26 November 2025

Glenorchy City Council

Dear Planner,

Re: Proposed new single dwelling at 63 Bimburra Road, Glenorchy

The proposed development at 63 Bimburra Road, Glenorchy includes proposal for a single dwelling located within the permissible building control area as listed on the title in agreement with Glenorchy City council. The site is located within the Low Density Residential Zone of the Tasmanian Planning Scheme. Overlays across the site also include, Landslide, Bushfire prone, natural assets and flood overlays. A number of supplementary information and reports from consultants largely address these overlays, namely:

- Flood hazard assessment – Envirotech
- Landslide risk assessment – Envirotech
- Waterway & Coastal Protection – Envirotech
- Bushfire – David Lake

In addition, the below response includes justification for the proposal against the Low Density Residential zone for the TPS.

10.4.2 Building Height

A1 Does not comply

P1 The highest point of the proposal sits approximately 9.6m above natural ground level. This is largely due to the natural 1 in 3 slope of the site and is concentrated to the centre of the proposal only. As the site slopes back up towards the south, the proposed dwelling reduces in height to be more accommodating with the landscape.
A reduction in natural sunlight to habitable rooms is not visible from sun shadow modelling and overshadowing of neighbouring properties is also observed as being limited from these models. Therefore it is not believed that the proposal would cause unreasonable loss of amenity.

10.4.3 Setback

A1 Complies – Frontage setback is greater than 8m

A2 Does not comply – Western side boundary setback is less than 5m

P2 The existing site topography is extremely steep with a natural slope of 1:3 in some locations. The proposal encroaches into the side setbacks by approximately 3m for a short length of wall (approximately 7m in

length). With a site of this nature, and the proposed location of the dwelling, situated within the building restriction area as dictated by the title, some encroachment is expected. We believe the encroachment on this boundary is reasonable and does not cause unreasonable loss to neighbouring dwellings as:

- The nearest dwelling in 65 Bimburra Road is located much higher on the landscape than the proposal, combined with being located due west of the proposal, any loss of sun to habitable rooms or private open spaces is considered minimal and does not lose any sunlight throughout the winter solstice. Refer to sun shadow diagrams.
- The orientation of the site is elongated north to south, however to maximize solar gain for the owners of 63 Bimburra Road, a northern aspect in the proposal is included and encroaches minorly into the side setback.
- At the point of the encroachment, the height difference between natural ground level and the roof could be considered minor and a 'single storey' in height. With the angle of the roof not sloped to negatively affect the neighbouring dwelling aspect or sunlight.

10.4.4 Site Coverage

A1 Site coverage complies – site area is 259/197 (first floor footprint area) = 0.076 =7% site coverage

There are works proposed within the road reserve to enable the property be connected to Taswater sewage service. We request General Manager consent under S14 of LUPAA for these works and acknowledge a Road Works permit will be required prior to the works being completed.

If council requires further information on the proposal, please don't hesitate to contact the undersigned,

BUSHFIRE HAZARD REPORT

Proposed residential dwelling
63 Bimburra Road
Glenorchy, 7010

Dated 7th July 2025

Contents

Appendix A – Site analysis with Cadastral & Contour Overlay - indicates subject site
Appendix B – Designer's site plan and site Images
Appendix C – Bushfire Hazard Management Plan, by David Lyne – certified date 07.07.2025; Certificate of Others (Form 55) 1675/25

1. Introduction

I have been engaged by Prime Design to prepare a bushfire report and plan for a new residential dwelling in the suburb of Glenorchy. The intent of this report is to confirm the suitability of the bushfire prone parcel of land to be successfully developed for the dwelling in accordance with the Directors Determination – bushfire hazard areas v1.2.

The assessment describes the site and surrounding area, classifying the vegetation, assessing the slope and environmental features. This report should be included with approval documentation forming part of the certified documentation intended to satisfy the Directors Determination.

2. Limitation of Report

This report has been prepared for the abovementioned clients for their use and distribution only. The intent of the report is for it to be used as supporting documentation for the Development Application (specifically vegetation clearance/maintenance distances) and the Building Application. Should submitted Application Plans differ from the Certified Plans supplied by the builder then an amended design review should be conducted to determine the suitability of any amendments in relation to the Bushfire Prone Area Requirements of AS3959-2018.

It is also to be noted that the assessment has been conducted according to the site inspection being conducted in July 2025 and does not take into account the possibility of altered site conditions either naturally occurring or where currently maintained or excluded vegetation conditions change due to a lack of ongoing maintenance.

It should be noted that compliance with the recommendations contained in this assessment does not mean that there is no residual risk to life safety or property as a result of bushfire. A residual level of risk remains which recognises that removing the risk to life and property in absolute terms is not achievable while people continue to build in bushfire prone areas. This limitation is expressed in the following extract from AS 3959 (2018) which states (in the forward), *It should be borne in mind that the measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions.*
This level of residual risk is inherent in all bushfire standards and also applies to this assessment.

3. Site Description and Background

63 Bimburra Road Glenorchy is an existing land parcel, located in the municipality of the Glenorchy Council. The property is currently vacant with the majority of vegetation present mostly cleared, with some larger standing trees at the rear of the property to the south. There are established residential dwellings to the north, east and west, with forest vegetation to the south.

The site has access to a pre-approved road – Bimburra Road, which connects to Kalang Avenue and eventually the Brooker Highway. The allotment is provided with a reticulated water supply for firefighting.

3.1 Property Details

Address: 63 Bimburra Road, Glenorchy 7010

Municipality: Glenorchy Council

Zoned: Low density residential

Lot Number: 148526/1

Type of Development: New residential dwelling

Classified BAL: **BAL-29**

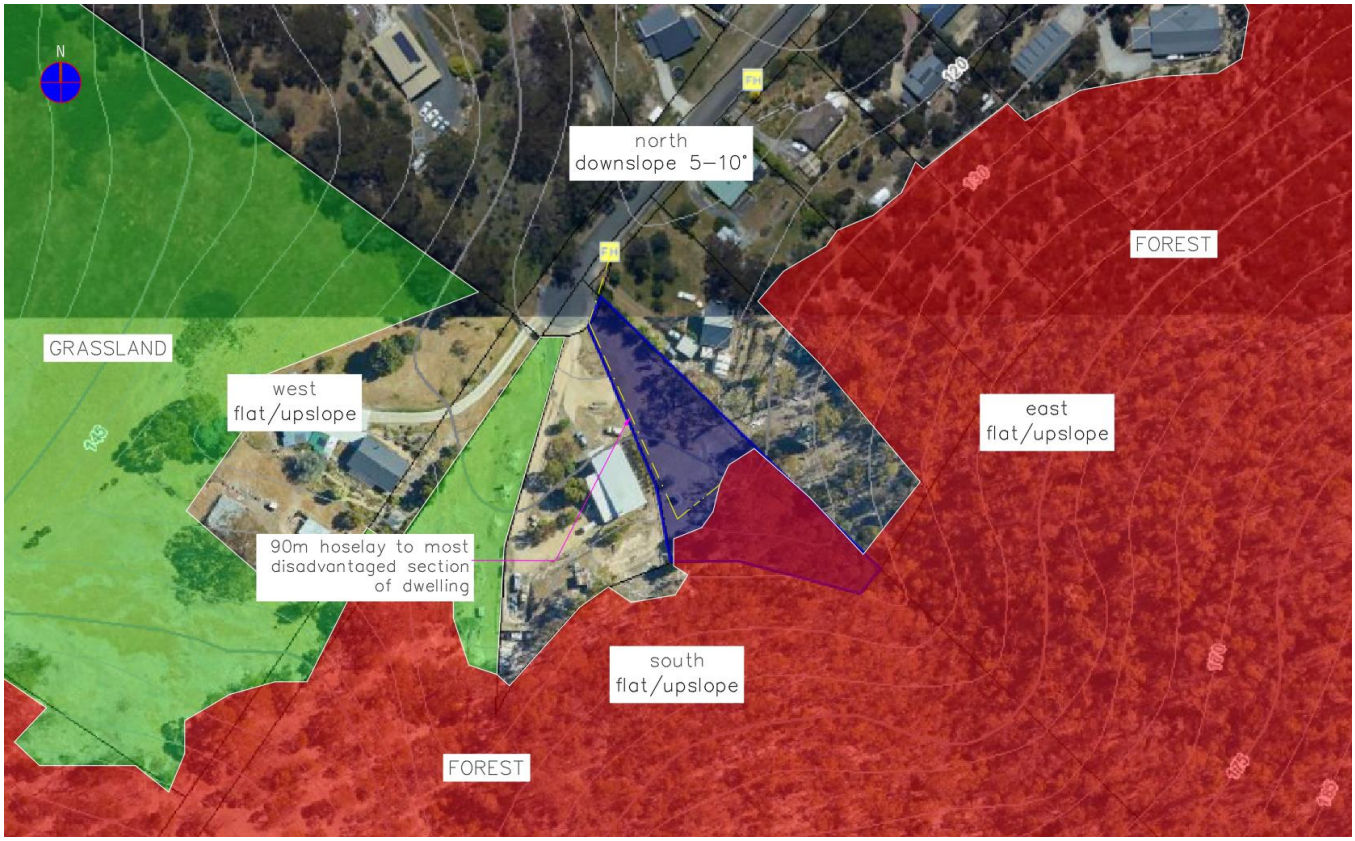


Photo 1 – Site analysis with Cadastral Overlay – Subject site highlighted blue.

3.2 Classification of Vegetation

The vegetation affecting the site has been classified in accordance with Clause 2.2.3 of AS 3959-2018. The Bushfire-Prone vegetation affecting the site is predominantly ***Forest – Group A*** in accordance with AS3959-2018.

In this case, in accordance with Clause 2.2.2 of AS 3959-2018, the relevant Fire Danger Index for Tasmania of 50 (FDI 50).

When considering the definition of Bushfire Prone Area under the Code it is evident the proposed dwelling location is within 100 metres of greater than 1 hectare of vegetation classified in accordance with AS 3959-2018 and is therefore considered *'Bushfire Prone'*.

From the proposed dwelling site a 360° survey has been conducted to determine the vegetation type, proximity and slope under the vegetation which is of the highest hazard rating. In this case the ***Forest*** to the south is the highest hazard vegetation surrounding the dwelling.

Note: in a bushfire there is a possibility of fire attack from any direction, not just the direction of the highest hazard. Photo 1, above indicates the Bushfire Prone Vegetation described. Refer to Appendix B for current conditions as at time of inspection.

3.3 Slope

The Effective slope of the land under the classified vegetation is determined in accordance with Clause 2.2.5 of AS 3959- 2018.

The *effective* slope under the bushfire prone vegetation is generally Upslope/Flatland 0° to the south, east and west; and downslope 5-10° to the north.

Refer to Appendix A Image for topographic contour information.

4. Bushfire Assessment

In accordance with Clause 2.2 of AS 3959-2018, the Simplified Procedure has been applied to determine the Bushfire Attack Level (BAL) for the proposed dwelling site. In accordance with the Code, fire-fighting water supply and vehicle access are also considered and discussed in relation to the proposed dwelling.

It should be noted that AS3959 Table 2.6 only provides BAL ratings for separation distance up to and including 50m from grassland. Therefore, grassland less than 100m but greater than 50m separation from the site has been excluded from assessment.

4.1 Bushfire Attack Level

Considering the current conditions, in accordance with AS3959-2018 the dwelling site is capable of achieving **BAL-29** (the minimum required standard required by the Code being BAL-29).

The desired BAL rating to be applied in this instance will be **BAL-29**. The vegetation within the Hazard Management Area (HMA) is to be continually maintained in a minimal fuel condition and in which there are no other hazards present which significantly contribute to the spread of a fire.

Table 1 – Bushfire Attack Level Assessment Summary and Notes

Property Details

Applicants Name	Prime Design	**Phone**	0439 336 257
Municipality	Glenorchy Council	**Zoning**	Low density residential
Certificate of Title/Lot No.	148526/1	**Lot Size**	2626m²
Address	63 Bimburra Road, Glenorchy 7010		

Type of Building Work

New Class 1a Building	x
New Class 10a Building	
New Class 2 Building	
New Class 3 Building	
Alteration/Additions to an existing building	

Description of building work: e.g. *single dwelling with attached garage*
New dwelling

Bush Fire Attack Level (BAL)

Relevant fire danger index: (see clause 2.2.2) **FDI 50**

Assess the vegetation within 100m in all directions (tick relevant group)
Note 1: Refer to table 2.3 and figures 2.3 & 2.4 for description and classification of vegetation.

Vegetation Classification (See Table 2.3	North X	South X	East X	West X
	North East	South-West	South-East	North-West
Group -	Grassland	Forest	Forest	Forest

Exclusions (where applicable)	Circle relevant paragraph descriptor from clause 2.2.3.2			
	(a) (b) (c) (d) (e) (f)	(a) (b) (c) (d) (e) (f)	(a) (b) (c) (d) (e) (f)	(a) (b) (c) (d) (e) (f)

Distance of the site from classified vegetation (see clause 2.2.4)

Distance to classified vegetation	Show distances in meters			
	40m	0m	36m	70m

Effective Slope	Upslope			
Slope under the classified vegetation	Upslope/0° X	Upslope/0° X	Upslope/0° X	Upslope/0° X
	Downslope			
	>0 to 5° ☐	>0 to 5° ☐	>0 to 5° ☐	>0 to 5° ☐
	>5 to 10° ☐	>5 to 10° ☐	>5 to 10° ☐	>5 to 10° ☐
	>10 to 15° ☐	>10 to 15° ☐	>10 to 15° ☐	>10 to 15° ☐
	>15 to 20° ☐	>15 to 20° ☐	>15 to 20° ☐	>15 to 20° ☐

Assessed BAL value	**BAL-12.5**	**BAL-FZ**	**BAL-12.5**	**BAL-12.5**
Proposed BAL value	**BAL-12.5**	**BAL-29**	**BAL-12.5**	**BAL-12.5**
Separation to achieve BAL-29	**6-<10m**	**16-<23m**	**16-<23m**	**16-<23m**
Separation to achieve BAL-19	**10-<14m**	**23-<32m**	**23-<32m**	**23-<32m**
Separation to achieve BAL-12.5	**14-<50m**	**32-<100m**	**32-<100m**	**32-<100m**

Construction Requirements
For this particular development a BAL-29 rating would suit all directions of this site, construction will be generally compliant with AS3959 -2018 Sections 3 and 7.

4.2 Road / Vehicle Access

The primary access to the lot is from a sealed public road – Bimburra Road. As there is an existing water hydrant along Bimburra Road that is within 120m hoselay, there are no requirements to upgrade the driveway or access.

4.3 Water Supply

The proposed development has access to a reticulated water supply suitable for firefighting. There is an existing water hydrant located to the north-east of the front boundary of the property, which is 90m hose lay from the most disadvantaged part of the dwelling – see BHMP for current location.

4.4 Hazard management area

The minimum extents of the Hazard Management Area (HMA) are for the entirety of the residential allotment to be managed and treated as HMA. Management prescriptions for the proposed HMA are provided in Table 2.

Table 2 - Hazard Management Area Prescriptions

Within 10m of habitable buildings	• No storage of flammable materials (e.g. firewood); • Avoid locating flammable garden materials near vulnerable building elements such as glazed windows/doors, decks and eaves (e.g. non-fire-retardant plants and combustible mulches); • Non-flammable features such as paths, driveways and paved areas are encouraged around habitable buildings.

Trees within HMA	• Maintain canopy separation of approximately 2.0m; • Ensure no branches overhang habitable buildings; • Remove tree branches within 2.0m of the ground level below; • Locate any new tree plantings 1.5 x their mature height from buildings; • Avoid planting trees with loose, stringy or ribbon bark.
Understory vegetation within HMA	• Maintain grass cover at <100mm; • Maintain shrubs to <2.0m height; • Shrubs are to be maintained in clumps so as to not form contiguous vegetation (i.e. clumps up to 10sqm in area, separated from each other by at least 10m); • Avoid locating shrubs directly underneath trees; • Periodically remove dead leaves, bark and branches from underneath trees and around habitable buildings.

5. Conclusion

The site has been classified as **BAL-29** as per the assessment processes outlined in AS3959-2018. The separation distances shown above are the areas to be maintained and kept in a way to reduce the fuel loads present in order to achieve lower BAL ratings. For this particular site and for where the proposed dwelling is to be constructed, a **BAL-29** rating would be achieved and would suit all directions of the site.

6. References

Directors Determination – requirements for building in bushfire-prone areas v2.3.

LIST map version. Aerial Photograph [online]. Available from: http://www.thelist.tas.gov.au/listmap/listmap

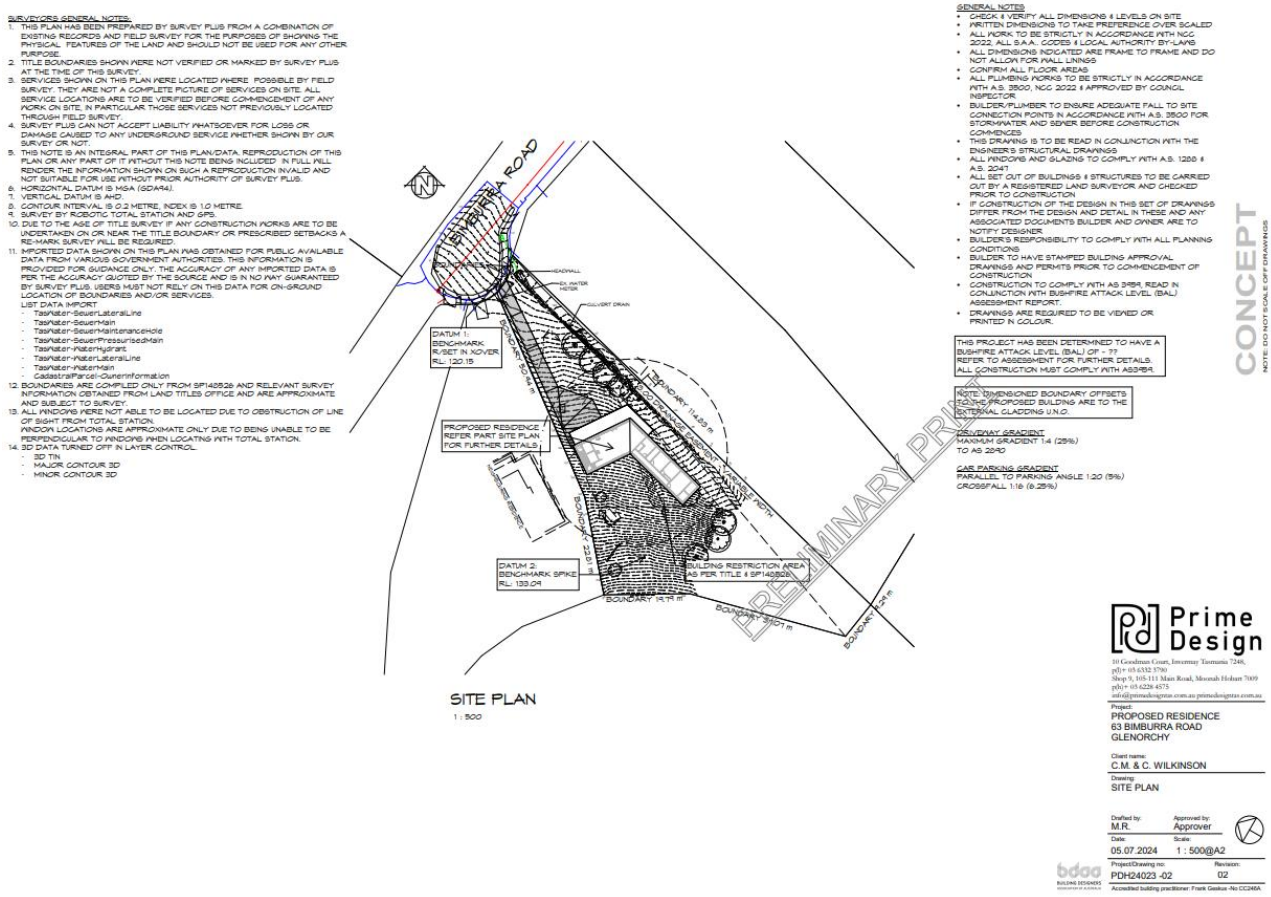
Standards Australia 2018, *Construction of buildings in bushfire prone areas*, AS 3959-2018.

Statement

I have taken all reasonable steps to ensure that the information provided in this assessment is accurate and reflects the conditions on and around the site and allotment on the date of this assessment.

It should be noted that this report does not take into account the possibility of altered site conditions either naturally occurring or where currently maintained or excluded vegetation conditions change due to lack of ongoing maintenance. Compliance with the recommendations contained in this assessment does not mean that there is no residual risk to safety of life or property as a result of bushfire.

Appendix B – Site Images and designers site plan



Looking North

Looking South

Looking East

Looking West

HAZARD MANAGEMENT AREAS – HMA

Hazard Management Area includes the area to protect the Building as well as the access and water supplies. The entirety of this allotment should be treated as HMA. Vegetation in the Hazard Management area is to be managed and maintained in a minimum fuel condition.

The HMA is determined from the unmanaged vegetation on neighbouring allotments, and should the level of the unmanaged vegetation increase the BHMP and HMA should be reviewed to determine the ongoing suitability of the BHMP and HMA associated with the development.

MAINTENANCE SCHEDULE

- Removal of fallen limbs, leaf and bark litter;
- Cut lawns short (less than 100mm) and maintain;
- Remove pine bark and other garden mulch;
- Complete under–brushing and thin out the under storey;
- Prune low hanging trees to ensure separation from ground litter;
- Prune larger trees to establish and maintain horizontal and vertical canopy separation;
- Maintain storage of petroleum fuels;
- Maintain access to the dwelling and water storage area Remove fallen limbs, leaf and bark litter from roofs, gutters and around the building;

BUSHFIRE PROTECTION MEASURES

To reduce the risk of bushfire attack, continual maintenance of bushfire protection measures including building maintenance, managed vegetation areas, water supply and road construction are to be undertaken by successive owners for perpetuity.

PLAN TO BE READ IN CONJUNCTION WITH BUSHFIRE ATTACK LEVEL (BAL) REPORT

NOTIFY COUNCIL AND CERTIFYING BUSHFIRE PRACTITIONER IF ANY VARIATION IN BUILDING SETOUT OR VEGETATION HAZARDS OCCUR

ENSURE THIS PLAN AND ACCOMPANYING REPORT DO NOT CONFLICT WITH OTHER RELEVANT REPORTS AND ASSESSMENTS

HAZARD MANAGMENT AREA
Low threat, maintained vegetation in accordance with AS 3959 – Clause 2.2.3.2 (e) & (f). Building is to be constructed to meet BAL–29 requirements

SITE PLAN NTS

4 0 4 8 12 16 20 m

SCALE 1:400

BHMP

SCALE 1:400

Prepared By David Lyne – BFP 144

Prime Design
63 Bimburra Road, Glenorchy
Tasmania 7010
Job No: 1675

11 GRANVILLE AVENUE
GEILSTON BAY, TASMANIA 7015
PH: 0421 852 987 EMAIL: dave_lyne@hotmail.com
Accredited Designer: David Lyne CC7063

N

PLEASE READ CAREFULLY

THIS PLAN CERTIFIED CORRECT IS THE ONE REFERRED TO IN THE BUILDING CONTRACT AND I UNDERSTAND CHANGES HEREAFTER MAY NOT BE POSSIBLE.

FINAL PLAN: ANY REQUESTED VARIATIONS TO YOUR HOUSE PLAN WILL INCUR AN AMENDMENT / ADMINISTRATION MINIMUM FEE

SIGNATURES

CLIENT:..... DATE:.....

CLIENT:..... DATE:.....

BUILDER:..... DATE:.....

DWG NO: 1675		SHEET: 01
SCALE AT A3: 1:400		DATE: 07.07.2025
DRAWN: DL	CHECK: DL	REV 0

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: Prime Design *Owner /Agent*

Address

Suburb/postcode

Form **55**

Qualified person details:

Qualified person: David Lyne

Address:

Licence No:

Qualifications and Insurance details

Speciality area of expertise:

Details of work:

Address: 63 Bimburra Road

Glenorchy 7010

Lot No: 1

Certificate of title No: 148526

The assessable item related to this certificate: Assessment – BAL Ratings

(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: Bushfire Hazard
Bushfire Hazard Management Plan

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

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

◉ building work, plumbing work or plumbing installation or demolition work

OR

○ a building, temporary structure or plumbing installation

In issuing this certificate the following matters are relevant

Documents:	Bushfire Hazard Report – New residential dwelling Bushfire Hazard Management Plan
Relevant calculations:	• In Accordance with AS3959-2018; and • the Building Regulations (TAS).
References:	• AS3959-2018; • the Building Regulations (TAS); and • Building Code of Australia (BCA).

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

The above mentioned report concludes that a BAL-29 rating is achievable and easily maintained for the dwelling on this site

Scope and/or Limitations

The assessment has been conducted according to information provided by the designer/client and freely available historical data and does not take into account the possibility of altered site conditions from the data relied upon.
It should be noted compliance with the recommendations contained in the certified documents does not mean that there is no residual risk to life safety and property as a result of bushfire. The limitation is expressed in the following extract from AS3959-2018, which states:

It should be borne in mind that the measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions.

The level of residual risk is inherent in all bushfire standards and also applies to this certification.

The assessment has been undertaken and certification provided on the understanding that; -

1. The certificate only deals with the potential bushfire risk all other statutory assessments are outside the scope of this report.

2. The report only identifies the size, volume and status of vegetation at the time the site inspection was undertaken and cannot be relied upon for any future development.
Impacts of future development and vegetation growth have not been considered.

I certify the matters described in this certificate.

Qualified person:

Date: 07/07/2025

enviro •tech
CONSULTANTS
Geotechnical & Environmental Services

FLOOD PRONE AREAS HAZARD ASSESSMENT

Proposed Dwelling 63 BIMBURRA ROAD - GLENORCHY

Client:	**Prime Design**
Certificate of Title:	**237846/1**
Investigation Date:	**02/07/2025**

Refer to this Report As

Enviro-Tech Consultants Pty. Ltd. 2025. Flood Hazard Assessment Report for a Proposed Dwelling, 63 Bimburra Road - Glenorchy. Unpublished report for Prime Design by Enviro-Tech Consultants Pty. Ltd., 02/07/2025.

Report Distribution:

This report has been prepared by Enviro-Tech Consultants Pty. Ltd. for the use by parties involved in the proposed residential development of the property named above. It is to be used only to assist in managing any existing or potential inundation hazards relating to the Site and its development.

Limitations of this report

The data displayed within this document has been prepared using open-source scientific documents and data. Envirotech have used this local and regional data to estimate present and future hazards at the Site. The data is by its nature approximate and may contain errors introduced by the data provider(s).

The inundation modelling conducted in this assessment assumes specific Site conditions detailed within this assessment report as per design plans. Modifications to the landscape, not indicated in this report, including construction of retaining walls, soil cut or fill, and water flow obstructions including but not limited to vegetation, fencing, and non-fixed items may result in varied inundation levels and varied water flow movement across the property which are not modelled in this assessment are outside of the scope of this investigation.

Executive Summary

Enviro-Tech Consultants Pty. Ltd. (Envirotech) was engaged by Prime Design to prepare a flood-prone areas hazard assessment for a proposed double-storey dwelling and driveway at 63 Bimburra Road, Glenorchy. The Site is located within a mapped 1% Annual Exceedance Probability (AEP) flood-prone area and is subject to the Flood-Prone Areas Hazard Code under the Glenorchy planning scheme.

Hydrological modelling was undertaken to assess the pre- and post-development flood behaviour of the Site. The modelling confirms that:

- A 77-hectare upstream catchment contributes surface water flows toward the Site, with the primary flow path crossing the proposed driveway before discharging to a council culvert.
- The proposed dwelling is located outside the flood-prone area, with finished floor levels set well above the defined 1% AEP flood level.
- The deck structure extends partially into the flood-prone overlay but is elevated and open below, allowing floodwaters to pass beneath without obstruction.
- Differences in flow dynamics between the current soil surface and the proposed roughened concrete are negligible.
- The flood hazard class at the driveway is H1, which is considered safe for people, vehicles, and buildings.

No flood protection measures are required for the dwelling. Recommendations have been provided for the driveway construction to ensure ongoing flood compatibility, including open flow design, concrete surface treatment, and subgrade protection. The development is assessed to meet the performance criteria of the planning scheme and maintain a tolerable flood risk for the life of the proposed use.

1 Introduction

1.1 *Background*

Enviro-Tech Consultants Pty. Ltd. (Envirotech) were contracted by Prime Design to prepare a flood prone areas hazard assessment for a proposed Dwelling located at 63 Bimburra Road, Glenorchy. This report has been written to address planning scheme overlay codes in general accordance with the state-wide planning provisions for Glenorchy City Council.

This inundation modelling report has been overseen by an environmental and engineering geologist with hydrogeology and hydrology training and experience. Areas of competence include catchment and streamflow models for assessing waterway erosion and inundation.

The proposed development has triggered the following overlay codes which are addressed within this report:

- C 12.0 Flood Prone Areas Code

1.2 *Objectives*

The objective of the Site investigation is to:

- Use available geographic information system (GIS) data to make interpretations about present Site hydrology, and how the proposed development will be impacted by inundation and where relevant, assessing the development influence on floodwaters entering and exiting the land.
- Conduct a risk assessment for the proposed development ensuring relevant performance criteria, building regulations and directors determination are addressed.
- Assess if the proposed development can achieve and maintain a tolerable risk for the intended life of the use or development without requiring any flood protection measures.
- Determine if the building and works will cause or contribute to flood or inundation on the Site, on adjacent land or public infrastructure
- Provide recommendations for managing inundation risk.

1.3 *Cadastral Title*

The land studied in this report is defined by the title 237846/1

1.4 *Site Setting*

The Site watershed influence is presented in Map 1. Floodwater overlays and Site location are presented in Map 2.

2 Assessment

2.1 *Proposed Development*

Table 1 summarises the provided design documents from which this assessment is based (Attachment 2). The proposed development comprises a four bedrooms double storey dwelling and a driveway, with the proposed crossover falling within the flood prone areas overlay.

Table 1 Project Design Drawings

Drafted By	Project Number	Date Generated	Drawings
Prime Design	PDH24023	05/07/2025	03

2.2 *Planning*

Planning code overlay mapping is presented in Attachment 1 and planning and building regulations are addressed in Attachment 3.

The Site is located within the Glenorchy Council mapped 1% Annual Exceedance Probability (AEP) inland flooding hazard area (Map 2). The mapping has triggered Flood Prone Areas Hazard Code, meaning that a more detailed investigation is required to further assess inundation risk associated with the proposed development. The defined floodwater level for the land is to be assessed based on proposed Site works.

2.3 *Building*

According to the Tasmanian Building Regulations 2016, the floor level of each habitable room[1] of the building, being erected, re-erected, or added as part of the work, is to be constructed at least 300 millimetres above the defined flood level for the land.

2.4 *Topography*

2.5 The Site slopes moderately from approximately RL 130 m AHD in the southeast to RL 120 m AHD at the northwest boundary. Overland flow follows this gradient through an existing drainage easement toward a headwall at Bimburra Road (Map 2).

2.6 *Stormflow Analysis*

Details of the stormflow analysis assessment are presented in Attachment 4. The following are observed:

- A large upstream catchment (~77 ha) contributes overland flow toward the Site from the south and southwest.
- A cross-section modelled flow of 3.0 m^3/s at the driveway, with a channel slope of 9.8% and average flow velocity of 1.5 m/s (Figure 1).
- An existing 3.0 m wide drainage easement captures separate flows from the southeast, which pass under the deck via a natural channel and exit through a headwall, without interacting with any of the proposed habitable rooms.
- The 1% AEP flood path crosses the driveway crossover before discharging to a council culvert at Bimburra Road.
- Differences in flow dynamics between the current soil surface and the proposed roughened concrete are negligible.
- Based on the modelled flow depth and velocity, the overland flow path at the driveway remains within hazard class H1, considered generally safe for people, vehicles, and buildings (see Figure 2: Flood Hazard Curve).

[1] habitable room - means any room of a habitable building other than a room used, or intended to be used, for a bathroom, laundry, toilet, pantry, walk-in wardrobe, corridor, stair, hallway, lobby, clothes drying room, service or utility room, or other space of a specialised nature occupied neither frequently nor for extended periods.

3 Risk Assessment

Qualitative risk evaluation criteria have been created to determine fundamental risks that may occur due to development in areas that are vulnerable to inundation hazards.

This qualitative risk assessment technique is based on AS/NZS ISO 31000:2009 and relies on descriptive or comparative characterisation of consequence, likelihood, and the level of risk comparative (rather than using absolute numerical measures).

A risk consequence/likelihood matrix has been selected which is consistent with AS/NZS ISO 31000:2009 guidelines.

Consequence/likelihood criteria have assisted in determining if any risk management measures are required at the Site to mitigate any potential hazards. Adopted consequence/likelihood criteria are presented in Figure 2 Flood Hazard Curve (Ball, et al., 2019). Performance criteria are presented in Attachment 6.

As the proposed dwelling is located above the mapped 1% AEP extent and the deck and driveway are flood-compatible, the associated risks are considered low.

4 Recommendations

The following recommendations apply to the proposed driveway only. No flood mitigation measures are required for the proposed dwelling, as it is located outside the mapped 1% AEP flood extent and above the defined inundation level.

- **Formed Concrete Slab with Flood Tolerance**
  - Construct a shallow, slightly depressed concrete apron or dish drain at the driveway entrance/crossover where floodwaters are expected to pass. This allows overtopping while protecting the surface from erosion.
  - The concrete section should be reinforced and textured (e.g. broom finish) to improve grip during wet conditions.
- **Maintain Natural Flow Paths Across Driveway**
  - Do not raise the driveway formation at the entrance in a way that blocks overland flow. Instead, match the existing terrain as closely as possible.
  - Let water pass over the surface, in a broad shallow sheet (not through a culvert), maintaining flow continuity.
- **Edge and Subgrade Protection**

Because dispersive soils are likely:

  - Excavate and treat dispersive subgrade (e.g. replace top 150–200 mm with non-dispersive crushed rock or stabilised fill before pouring concrete).
  - Install non-woven geotextile under the slab edges or in batters if any edge grading is required.
  - Consider concrete cut-off edges or kerbing if needed to prevent undermining or rilling along driveway margins.
- **No Culvert Recommended**
  - Due to the dispersed nature of the flow, installing a culvert would likely concentrate flow, leading to localised scour or blockage risk.
  - The concrete slab crossing is better aligned with the flow regime, safer in high-flow events, and easier to maintain.

Enviro-Tech Consultants Pty. Ltd.

5 References

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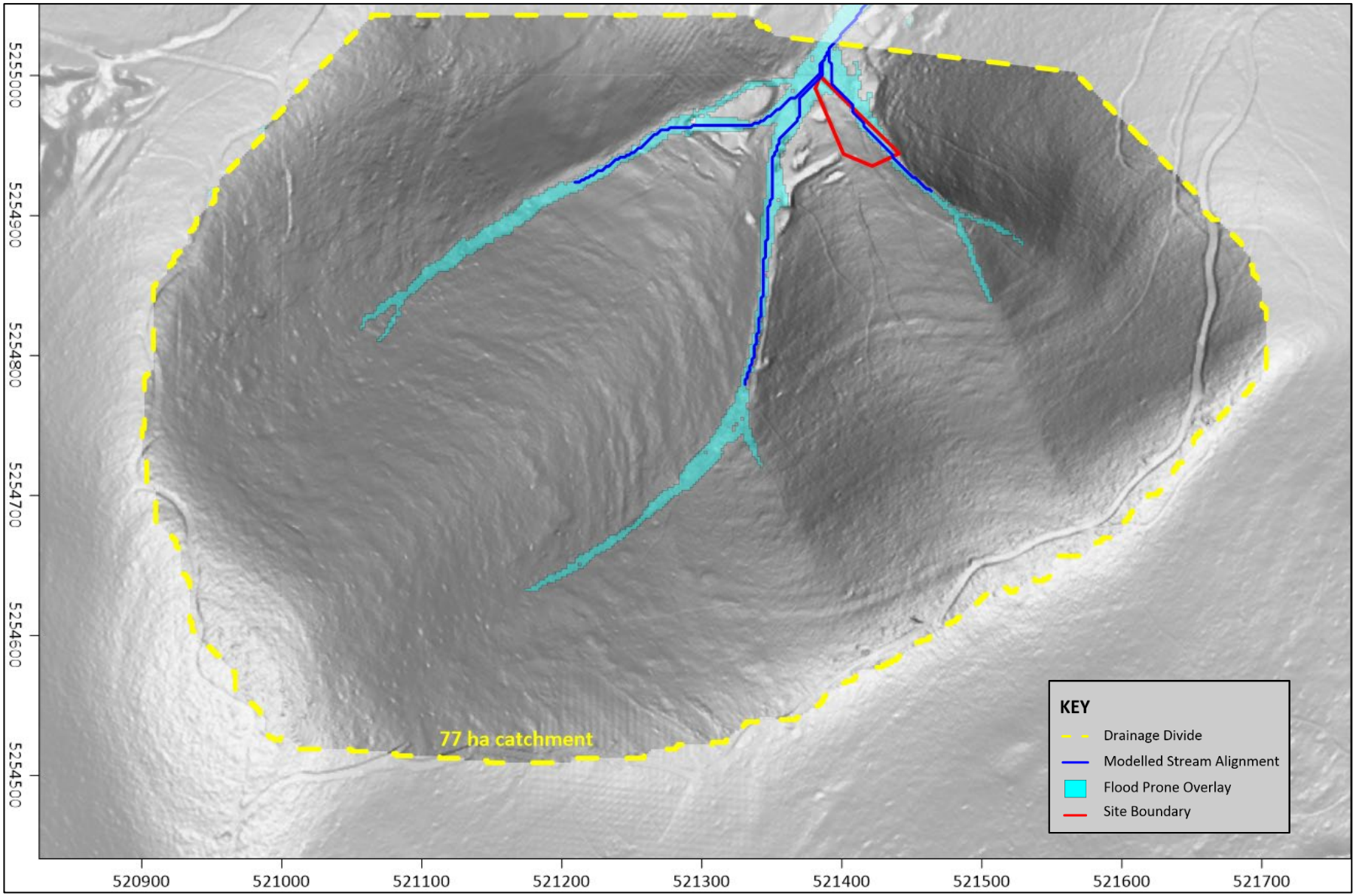
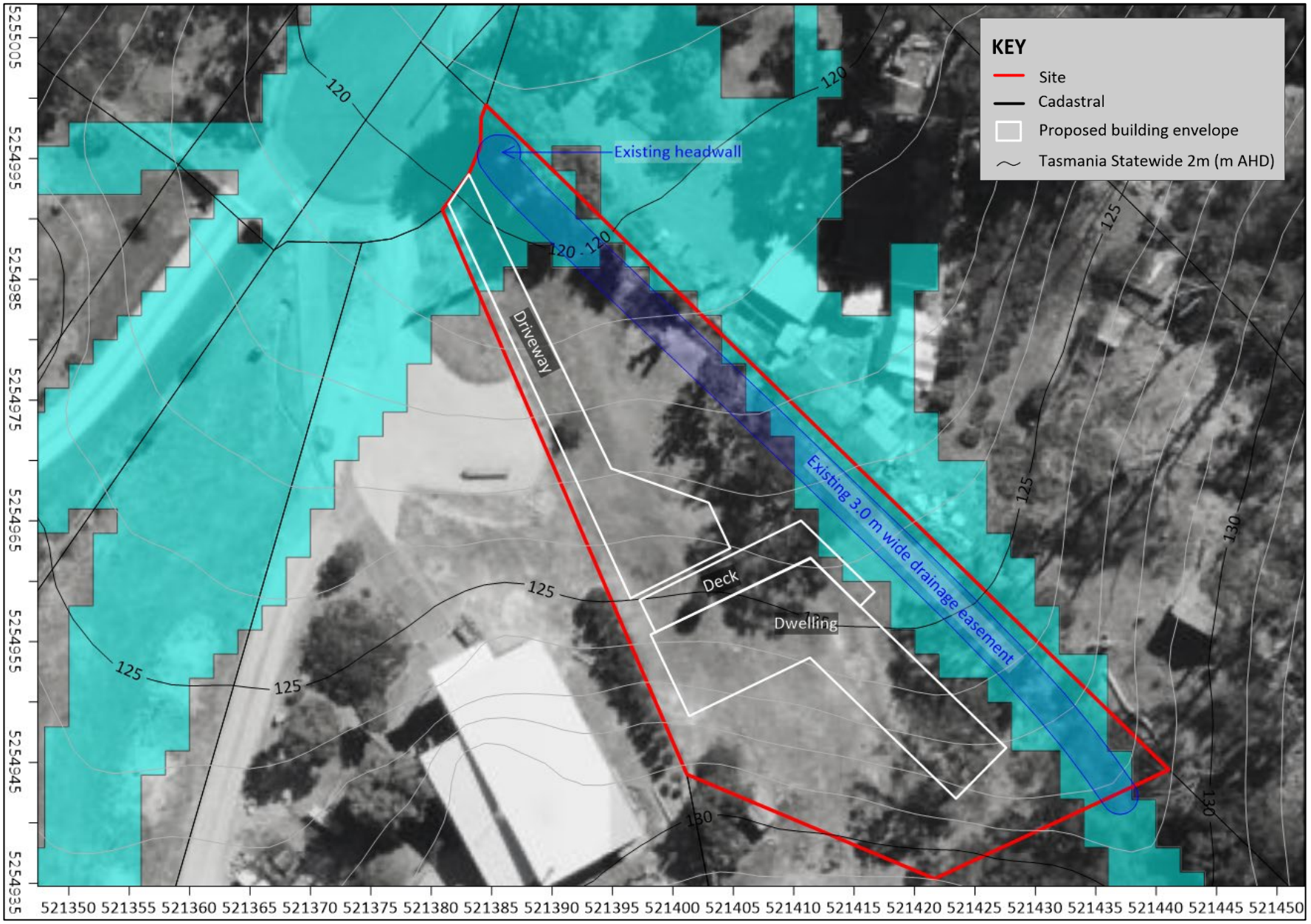
Attachment 1 Mapping

Map 1



Map 1 Site regional Hillshade setting with Local Surfer Watershed Model

Map 2

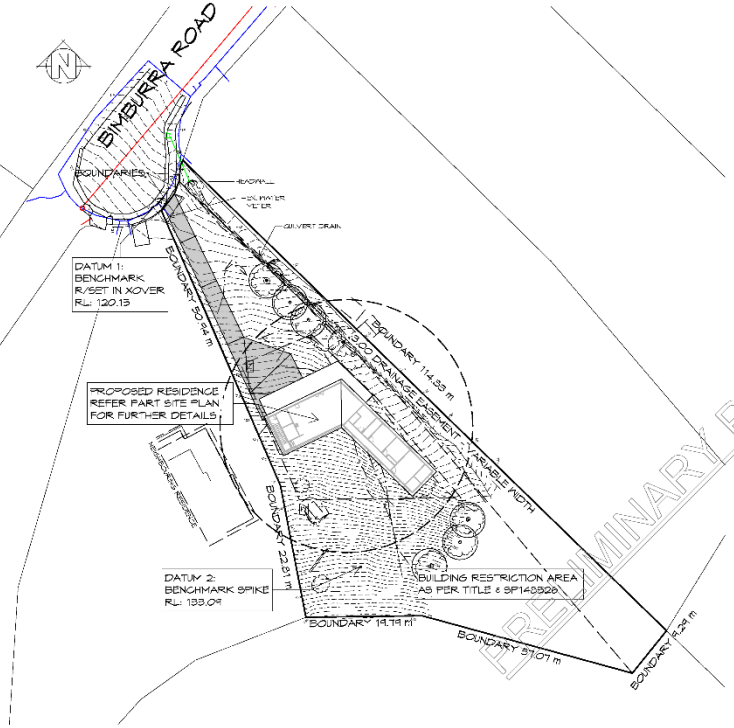


Map 2 1% AEP Floodwater hazard overlay prepared by the local government authority and cross section

Attachment 2 Preliminary Design Concept Plans

SURVEYORS GENERAL NOTES:

1. THIS PLAN HAS BEEN PREPARED BY SURVEY PLUS FROM A COMBINATION OF EXISTING RECORDS AND FIELD SURVEY FOR THE PURPOSES OF SHOWING THE PHYSICAL FEATURES OF THE LAND AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
2. TITLE BOUNDARIES SHOWN WERE NOT VERIFIED OR MARKED BY SURVEY PLUS AT THE TIME OF THIS SURVEY.
3. SERVICES SHOWN ON THIS PLAN WERE LOCATED WHERE POSSIBLE BY FIELD SURVEY. THEY ARE NOT A COMPLETE PICTURE OF SERVICES ON SITE. ALL SERVICE LOCATIONS ARE TO BE VERIFIED BEFORE COMMENCEMENT OF ANY WORK ON SITE, IN PARTICULAR THOSE SERVICES NOT PREVIOUSLY LOCATED THROUGH FIELD SURVEY.
4. SURVEY PLUS CAN NOT ACCEPT LIABILITY WHATSOEVER FOR LOSS OR DAMAGE CAUSED TO ANY UNDERGROUND SERVICE WHETHER SHOWN BY OUR SURVEY OR NOT.
5. THIS NOTE IS AN INTEGRAL PART OF THIS PLAN/DATA. REPRODUCTION OF THIS PLAN OR ANY PART OF IT WITHOUT THIS NOTE BEING INCLUDED IN FULL WILL RENDER THE INFORMATION SHOWN ON SUCH A REPRODUCTION INVALID AND NOT SUITABLE FOR USE WITHOUT PRIOR AUTHORITY OF SURVEY PLUS.
6. HORIZONTAL DATUM IS MGA (GDA94).
7. VERTICAL DATUM IS AHD.
8. CONTOUR INTERVAL IS 0.2 METRE, INDEX IS 1.0 METRE.
9. SURVEY BY ROBOTIC TOTAL STATION AND GPS.
10. DUE TO THE AGE OF TITLE SURVEY IF ANY CONSTRUCTION WORKS ARE TO BE UNDERTAKEN ON OR NEAR THE TITLE BOUNDARY OR PRESCRIBED SETBACKS A RE-MARK SURVEY WILL BE REQUIRED.
11. IMPORTED DATA SHOWN ON THIS PLAN WAS OBTAINED FOR PUBLIC AVAILABLE DATA FROM VARIOUS GOVERNMENT AUTHORITIES. THIS INFORMATION IS PROVIDED FOR GUIDANCE ONLY. THE ACCURACY OF ANY IMPORTED DATA IS PER THE ACCURACY QUOTED BY THE SOURCE AND IS IN NO WAY GUARANTEED BY SURVEY PLUS. USERS MUST NOT RELY ON THIS DATA FOR ON-GROUND LOCATION OF BOUNDARIES AND/OR SERVICES.
    LIST DATA IMPORT
    - TasWater-SewerLateralLine
    - TasWater-SewerMain
    - TasWater-SewerMaintenanceHole
    - TasWater-SewerPressurisedMain
    - TasWater-WaterHydrant
    - TasWater-WaterLateralLine
    - TasWater-WaterMain
    - CadastralParcel-OwnerInformation
12. BOUNDARIES ARE COMPILED ONLY FROM SP148528 AND RELEVANT SURVEY INFORMATION OBTAINED FROM LAND TITLES OFFICE AND ARE APPROXIMATE AND SUBJECT TO SURVEY.
13. ALL WINDOWS WERE NOT ABLE TO BE LOCATED DUE TO OBSTRUCTION OF LINE OF SIGHT FROM TOTAL STATION.
    WINDOW LOCATIONS ARE APPROXIMATE ONLY DUE TO BEING UNABLE TO BE PERPENDICULAR TO WINDOWS WHEN LOCATING WITH TOTAL STATION.
14. 3D DATA TURNED OFF IN LAYER CONTROL.
    - 3D TIN
    - MAJOR CONTOUR 3D
    - MINOR CONTOUR 3D



SITE PLAN
1 : 500

GENERAL NOTES

- CHECK & VERIFY ALL DIMENSIONS & LEVELS ON SITE
- WRITTEN DIMENSIONS TO TAKE PREFERENCE OVER SCALED
- ALL WORK TO BE STRICTLY IN ACCORDANCE WITH NCC 2022, ALL S.A.A. CODES & LOCAL AUTHORITY BY-LAWS
- ALL DIMENSIONS INDICATED ARE FRAME TO FRAME AND DO NOT ALLOW FOR WALL LININGS
- CONFIRM ALL FLOOR AREAS
- ALL PLUMBING WORKS TO BE STRICTLY IN ACCORDANCE WITH A.S. 3500, NCC 2022 & APPROVED BY COUNCIL INSPECTOR.
- BUILDER/PLUMBER TO ENSURE ADEQUATE FALL TO SITE CONNECTION POINTS IN ACCORDANCE WITH A.S. 3500 FOR STORMWATER AND SEWER BEFORE CONSTRUCTION COMMENCES
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE ENGINEER'S STRUCTURAL DRAWINGS
- ALL WINDOWS AND GLAZING TO COMPLY WITH A.S. 1288 & A.S. 2047
- ALL SET OUT OF BUILDINGS & STRUCTURES TO BE CARRIED OUT BY A REGISTERED LAND SURVEYOR AND CHECKED PRIOR TO CONSTRUCTION
- IF CONSTRUCTION OF THE DESIGN IN THIS SET OF DRAWINGS DIFFER FROM THE DESIGN AND DETAIL IN THESE AND ANY ASSOCIATED DOCUMENTS BUILDER AND OWNER ARE TO NOTIFY DESIGNER
- BUILDER'S RESPONSIBILITY TO COMPLY WITH ALL PLANNING CONDITIONS
- BUILDER TO HAVE STAMPED BUILDING APPROVAL DRAWINGS AND PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION
- CONSTRUCTION TO COMPLY WITH AS 3959, READ IN CONJUNCTION WITH BUSHFIRE ATTACK LEVEL (BAL) ASSESSMENT REPORT.
- DRAWINGS ARE REQUIRED TO BE VIEWED OR PRINTED IN COLOUR.

THIS PROJECT HAS BEEN DETERMINED TO HAVE A BUSHFIRE ATTACK LEVEL (BAL) OF - ??
REFER TO ASSESSMENT FOR FURTHER DETAILS.
ALL CONSTRUCTION MUST COMPLY WITH AS3959.

NOTE: DIMENSIONED BOUNDARY OFFSETS TO THE PROPOSED BUILDING ARE TO THE EXTERNAL CLADDING U.N.O.

DRIVEWAY GRADIENT
MAXIMUM GRADIENT 1:4 (25%)
TO AS 2890

CAR PARKING GRADIENT
PARALLEL TO PARKING ANGLE 1:20 (5%)
CROSSFALL 1:16 (6.25%)

CONCEPT
NOTE: DO NOT SCALE OFF DRAWINGS

PRELIMINARY PRINT

Prime Design
10 Goodman Court, Invermay Tasmania 7248,
p(h)- 03 6332 3790
Shop 9, 105-117 Main Road, Moonah Hobart 7009
p(h)- 03 6228 4575
info@primedesigntas.com.au primedesigntas.com.au

Project:
PROPOSED RESIDENCE
63 BIMBURRA ROAD
GLENORCHY

Client name:
C.M. & C. WILKINSON

Drawing:
SITE PLAN

Drafted by:	Approved by:
M.R.	Approver
Date:	Scale:
05.07.2024	1 : 500@A2
Project/Drawing no:	Revision:
PDH24023 -02	02

bdaa BUILDING DESIGNERS ASSOCIATION OF TASMANIA
Accredited building practitioner: Frank Geskus -No CC246A

Attachment 3 Planning and Building Regulations

C12.0 Flood-Prone Area Hazard Code

Code Overlay – The LIST Mapping

The Site is located within the Glenorchy Council mapped 1% Annual Exceedance Probability (AEP) inland flooding hazard area (Map 2). The mapping has triggered Flood Prone Areas Hazard Code, meaning that a more detailed investigation is required to further assess risk associated with the proposed development.

C12.6 Development Standards for Buildings and Works

C12.6.1 Buildings and works within a flood-prone hazard area

C12.6.1 Objective

That:

(a) building and works within a flood-prone hazard area can achieve and maintain a tolerable risk from flood; and
(b) buildings and works do not increase the risk from flood to adjacent land and public infrastructure.

C12.6.1 A1 Acceptable Solutions

As there are no acceptable solutions to C12.6.1 (A1), the proposed development is to be assessed against performance criteria.

C12.6.1 P1 Performance Criteria

The proposed development needs to be assessed against the following performance criteria:

- C12.6.1 P1.1 and
- C12.6.1 P1.2.

Assessment Against Development Standards (Clause C12.6.1 – Buildings and Works)

As the proposed driveway is located within a flood-prone hazard area, and there are no Acceptable Solutions under Clause C12.6.1 – Buildings and Works within a Flood-Prone Hazard Area, the Performance Criteria P1.1 and P1.2 must be addressed.

Attachment 4 Site Overland Flow Analysis

Flooding Constraints

The following are inferred:

- A Manning coefficient of 0.040 is estimated.
- Assumption there is a conservation of channel flow rates before and after development.

Flood Modelling

Models are used to estimate floodwater flow inundation levels based on a surface roughness of 0.040.

Pre-Build

The Site is located within a broader 77-hectare catchment, contributing overland flow from the south and southwest (Map 1). These upstream areas direct surface water toward the lower northwest boundary of the Site via shallow natural drainage lines. The main convergence of these flow paths occurs near the driveway crossover.

This southern inflow area forms the focus of the hydrological modelling presented in this assessment. A cross-section was taken perpendicular to the flow path at the proposed driveway location to quantify pre-development flood behaviour. The modelling scenario assumed a 1% AEP flow of 3.0 m^3/s, with a channel slope of 9.8%, average flow velocity of 1.5 m/s, and Manning's n = 0.040 to represent clean soil or compacted surface roughness.

This cross-sectional analysis (see Figure 1, Section A – Existing Floodwaters) confirmed a shallow, broad flow path traversing the Site at the driveway entrance. Flow depths were found to be generally less than 200 mm, with no obstructions or modifications to natural flow at this location under current conditions.

The existing 3.0 m wide drainage easement that crosses the Site from southeast to northwest was not modelled, as it does not interact with habitable or trafficable components of the Site. Flow through this corridor is captured by an existing headwall and culvert at the Bimburra Road frontage. The channel discharges lawfully to council infrastructure and represents a contained flood path under existing conditions.

Proposed Development

The proposed development comprises a double-storey dwelling and an associated concrete driveway. The dwelling is located upslope of the mapped flood-prone area, with its finished floor level (FFL) situated well above the inferred inundation zone. While the deck structure extends into the mapped flood extent, it is elevated and open beneath, allowing floodwaters to pass through unobstructed.

The portion of the proposed driveway located within the flood overlay occupies only a small part of the overall cross-sectional flow area. This section is relatively narrow, and the transition from natural soil to the smooth concrete surface is expected to have minimal impact on flow dynamics. Although a slight increase in velocity may result from the hardened surface, the change is considered marginal and unlikely to significantly affect floodwater behaviour.

Based on the predicted flow depth (~0.2 m) and average velocity (~1.5 m/s), the flood hazard rating affecting the driveway is classified as H1 – generally safe for people, vehicles, and buildings as shown in Figure 2 Flood Hazard Curve (Ball, et al., 2019).

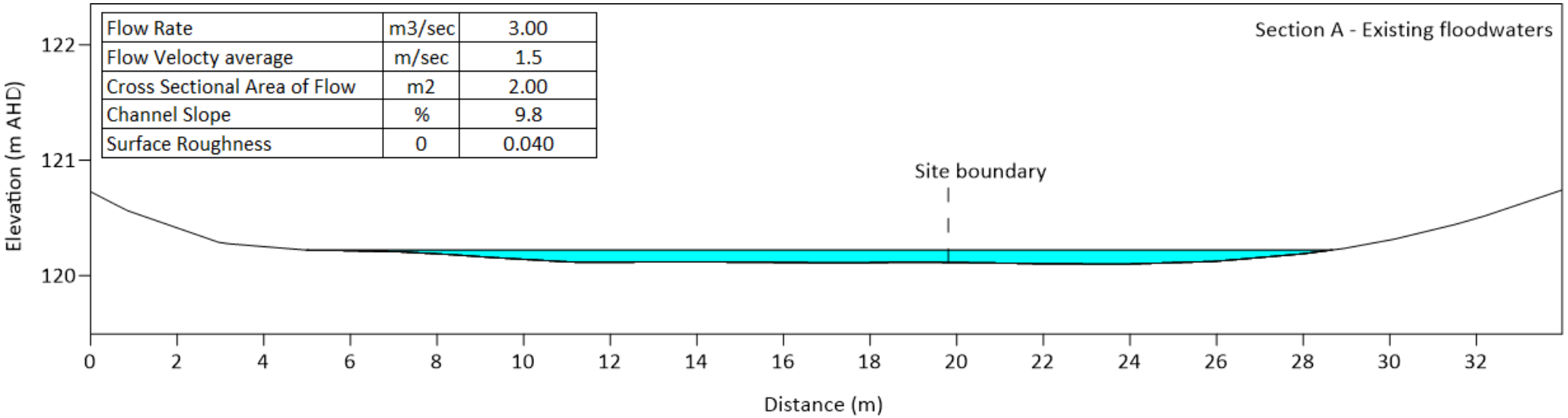


Figure 1 AEP Site Stormwater Flow Analysis – Cross Section A Within the proposed driveway footprint – Drawing Is to Scale and For Conceptual Modelling Purposes Only

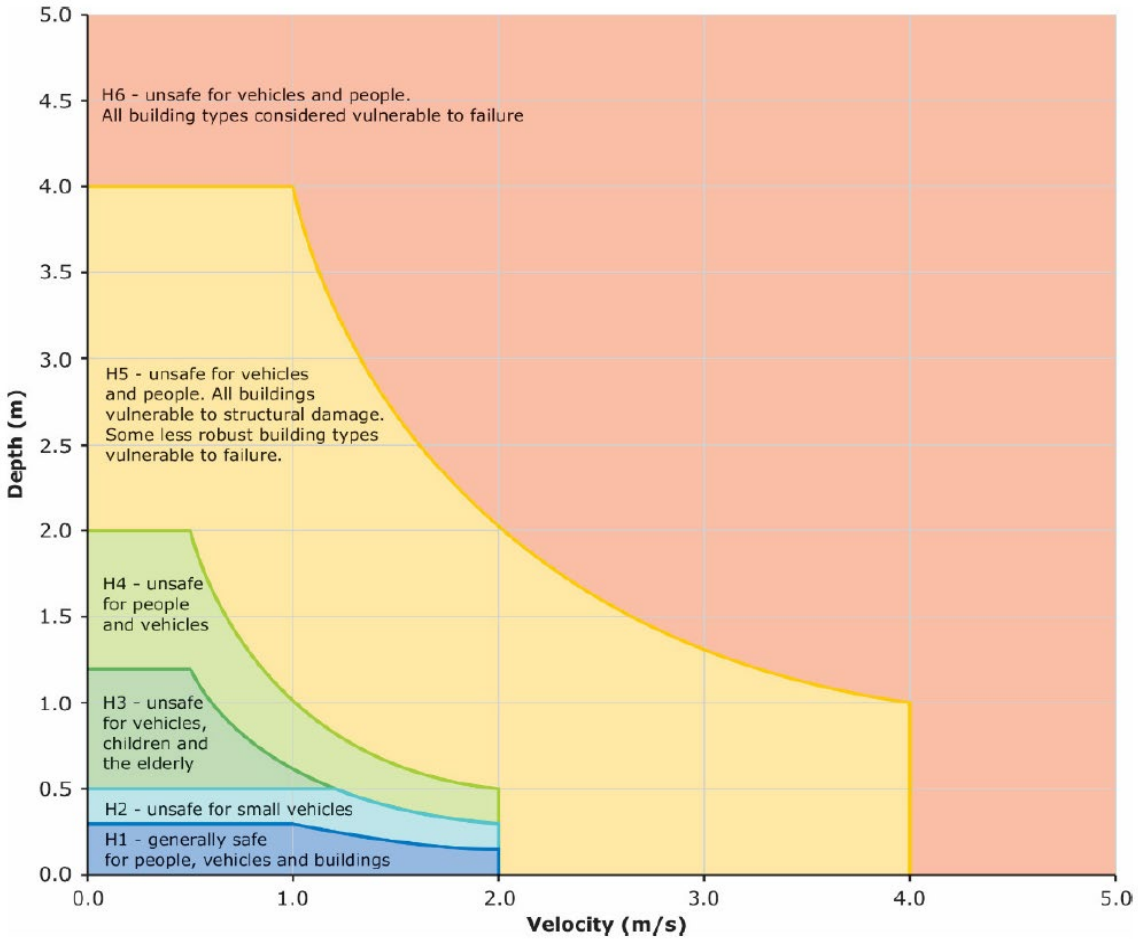


Figure 2 Flood Hazard Curve (Ball, et al., 2019)

Attachment 5 Qualitative Terminology

almost certain	Is expected to occur in most circumstances; and/or there is a high level of recorded incidents; and/or strong anecdotal evidence; and/or a strong likelihood the event will recur; and/ or great opportunity, reason, or means to occur; may occur once every year or more
Likely	Will probably occur in most circumstances; and/or regular recorded incidents and strong anecdotal evidence; and/or considerable opportunity, reason or means to occur; may occur once every five years
Possible	May occur at some time; and/or few, infrequent or randomly recorded incidents or little anecdotal evidence; and/or very few incidents in associated or comparable organisations, facilities or communities; and/or some opportunity, reason or means to occur; may occur once every 20 years
Unlikely	Is not expected to occur; and/or no recorded incidents or anecdotal evidence; and/or no recent incidents in associated organisations, facilities or communities; and/or little opportunity, reason or means to occur; may occur once every 100 years
Rare	May occur only in exceptional circumstances; may occur once every 500 or more years

Source: Commonwealth of Australia, 2004: Emergency Management Australia – Emergency Risk Management Applications Guide Manual 5

Consequence Rating	***Public Safety***	***Local growth and economy***	***Community and Lifestyle***	***Environment & sustainability***	***Public administration***
Catastrophic	Large numbers of serious injuries or loss of lives	Local decline leading to business failure, loss of employment, local hardship	Local area seen as very unattractive, significant decline, and unable to support community	Major widespread loss of environmental amenity and progressive irrecoverable environmental damage	Public Administration would fail and cease to be effective
Major	Isolated instances of serious injuries or loss of lives	Local stagnation such that businesses unable to thrive and imbalance between employment and local population growth	Severe and widespread decline in services and quality of life within community	Severe loss of environmental amenity and a danger of continuing environmental damage	Public administration would struggle to remain effective and would be perceived as being in danger of failing completely
Moderate	Small number of injuries	Significant general reduction in economic performance relative to current forecasts	General appreciable decline in services	Isolated significant instances of environmental damage that might be reversed with intensive efforts	Public administration would be under significant pressure on numerous fronts
Minor	Serious near misses or minor injuries	Individually significant but isolated areas of reduction in economic performance relative to current forecasts	Isolated but noticeable examples of decline in services	Minor instances of environmental damage that could be reversed	Isolated instances of Public administration being under significant pressure
Insignificant	Appearance of threat by no actual harm	Minor shortfall relative to current forecasts	There would be minor areas in which the region was unable to maintain is current services	No environmental damage	There would be some minor instances of public administration being under more than usual stress but it could be managed

Likelihood (L)	**Consequences (C)**				
	Insignificant	**Minor**	**Moderate**	**Major**	**Catastrophic**
Almost certain	MEDIUM	medium	high	extreme	extreme
Likely	low	medium	high	high	extreme
Possible	low	medium	medium	high	high
Unlikely	low	low	medium	medium	medium
Rare	low	low	low	low	medium

Adapted from DCC 2006, 40.

Attachment 6 Tasmanian Planning Scheme – Flood Prone Hazard Areas

Building and Works

Objective ,That:

(a) building and works within a flood-prone hazard area can achieve and maintain a tolerable risk from flood; and

(b) buildings and works do not increase the risk from flood to adjacent land and public infrastructure.

C12.6.1 P1.1 Buildings and works within a flood-prone hazard area – risk assessment

Performance Criteria C12.6.1 P1.1 Buildings and works within a flood-prone hazard area must achieve and maintain a tolerable risk from a flood, having regard to:	Relevance	Management Options	Likelihood	Consequence	Risk	Further Assessment Required
(a) the type, form, scale and intended duration of the development;	The type, form, and scale of the development are considered minimal in terms of flood risk. The habitable floor level is situated outside the 1% AEP flood-prone area, and minor works (driveway, open deck) are designed to maintain overland flow continuity.		Unlikely	Minor	Low	No
(b) whether any increase in the level of risk from flood requires any specific hazard reduction or protection measures;	Modelling confirms that flood risk is not increased on or off site. No hazard reduction or structural mitigation measures are required, as the development allows for the free passage of overland flow.		Unlikely	Minor	Low	No
(c) any advice from a State authority, regulated entity or a council; and						
(d) the advice contained in a flood hazard report.						

C12.6.1 P1.2 Buildings and works within a flood-prone hazard area - flood hazard reporting

Performance Criteria C12.6.1 P1.2 A flood hazard report also demonstrates that the building and works:	Relevance	Management Options	Likelihood	Consequence	Risk	Further Assessment Required
(a) do not cause or contribute to flood on the Site, on adjacent land or public infrastructure; and	Based on the flood modelling, the proposed driveway and dwelling will not result in obstruction, redirection, or increased risk to adjacent land, infrastructure, or flow paths.	The development avoids interference with the mapped drainage easement. Surface water continues westward without diversion. Driveway and deck structures are designed to remain passable or permeable under shallow flow, ensuring no upstream or downstream impact.	Unlikely	Minor	Low	No
(b) can achieve and maintain a tolerable risk from a 1% annual exceedance probability flood event for the intended life of the use without requiring any flood protection measures.	The proposed dwelling sits outside the flood-prone area, with floor levels above the 1% AEP extent. No flood protection is required to maintain tolerable risk.	The habitable floor is above the 1% AEP flood extent. The deck and driveway are non-habitable and flood-compatible, allowing flow without requiring barriers or protection.	Unlikely	Minor	Low	No

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: Prime Design

Owner /Agent

Address

Suburb/postcode

Form **55**

Qualified person details:

Qualified person:

Address:

Licence No:

Qualifications and Insurance details:

Speciality area of expertise:

Details of work: Riverine Inundation Assessment

Address: 63 Bimburra Road

Glenorchy 7010

Lot No: 1

Certificate of title No: 237846/1

The assessable item related to this certificate: Riverine (flood prone areas) inundation hazard assessment

(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: Geological

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

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

- (•) building work, plumbing work or plumbing installation or demolition work

OR

- ( ) a building, temporary structure or plumbing installation

In issuing this certificate the following matters are relevant –

Documents:	Enviro-Tech Consultants Pty. Ltd. 2025. Flood Hazard Assessment Report for a Proposed Dwelling, 63 Bimburra Road - Glenorchy. Unpublished report for Prime Design by Enviro-Tech Consultants Pty. Ltd., 02/07/2025.
Relevant calculations:	
References:	- Director's Determination - Riverine Inundation Hazard Areas - Tasmanian Planning Scheme – State Planning Provisions - Flood-Prone Areas Hazard Code - Part 5 (Work in Hazardous Areas) of the Building Regulations 2016; Division 2 – Riverine Inundation

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

- An assessment of:
  - Defined Site floodwater levels or designated floodwater levels
  - 1% AEP floodwater hazards based on building design or 2100 scenarios

Scope and/or Limitations

Impact from changes to Site levels, structures or water flow obstructions on the Site (beyond what is detailed within Site proposal documents) or on neighboring properties are outside of the scope of this assessment.

I certify the matters described in this certificate.

Qualified person:

enviro•tech
CONSULTANTS
Geotechnical & Environmental Services

GEOTECHNICAL SITE INVESTIGATION
AND
LANDSLIDE RISK ASSESSMENT

63 BIMBURRA ROAD - GLENORCHY

PROPOSED DWELLING

Client: Prime Design

Certificate of Title: 237846/1

Investigation Date: 02/07/2025

Refer to this Report As

Enviro-Tech Consultants Pty. Ltd. 2025. Flood-Prone Areas Hazard Assessment Report for a Proposed Residence, 63 Bimburra Road, Glenorchy. Unpublished report for Prime Design by Enviro-Tech Consultants Pty. Ltd., 28/07/2025.

Report Distribution

This report has been prepared by Enviro-Tech Consultants Pty. Ltd. (Envirotech) for the use by parties involved in the proposed development of the property named above.

Permission is hereby given by Envirotech and the client, for this report to be copied and distributed to interested parties, but only if it is reproduced in colour, and only distributed in full. No responsibility is otherwise taken for the contents.

Limitations of this report

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

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

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

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

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

Investigation Summary

Site Classification

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

CLASS S is based on soil profiles around the proposed building envelope being classified as slightly reactive to soil moisture variation, with test locations potentially subject to surface movement ranging from 0 to 20 mm. Class S also applies if clean SAND, GRAVEL or crushed rock is used as fill. Use of 1m thickness of CLAY fill sourcing from the cut has the potential to result in a CLASS H1 soil profile.

Foundations

It is recommended that concentrated loads including but not limited to slab edge or internal beam or strip footings supported directly on piers or pads which are founded in the Distinctly Weathered SILTSTONE Bedrock at 0.6 to 0.8 m depth or greater. Allowable bearing capacity exceeds 400 kPa on the very hard siltstone bedrock.

Wind Load Classification

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

Region:	A
Terrain category:	TC2.5
Shielding Classification:	PS
Topographic Classification:	T0
Wind Classification:	N1
Design Wind Gust Speed ($V_{h,u}$) m/s	34

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

Site Investigation

The Site investigation is summarised in Table 1.

Table 1 Summary of Site Investigation

Client	**Prime Design**
Project Address	63 Bimburra Road - Glenorchy
Council	Glenorchy
Planning Scheme	Tasmanian Planning Scheme
Inundation, Erosion or Landslip Overlays	Flood-prone Hazard Areas Code; Low Landslip Hazard Code; Waterway.
Proposed	Dwelling
Investigation	Fieldwork was carried out by an Engineering Geologist on the 2/7/2025
Site Topography	The building site has a strong slope of approximately 23% (13°) to the north
Site Drainage	The site receives overland flow runoff directly from the south.
Soil Profiling	Three investigation holes were direct push sampled from surface level around the proposed dwelling (Appendix A):
Investigation Depths	The target excavation depth was estimated at 2.3 m. Borehole BH01 was direct push sampled to 0.7 m, borehole BH02 was direct push sampled to 0.9 m, and borehole BH03 was direct push sampled to 0.8 m (all ending in SILTSTONE). Borehole logs and photos are presented in Appendix B & C.
Soil moisture and groundwater	All recovered soil at the site ranged from dry to slightly moist. Groundwater was not encountered.
Geology	According to 1:25,000 Mineral Resources Tasmania geological mapping (accessed through The LIST), the geology comprises of: Permian Sparsely to richly fossiliferous marine siltstone, mudstone, sandstone and impure limestone with lonestones (correlate of Bundella Formation).

Soil Profiles

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

Table 2 Soil Summary Table

#	Layer	Details	USCS	BH01	BH02	BH03
1	Silty SAND	SOIL & COBBLES: Silty SAND, very dark brown, well sorted, fine to medium grained sand, trace roots, trace clay, 5 % roots; sub-rounded gravel; 10% SILTSTONE cobbles, MD	SM	0-0.2 DS@0.1	0-0.1	0-0.2
2	Clayey Gravelly SILT	SOIL & COBBLES: Clayey Gravelly SILT trace sand, very pale brown, well sorted, low plasticity, medium to coarse grained sand; sub-rounded gravel; 15% SILTSTONE cobbles, St-VSt	ML	0.2-0.6 DS@0.4	0.1-0.5	0.2-0.5
3	CLAY	SOIL & COBBLES: CLAY, pale brown, well sorted, high plasticity, fine to medium grained sand, with gravel, trace roots, 5 % roots; sub-angular gravel; 15% SILTSTONE cobbles, St-VSt	CH		0.5-0.7 DS@0.6	0.5-0.7
4	SILTSTONE	Extremely Weathered SILTSTONE Bedrock			0.7-0.8	
5	SILTSTONE	Distinctly Weathered SILTSTONE Bedrock, VH (rock strenght inferred from BH01,0.6)		0.6-0.7 PL@0.6 REF	0.8-0.9 REF	0.7-0.8 REF

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

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

Discussion

Landslip Overlay Overview

The proposed building and works fall within the LIST Landslip Hazard Overlay (low hazard band) as presented in Appendix 1. Landslide hazard reporting requirements are presented in Table 3.

Table 3 Landslip Hazard Reporting Requirements Framework

Council	Glenorchy
Planning Scheme	Tasmanian Planning Scheme
Planning Scheme Code	C15.0 Landslip Hazard Code
Landslip Hazard Band	Low
Landslip Planning Map Component	Debris flow susceptibility Mountain runout 22-12 Q4a
Proposed Development Is Exempt From Planning	No
Significant Works	Yes*
Critical Use, Vulnerable Use or Hazardous Use	No
Subdivision that creates a new road or extends an existing road in a medium landslip overlay	No
Development Code to Be Addressed	C15.6.1 Building and works within a landslip hazard area
Additional Information Required for Footing System	NO
Planning Report Requirements	Landslip Hazard Report with an accompanying Geotechnical Site Investigation report prepared using the methodology of the Practice Note Guidelines for Landslide Risk Management 2007 by a geotechnical practitioner
Modelling Timeframe	Building design life
Directors Determination Reporting Requirements	Preliminary to any Building Works
Certificate of Likely Compliance	Preliminary to any Building Works
Site Classification Requirements	Class P unless otherwise determined in a Site Classification report
Reporting Guideline Requirement	Australian Geomechanics Society - Landslide Risk Management Guidelines

*An assumption is made, that an assessment is to be made based on the 2016 Building Act, regardless of whether significant works is proposed in the low overlay or not, and therefore the proposal it is exempt from planning

Planning Exemption

The Site is within a low landslip hazard band and the proposed development involves building work that requires authorisation under the Building Act 2016. In accordance with Clause C15.4.1(d) of the Landslip Hazard Code, such development is exempt from this code.

Notwithstanding the exemption, a site-specific geotechnical assessment has been undertaken by a qualified practitioner in accordance with the Practice Note Guidelines for Landslide Risk Management (2007), confirming that the proposed works represent a tolerable risk to life and property. This satisfies the relevant provisions under the Director's Determination and supports approval under the Building Act.

Directors Determination Objectives

As proposed works at the Site are considered significant works, the Directors Determination - Landslip Hazard Areas directly applies and therefore the building surveyor must ensure:

- that the proposed works considers the AS 2870 site classification, any further geotechnical site investigation (low) and any relevant landslip management plan; and
- that the proposed works can achieve and maintain a tolerable risk for the intended life of the building including significant work and the installations for the management and disposal of stormwater, sewage, water storage overflow or other wastewater, will not cause or contribute to landslip movement on the site or adjacent land; and
- that sufficient information has been provided in this report for the design of the footing system

Given the proposed development is in the low hazard overlay, an AS 2870 foundation classification report is the minimum requirement.

Proposed development

The proposed development comprises the construction of a substantial two-storey residential dwelling on sloping terrain within a mapped Low Landslide Hazard Area. The building has a total combined floor area of approximately 304 m², including a 180 m² upper floor and a 124 m² ground floor. The structure is to be partially embedded into the natural slope, requiring significant cut and fill earthworks for site preparation and level access.

Associated significant works include:

- Excavation exceeding 1.0 m in depth, particularly for footings, slab formation, and building into the slope;
- Filling in excess of 100 m³, using both reworked site-won material and imported fill;
- Installation of subsurface plumbing and drainage infrastructure, including stormwater, sewer, and service trenches;
- Modifications to surface and/or groundwater drainage, associated with regrading, hardstand areas, and retaining structures
- The construction of retaining elements and structural footings to support the dwelling and stabilise adjacent earthworks.

The proposed dwelling will be supported on engineered foundations and is expected to involve temporary and permanent changes to the slope profile to accommodate the building platform and associated infrastructure.

Investigation Objectives

Landslip Hazard Report with an accompanying Geotechnical Site Investigation report prepared using the methodology of the Practice Note Guidelines for Landslide Risk Management 2007 by a geotechnical practitioner.

Scope of Works

The Site has been investigated with remote sensing, a Site Walk over, soil coring and dynamic cone penetrometer (DCP) testing.

Topography

At the site scale, the property at 63 Bimbara Road occupies a north- to northwest-facing slope with surface elevations ranging from approximately 138 m AHD at the upper (southern) boundary to around

120 m AHD at the lower (northern) boundary, near the driveway entrance — giving a total elevation change across the Site of approximately 18 m.

The upper half of the Site (from ~138 m to ~130 m AHD) features moderate slopes, with gradients of approximately 15°–28°, based on 10 m contour intervals spaced ~64.7 m apart. The lower half of the Site, from the 130 m to 120 m contour, is more gently sloped, with gradient estimates reducing to approximately 11° (or ~19%), particularly in the area proposed for development.

The Site is traversed at its eastern margin by a shallow drainage depression, which becomes more defined offsite within the adjacent property at 61 Bimbara Road. There is no deeply incised gully within the development area, and the building envelope is located in the more gently sloping lower half of the Site.

At the regional scale, the Site forms part of a broader hillside system extending upslope beyond 220 m AHD. Hillshade modelling reveals multiple linear scars along ridgelines upslope of the Site, consistent with informal 4WD tracks that follow topographic highs. These features are interpreted to be associated with vehicular disturbance and surface erosion, and not natural drainage incisions. No evidence of tunnel erosion is observed; the patterns are more consistent with sheet or rill erosion resulting from water movement along disturbed ridge-top surfaces.

Overall, the Site occupies a mid- to lower-slope position on a broader hillside landform, with moderate gradients in the upper part and more subdued terrain within the lower development area.

Geology

At the site scale, the property is primarily underlain by the PLN geological unit, representing Permian-aged sedimentary rocks. This unit comprises a sequence of marine siltstone, mudstone, sandstone, impure limestone, and loamstones, often fossiliferous and associated with the Bundella Formation. These rocks are typically low to moderate in strength and can be moderately dispersive, especially when weathered or exposed to concentrated surface water flow. Rock outcrop is not expected within the development envelope but may occur in the upper parts of the slope or shallow subsurface.

At the northern end of the Site, near the driveway entrance, the geology transitions into QHAM, a unit of Quaternary-aged alluvium and marsh deposits associated with modern floodplain processes. These deposits are unconsolidated silts, clays, and organic-rich soils, and although limited in extent, they may have implications for drainage, erosion, and foundation behaviour within access areas.

Regionally and upslope of the Site, geological mapping shows the presence of the PFF unit (part of the Faulkner Group), comprising paralic, flaser-bedded and ripple cross-laminated micaceous sandstones and siltstones, including pebbly and granule sandstones, and occasional fossil-bearing intervals. This unit is not encountered at the Site but reflects the stratigraphic complexity of the surrounding terrain and is consistent with observed upslope landforms and drainage behaviour. Its more granular composition may influence localised permeability and groundwater movement in steeper terrain upslope of the property.

Subsurface Conditions

Three boreholes (BH01–BH03) confirm a shallow residual soil profile overlying weathered Permian siltstone bedrock, with refusal depths ranging from 0.6 to 0.9 m.

The soil profile includes:

- Silty SAND (SM): Fine to medium sand with trace clay, roots, and 10% cobbles (0.0–0.2 m)
- Clayey Gravelly SILT (ML): Low-plasticity silt with 15% cobbles (0.2–0.6 m)

- CLAY (CH): High-plasticity pale brown clay with sub-angular gravel and 15% cobbles (up to 0.7 m)
- Extremely to Distinctly Weathered SILTSTONE: Very high strength bedrock encountered between 0.6–0.9 m

The soils are well graded, cobbly, and show increasing stiffness with depth. Bedrock strength was classified as very high based on point load and refusal. No cavities or highly compressible materials were noted.

Dispersion Susceptibility

Laboratory testing indicates that the upper soil layers (Silty SAND and Clayey Gravelly SILT) are Class 2 dispersive, suggesting low to moderate susceptibility to erosion. Neither layer is severely dispersive, and no tunnel erosion features or dispersive horizons were observed in the field. While dispersion is not a critical risk, erosion controls are recommended to manage surface runoff, particularly where soils are left exposed during or after construction.

Geotechnical Properties

The soils exhibit favourable engineering properties for residential development:

- Reactivity: Soils are classified as Class S, indicating low potential for ground movement due to moisture variation.
- Bearing Capacity: Inferred from DCP testing, soils exhibit moderate to high bearing capacity values in the range of 130–280 kPa, suitable for shallow footings.
- Density and Consistency: Soils are medium dense to dense, and classified as stiff to very stiff in clayey layers. No soft or loose horizons were identified.
- Cobbles and Gravel: Angular to sub-rounded siltstone cobbles (up to 15%) are present throughout the profile, increasing the strength and heterogeneity of the soil mass.
- Bedrock: Refusal was reached on very high strength siltstone, providing a stable and shallow founding horizon across the Site.

Landslide Susceptibility

The Site is mapped within a Landslide Hazard Area – Low, and risk has been assessed in accordance with the Director's Determination and AGS 2007 guidelines.

Key risk factors include:

- Topography: The Site lies on a north- to northwest-facing slope, with gradients of 15°–28° in the upper section, flattening to ~11° in the lower half, where development is proposed.
- Soil Strength: Field data (DCP and borehole refusal) confirm medium to high shear strength and no evidence of soft, compressible, or saturated soils.
- Shallow Bedrock: The presence of competent siltstone at 0.6–0.9 m depth provides a stable foundation layer.
- Dispersion: Soils are not severely dispersive; surface erosion may occur but tunnel or deep-seated erosion is not expected.
- Surface Disturbance: Hillshade modelling identifies 4WD tracks upslope, which have caused minor rill erosion along ridge lines but do not indicate active instability.

Based on all available data, the risk of landslide impacting the proposed development is considered low, and the Site is suitable for development with standard erosion and drainage controls.

Director's Determination – Landslip Hazard Areas v1.1 (2021)

Assurance that works will not cause or contribute to landslip

The proposed two-storey dwelling will be constructed on a north- to northwest-facing slope underlain by shallow Permian siltstone bedrock, encountered between 0.6 m and 0.9 m depth. The structure will be predominantly founded on bedrock, particularly at the uphill (southern) side of the building platform, where full bearing contact with very high strength siltstone will provide a stable footing condition.

The downhill (northern) portion of the dwelling is to be constructed over minor fill. It is recommended that this section be supported on piers founded through fill to bedrock, thereby ensuring uniform settlement performance and global stability. As such, the entire dwelling is effectively founded on competent rock.

While portions of the structure may retain minor amounts of soil along the upslope interface, this is not considered a geotechnical risk. The surrounding soils are medium dense to dense, with no evidence of low strength zones, perched water, or instability.

The proposed excavation, filling, and stormwater infrastructure have been designed not to contribute to slope instability or landslip on the Site or adjacent land. Surface soils are moderately dispersive (Class 2) but are of limited thickness and will be managed through appropriate drainage and erosion control measures. No tunnel erosion or gully incision is evident within the building area.

Assurance that the proposed work will maintain tolerable risk

The risk associated with the proposed development has been assessed as low and tolerable in accordance with AGS (2007) guidelines and the Director's Determination.

The presence of shallow, high-strength bedrock, combined with engineered foundations and drainage design, ensures the long-term stability of the Site. The geotechnical assessment concludes there is no evidence of deep-seated or shallow-seated instability, and the proposed works will not adversely affect slope performance on or beyond the Site.

Accordingly, the development satisfies the tolerable risk threshold under the guidelines and the Director's Determination.

Recommendations

Dispersive soils

Findings

The results presented in Appendix D indicate:

- Deeper soil Layers 2 and 3 comprises Emerson Class 2 category soils which are considered moderately dispersive

Site specific recommendations

- It is recommended that all strip footings within the proposed cuts are seated onto the bedrock to prevent migration of groundwater into filled areas.
- Surface water and groundwater is to be diverted around from the building footprint.

Plumbing

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

Refer to Table 4 to assess soil movement (Ys) around pipework for different depth ranges.

*Table 4 Millimetres soil movement (Ys) for determining plumbing requirements for various soil depths **

Building	Profiles	P*	E Ys >75	H2 Ys 60-75	H1 Ys 40-60	M Ys 20-40	S Ys 0-20	A Ys 0
Dwelling	BH01 BH02 BH03	No					0-0.7	0.7-3

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

Class A and S

When pipework service trench basses fall within Class A to S depth range as shown in Table 4, and all plumbing recommendations herein have been implemented, the drainage system does not require any additional protection and should be installed following the AS/NZS 3500 series standards.

Site Drainage

As part of the building design plan, drains are recommended upslope of earth retaining structures, soil cuts, filled areas and the proposed building Site to capture and divert Site stormwater flow.

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

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

Temporary Site Drainage

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

Rock Excitability

It is recommended that a large (~13 tone) excavator equipped with a rock breaker is required to effectively remove any bedrock.

Permanent Cut Batters – Soil and Rock

To ensure that cuts remain serviceable, it is recommended that unretained cuts in soil do not exceed 1V: 2H and unsupported baters in bedrock do not exceed 2V: 1H. Before cuts are approached by workers, cuts must be appropriately scaled to remove any loose soil and rock. The bedrock should not be increased beyond 2.0 m height relative to depth below natural level, without inspection by a suitably qualified person to ensure that these cuts are safe to work under.

Filling Works

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

Long-term erosion management

The following measures are generally recommended for maintaining long-term erosion stability of soil slopes:

- Slopes exceeding 1V: 4H and up to 1V: 3H will need to be effectively stabilised with mulch/topsoil mixes, drill/broadcast seeding, hydroseeding or soil binders.
- Slopes up to 1V:2Hcan be stabilised with straw mulching.
- Slopes exceeding 1V: 2H and up to 1V:1.5H may be effectively stabilised with hydromulching
- Slopes exceeding 1V:1.5H but no greater than 1V: 1H will generally require measures such as erosion control blankets.

Earth-Retaining Structures

Any excavations higher than 1.0m and exceeding the recommended batter angle should be supported with a retaining wall engineered that allows free drainage of the retained soil and rock.

Building Pad Preparation

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

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

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

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

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

Foundation Maintenance

Details on appropriate site and foundation maintenance practises from the CSIRO BTF 18 Foundation Maintenance and Footing Performance: A Homeowner's Guide are presented in Appendix F of this report along with Australian Geoguide (LR8) Hillside Construction Practice (Appendix G).

Notes About Your Assessment

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

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

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

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

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

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

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

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Appendix A Mapping

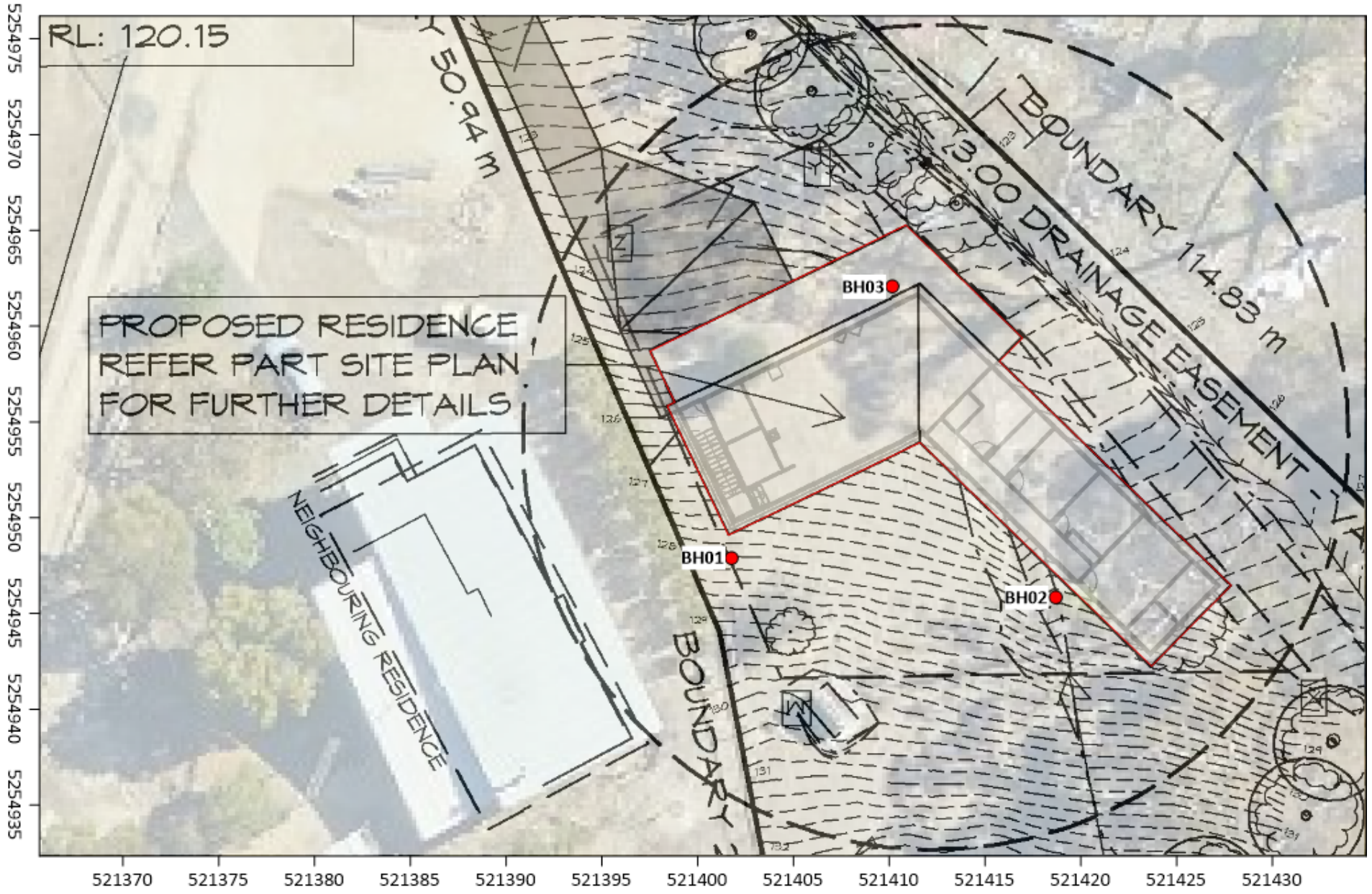

Figure 1 Site Borehole Locations

Appendix B Borehole Logs

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Positioning: GDA94 & mAHD

ASSESSMENT: Geotechnical Site Investigation
STRUCTURE: Dwelling
EASTING: 521402
NORTHING: 5254948
ACCURACY
HORIZ: 0.61m **VERT:** ~0.1m

Borehole : BH01
DATE TESTED: 2/07/2025
LOGGED BY: M. Scalisi
ELEVATION: 127.2

LOCATION: 63 Bimburra Road - Glenorchy
CLIENT: Prime Design
EQUIPMENT: AMS Powerprobe 9120 RAP
ESTIMATED GROUND m (m AHD):

DEPTH (m)	GRAPHIC	DESCRIPTION	DENSITY CONSIST. STRENGTH	LAYER	ELEVATION (mAHD)	MOISTURE Index	MOISTURE %	MOISTURE Well	SAMPLE	TEST	Cu (kPa)	UCS (kg/cm²)	(IS50 MPa) NSPT	NDCP/100mm
0.0	SM	SOIL & COBBLES: Silty SAND, very dark brown, well sorted, fine to medium grained sand, trace roots, trace clay, 5 % roots	medium dense	1	127.1	Slightly Moist			DS					3.0 5.0
0.5	ML	SOIL & COBBLES: Clayey Gravelly SILT trace sand, very pale brown, well sorted, low plasticity, medium to coarse grained sand	stiff to very stiff	2	126.9 126.7	Dry	10		DS					8.0 5.0 4.0 6.0
		Distinctly Weathered SILTSTONE Bedrock yellowish brown	very high	5					PL	IS 50			7.21 MPa	
					126.5									REF
		Direct Push Sampler Refusal on Distinctly Weathered SILTSTONE Bedrock End of borehole at 0.7m depth.												

GROUNDWATER: Not Encountered
TESTING:

PAGE 1 of 1

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Positioning: GDA94 & mAHD

ASSESSMENT: Geotechnical Site Investigation

STRUCTURE: Dwelling

EASTING: 521418.5 **NORTHING:** 5254946

ACCURACY **HORIZ:** 0.65m **VERT:** ~0.1m

Borehole : BH02

DATE TESTED: 2/07/2025

LOGGED BY: M. Scalisi

ELEVATION: 123.7

LOCATION: 63 Bimburra Road - Glenorchy

CLIENT: Prime Design

EQUIPMENT: AMS Powerprobe 9120 RAP

ESTIMATED GROUND m (m AHD):

DEPTH (m)	GRAPHIC	DESCRIPTION	DENSITY CONSIST. STRENGTH	LAYER	ELEVATION (mAHD)	MOISTURE Index	MOISTURE %	MOISTURE Well	SAMPLE	TEST	Cu (kPa)	UCS (kg/cm²)	(IS50 MPa) NSPT	NDCP/100mm
0.0	SM	SOIL & COBBLES: Silty SAND, very dark brown, well sorted, fine to medium grained sand, trace roots, trace clay, 5 % roots	medium dense	1		Slightly Moist								3.0
					123.6									2.9
	ML	SOIL & COBBLES: Clayey Gravelly SILT trace sand, very pale brown, well sorted, low plasticity, medium to coarse grained sand	stiff to very stiff	2										4.0
					123.4	Dry								5.0
														5.0
0.5	CH	SOIL & COBBLES: CLAY, pale brown, well sorted, high plasticity, fine to medium grained sand, with gravel, trace roots, 5 % roots	very stiff	3	123.2		15		DS					7.0
		Extremely Weathered SILTSTONE Bedrock light yellowish brown		4	123.0									7.0
		Distinctly Weathered SILTSTONE Bedrock yellowish brown		5										REF
					122.8									
		Direct Push Sampler Refusal on Distinctly Weathered SILTSTONE Bedrock												
		End of borehole at 0.9m depth.												

GROUNDWATER: Not Encountered

TESTING:

PAGE 1 of 1

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Positioning: GDA94 & mAHD

ASSESSMENT: Geotechnical Site Investigation

STRUCTURE: Dwelling

EASTING: 521410 **ACCURACY**

NORTHING: 5254962 **HORIZ:** 0.68m **VERT:** ~0.2m

Borehole : BH03

DATE TESTED: 2/07/2025

LOGGED BY: M. Scalisi

ELEVATION: 127.5

LOCATION: 63 Bimburra Road - Glenorchy

CLIENT: Prime Design

EQUIPMENT: AMS Powerprobe 9120 RAP

ESTIMATED GROUND m (m AHD):

DEPTH (m)	GRAPHIC	DESCRIPTION	DENSITY CONSIST. STRENGTH	LAYER	ELEVATION (mAHD)	MOISTURE Index	MOISTURE %	MOISTURE Well	SAMPLE	TEST	Cu (kPa)	UCS (kg/cm²)	(IS50 MPa) NSPT	NDCP/100mm
0.0	SM	SOIL & COBBLES: Silty SAND, very dark brown, well sorted, fine to medium grained sand, trace roots, trace clay, 5 % roots	medium dense	1	127.5	Slightly Moist								3.0
	ML	SOIL & COBBLES: Clayey Gravelly SILT trace sand, very pale brown, well sorted, low plasticity, medium to coarse grained sand	stiff to very stiff	2	127.3	Moist								4.0
0.5	CH	SOIL & COBBLES: CLAY, pale brown, well sorted, high plasticity, fine to medium grained sand, with gravel, trace roots, 5 % roots		3	127.1									2.9
		Distinctly Weathered SILTSTONE Bedrock yellowish brown		5	126.9	Slightly Moist								5.0
		Direct Push Sampler Refusal on Distinctly Weathered SILTSTONE Bedrock			126.7									4.0
		End of borehole at 0.8m depth.												4.0
														9.0
														REF

GROUNDWATER: Not Encountered

TESTING:

Appendix C Core Photographs

BH01

BH02

BH03

*** 1 metre core tray length**

Appendix D Geotechnical Testing

Soil Dispersion (Emerson aggregate test)

Select soil samples were tested for dispersion susceptibility using the Emerson Class number method according to AS1289.3.8.1. The results presented in Table 5 demonstrate that:

- Deeper soil Layers 2 and 3 comprises Emerson Class 2 category soils which are considered moderately dispersive

Table 5 Summary of the Emerson class results.

Layer	Soil	Depth	Sample ID	Emersion Class	Date Tested	Water	pH
2	Silty GRAVEL	0.4	BH01 0.4	Class 2	10/07/2025	DI 16°C	6.75
3	CLAY	0.6	BH02 0.6	Class 2	10/07/2025	DI 16°C	5.24

Rock Point Load Testing

Rock samples collected from the Project Area were tested using a digital rock point load tester which has been manufactured in accordance with AS 4133.4.1. The 'lump' sample method and calculation have been used in the tests.

A siltstone rock sample was collected from the proposed building pad within the Project Area. The siltstone inferred to have a very high rock strength based on interpretation of the point load testing results (Table 6).

Table 6 Point load index testing results.

	Units	BH01
Depth	m	0.600
Layer		5
Test	MPa (IS50)	7.208
Index		VH

Appendix E Geotechnical Interpretation

Footing Minimum Target Depths

Footing design for the proposed structures are to consider the depths of limiting layers at the base of potentially problematic soils. Where practical/allowable, thickened beams may be deepened through problematic soil layers according to engineering specifications (Table 7). Table 8 should be referred to where only 50kPa allowable bearing capacity is required.

Table 7 also presents a summary of the estimated soil depths and associated layers where less than 5mm of vertical soil movement can expected due to soil moisture fluctuations from normal seasonal wetting and drying cycles. Where 5mm tolerances are required, concentrated loads including but not limited to slab edge or internal beam or strip footings shall be supported directly on piers in accordance with minimum target layer depths presented in Table 7, with considerations given to required bearing capacities in accordance with Table 8.

Table 7 Soil characteristic surface movements and recommended footing minimum target depths

Footing design parameters	BH01	BH02	BH03
Ys Calculation Depth	0m^	0m^	0m^
Surface movement Ys (mm)	5	15	15
Soil reactivity class	S	S	S
Base of problem soil layer (m)*	-	-	-
Layer at base of problem soil*	-	-	-
Pier/Footing minimum target depth (m)#	>0.7^	>0.9^	>0.8^
Pier/footing minimum target layer#	5	5	5
Allowable bearing capacity at min target depth (kPa) #	110	400	400

- No problem layers encountered

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

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

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

Target soil layer depth where Ys values from normal wetting and drying cycles are estimated at less than 5mm vertical movement. >minimum bored pier depths (see bearing capacity table for bored pier design depths).

Soil and Rock Allowable Bearing Capacity & End Bearing Capacity

Soil allowable bearing capacity was calculated from correlations with DCP blow counts. A recommended safety factor of 3 is applied in accordance with AS2870. Where high clay and silt content is observed in the soil, soil allowable bearing capacity is determined from undrained shear strengths using field vane correlated DCP values. Interpretive bearing capacity values are presented in Table 8.

Table 8 Soil allowable bearing capacities and problematic ground conditions.

Depth below investigation surface (m)	Allowable Bearing Capacity (kPa)		
	BH01	BH02	BH03
0	**130***	**130***	**130***
0.1	**210**	**130**	**170**
0.2	**330**	**170**	**130**
0.3	**200**	**200**	**200**
0.4	**170**	**200**	**170**
0.5	**240**	**280**	**170**
0.6	**SILTSTONE**	**280**	**>400**
0.7	**REF**	**SILTSTONE**	**SILTSTONE**
0.8		**SILTSTONE**	

Correlations drawn from DCP and vane shear testing.

REF - Penetrometer Refusal

^ Footings to be founded through the FILL

*Soil layer expected at the base of problematic soil layers at test location (or at surface where problematic soils not encountered) to achieve 100 kPa allowable bearing capacity or greater.

Foundation Maintenance and Footing Performance:
A Homeowner's Guide

CSIRO

BTF 18
replaces
Information
Sheet 10/91

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

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

Soil Types

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

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

Causes of Movement

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

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

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

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

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

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

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

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

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

GENERAL DEFINITIONS OF SITE CLASSES

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

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

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

Unevenness of Movement

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

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

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

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

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

Effects of Uneven Soil Movement on Structures

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

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

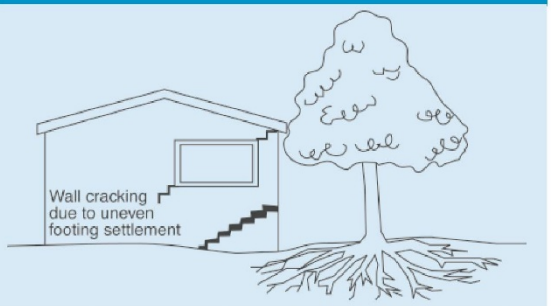
Isolated piers affected by erosion or saturation of foundations will eventually lose contact with the bearers they support and may tilt or fall over. The floors that have lost this support will become bouncy, sometimes rattling ornaments etc.

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

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

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

Trees can cause shrinkage and damage



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

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

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

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

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

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

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

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

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

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

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

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

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

Water Service and Drainage

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

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

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

Seriousness of Cracking

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

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

Prevention/ Cure

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

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

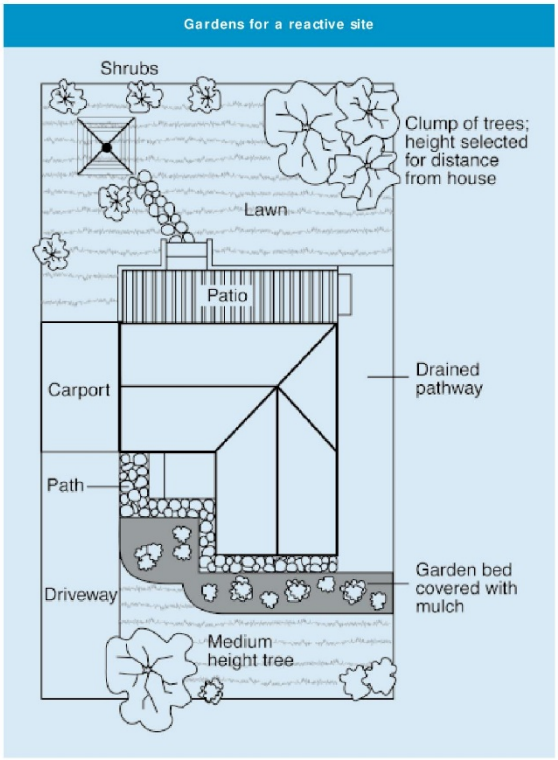
It is, however, sometimes necessary when attempting to prevent water migration that testing be carried out to establish watertable height and subsoil water flows. This subject is referred to in BTF 19 and may properly be regarded as an area for an expert consultant.

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

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

CLASSIFICATION OF DAMAGE WITH REFERENCE TO WALLS

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



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

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

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

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

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

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

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

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

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

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

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

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

Remediation

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

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

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

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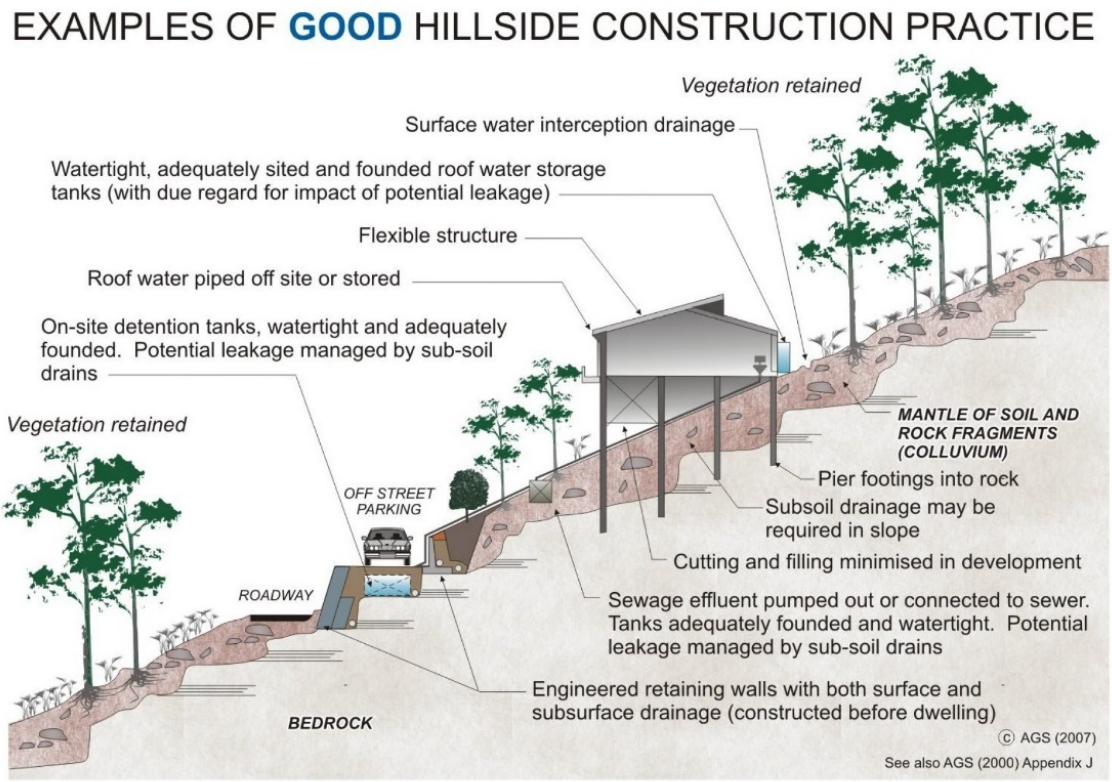
Appendix G Examples of Good Hillside Construction (AGS LRM LR8)

AUSTRALIAN GEOGUIDE LR8 (CONSTRUCTION PRACTICE)

HILLSIDE CONSTRUCTION PRACTICE

Sensible development practices are required when building on hillsides, particularly if the hillside has more than a low risk of instability (GeoGuide LR7). Only building techniques intended to maintain, or reduce, the overall level of landslide risk should be considered. Examples of good hillside construction practice are illustrated below.



WHY ARE THESE PRACTICES GOOD?

Roadways and parking areas - are paved and incorporate kerbs which prevent water discharging straight into the hillside (GeoGuide LR5).

Cuttings - are supported by retaining walls (GeoGuide LR6).

Retaining walls - are engineer designed to withstand the lateral earth pressures and surcharges expected, and include drains to prevent water pressures developing in the backfill. Where the ground slopes steeply down towards the high side of a retaining wall, the disturbing force (see GeoGuide LR6) can be two or more times that in level ground. Retaining walls must be designed taking these forces into account.

Sewage - whether treated or not is either taken away in pipes or contained in properly founded tanks so it cannot soak into the ground.

Surface water - from roofs and other hard surfaces is piped away to a suitable discharge point rather than being allowed to infiltrate into the ground. Preferably, the discharge point will be in a natural creek where ground water exits, rather than enters, the ground. Shallow, lined, drains on the surface can fulfil the same purpose (GeoGuide LR5).

Surface loads - are minimised. No fill embankments have been built. The house is a lightweight structure. Foundation loads have been taken down below the level at which a landslide is likely to occur and, preferably, to rock. This sort of construction is probably not applicable to soil slopes (GeoGuide LR3). If you are uncertain whether your site has rock near the surface, or is essentially a soil slope, you should engage a geotechnical practitioner to find out.

Flexible structures - have been used because they can tolerate a certain amount of movement with minimal signs of distress and maintain their functionality.

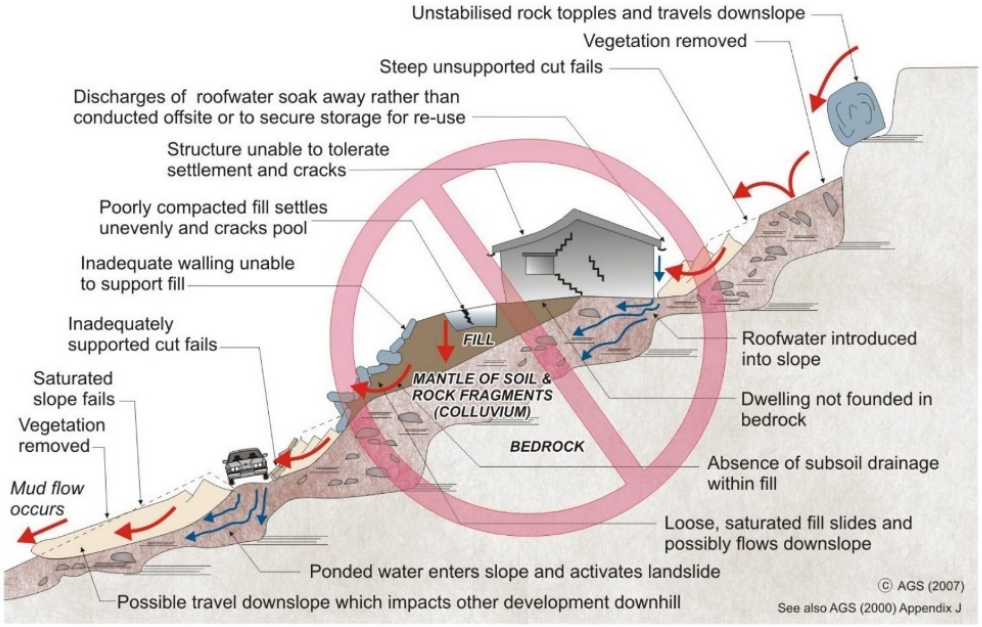
Vegetation clearance - on soil slopes has been kept to a reasonable minimum. Trees, and to a lesser extent smaller vegetation, take large quantities of water out of the ground every day. This lowers the ground water table, which in turn helps to maintain the stability of the slope. Large scale clearing can result in a rise in water table with a consequent increase in the likelihood of a landslide (GeoGuide LR5). An exception may have to be made to this rule on steep rock slopes where trees have little effect on the water table, but their roots pose a landslide hazard by dislodging boulders.

Possible effects of ignoring good construction practices are illustrated on page 2. Unfortunately, these poor construction practices are not as unusual as you might think and are often chosen because, on the face of it, they will save the developer, or owner, money. You should not lose sight of the fact that the cost and anguish associated with any one of the disasters illustrated, is likely to more than wipe out any apparent savings at the outset.

ADOPT GOOD PRACTICE ON HILLSIDE SITES

AUSTRALIAN GEOGUIDE LR8 (CONSTRUCTION PRACTICE)

EXAMPLES OF **POOR** HILLSIDE CONSTRUCTION PRACTICE



WHY ARE THESE PRACTICES POOR?

Roadways and parking areas - are unsurfaced and lack proper table drains (gutters) causing surface water to pond and soak into the ground.

Cut and fill - has been used to balance earthworks quantities and level the site leaving unstable cut faces and added large surface loads to the ground. Failure to compact the fill properly has led to settlement, which will probably continue for several years after completion. The house and pool have been built on the fill and have settled with it and cracked. Leakage from the cracked pool and the applied surface loads from the fill have combined to cause landslides.

Retaining walls - have been avoided, to minimise cost, and hand placed rock walls used instead. Without applying engineering design principles, the walls have failed to provide the required support to the ground and have failed, creating a very dangerous situation.

A heavy, rigid, house - has been built on shallow, conventional, footings. Not only has the brickwork cracked because of the resulting ground movements, but it has also become involved in a man-made landslide.

Soak-away drainage - has been used for sewage and surface water run-off from roofs and pavements. This water soaks into the ground and raises the water table (GeoGuide LR5). Subsoil drains that run along the contours should be avoided for the same reason. If felt necessary, subsoil drains should run steeply downhill in a chevron, or herring bone, pattern. This may conflict with the requirements for effluent and surface water disposal (GeoGuide LR9) and if so, you will need to seek professional advice.

Rock debris - from landslides higher up on the slope seems likely to pass through the site. Such locations are often referred to by geotechnical practitioners as "debris flow paths". Rock is normally even denser than ordinary fill, so even quite modest boulders are likely to weigh many tonnes and do a lot of damage once they start to roll. Boulders have been known to travel hundreds of metres downhill leaving behind a trail of destruction.

Vegetation - has been completely cleared, leading to a possible rise in the water table and increased landslide risk (GeoGuide LR5).

DON'T CUT CORNERS ON HILLSIDE SITES - OBTAIN ADVICE FROM A GEOTECHNICAL PRACTITIONER

More information relevant to your particular situation may be found in other Australian GeoGuides:

- GeoGuide LR1 - Introduction
- GeoGuide LR2 - Landslides
- GeoGuide LR3 - Landslides in Soil
- GeoGuide LR4 - Landslides in Rock
- GeoGuide LR5 - Water & Drainage
- GeoGuide LR6 - Retaining Walls
- GeoGuide LR7 - Landslide Risk
- GeoGuide LR9 - Effluent & Surface Water Disposal
- GeoGuide LR10 - Coastal Landslides
- GeoGuide LR11 - Record Keeping

The Australian GeoGuides (LR series) are a set of publications intended for property owners; local councils; planning authorities; developers; insurers; lawyers and, in fact, anyone who lives with, or has an interest in, a natural or engineered slope, a cutting, or an excavation. They are intended to help you understand why slopes and retaining structures can be a hazard and what can be done with appropriate professional advice and local council approval (if required) to remove, reduce, or minimise the risk they represent. The GeoGuides have been prepared by the Australian Geomechanics Society, a specialist technical society within Engineers Australia, the national peak body for all engineering disciplines in Australia, whose members are professional geotechnical engineers and engineering geologists with a particular interest in ground engineering. The GeoGuides have been funded under the Australian governments' National Disaster Mitigation Program.

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: Prime Design

Owner /Agent

Address

Suburb/postcode

Form **55**

Qualified person details:

Qualified person:

Address:

Licence No:

Qualifications and Insurance details:

Speciality area of expertise: Geo-technical Reports

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

Details of work: Geotechnical Site Investigation

Address: 63 Bimburra Road

Lot No: 1

Glenorchy 7010

Certificate of title No: 237846/1

The assessable item related to this certificate: Geotechnical Site Investigation written in accordance with AS1726 by a geotechncial practitioner with appropriate experience, training and qualifications.*

(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 including landslide risk assessment in accordance with "Practice Note Guidelines for Landslide Risk Management 2007" published by the Australian Geomechanics Society.*

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

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

- (•) building work, plumbing work or plumbing installation or demolition work

OR

- ( ) a building, temporary structure or plumbing installation

In issuing this certificate the following matters are relevant –

Documents:	Enviro-Tech Consultants Pty. Ltd. 2025. Geotechnical Site Investigation for a Proposed Dwelling, 63 Bimburra Road - Glenorchy. Unpublished report for Prime Design by Enviro-Tech Consultants Pty. Ltd., 02/07/2025.
Relevant calculations:	
References:	- AS1726-2017 Geotechnical Site Investigations

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

- An assessment of:
- Foundations for proposed building structures.*

Scope and/or Limitations

The Geotechnical Site Investigation applies to the Site and Project Area as inspected and does not account for future alteration to foundation conditions as a result of earth works, drainage condition changes or variations in site maintenance which are not included within the provided plans.

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

I certify the matters described in this certificate.

Qualified person:

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

To: Prime Design

Owner /Agent

Address

Suburb/postcode

Form **55**

Qualified person details:

Qualified person: Kris Taylor

Address:

Licence No:

Qualifications and Insurance details:

Speciality area of expertise: Geo-technical Reports

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

Details of work: Landslip Hazard Report

Address: 63 Bimburra Road

Lot No: 1

Glenorchy 7010

Certificate of title No: 237846/1

The assessable item related to this certificate: Landslip Hazard Report prepared by a geotechnical practitioner with experience and competence in the preparation of landslip hazard reports

(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

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

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

- (•) building work, plumbing work or plumbing installation or demolition work

OR

- ( ) a building, temporary structure or plumbing installation

In issuing this certificate the following matters are relevant –

Documents:	Enviro-Tech Consultants Pty. Ltd. 2025. Landslip Hazard Assessment Report for a Proposed Dwelling, 63 Bimburra Road - Glenorchy. Unpublished report for Prime Design by Enviro-Tech Consultants Pty. Ltd., 02/07/2025.
Relevant calculations:	
References:	Directors Determination - Landslip Hazard Areas Areas Extract from Australian Geomechanics Journal and News of the Australian Geomechanics Society Volume 42 No 1 March 2007. Landslide Risk Management Building on Tasmanian Landscapes: Guidance for Geotechnical Reporting in Tasmania (Mineral Resources Tasmania, 2018)

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

Scope and/or Limitations

Tasmanian Planning Scheme – State Planning Provisions: To ensure that a tolerable risk can be achieved and maintained for the type, scale and intensity and intended life of use or development on land within a landslip hazard area. Directors determinatiopn: lowest level of likely risk from landslip to secure the benefits of a use or development in a landslip hazard area, and which can be managed through routine regulatory measures or by specific hazard management measures for the intended life of each use or development.

I certify the matters described in this certificate.

Qualified person:

WATERWAY
AND
COASTAL PROTECTION AREA ASSESSMENT

63 BIMBURRA ROAD – GLENORCHY

PROPOSED RESIDENCE

Client: Prime Design

Certificate of Title: 237846/1

Investigation Date: 02/07/2025

Refer to this Report As
Enviro-Tech Consultants Pty. Ltd. 2025. Natural Values Assessment Report for a Proposed Residence, 63 Bimburra Road, Glenorchy. Unpublished report for Prime Design by Enviro-Tech Consultants Pty. Ltd., 28/07/2025.

Report Distribution:
This report has been prepared by Enviro-Tech Consultants Pty. Ltd. for the use by parties involved in the proposed residential development of the property named above. It is to be used only to assist in managing any existing or potential erosion hazards relating to the Site and its development.

1 Introduction

1.1 *Background*

Enviro-Tech Consultants Pty. Ltd. (Envirotech) were contracted by Prime Design to prepare a natural values assessment for a proposed dwelling located at Bimburra Road, Glenorchy. This report has been written to address planning scheme overlay codes in general accordance with the state-wide planning provisions for Glenorchy City Council. The proposed development has triggered C7.0 Natural Assets Code which are addressed within this report:

1.2 *Objectives*

The objective of the Site investigation is to:

- Identify which overlay codes apply to the Site in terms of coastal vulnerability and determine planning scheme exemptions, acceptable solutions, and where applicable performance criteria.
- Prepare a report analysing Site hazards for the relevant directors' determination overlay codes and performance criteria.
- Conduct a risk assessment for the proposed development ensuring relevant performance criteria and directors' determination are addressed.
- Determine if the building and works will cause or contribute to erosion, flooding, or natural values disturbance on the site or on adjacent land or public infrastructure
- Provide recommendations for managing or mitigating potential impacts on natural values.

1.3 *Cadastral Title*

The land studied in this report is defined by the title 237846/1

1.4 *Site Setting*

The Site is located on a northwest-facing hillside within a rural residential setting, with ground elevations ranging from approximately 138 m AHD at the rear to 120 m AHD at the front boundary (Attachment 1). The terrain comprises moderate to gently sloping ground, with the proposed building platform located on the lower, more subdued portion of the Site. A shallow drainage depression runs along the eastern boundary but does not intersect the development area. The surrounding landscape includes open paddocks, scattered vegetation, and informal vehicle tracks upslope.

2 Planning

Planning code overlay mapping is presented in Attachment 1 and planning and building regulations are addressed in Attachment 3.

2.1 *Proposed Development*

The proposed development comprises construction of a two-storey residence with a driveway.

2.2 *Natural Assets Code*

Parts of the proposed residence fall within the waterways and coastal protection overlay (Map 1). Natural Assets Code C7.0 Development Standards for Building and Works E7.6 relevant to this code are addressed within this report. The proposed driveway does not fall within the overlay.

The following performance criteria are to be addressed:

- C7.6.1 P1.1 The proposed development does not meet C7.6.1 A1 given that the development is not within a WCPA & a building area on a sealed plan approved under this planning scheme.

The following performance criteria do not need to be addressed:

- C7.6.1 P1.2 given the highest astronomical tide within the Project Area is at 0.80 m AHD. The Site and the proposed building and work for the Site are above 4.0 m AHD.
- C7.6.1 P4.1 and C7.6.1 P4.1 given no dredging is proposed
- C7.6.1 P5 as no coastal protection, watercourse erosion or inundation protection works are required.

3 Potential for Impact

3.1.1 Vegetation

- Minor disturbance to native herbivore grazed grasses where the WCPA overlaps with the building envelope only.

3.1.2 Cut and Fill

- Minimal cut and fill will be required to accommodate the proposed building footprint.
- Proposed works will not affect slope stability or result in disturbance to drainage patterns

3.1.3 Erosion

- Minor surface erosion may occur during construction due to rainfall or wind exposure.
- The risk of erosion is low, with soils classified as moderately dispersive (Class 2) and well-structured.
- The existing terrain and vegetation outside the footprint will retain overland flow, reducing sediment transport.
- Runoff rates are expected to be low, given the shallow slope and short flow path to the overlay boundary.

4 Management

4.1.1 Site Specific

- A Soil and Water Management Plan (SWMP) is to be implemented prior to construction.
- Where soils are exposed, temporary sediment controls such as silt fences or straw wattles will be used.
- Any disturbed surfaces will be stabilised promptly through hydroseeding, mulching, or planting with grass species suitable for local conditions.

4.1.2 Guidelines

For further reading, the following texts are recommended:

- Best practice guidelines in the Wetlands and Waterways Works Manual
- The guidelines in the Tasmanian Coastal Works Manual.

Kris J Taylor BSc (Hons) | Environmental & Engineering Geologist

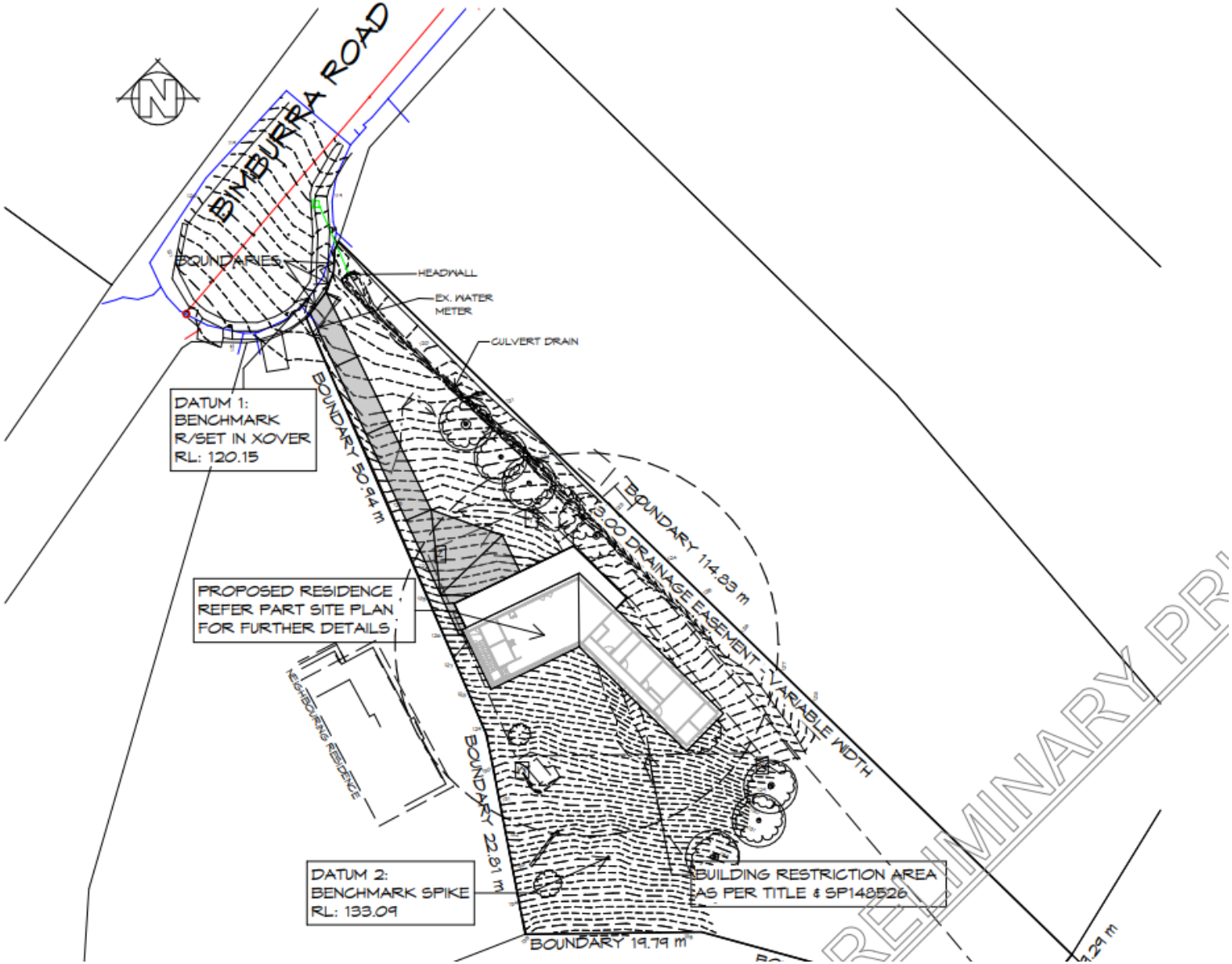
Director

Enviro-Tech Consultants Pty. Ltd.

Attachment 1 Mapping

Map 1 Waterways and Coastal Protection Overlay

Attachment 2 Preliminary Design Concept Plans



Attachment 3 Planning and Building Regulations (TPS)

Tasmanian Planning Scheme

C7.0 Natural Assets Code

Code Overlay – The LIST Mapping

The Site falls within the Natural Assets Code C7.6.1 – Waterways and Coastal Protection Area Overlay (WCPA) overlay presented in Map 1.

C7.6. Development Standards for Building and Works

C7.6.1 Objective

That buildings and works within a waterway and coastal protection area or future coastal refugia area will not have an unnecessary or unacceptable impact on natural assets.

C7.6.1 Acceptable Solutions

The proposed development is to be assessed against Natural Assets Code C7.6.1 acceptable solutions presented in Table 2.

C7.6.1 Performance Criteria

Meeting various performance criteria C7.6.1 is to be assessed by way of risks assessment, with performance solutions summarised in Attachment 4.

C7.6.1 P1.1 Performance Criteria - Buildings and Works – Waterways and Coastal Protection

The proposed development does not meet C7.6.1 A1 given that the development is not within a building area on a sealed plan approved under this planning scheme. C7.6.1 P1.1 performance solutions therefore needs to be addressed.

Table 1 Natural Asset Code Acceptable Solutions

Natural Asset Code	Acceptable Solution	Overlay	Performance Solution	Performance Solution to be Addressed	Justification
C7.6.1 A1 (a)	be within a building area on a sealed plan approved under this planning scheme;	WCPA	C7.6.1 P1.1	Yes	**Does not meet acceptable solutions** The proposed development does not meet C7.6.1 A1 given that the development is not within a building area on a sealed plan approved under this planning scheme.
C7.6.1 A1 (b)	in relation to a Class 4 watercourse, be for a crossing or bridge not more than 5m in width; or	WCPA	C7.6.1 P1.1	No	**Not applicable**
C7.6.1 A1 (c)	if within the spatial extent of tidal waters[1]	WCPA	C7.6.1 P1.2	No	**Not applicable**
C7.6.1 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.	FCRA	C7.6.1 P2.1 C7.6.1 P2.2	No	**Not applicable**
C7.6.1 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.	FCRA or WCPA	C7.6.1 P3	No[2]	**Not applicable**
C7.6.1 A4	Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area.	FCRA or WCPA	C7.6.1 P4.1 C7.6.1 P4.1	No	**No applicable**
C7.6.1 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.	FCRA or WCPA	C7.6.1 P5	No	**No applicable**

[1] 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.

Attachment 4 Performance Criteria – Natural Assets Code

C7.6.1 P1.1 - Buildings and works – waterways and costal protection area

Performance Criteria C7.6.1 P1.1 **Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on *natural assets*[3], having regard to:**	**Relevance**	**Management Options**
(a) impacts caused by erosion, siltation, sedimentation and runoff;	No works are proposed within any watercourse or drainage line. Site has low erosion risk given the proposed level of disturbance and design.	Soil and Water Management Plan (SWMP) implemented prior to works.
(b) impacts on riparian or littoral vegetation;	No riparian vegetation will be disturbed. Site is cleared.	Nil required. No vegetation removal in overlay area.
(c) maintaining *natural streambank and streambed condition*[4], where it exists;	No streambank or defined waterway exists at this location.	Not applicable.
(d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;	No in-stream features (logs, rocks, trailing vegetation) are present.	Not applicable.
(e) the need to avoid significantly impeding natural flow and drainage;	The building does not impede natural flow paths. Outside of the Flood Prone Area Overlay. Drainage maintained.	Not applicable.
(f) the need to maintain fish passage, where known to exist;	No watercourse present; no fish passage affected.	Not applicable.
(g) the need to avoid land filling of wetlands;	No wetlands are present. No filling is proposed within overlay.	Nil required.
(h) the need to group new facilities with existing facilities, where reasonably practical;	Development is consistent with nearby existing buildings.	Nil required.
(i) minimising cut and fill;	Minor cut and fill which is done in a way which is sensitive to the natural setting	Earthworks to be managed under SWMP.
(j) building design that responds to the particular size, shape, contours or slope of the land;	Building design follows slope. Proposed floor level appropriate.	Slab-on-ground design aligns with contours.
(k) minimising impacts on coastal processes, including sand movement and wave action;	Not located within a coastal or marine context.	Not applicable.
(l) minimising the need for future works for the protection of natural assets, infrastructure and property;	No future stabilisation or drainage works are anticipated.	Stable founding on bedrock. Appropriate surface drainage included.
(m) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and	SWMP to reflect best practice for sediment and erosion control.	Temporary controls (e.g. silt fencing, diversion drains) implemented.
(n) the guidelines in the Tasmanian Coastal Works Manual.	Not applicable. Site is inland, not in a coastal zone.	Nil required.

[3] means biodiversity, environmental flows, natural stream bank and stream bed condition, riparian vegetation, littoral vegetation, water quality, wetlands, river condition and waterway and/or coastal values

[4] means the natural rate of erosion or accretion of the bank and bed of a watercourse and natural hydrological processes, as determined using The Tasmanian River Condition Index Book 2 Hydrology User's Manual and Book 3 Physical Form Field Manual.

DEVELOPMENT APPLICATION

APPLICATION NUMBER:	PLN-25-347
PROPOSED DEVELOPMENT:	Single dwelling
LOCATION:	63 Bimburra Road, Glenorchy
APPLICANT:	Prime Design (Invermay)
ADVERTISING START DATE:	12/12/2025
ADVERTISING EXPIRY DATE:	06/01/2026

Plans and documentation are available for inspection at Council's Offices, located at 374 Main Road, Glenorchy between 8.30 am and 5.00 pm, Monday to Friday (excluding public holidays) and the plans are available on Glenorchy City Council's website (**www.gcc.tas.gov.au**) until **06/01/2026.**

During this time, any person may make representations relating to the applications by letter addressed to the Chief Executive Officer, Glenorchy City Council, PO Box 103, Glenorchy 7010 or by email to gccmail@gcc.tas.gov.au.

Representations must be received by no later than 11.59 pm on **06/01/2026** or for postal and hand delivered representations, by 5.00 pm on **06/01/2026.**

374 Main Road, Glenorchy
PO Box 103, Glenorchy TAS 7010
(03) 6216 6800 | gccmail@gcc.tas.gov.au
www.gcc.tas.gov.au
ABN 19 753 252 493