br><br>(c) any advice from a State authority, regulated entity or a council; and<br><br>(d) the advice contained in a landslip hazard report. | **COMPLIES** | The proposed development is exempt as per 15.4.1 |
| | | | **P1.2** A landslip hazard report also demonstrates that the buildings and works do not cause or contribute to landslip on the site, on adjacent land or public infrastructure. | **COMPLIES** | The proposed development is exempt as per 15.4.1 |



## THE LAWRENCE FAMILY TRUST

**NEW NEW RESIDENCE**
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DATE: **5/12/2025** SIZE: **A2** SCALE:
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EMAIL: **NIK@THEATTIC.NET.AU**

# CODE OVERLAY - COASTAL EROSION HAZARD CODE
# LOW COASTAL EROSION HAZARD BAND
# TASMANIAN PLANNING SCHEME

| CODE | PROVISION | ACCEPTABLE SOLUTION | PERFORMANCE CRITERIA | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|---|
| 10.6.1 | **Development Standards** | **A1** No Acceptable Solution. | **P1.1** Buildings and works, excluding coastal protection works, within a coastal erosion hazard area must hav a tolerable risk, having regard to:<br><br>(a) whether any increase in the level of risk from coastal erosion requires any specific hazard reduction or protection measures;<br><br>(b) any advice from a State authority, regulated entity or a council; and<br><br>(c) the advice contained in a coastal erosion hazard report. | **COMPLIES** | The proposed development is exempt as per 10.4.1 |
| | | | **P1.2** A coastal erosion hazard report demonstrates that:<br><br>(a) the building and works:<br><br>(i) do not cause or contribute to any coastal erosion on the site, on adjacent land or public infrastructure; and<br><br>(ii) can achieve and maintain a tolerable risk from a coastal erosion event in 2100 for the intended life of the use without requiring any specific coastal erosion protection works;<br><br>(b) buildings and works are not located on actively mobile landforms, unless for engineering or remediation works to protect land, property and human life. | **COMPLIES** | The proposed development is exempt as per 10.4.1 |





## THE LAWRENCE FAMILY TRUST

**NEW NEW RESIDENCE**
**5 TERN CIRCLE,**
**PRIMROSE SANDS, TAS 7173**

DATE: **5/12/2025** SIZE: **A2** SCALE:
JOB: **#ATT1620** DRAWN: **N VALENTINE**
EMAIL: **NIK@THEATTIC.NET.AU**

# CODE OVERLAY - BUSHFIRE PRONE AREAS CODE
# BUSHFIRE PRONE AREAS
# TASMANIAN PLANNING SCHEME

| CODE | PROVISION | | COMPLIANCE | DEVELOPMENT RESPONSE |
|---|---|---|---|---|
| **13.4.1** | **Use or Development Exempt from this Code** | The following use or development is exempt from this code:<br><br>(a) any use or development that the TFS or an accredited person, having regard to the objective of all applicable standards in this code, certifies there is an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures; and<br><br>(b) adjustment of a boundary in accordance with clause 7.3 of this planning scheme. | **COMPLIES** | The proposed development has been provided with a BAL rating and will comply with this code and is thus exempt. |



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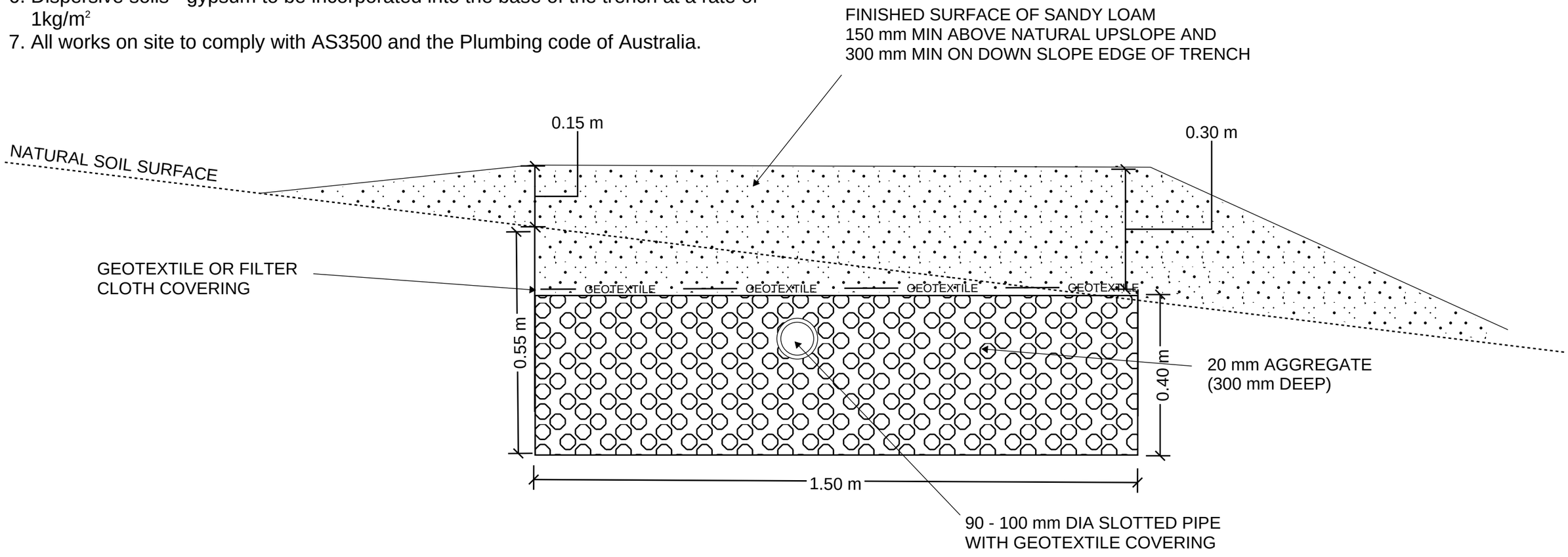
# TERRACED STORMWATER TRENCH DETAIL

DOYLE SOIL CONSULTING

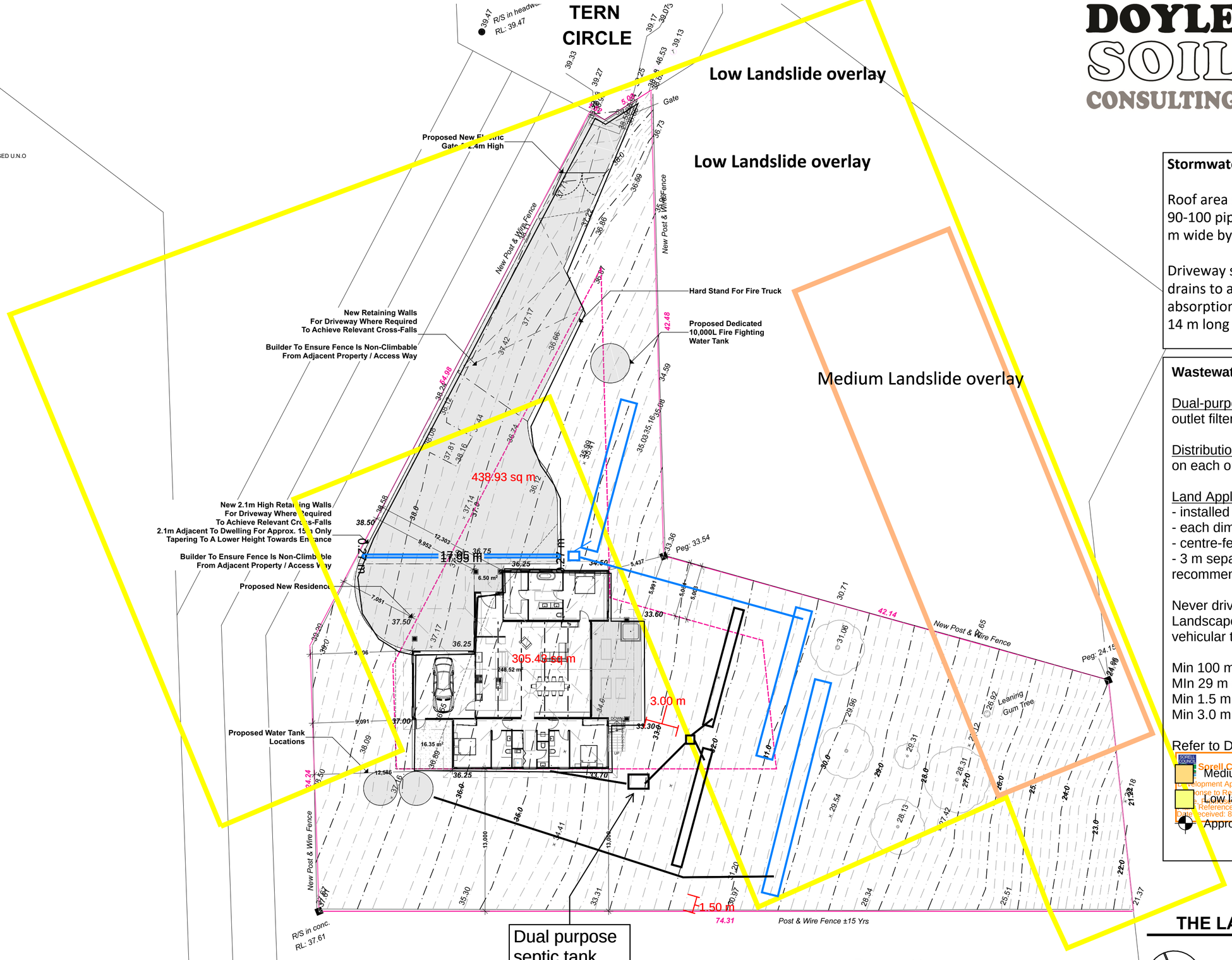
**Design notes:**

1. Absorption trench dimensions of up to 20m long by 0.45m deep by 1.5 m wide – total storage volume calculated at average 35% porosity.
2. Base of trenches to be excavated level and smearing and compaction avoided.
3. 90-100mm slotted pipe should be placed in the top 100mm of the 20mm aggregate
4. Geotextile or filter cloth to be placed over the pipe to prevent clogging of the pipes and aggregate
5. Construction on slopes up to 20% to allow trench depth range 600mm upslope edge to 400mm on down slope edge
6. Dispersive soils - gypsum to be incorporated into the base of the trench at a rate of 1kg/$m^2$
7. All works on site to comply with AS3500 and the Plumbing code of Australia.



W00 WINDOW ID
D00 DOOR ID
MB METER BOX
HW HOT WATER SYSTEM
[CS] CONCRETE SLAB
[PC] POLISHED CONCRETE
[TF] TIMBER FLOOR
[C] CARPET
[T] TILES

**ADDITIONAL NOTES:**
PROPOSED SHOWER(S) TO BE ENCLOSED U.N.O




DOYLE SOIL CONSULTING

**NOTE:**
MECHANICAL VENTILATION TO BE PROVIDED IN ACCORDANCE WITH PART 3.8.5 of BCA/NCC TO AMENITY AREAS, WHERE NATURAL VENTILATION IS NOT ACHIEVABLE.

## Stormwater Design

Roof area storm water overflow via a DN 90-100 pipe to one trench 20 m long by 1.5 m wide by 0.6 m deep

Driveway stormwater overflow via grated drains to a two-way flow splitter box to two absorption trenches each
14 m long by 1.5 m wide by 0.6 m deep

## Wastewater Design

Dual-purpose septic tank (min 3000L) with outlet filter. Location on plan nominal only.

Distribution box with Tuff-tite® speed levellers on each outlet.

Land Application Area: 24 m²
- installed as two absorption trenches
- each dims: 14.0m x 0.9 m x 0.4 m
- centre-feed each length of slotted pipe
- 3 m separation between trenches recommended

Never drive on the finished absorption bed. Landscape or fence-off to reduce the risk of vehicular traffic.

Min 100 m downslope water setback
MIn 29 m downslope boundary setback
Min 1.5 m boundary setbacks
Min 3.0 m setback from upslope foundations

Refer to DSC report

Medium landslide hazard area
Low landslide hazard area
Approximate test hole locations

Sorell Council
Development Application: 5.2025.208.1 - Response to Request For Information - 5 Tern Circle, Primrose Sands P2.pdf
Plans Reference: P2
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Designs of onsite wastewater management systems are site-specific. Installer to refer closely to DSC report and design spec sheets. Contact the system designer with any questions or proposed changes to the system prior to proceeding with changes. Failure to do so may prevent designer certification/sign-off

Robyn Doyle
Building Services Designer
Hydraulic
CC7418
20/10/2025

Prepared by
Rowan Mason
3/10/25

**THE LAWRENCE FAMILY TRUST**

**NEW RESIDENCE**
**5 TERN CIRCLE,**
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DATE: **5/8/2025** SIZE: **A2** SCALE:**1:250**
JOB: **#ATT1620** DRAWN: **N VALENTINE**
EMAIL: **NIK@THEATTIC.NET.AU**

**PROPOSED SITE PLAN LG 3**

# PROPOSED NEW RESIDENCE FOR:
# THE LAWRENCE FAMILY TRUST
5 TERN CIRCLE, PRIMROSE SANDS
TAS 7173

VOLUME: **180633**
CLIMATE ZONE: **7**
BUILDING CLASS: **1a**
SOIL CLASS: **TBC**

FOLIO: **3**
WIND CLASS: **TBC**
SITE AREA: **2812 m²**

LOT NO: **3**
BAL: **BAL-19**
ALPINE AREA: **N/A BCA FIGURE 3.7.5.2**

CORROSION ENVIRONMENT: N/A - FOR STEEL SUBJECT TO THE INFLUENCE OF SALT WATER, BREAKING SURF OR HEAVY INDUSTRIAL AREAS, REFER TO BCA SECTION 3.4.2.2 & BCA TABLE 3.4.4.2 CLADDING AND FIXINGS TO MANUFACTURER'S RECOMMENDATIONS

OTHER HAZARDS: **N/A** - HIGH WIND, EARTHQUAKE, FLOODING, LANDSLIP, DISPERSIVE SOILS, SAND DUNES, MINE SUBSIDENCE, LANDFILL, SNOW & ICE OR OTHER RELEVANT FACTORS





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## COVER PAGE 1

W00 WINDOW ID

D00 DOOR ID

MB METER BOX

HW HOT WATER SYSTEM

[CS] CONCRETE SLAB

[PC] POLISHED CONCRETE

[TF] TIMBER FLOOR

[C] CARPET

[T] TILES

**ADDITIONAL NOTES:**
PROPOSED SHOWER(S) TO BE ENCLOSED U.N.O

**NOTE:**

**MECHANICAL VENTILATION TO BE PROVIDED IN ACCORDANCE WITH PART 3.8.5 of BCA/NCC TO AMENITY AREAS, WHERE NATURAL VENTILATION IS NOT ACHIEVABLE.**




# THE LAWRENCE FAMILY TRUST

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## EXISTING SITE / DEMOLITION FLOOR PLAN LG 2

W00 WINDOW ID

D00 DOOR ID

MB METER BOX

HW HOT WATER SYSTEM

[CS] CONCRETE SLAB

[PC] POLISHED CONCRETE

[TF] TIMBER FLOOR

[C] CARPET

[T] TILES

**ADDITIONAL NOTES:**
PROPOSED SHOWER(S) TO BE ENCLOSED U.N.O

**NOTE:**

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# TERN CIRCLE

R/S in headw...
RL: 39.47

Gate

Proposed New Electric Gate & 2.4m High

New Post & Wire Fence

Hard Stand For Fire Truck

New Retaining Walls For Driveway Where Required To Achieve Relevant Cross-Falls

Builder To Ensure Fence Is Non-Climbable From Adjacent Property / Access Way

Proposed Dedicated 10,000L Fire Fighting Water Tank

New 2.1m High Retaining Walls For Driveway Where Required To Achieve Relevant Cross-Falls 2.1m Adjacent To Dwelling For Approx. 15m Only Tapering To A Lower Height Towards Entrance

Builder To Ensure Fence Is Non-Climbable From Adjacent Property / Access Way

Proposed New Residence

Proposed Water Tank Locations

Peg: 33.54

Peg: 24.15

Leaning Gum Tree

New Post & Wire Fence

R/S in conc.
RL: 37.61

74.31 Post & Wire Fence ±15 Yrs

Sorell Council

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Plans Reference: P2
Date received: 8/12/2025



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## PROPOSED SITE PLAN LG 3

W00 WINDOW ID

D00 DOOR ID

MB METER BOX

HW HOT WATER SYSTEM

[CS] CONCRETE SLAB

[PC] POLISHED CONCRETE

[TF] TIMBER FLOOR

[C] CARPET

[T] TILES

**ADDITIONAL NOTES:**
PROPOSED SHOWER(S) TO BE ENCLOSED U.N.O

**NOTE:**

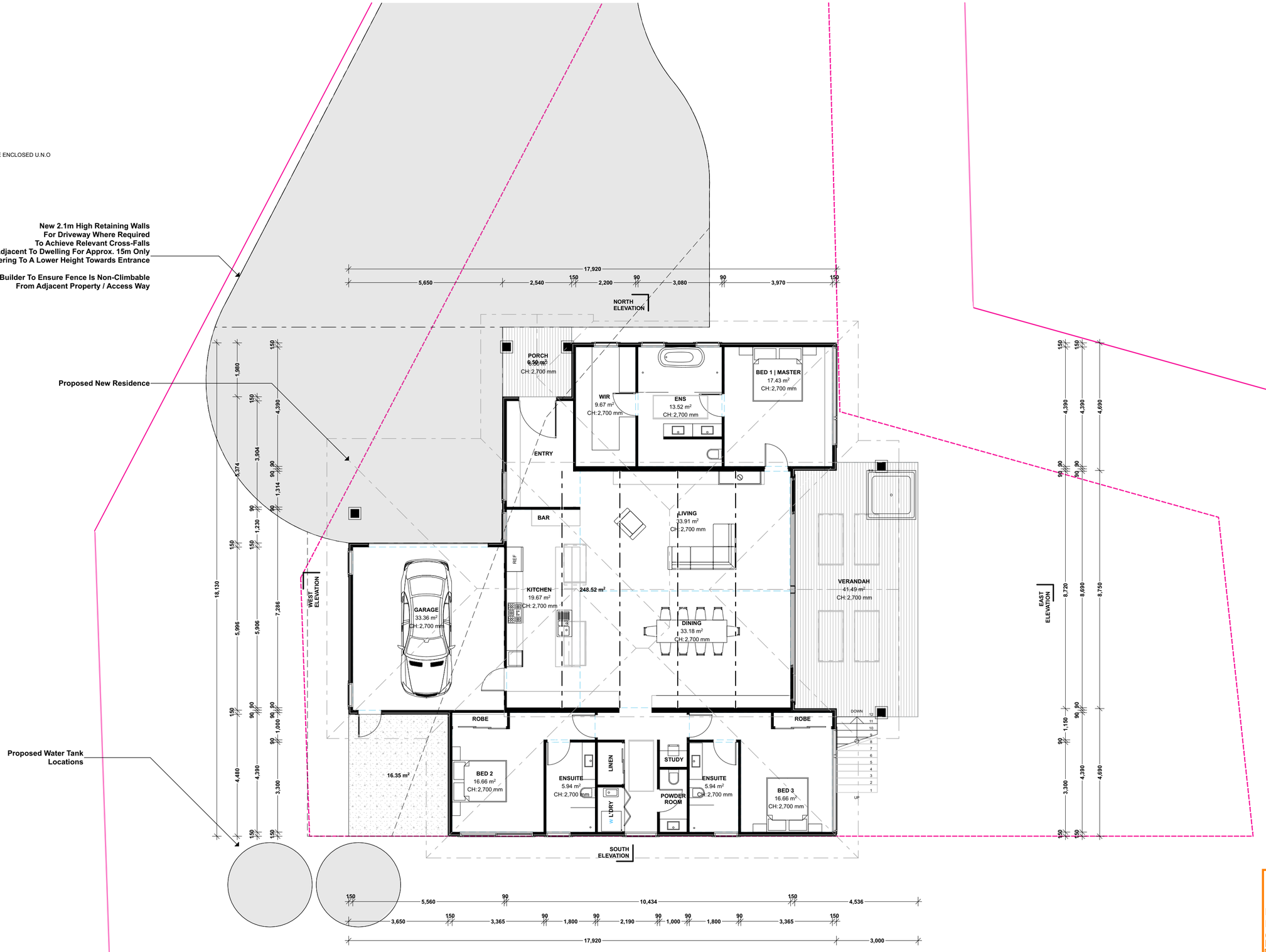
**MECHANICAL VENTILATION TO BE PROVIDED IN ACCORDANCE WITH PART 3.8.5 of BCA/NCC TO AMENITY AREAS, WHERE NATURAL VENTILATION IS NOT ACHIEVABLE.**

**New 2.1m High Retaining Walls For Driveway Where Required To Achieve Relevant Cross-Falls 2.1m Adjacent To Dwelling For Approx. 15m Only Tapering To A Lower Height Towards Entrance**

**Builder To Ensure Fence Is Non-Climbable From Adjacent Property / Access Way**

**Proposed New Residence**

**Proposed Water Tank Locations**



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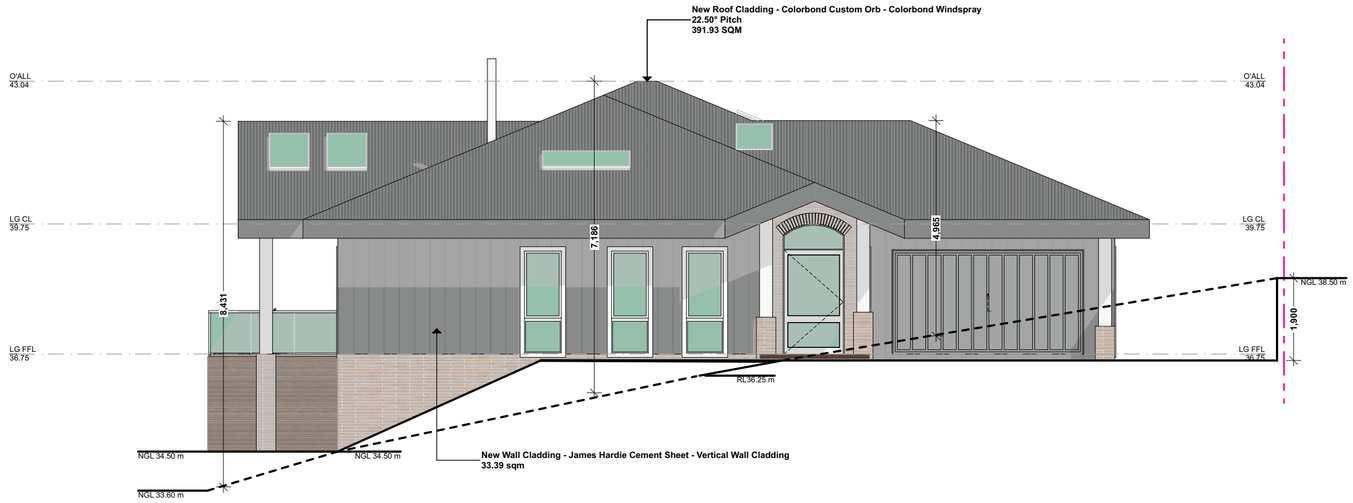
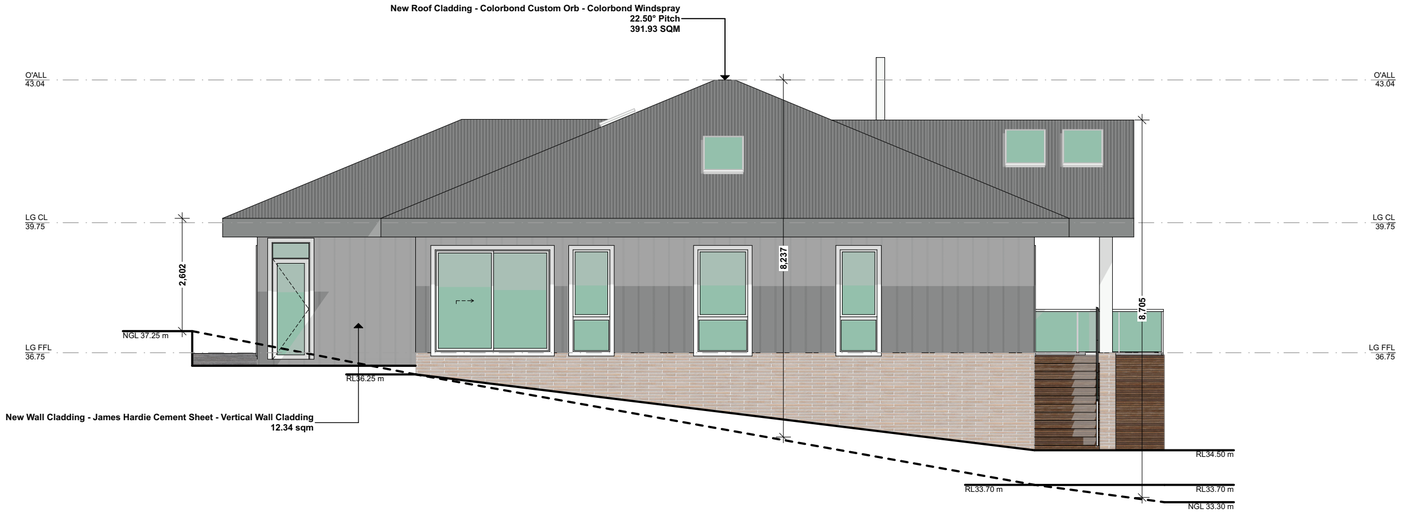
## FLOOR PLAN LG 1:100 4

**NOTE:**

**ANY SCREENED WINDOWS ARE TO BE FIZED, OR RESTRICTED AWNING/OPERABLE TO A HEIGHT OF 1700mm ABOVE FINISHED FLOOR LEVEL (FFL) IN ACCORDANCE WITH CLAUSE 55.04-6 (STANDARD B22 - OVERLOOKING) OF THE MOONEE VALLEY PLANNING SCHEME.**




**NORTH** ELEVATION




**SOUTH** ELEVATION

**NB:**
ALL WINDOWS LOCATED 2.0m ABOVE THE SURFACE BENEATH ARE TO BE PROVIDED WITH WINDOW RESTRICTORS TO REFLECT A MAXIMUM OPENING OF 124mm, TO RESIST AN OUTWARD HORIZONTAL ACTION OF 250N IN ACCORDANCE WITH NCC PART 3.9.2.5

WHERE THE RESTRICTING DEVICE OR SCREEN CAN BE REMOVED, UNLOCKED OR OVERRIDDEN, A PERMANENT BARRIER WITH A HEIGHT NOT LESS THAN 865m ABOVE THE FLOOR IS REQUIRED TO THE OPENABLE WINDOW, IN ADDITION TO WINDOW PROTECTION. THE BARRIER MUST NOT HAVE ANY HORIZONTAL OR NEAR HORIZONTAL ELEMENTS BETWEEN 150mm AND 760mm ABOVE THE FLOOR THAT FACILITATE CLIMBING.

GRADE 'A' SAFETY GLAZING IS REQUIRED TO ALL WINDOWS WITHIN 500mm OFF THE FLOOR, WITHIN 300mm OF A DOOR, WITHIN 2000mm OFF THE FLOOR IN ALL WET AREAS AND IS SUSCEPTIBLE TO HUMAN IMPACT.





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## PROPOSED ELEVATIONS 5

**NOTE:**

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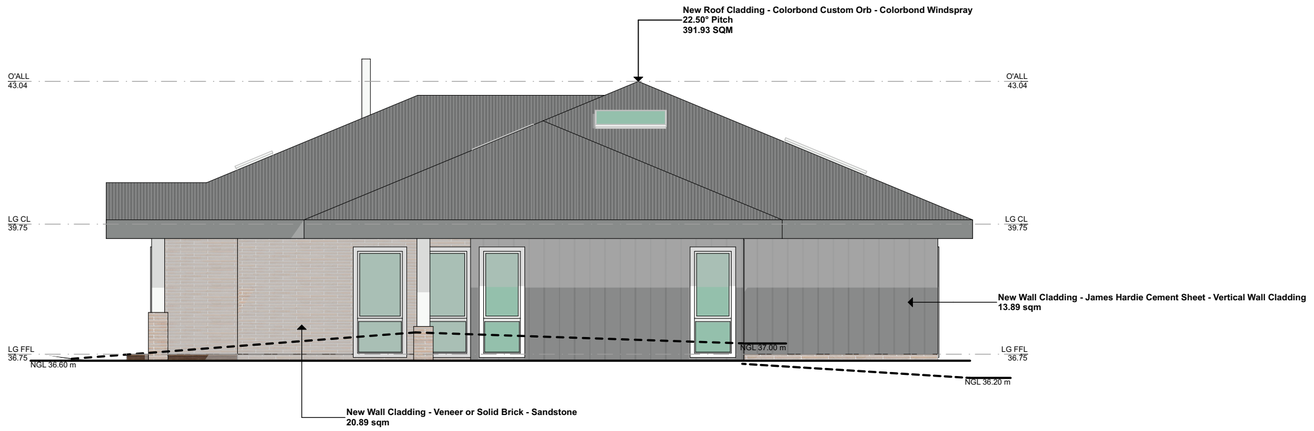
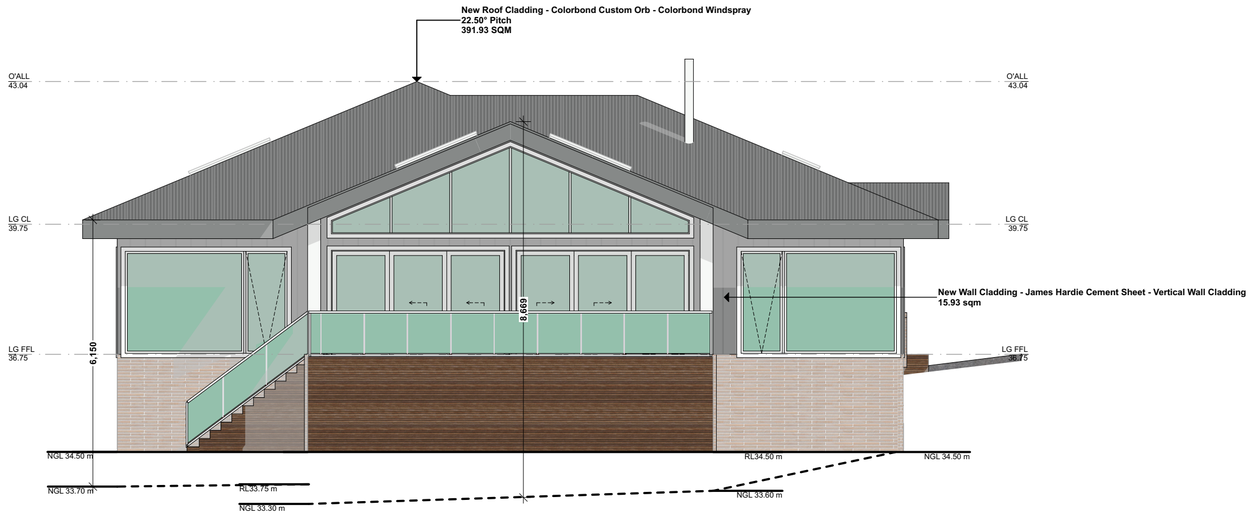



**WEST** ELEVATION




**EAST** ELEVATION

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## PROPOSED ELEVATIONS 6

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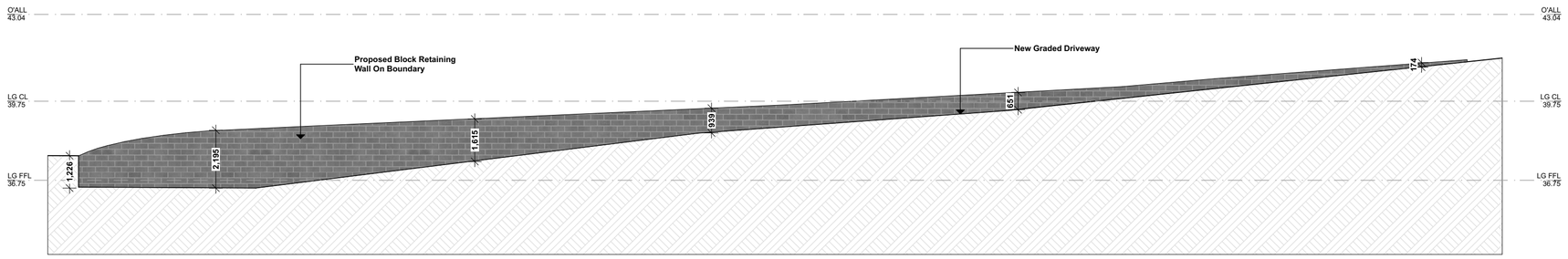


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JOB: **#ATT1620** DRAWN: **N VALENTINE**
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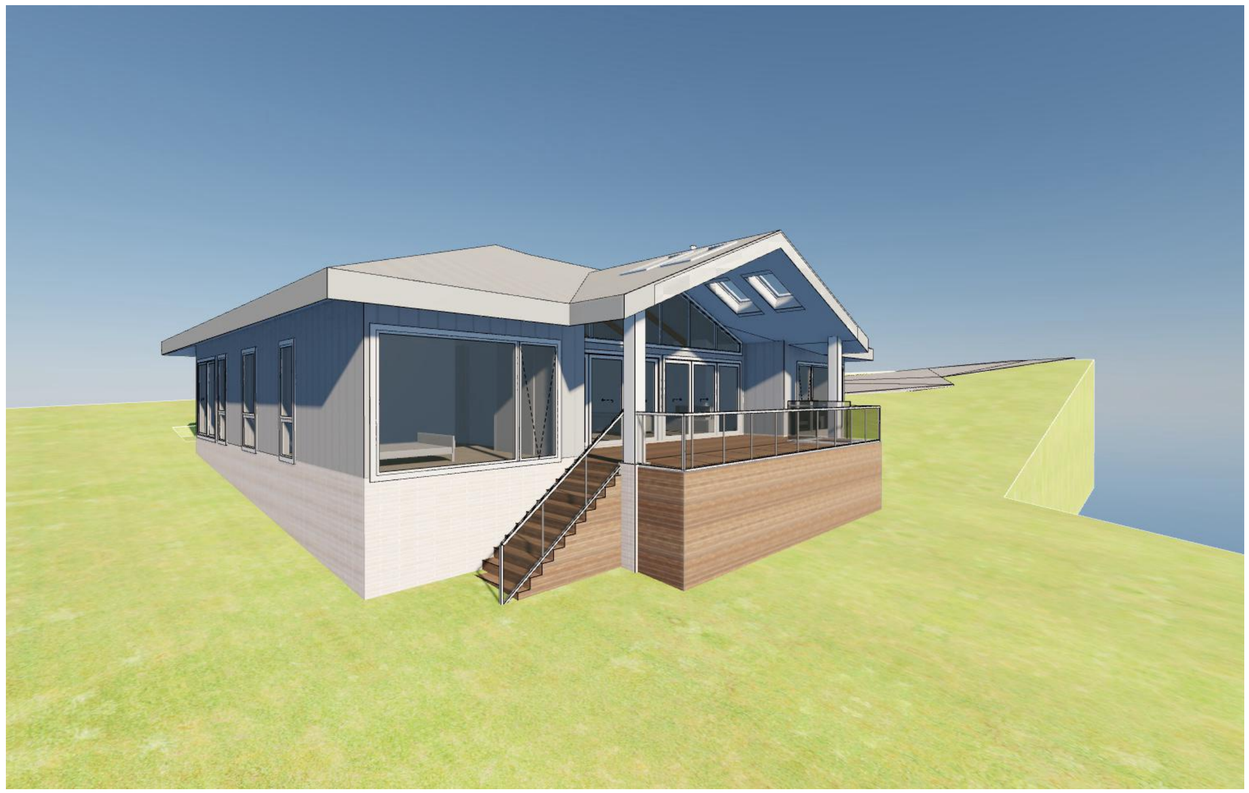
## PROPOSED RETAINING WALL ELEVATION 7



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Sorell Council
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Plans Reference: P2
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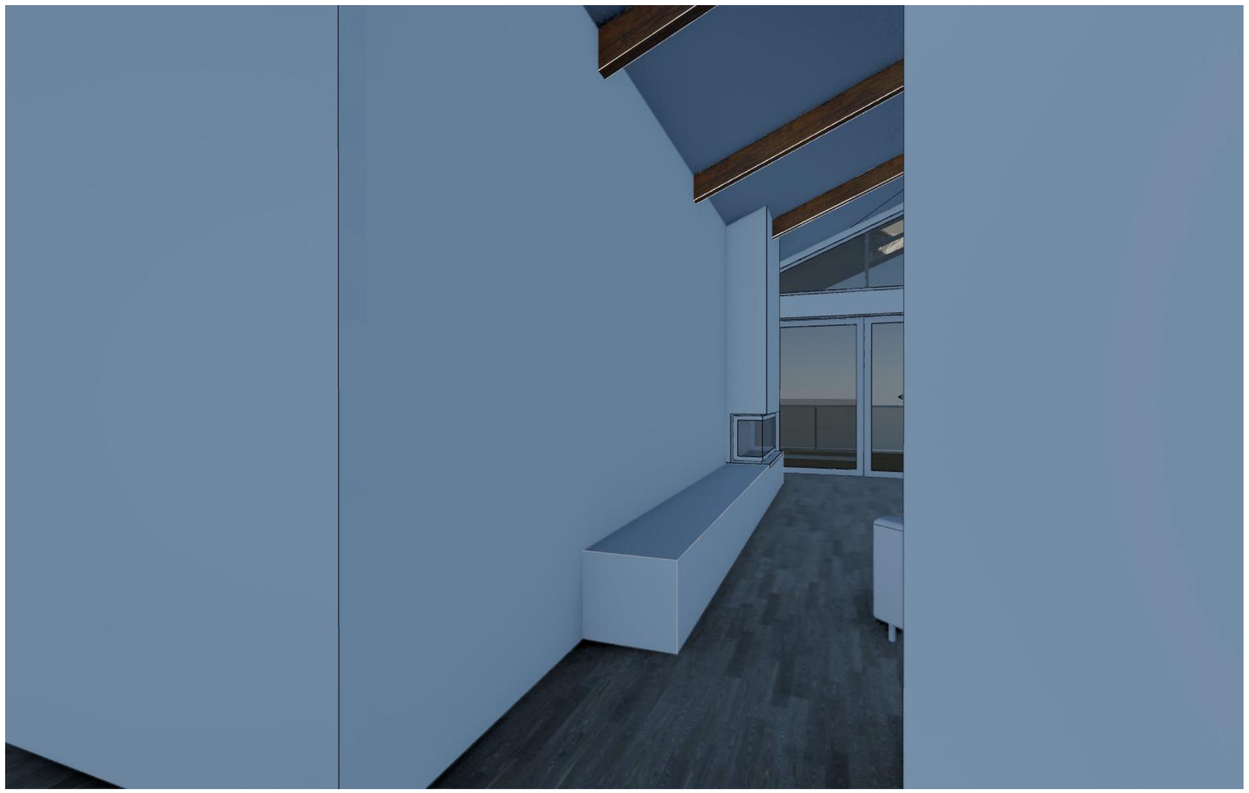
## 3D PERSPECTIVE 8



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## 3D PERSPECTIVE 9

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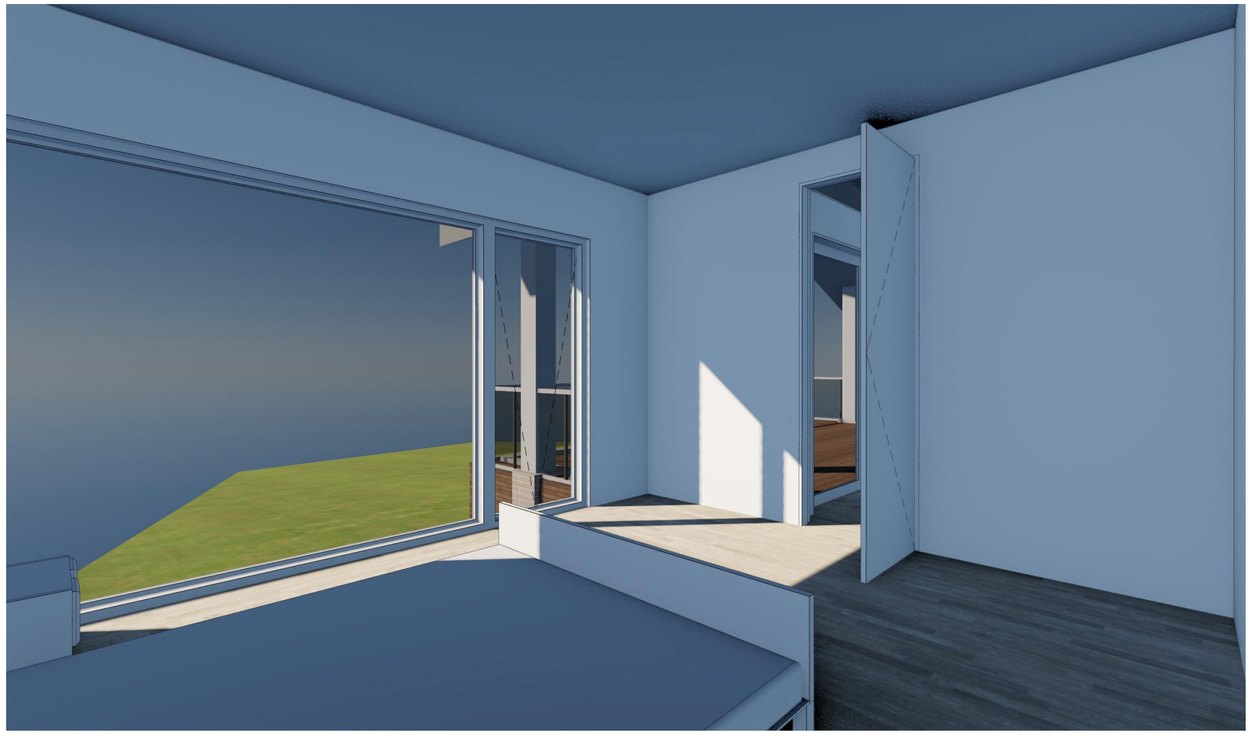



**Sorell Council**

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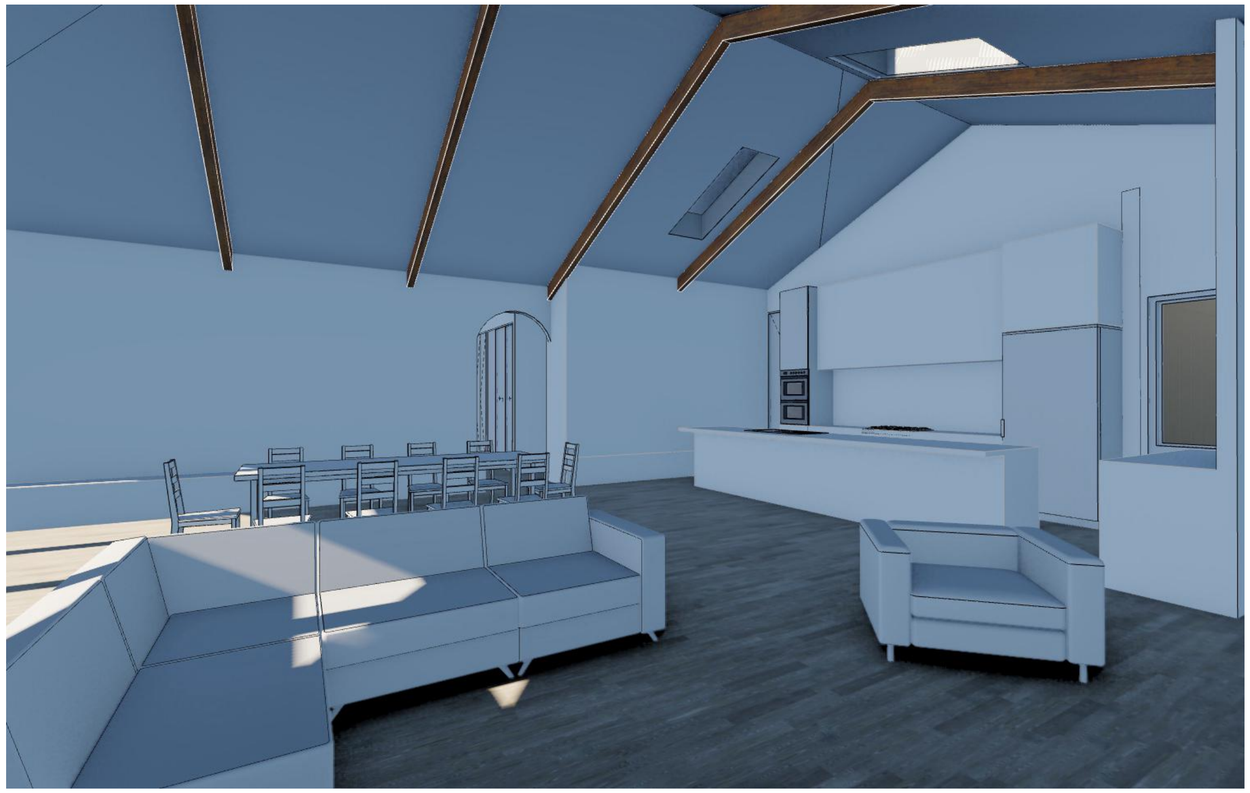
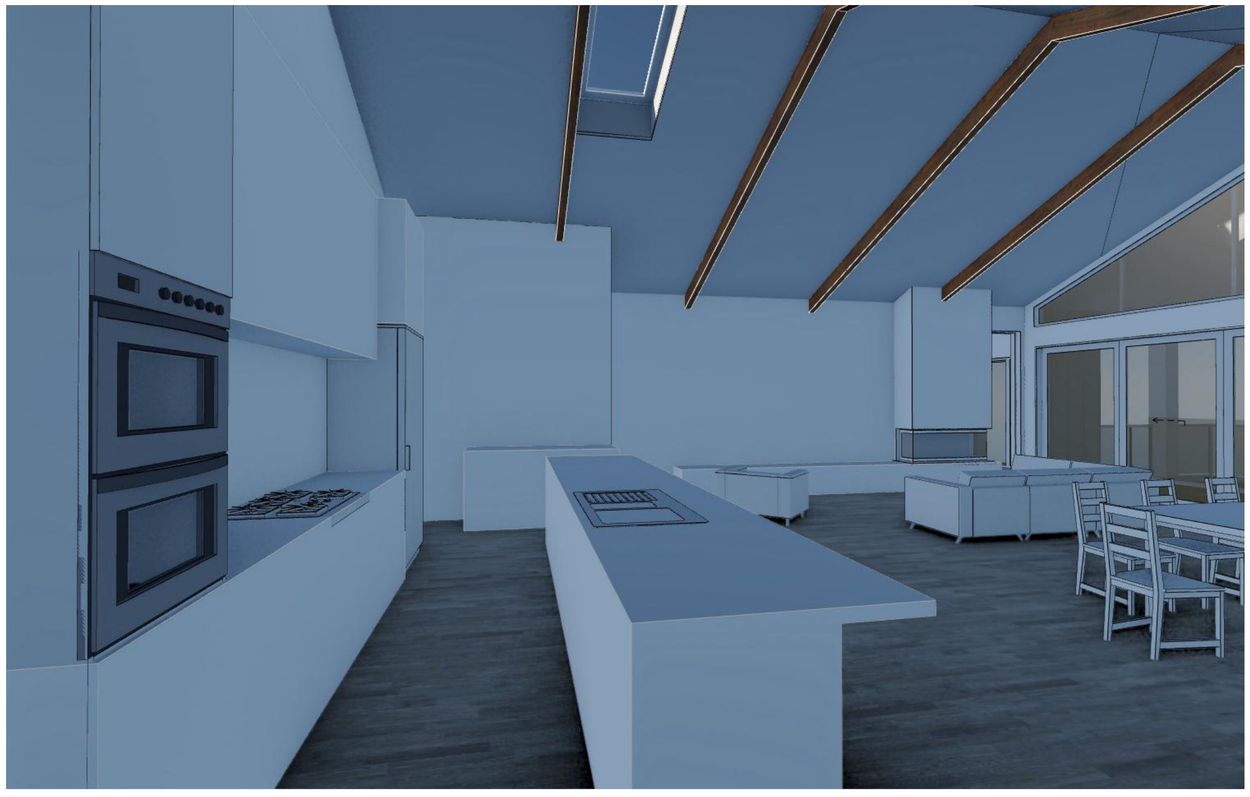
## 3D PERSPECTIVE 10





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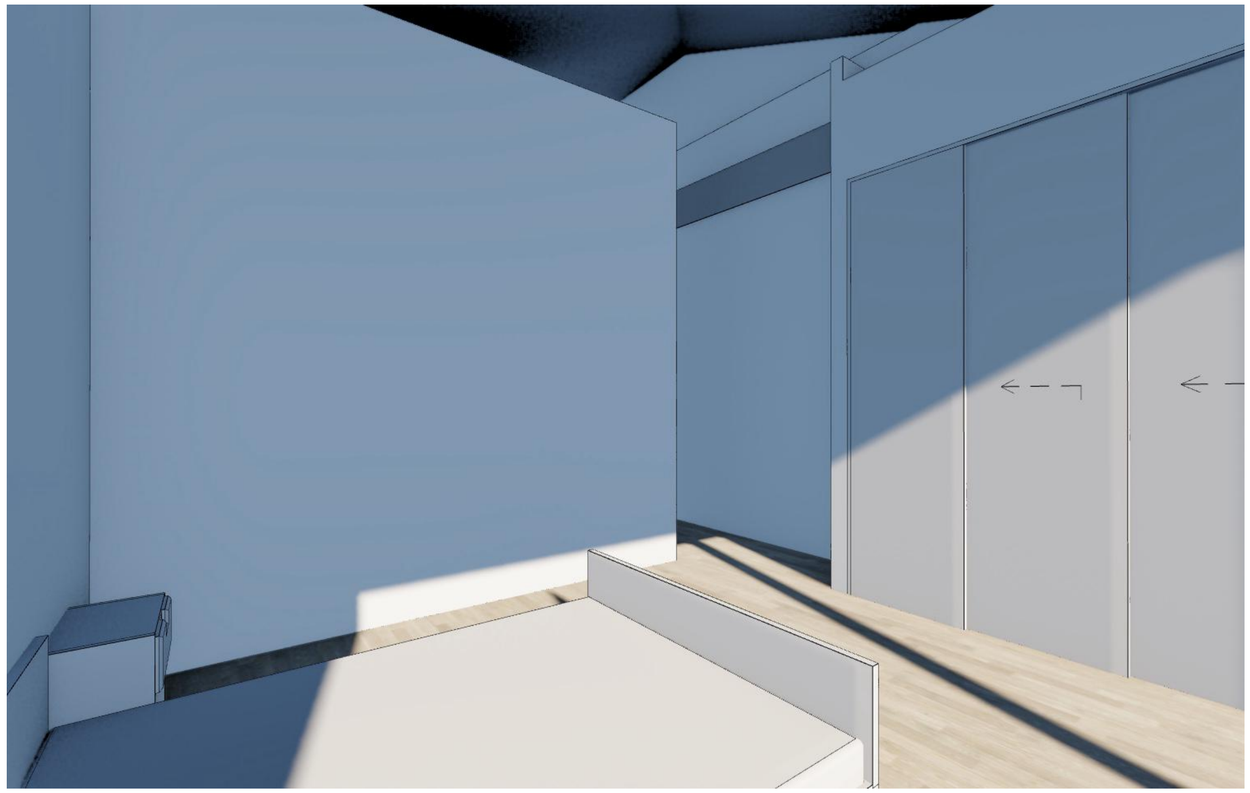
## 3D PERSPECTIVE 11

Sorell Council
Development Application: 5.2025.208.1 - Response to Request For Information - 5 Tern Circle, Primrose Sands P2.pdf
Plans Reference: P2
Date received: 8/12/2025



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## 3D PERSPECTIVE 12

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