DEVELOPMENT APPLICATION

APPLICATION NUMBER:	PLN-23-274
PROPOSED DEVELOPMENT:	Pergola and deck (Residential)
LOCATION:	6 Officer Street Rosetta
APPLICANT:	R Shrestha
ADVERTISING START DATE:	18/07/2025
ADVERTISING EXPIRY DATE:	01/08/2025

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 **01/08/25**.

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 **01/08/25**, or for postal and hand delivered representations, by 5.00 pm on **01/08/25**.

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

GEO-ENVIRONMENTAL SOLUTIONS

LANDSLIP RISK ASSESSMENT

PROJECT:

Alterations & Additions - Residential Dwelling

Site Address:

6 Officer St
Taroona
TAS
7010

CLIENT:

Rashik Shrestha

DATE:

2/07/2025

DOCUMENT CONTROL

Document Prepared By:

Geo-Environmental Solutions Pty Ltd

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DOCUMENT CONTROL		
Report Title:	GES_6 Officer St, Rosetta_LRA_V01	
Project Type:	Landslip Risk Assessment	
Client:	Rashik Shrestha	
Project Job Number:	J11669	
Revision Version:	V01	
Date:	2/07/2025	
Approved By:	V. Gupta	
	Signature:	Date
		2/07/2025

FIGURES

TABLE

1 INTRODUCTION

Geo-Environmental Solutions Pty Ltd (GES) were engaged by Alex Muller on behalf of Rashik Shrestha (the Client) to conduct a geotechnical investigation to assess retrospectively for landslip risk for some alterations and additions at the existing dwelling undertaken previously. The site lays within the Glenorchy Planning Scheme mapped 'Proclaimed – Landslip A area' with a 'high' risk for landslip.

Figure 1 - Location of the site at 6 Officer St, Rosetta (shown in blue)

The proposed development is located at cadastral title (CT 6601/65) located at 6 Officer Street in Rosetta (The Site). GES are to undertake this retrospective geotechnical assessment relating to the alterations & additions of the existing dwelling at the site which includes upgrades to the patio and installation of a clothesline deck. The assessments are in conjunction with the requirements of the Landslide Hazard Code, part of the Tasmanian Planning Scheme – Glenorchy 2025. GES have written this report with reference to the Australian Geomechanics Guidelines (AGS 2007).

GES have undertaken this assessment using site observations and investigation, photographs and publicly available datasets in the construction of this report. Estimations are determined by approximation with regional information applied where appropriate to site specific information.

2 OBJECTIVES

The objective of the site investigation is to:

- Identify the requirements of the Landslip Hazard Code;
- Conduct a Landslip risk assessment of the proposed works with reference to the Australian Geomechanics Society (AGS) *Landslip Risk Management (2007) guidelines'*.
- Identify which planning scheme codes need to be addressed in terms of Landslip and identify the relevant performance criteria relevant to the project which need addressing.
- Use bore hole drilling information, geological mapping and site inspections to determine site physical conditions.
- Conduct a site risk assessment for the proposed development ensuring relevant performance criteria are addressed.
- Where applicable, provide recommendations on remediation of any earthworks to ensure safe slope management.

3 Site Details

3.1 Project Area Land Title

The land studied in this report is defined by the following title reference:

- CT – 6601/65

This parcel of land is referred to as the 'Site' and/or the 'Project Area' in this report.

3.2 Australian Building Code Board

This report presents a summary of the overall site risk to Landslip hazards. This assessment has been conducted for the year 2070 which is representative of a 'normal' 50-year building design life category (since the buildings were constructed in 2020).

Per the Australian Building Code Board (ABCB 2015), when addressing building minimum design life:

> *'The design life of buildings should be taken as 'Normal" for all building importance categories unless otherwise stated.'*
>
> As per Table 3-1, the building design life is 50 years for a normal building.

Table 3-1 Design life of building and plumbing installations and their components

Building Design Life Category	*Building Design Life (years)*	*Design life for components or sub systems readily accessible and economical to replace or repair (years)*	*Design life for components or sub systems with moderate ease of access but difficult or costly to replace or repair (years)*	*Design life for components or sub systems not accessible or not economical to replace or repair (years)*
Short	1 < dl < 15	5 or dl (if dl<5)	dl	dl
Normal	50	5	15	50
Long	100 or more	10	25	100

Note: Design Life (dl) in years

3.3 The Tasmanian Building Regulations 2016

Building in hazardous areas

As outlined in the Tasmanian Legislation website:

https://www.legislation.tas.gov.au/view/html/inforce/2024-06-27/act-2016-025#GS4@Gs1@Nd2662015425510@EN

Hazardous areas include areas which are bushfire prone, comprise reactive soils or substances, or are subject to coastal erosion, coastal flooding, riverine flooding, and landslip.

Division 5 - Landslip. Section 59. Landslip hazard areas

- For the purposes of the Act, land is a landslip hazard area if –
  - the land is shown on a planning scheme overlay map as being land that is within a landslip hazard area; and
  - the land is classified as land within a hazard band of a landslip hazard area.
- For the purposes of the definition of *hazardous area* in section 4(1) of the Act –
  - classification under a landslip determination as being land that is within a hazard band of a landslip hazard area is a prescribed attribute; and
  - a landslip hazard area is a hazardous area.

3.4 Tasmanian Interim Planning Scheme Landslip Overlay – Glenorchy City Council

The site predominately lies within 'High - Proclaimed landslip A' area overlay (Figure 2).

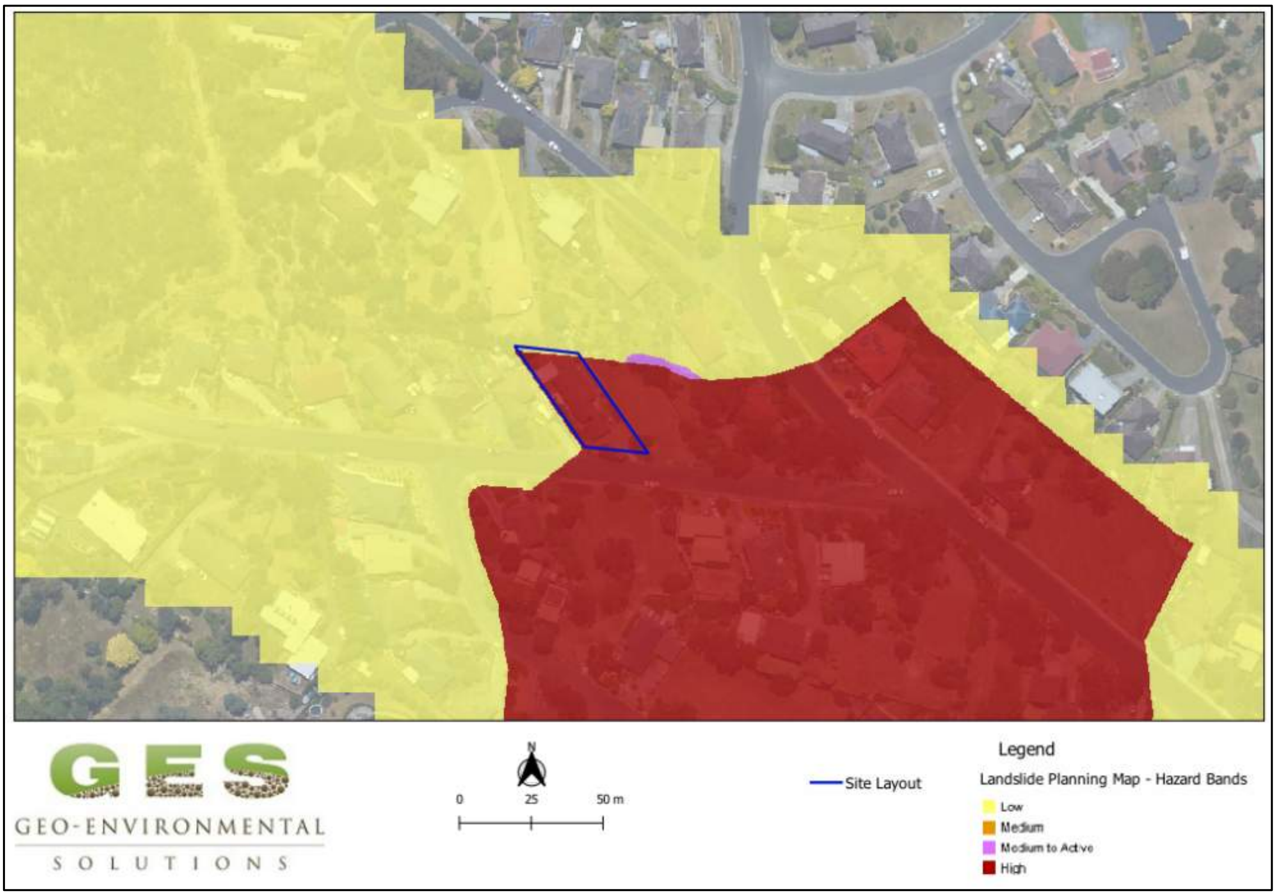


Figure 2 – Landslip Overlay at the Site (The List) with approximate location of proposed development

3.5 Site and Proposed Works

The project site is located in the southeast region of Tasmania, to the northwest of Hobart city centre. Currently, the site has an existing dwelling with a land area of approximately 715 m^2. The previous owner of the site undertook some development works ca. 2020 which involved upgradation of outdoor patio, and a small deck located in the northern and northwestern portion of the site.

Access to the site is through the existing driveway along the southwest via Officer Street.

Plans for the development have been provided to GES by the client which are presented in Figure 3 (refer DA drawings, '3.3.Pergola Engineering Plans & Forms.pdf', dated 17/12/2019 and '4.Clothes Line Deck Design Plan.pdf').

3.5.1 Development & Works Acceptable Solutions

Where applicable, the need for further performance criteria compliance is outlined in Appendix 1.

3.5.2 Landslip Hazard Code (LHC)

Given that the proposed dwelling is within the 'High - Landslip A' Landslip Hazard Area and there are no acceptable solutions for the proposed works, the Performance Criteria will need to be addressed.

3.5.3 Development Performance Criteria

The following performance criteria need to be addressed:

- *C15.6.1 P1*

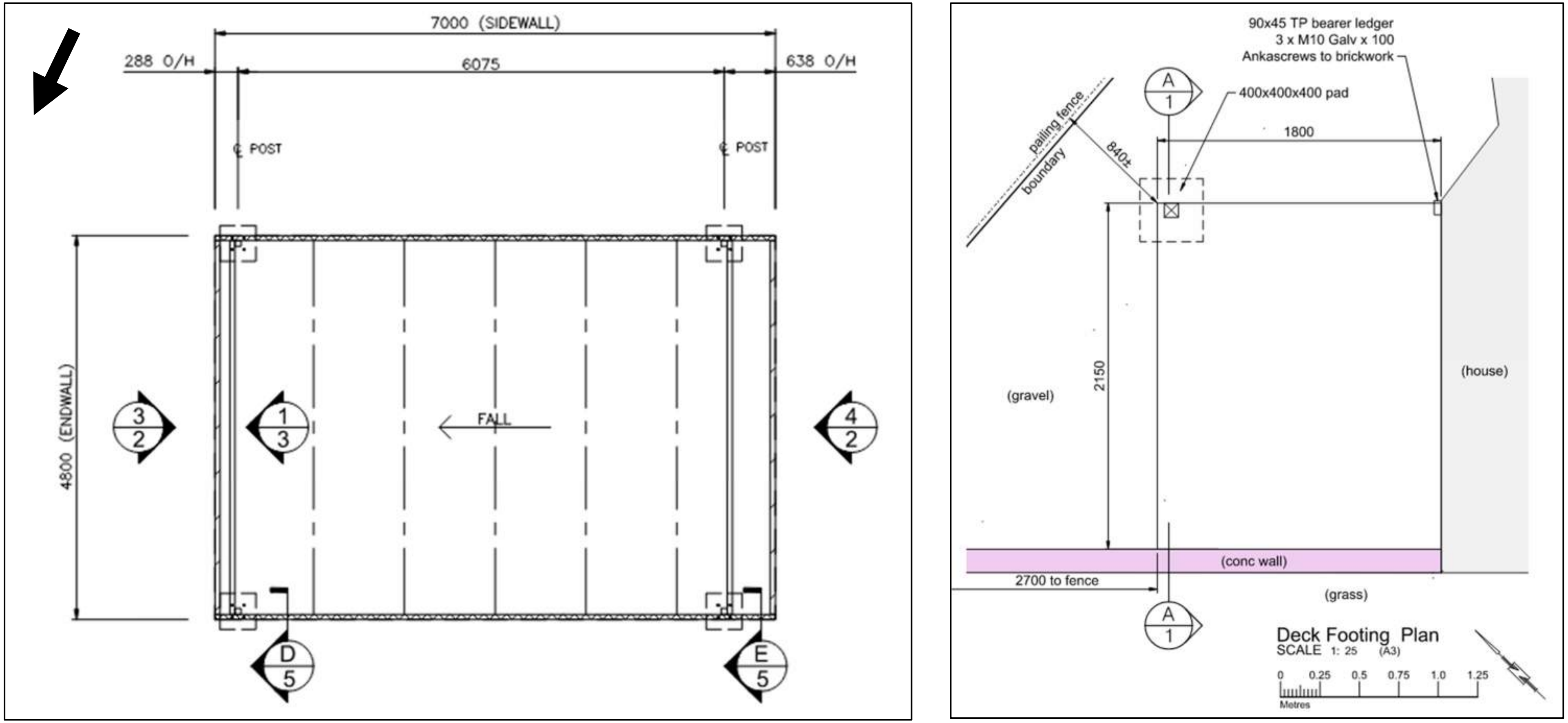


Figure 3 - Site Plan showing proposed extent of patio works (left) and clothesline deck (right)

4 Site Mapping

4.1 Geological Mapping

Based on the MRT 1:25,000 Mineral Resources Tasmania (MRT) mapping of Southeast Tasmania, the site geology comprises of the following geological unit (refer Figure 4):

- Map Unit – Tcbs: Poorly-sorted boulder to pebble grade deposits, clasts dominantly of Upper Parmeener sandstone with locally derived clasts of dolerite and Lower Parmeener rocks in some areas; clayey or sandy matrix (tertiary deposits).

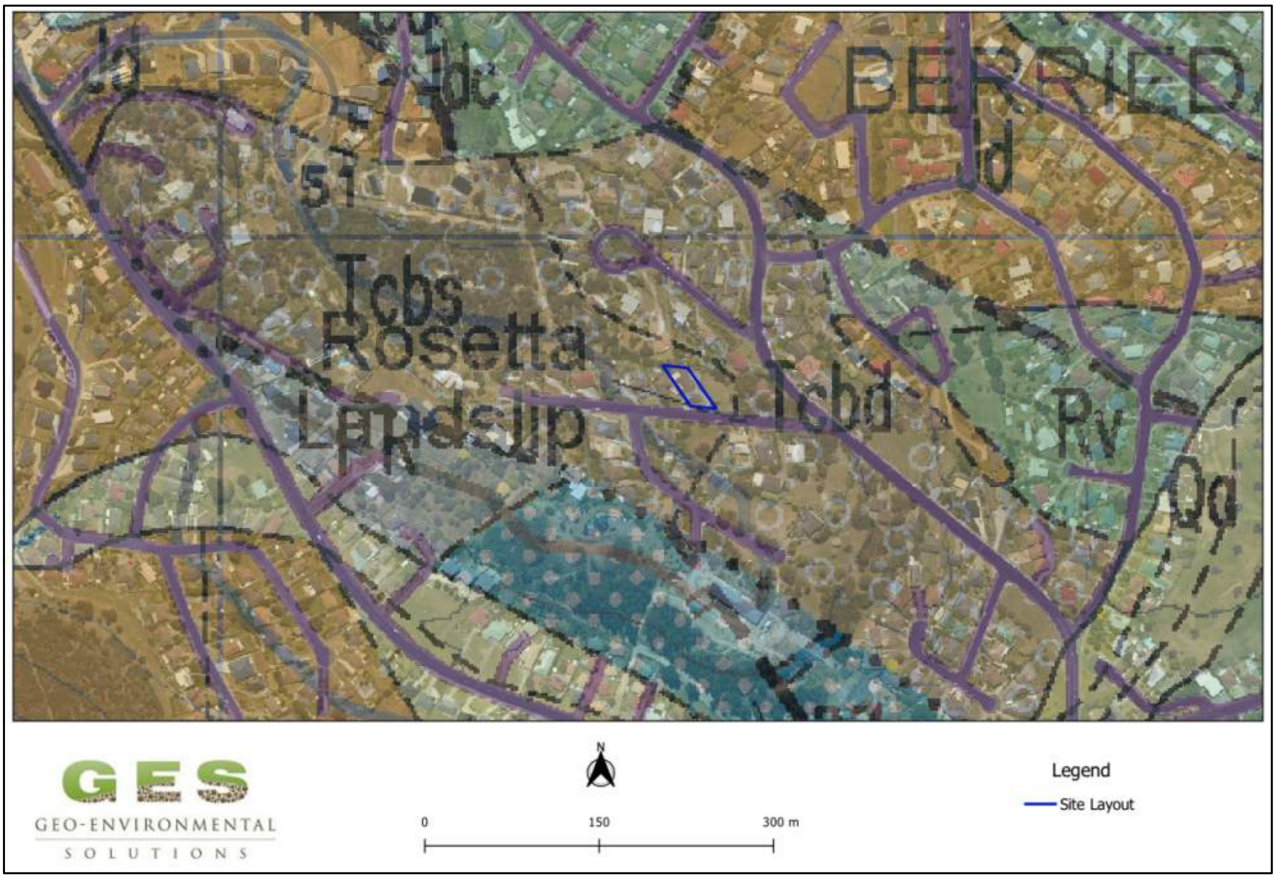


Figure 4 – Mapped geology (source: LIST Mapping 1:250,000); site shown in blue outline

4.2 Site Geomorphology

The dwelling is positioned on northeast facing slope. The development occupies the area situated along the northern and western portion of the site. Elevation on the site is approximately at 90 meters above the Australian Height Datum (AHD) at the south east portion of the site and 84m AHD at the north east portion of the site. The dwelling sits on gentle slopes, exhibiting gradients between 5 to 10 degrees with a steep cut in excess of 30 degrees along the western boundary shared with 8 Officer St. To depict the onsite slope angles, a slope gradient map was generated using QGIS software and 2013 Greater Hobart LiDAR data (refer to Figure 5).

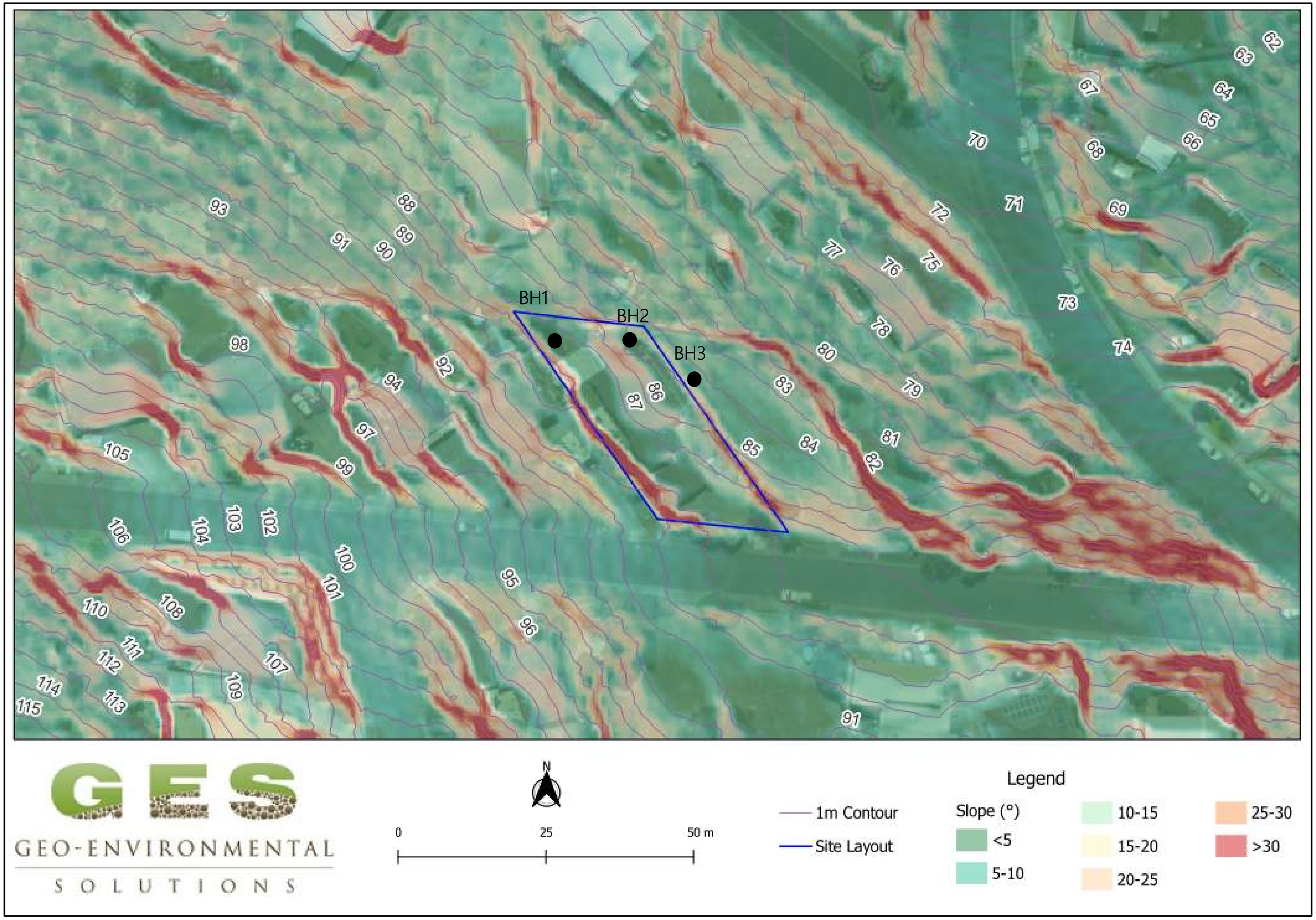


Figure 5 - Slope model developed from Hobart 1m-2013 LiDAR data (borehole approx. locations in black)

4.3 MRT Landslide Hazard Mapping

4.3.1 Landslide Inventory and Geomorphology

The MRT mapping shows the site to be located on an active earth translational slide (deep seated) with coastal deep-seated slides to the north and south of the site. The head scarp of the Taroona landslide is located approximately 200 m west of the site following the alignment of the Channel Highway. The site itself is located on the southern flank of the landslide. (Figure 6). Table 3 presents a summary of landslides, within similar geological and geomorphological settings to the site.

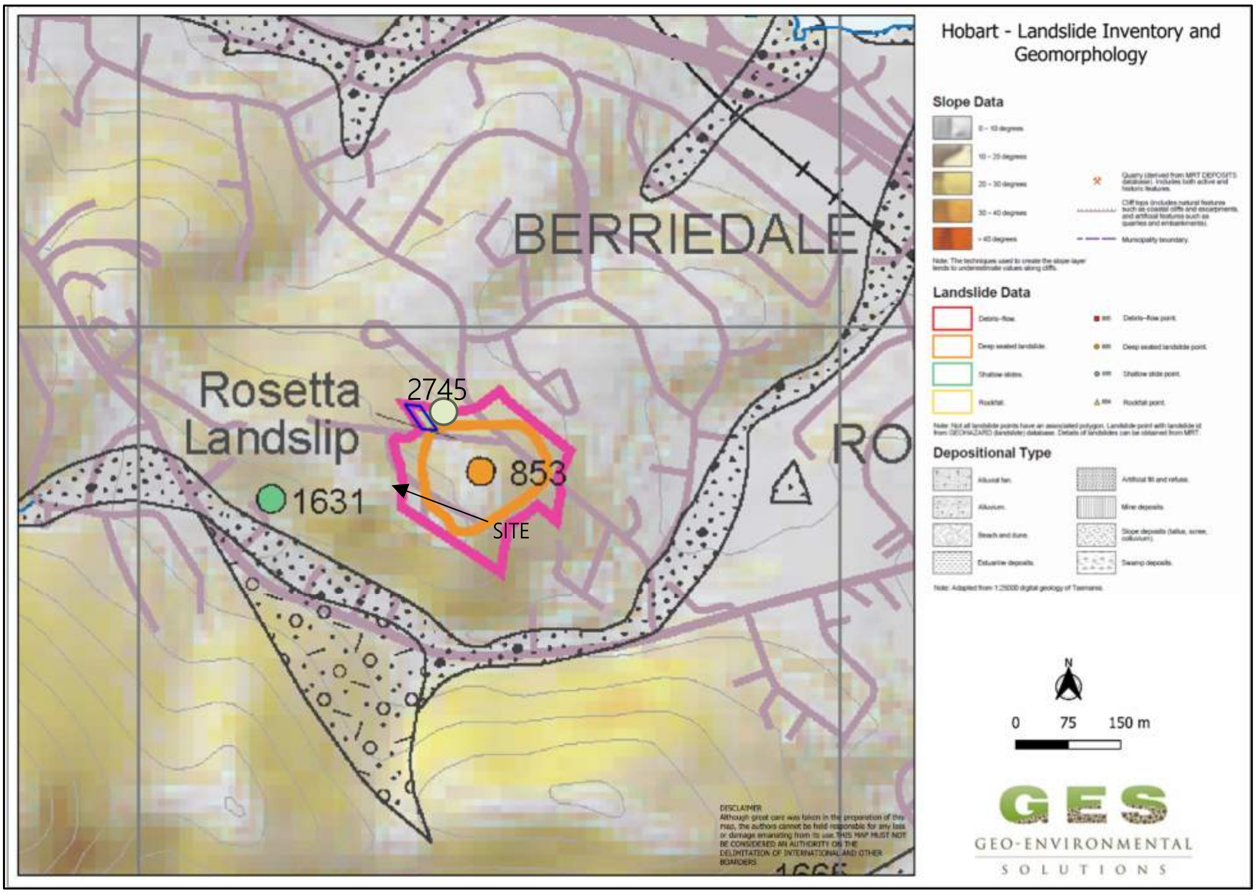


Figure 6 – Hobart landslide inventory map (Mazengarb 2004) overlay within the site (layout shown in blue)

Table 1 - Mineral Resources Tasmania Landslide Inventory Points

ID	Location	Feature Type	Classification	Activity State	Geological setting	Inspection Type
2745	4 Officer Street, Rosetta	Discrete Landslide	Soil Slide	Recent or Active since 2003	Tertiary sediments accumulated along fault scarps and composed of cobles and boulders of Permian, Triassic and Jurassic age rock in a matrix of clay, silt, sand and gravel.	Field Visit (P)
853	Hone Road and Officer St, Rosetta	Discrete Landslide	Debris Rotational Slide	Recent or Active, circa 1986	Tertiary deposits over Permian and Triassic sediments and Jurassic dolerite. NNW-trending major fault with other more complex faulting both causing high fracture density and brecciated bedrock.	MRT Report (P)
1631	Marys Hope Road. Rosetta	Discrete Landslide	Soil Slide	Recent or Active	Next to Cascades fault, below Permian and Triassic near horizontal contact, colluvial overburden	Field Visit (P)

4.3.2 Shallow Slide and Flow Susceptibility

No shallow slide and flow run-out hazard has been identified below the site (Figure 7).

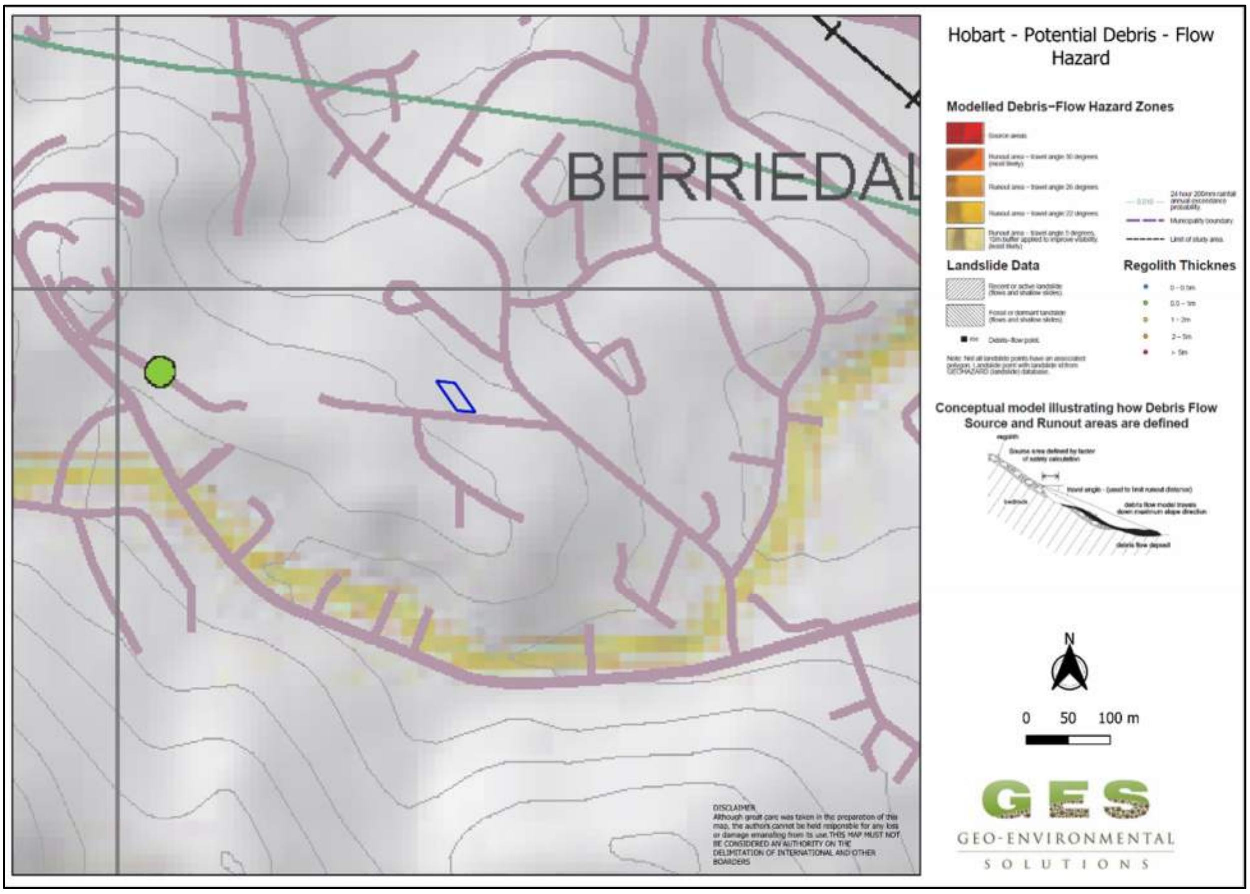


Figure 7 – Hobart shallow slide and flow susceptibility map (Mazengarb 2004) with overlay of proposed development (in green) within the site (layout shown in red)

4.3.3 Deep Seated Landslide Susceptibility

Deep seated slope instability has been identified based on the underlying geology and the slope angles in and around the vicinity of the site (refer Figure 7). The development area on site has been classified by MRT as 'Area above threshold (B)', which is based on a threshold angle of 10° for Tertiary Sediments (based on tertiary sediments encountered at Rosetta).

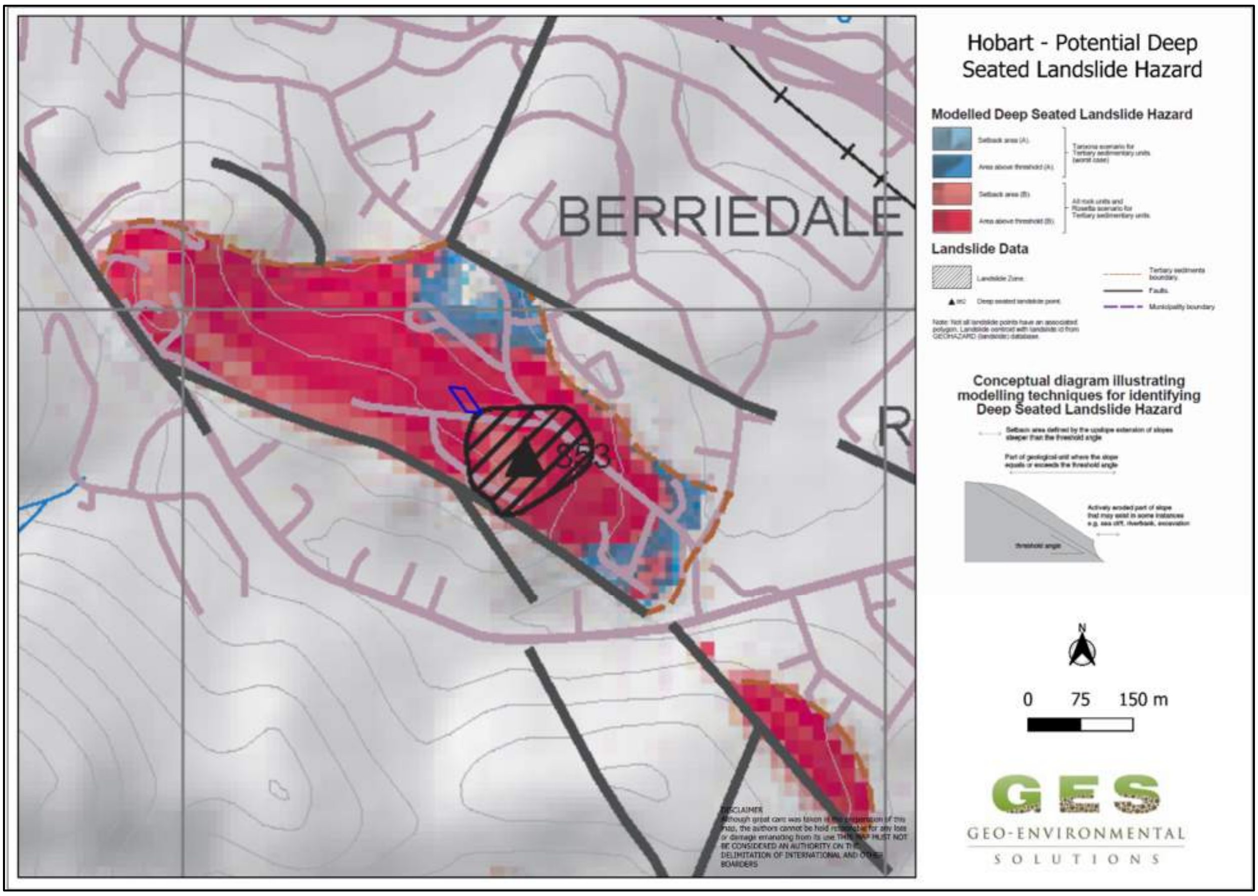


Figure 8 – Hobart deep seated landslide susceptibility map (Mazengarb 2004) with overlay of proposed development (in green) within the site (layout shown in red)

4.4 Field Investigation, Site Observation & Previous Investigations

4.4.1 Previous Reports

The Rosetta Landslide Complex has been well documented through reports and recent investigations carried out across the site. The landslide has resulted in extensive property damage throughout the area, dating back as early as 1989. Monitoring of the Rosetta site has been ongoing since 1990 with Casuarina monitoring since 2015. The greatest landslide movement has been recorded towards the edges of the landslide, where the slip plane is relatively shallow.

Landslide quarterly report published in August 2024 (Abbot M, 2024) indicate that between 2014 and 2024, there appears to be a long-term trend of settlement or minor downward movement in the order of 15-20mm with little lateral movements. It has been noted that no significant mass-movement of the landslide was inferred based on the quarterly review of monitoring points with local movement appearing to have stabilised in the points near the site since 2018.

4.4.2 Field Investigation - 2025

A site visit was undertaken on 5th of July wherein three bore holes were completed to identify the distribution and variation of the soil materials at the site. Due to access constraints, boreholes were drilled via hand augering methodology at BH01 and BH02 locations and via ute mounted GeoProbe rig at BH03 location accessed via adjacent lot at 4 Officer St. Table 2 provides a summary of the ground conditions encountered in BH01 to BH03 (refer Figure 5 for approx. locations).

Table 2 Site Soil Bore Logs

BH01 Depth (m)	*BH02 Depth (m)*	*BH03* Depth (m)*	*USCS*	*Description*
0.0-0.3	*0.0-0.2*		*SM*	TOPSOIL - Silty SAND with gravels: brown, slightly moist, loose. (refusal in BH02)
0.3-0.7			*SC*	Clayey SAND: pale brown/grey, slightly moist, very dense; clay, low plasticity.
		0.0-0.8	*CI*	FILL - Gravelly CLAY: medium plasticity, brown-grey, w<PL, stiff.
		0.8-1.2	*CI*	Sandy CLAY with gravel: medium plasticity, brown, w<PL, stiff. (refusal on assumed rock in BH03)

*Has not been used for site classification as it is located at 4 Officer St, Rosetta.

4.4.3 Site Classification

The site has been classified as Class P (*Ys* range of 40-60mm) due to the site being located on a high landslip area. The natural clay soils on soil present moderate reactivity characteristics and are likely to exhibit ground surface movement with an indicative (Y's) range of 40-60mm.

5 Landslip Hazard Analysis

5.1 Landslip Characteristics

Based on the slope characteristics including site geology, slope geometry and slope angles, MRT Landslip mapping/inventory and site observations, the following scenarios have been identified as potential slope failure mechanisms for the site (Figure 9):

- Scenario 1 – Shallow translational slide failure within shallow residual soils in cuttings above the retaining wall (<1.0m high) separating the pergola area from the deck area.
- Scenario 2 – Shallow translational slide within natural soils and fill materials caused by loading of natural soil slopes below the retaining wall
- Scenario 3 – Re-activation of part, or all of the assumed fossil landslide on which the property exists due to construction of pergola and deck on site.

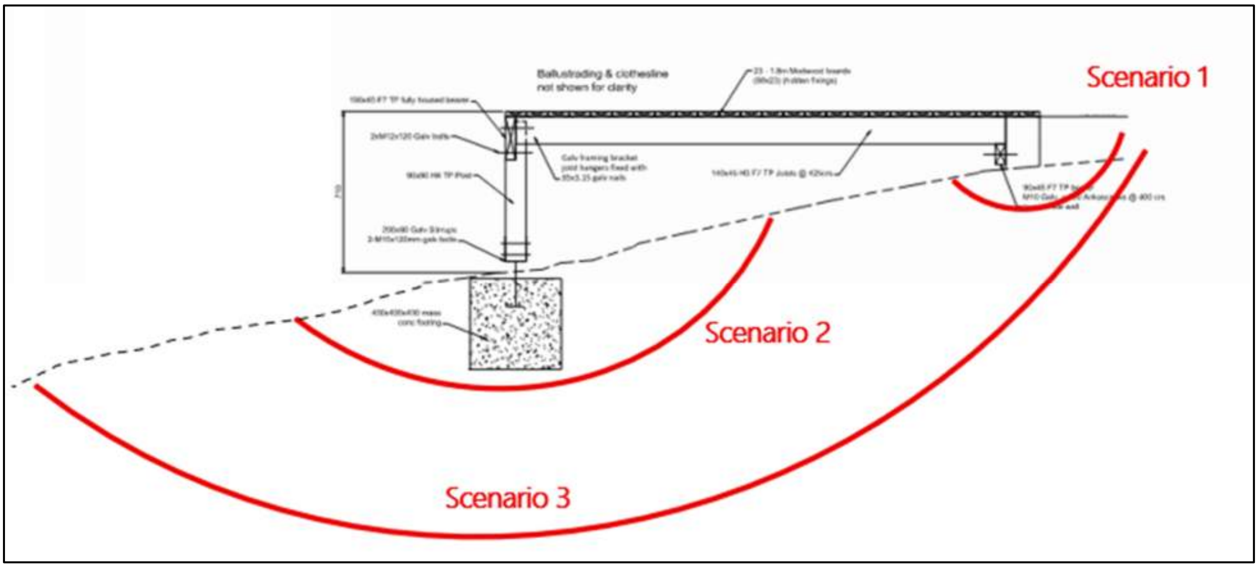


Figure 9 - Conceptual Cross Section of Slope Failure Mechanism relevant to the site (Not to scale)

5.2 Frequency Analysis

Table 3 presents the frequency analysis for the identified slope failure mechanisms. Terminology used is in accordance with the Australian Geomechanics Society (AGS) guidelines for Landslip risk management (2007a,b,c,d).

Table 3 Frequency analysis for Landslip hazards Scenario 1

Scenario	Failure Mechanism	Unit Affected	Observed in the field	Potential Size	Potential Speed	Water Content	Current Likelihood	Treated Likelihood
Scenario 1	Shallow translational or rotational slide – cut	Existing <1.0m cut near the deck	No	Small to medium	slow	Moist	Possible	Unlikely
Scenario 2	Shallow translational or rotational slide - fill	Existing fill near the deck	No	Small to medium	Slow to rapid	Moist	Possible	Unlikely
Scenario 3	Re-activation of part, or all of the assumed fossil landslide on which the property exists due to construction of pergola and deck on site.	Deep Tertiary deposits derived from Triassic sedimentary rocks and/or Jurassic Dolerite	Yes – currently active landslide	Large	Slow (based on August 2024 quarterly report)	Wet	Unlikely	Rare

5.3 Risk Analysis

5.3.1 Risk to Property

There is currently a moderate risk to property assuming no risk management is carried out. Treated risk may be reduced to low (Table 4).

Table 4 Consequence analysis for Landslip hazards – Property

Scenario	Issue	Current Risks			Landslip Risk Management	Treated Risks
		Likelihood of occurrence	Consequence to property	Level of risk to property		Level of risk to property
Scenario 1	Shallow translational or rotational slide – cut	Possible	Minor	Moderate	• All cut slopes to be retained using suitably engineered retaining walls with proper drainage to capture stormwater and divert away from the site slopes. • Any cuts to not exceed 1.0m in height	Low
Scenario 2	Shallow translational or rotational slide - fill	Possible	Minor	Moderate	• Depth of fill material placed should not exceed 0.3m in height above existing ground surface and adequately compacted in accordance with AS 3798-2007. • Fill batter angles should not exceed 1V:2H.	Low
Scenario 3	Re-activation of part, or all of the assumed fossil landslide on which the property exists due to construction of pergola and deck on site.	Unlikely	Medium	Low	Pergola Upgradation • The older pergola that was on the property was considered unsafe due to improper structural bracing and utilised portion of the fence for support with poor drainage. • An upgraded pergola has been understood to have been constructed in 2020 which has not been anticipated to impart any additional loading on the ground and all the rainwater collected is discharged into the gutter of the existing dwelling connected to the property's stormwater system. • The upgraded pergola has been built in accordance with relevant Australian Standards and includes Form 35 and Form 55. Construction of New Deck • A deck was constructed in 2020, designed to provide safe and easy access to the clothesline area. The deck measures 1800mm wide x 2150mm long x 710mm high off the ground. • Since the deck structure has a total floor area of less than 20 square metres and is not more than one storey high, as per the Director's Determination – Landslip Hazard Areas, it is considered as an 'insubstantial building'. Such a building is permitted to be erected in a 'high' landslip area. • The deck structure is anchored along one of its long sides to the existing dwelling, thereby limiting the extent of its load distribution. The isolated pad footing on site has been evaluated to exert a bearing pressure of up to 10kPa, which is considered insufficient to trigger any deep-seated landslip within the area.	Low

5.3.1 Risk to Life

Risk to life is considered acceptable following the recommended hazard treatment in Table 4 given the likelihood and consequence of a shallow slide failures within the soils and or fill, or within cutting (Table 5).

Table 5 Consequence analysis for Landslip hazards 1 – 2 – Life – Post Treatment

Hazard	Scenario 1	Scenario 2	Scenario 3
Factor	Shallow translational or rotational slide – cut	Shallow translational or rotational slide - fill	Re-activation of part, or all of the assumed fossil landslide on which the property exists due to construction of pergola and deck on site.
Likelihood	Possible	Possible	Unlikely
Indicative Annual Probability	0.001	0.001	0.0001
Use of Affected Structure/Site	Damage to cutting in the backyard	Damage to fill near the deck side of the yard	Entire development
Probability of Spatial Impact	Minor damage anticipated = .05	Minor damage anticipated = .05	Major damage anticipated = 1
Proportion of Time	Estimated 12 hours a day. = 0.5	Estimated 12 hours a day. = 0.5	Estimated 12 hours a day. = 0.5
Probability of Not Evacuating	Soils around the site exhibit signs of stress (cracking) allowing time to evacuate. = 0.1	Soils around the site exhibit signs of stress (cracking) allowing time to evacuate. = 0.1	Soils around the site exhibit signs of stress (cracking) allowing time to evacuate. = 0.1
Vulnerability	Building unlikely to collapse = 0.1	Building unlikely to collapse = 0.1	Building unlikely to collapse = 0.1
Risk for Person Most at Risk	2.5×10^{-7}	2.5×10^{-7}	5×10^{-7}
Risk Evaluation	Tolerable	Tolerable	Tolerable

5.3.2 Societal Risk

The Societal Risk Graph plot presented in Figure 10. showing the estimated individual risks for scenarios 1, 2 and 3 as presented in Figure 10 (outlined in the AGS 'Landslide Risk Management Concepts and Guidelines', 2000). The risks are estimated based on people in the structure spending up to 12 hours per day in internal areas the property.

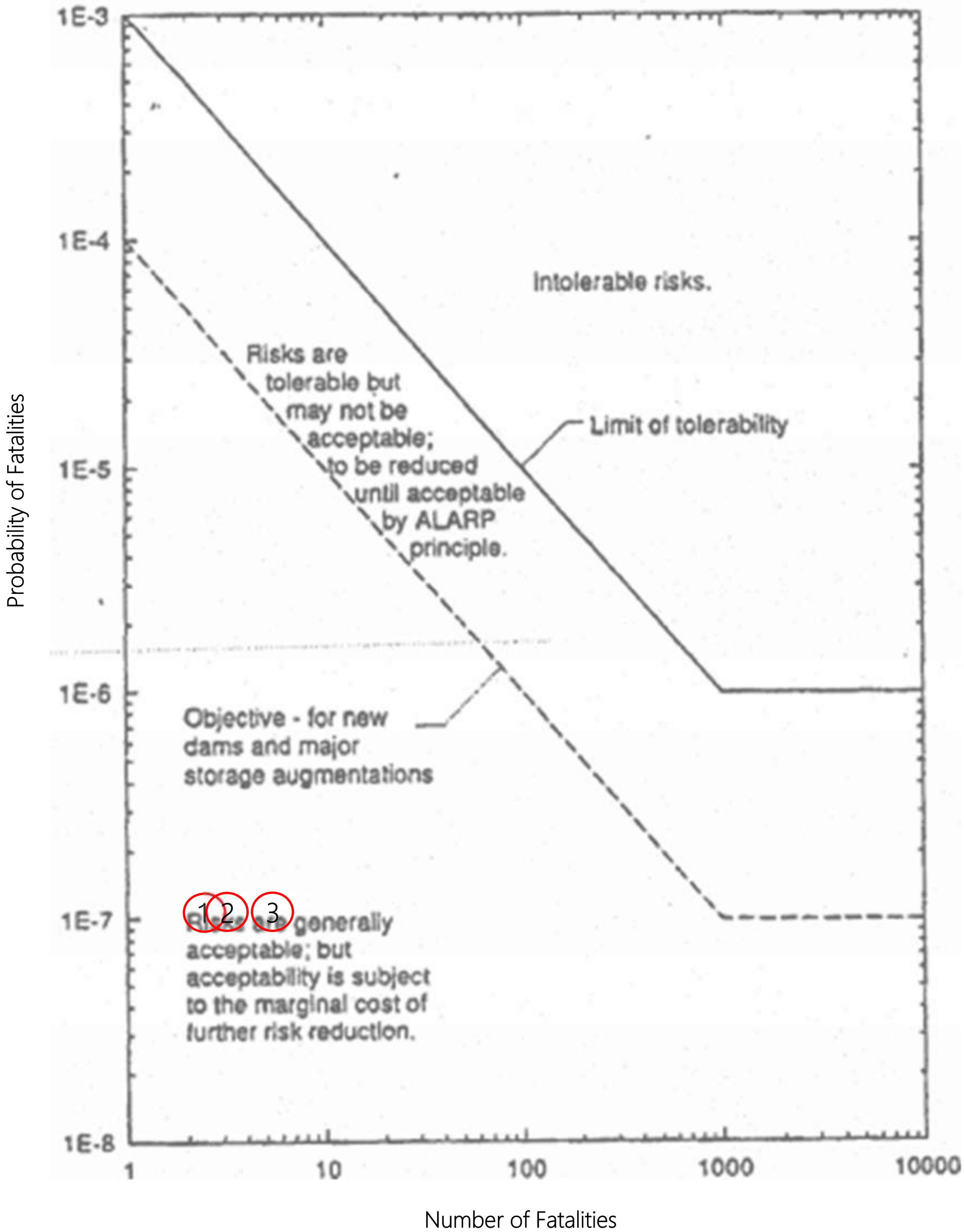


Figure 10 Societal Risk Graph of Probability of Fatalities vs Number of Fatalities (ANCOLD 1998)

6 Conclusions and Recommendations

Based on the outcome of the review of geotechnical information, slope stability and hazard analysis and risk assessment, the following conclusions and recommendations are made:

- The site is located within a 'High; proclaimed – landslip A area' hazard band;
- The older pergola that was on the property was considered unsafe due to improper structural bracing and utilised portion of the fence for support with poor drainage.
- An upgraded pergola has been understood to have been constructed in 2020 which has not been anticipated to impart any additional loading on the ground and all the rainwater collected is discharged into the gutter of the existing dwelling connected to the property's stormwater system.
- The upgraded pergola has been built in accordance with relevant Australian Standards and includes Form 35 and Form 55.
- A deck was constructed in 2020, designed to provide safe and easy access to the clothesline area. The deck measures 1800mm wide x 2150mm long x 710mm high off the ground.
- Since the deck structure has a total floor area of less than 20 square metres and is not more than one storey high, as per the Director's Determination - Landslip Hazard Areas, it is considered as an 'insubstantial building'. Such a building is permitted to be erected in a 'high' landslip area.
- The deck structure is anchored along one of its long sides to the existing dwelling, thereby limiting the extent of its load distribution. The isolated pad footing on site has been evaluated to exert a bearing pressure of up to 10 kPa, which is considered insufficient to trigger any deep-seated landslip within the area.
- All cut slopes to be retained using suitably engineered retaining walls with proper drainage to capture stormwater and divert away from the site slopes.
- Any cuts to not exceed 1.0m in height
- Depth of fill material placed should not exceed 0.3m in height above existing ground surface and adequately compacted in accordance with AS 3798-2007.
- Fill batter angles should not exceed 1V:2H.

With the implementation of all above recommendations the proposed works satisfies the performance criteria and is considered as it represents a tolerable risk for the life of the use and development with Code (C15.6.1) as per Glenorchy City Council Planning Scheme.

GES should be contacted immediately should conditions greatly differ to that which are stated in this report.

7 LIMITATIONS STATEMENT

This Assessment Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and 'the Client'. To the best of GES's knowledge, the information presented herein represents the Client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that discussed in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

8 REFERENCES

AGS (2007a). Guideline for Landslip Susceptibility, Hazard and Risk Zoning. Australian Geomechanics, Vol 42 No 1 March 2007

AGS (2007b). Commentary on Guideline for Landslip Susceptibility, Hazard and Risk Zoning. Australian Geomechanics, Vol 42 No 1 March 2007

AGS (2007c). Practice Notes Guidelines for Landslip Risk Management. Australian Geomechanics Vol 42 No 1 March 2007

AGS (2007d). Commentary on Practice Notes Guidelines for Landslip Risk Management. Australian Geomechanics Vol 42 No 1 March 2007

AGS (2007e). The Australian Geoguides for Slope Management and Maintenance. Australian Geomechanics Vol 42 No 1 March 2007

AS1170 (2007). Australian Standard. Structural design actions. Part 4: Earthquake actions in Australia. prepared by Committee BD-006, General Design Requirements and Loading on Structures. It was approved on behalf of the Council of Standards Australia on 22 May 2007. This Standard was published on 9 October 2007.

AS1289 (2000). Australian Standard. Various methods as Prepared by Committee CE/9, Testing of Soils for Engineering Purposes. Approved on behalf of the Council of Standards Australia on 3 December 1999 and published on 28 February 2000.

AS1726 (2017). Australian Standard. Geotechnical Site Investigations. Approved on behalf of the Council of Standards Australia on 7 April 2017 and published on 2nd May 2017.

AS2870 (2011). Australian Standard. Residential slabs and footings. prepared by Committee BD-025, Residential Slabs and Footings. Approved on behalf of the Council of Standards Australia on 20 December 2010. This Standard was published on 17 January 2011.

AS4133 (2000). Australian Standard. Prepared by Committee CE/9, Testing of Soils for Engineering Purposes. Approved on behalf of the Council of Standards Australia on 3 December 1999 and published on 28 February 2000.

Tasmanian Government, Director's Determination – Landslip Hazard Areas. Version 1.0 6 February 2020.

Mazengarb, C. 2004: Map 5, Hobart – Potential Deep Seated Landslide Hazard. Tasmanian Landslide Hazard Series. Mineral Resources Tasmania, Department of Infrastructure Energy and Resources, Hobart.

APPENDIX 1 – Acceptable Solutions

Landslip Code Areas

C15.6.1 Building and works within a landslip hazard area

Objective:

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

(a) minimise the likelihood of triggering a landslip event; and

(b) achieve and maintain a tolerable risk from a landslip.

Acceptable Solutions	Performance Criteria
A1 No Acceptable Solution.	**P1.1** Building and works within a landslip hazard area must minimise the likelihood of triggering a landslip event and achieve and maintain a tolerable risk from landslip, having regard to: (a) the type, form, scale and intended duration of the development; (b) whether any increase in the level of risk from a landslip requires any specific hazard reduction or protection measures; (c) any advice from a State authority, regulated entity or a council; and (d) the advice contained in a landslip hazard report. **P1.2** A landslip hazard report also demonstrates that the buildings and works do not cause or contribute to landslip on the site, on adjacent land or public infrastructure. **P1.3** If landslip reduction or protection measures are required beyond the boundary of the site the consent in writing of the owner of that land must be provided for that land to be managed in accordance with the specific hazard reduction or protection measures.

APPENDIX 2 – Qualitative Risk Assessment Tables

Likelihood & Consequence Index

QUALITATIVE MEASURES OF LIKELIHOOD

Approximate Annual Probability		Implied Indicative Landslide Recurrence Interval		Description	Descriptor	Level
Indicative Value	Notional Boundary					
10^{-1}	$5x10^{-2}$	10 years	20 years	The event is expected to occur over the design life.	ALMOST CERTAIN	A
10^{-2}		100 years		The event will probably occur under adverse conditions over the design life.	LIKELY	B
	$5x10^{-3}$		200 years			
10^{-3}		1000 years	2000 years	The event could occur under adverse conditions over the design life.	POSSIBLE	C
	$5x10^{-4}$					
10^{-4}		10,000 years		The event might occur under very adverse circumstances over the design life.	UNLIKELY	D
	$5x10^{-5}$		20,000 years			
10^{-5}		100,000 years		The event is conceivable but only under exceptional circumstances over the design life.	RARE	E
	$5x10^{-6}$		200,000 years			
10^{-6}		1,000,000 years		The event is inconceivable or fanciful over the design life.	BARELY CREDIBLE	F

Note: (1) The table should be used from left to right; use Approximate Annual Probability or Description to assign Descriptor, not *vice versa*.

QUALITATIVE MEASURES OF CONSEQUENCES TO PROPERTY

Approximate Cost of Damage		Description	Descriptor	Level
Indicative Value	Notional Boundary			
200%		Structure(s) completely destroyed and/or large scale damage requiring major engineering works for stabilisation. Could cause at least one adjacent property major consequence damage.	CATASTROPHIC	1
	100%			
60%		Extensive damage to most of structure, and/or extending beyond site boundaries requiring significant stabilisation works. Could cause at least one adjacent property medium consequence damage.	MAJOR	2
	40%			
20%		Moderate damage to some of structure, and/or significant part of site requiring large stabilisation works. Could cause at least one adjacent property minor consequence damage.	MEDIUM	3
	10%			
5%		Limited damage to part of structure, and/or part of site requiring some reinstatement stabilisation works.	MINOR	4
	1%			
0.5%		Little damage. (Note for high probability event (Almost Certain), this category may be subdivided at a notional boundary of 0.1%. See Risk Matrix.)	INSIGNIFICANT	5

Notes: (2) The Approximate Cost of Damage is expressed as a percentage of market value, being the cost of the improved value of the unaffected property which includes the land plus the unaffected structures.

(3) The Approximate Cost is to be an estimate of the direct cost of the damage, such as the cost of reinstatement of the damaged portion of the property (land plus structures), stabilisation works required to render the site to tolerable risk level for the landslide which has occurred and professional design fees, and consequential costs such as legal fees, temporary accommodation. It does not include additional stabilisation works to address other landslides which may affect the property.

(4) The table should be used from left to right; use Approximate Cost of Damage or Description to assign Descriptor, not vice versa

Qualitative Risk Matrix

QUALITATIVE RISK ANALYSIS MATRIX – LEVEL OF RISK TO PROPERTY

LIKELIHOOD		CONSEQUENCES TO PROPERTY (With Indicative Approximate Cost of Damage)				
	Indicative Value of Approximate Annual Probability	1: CATASTROPHIC 200%	2: MAJOR 60%	3: MEDIUM 20%	4: MINOR 5%	5: INSIGNIFICANT 0.5%
A – ALMOST CERTAIN	10^{-1}	VH	VH	VH	H	M or L (5)
B - LIKELY	10^{-2}	VH	VH	H	M	L
C - POSSIBLE	10^{-3}	VH	H	M	M	VL
D - UNLIKELY	10^{-4}	H	M	L	L	VL
E - RARE	10^{-5}	M	L	L	VL	VL
F - BARELY CREDIBLE	10^{-6}	L	VL	VL	VL	VL

Notes: (5) For Cell A5, may be subdivided such that a consequence of less than 0.1% is Low Risk.

(6) When considering a risk assessment it must be clearly stated whether it is for existing conditions or with risk control measures which may not be implemented at the current time.

RISK LEVEL IMPLICATIONS

Risk Level		Example Implications (7)
VH	VERY HIGH RISK	Unacceptable without treatment. Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to Low; may be too expensive and not practical. Work likely to cost more than value of the property.
H	HIGH RISK	Unacceptable without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to Low. Work would cost a substantial sum in relation to the value of the property.
M	MODERATE RISK	May be tolerated in certain circumstances (subject to regulator's approval) but requires investigation, planning and implementation of treatment options to reduce the risk to Low. Treatment options to reduce to Low risk should be implemented as soon as practicable.
L	LOW RISK	Usually acceptable to regulators. Where treatment has been required to reduce the risk to this level, ongoing maintenance is required.
VL	VERY LOW RISK	Acceptable. Manage by normal slope maintenance procedures.

Note: (7) The implications for a particular situation are to be determined by all parties to the risk assessment and may depend on the nature of the property at risk; these are only given as a general guide.

Performance Criteria C15.6.1 That building and works on land within a landslip hazard area can: (a) minimise the likelihood of triggering a landslip event; and (b) achieve and maintain a tolerable risk from a landslip	Relevance	Management Options	Managed (treated) Risk Assessment			Further Assessment Required
			Consequence	Likelihood	Risk	
P1.1 Building and works within a landslip hazard area must minimise the likelihood of triggering a landslip event and achieve and maintain a tolerable risk from landslip, having regard to: (a) the type, form, scale and intended duration of the development; (b) whether any increase in the level of risk from a landslip requires any specific hazard reduction or protection measures; (c) any advice from a State authority, regulated entity or a council; and (d) the advice contained in a landslip hazard report.	Achieve and maintain a tolerable risk	Refer to recommendations	Minor	Unlikely	Low	No
P1.2 A landslip hazard report also demonstrates that the buildings and works do not cause or contribute to landslip on the site, on adjacent land or public infrastructure.	Works not likely to cause or contribute to landslip on site, or adjacent land or public infrastructure	Refer to recommendations	Minor	Unlikely	Low	No
P1.3 If landslip reduction or protection measures are required beyond the boundary of the site the consent in writing of the owner of that land must be provided for that land to be managed in accordance with the specific hazard reduction or protection measures.	No reduction or protection required beyond the site boundary.	Refer to recommendations	Minor	Rare	Low	No

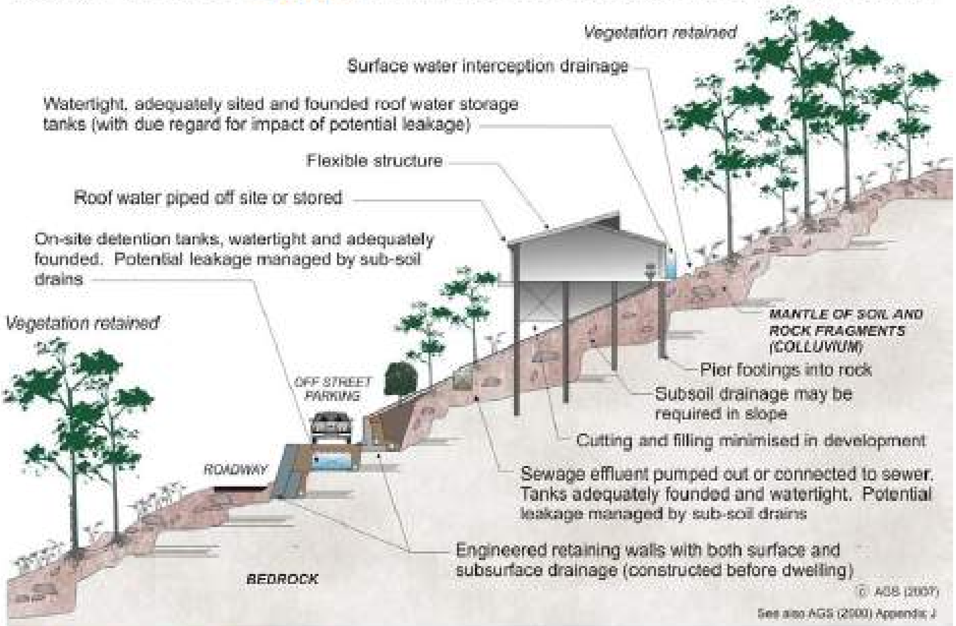
APPENDIX 3 - Australian Geomechanics Society (AGS) Landslip Risk

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.

EXAMPLES OF GOOD HILLSIDE CONSTRUCTION PRACTICE



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.

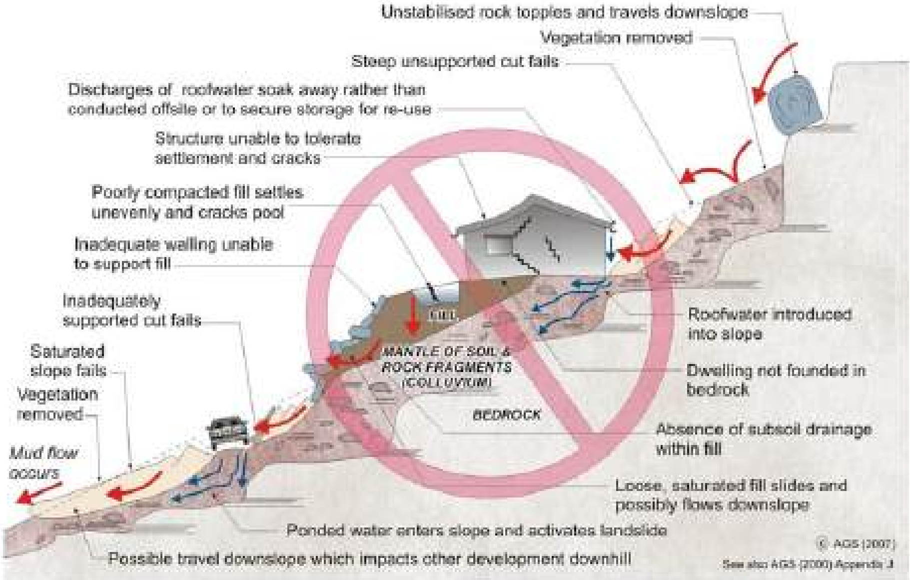
Vegetation clearance - on soil slopes has been kept to a reasonable minimum. Trees, and to a lesser extent smaller vegetation, take large quantities of water out of the ground every day. This lowers the ground water table, which in turn helps to maintain the stability of the slope. Large scale clearing 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

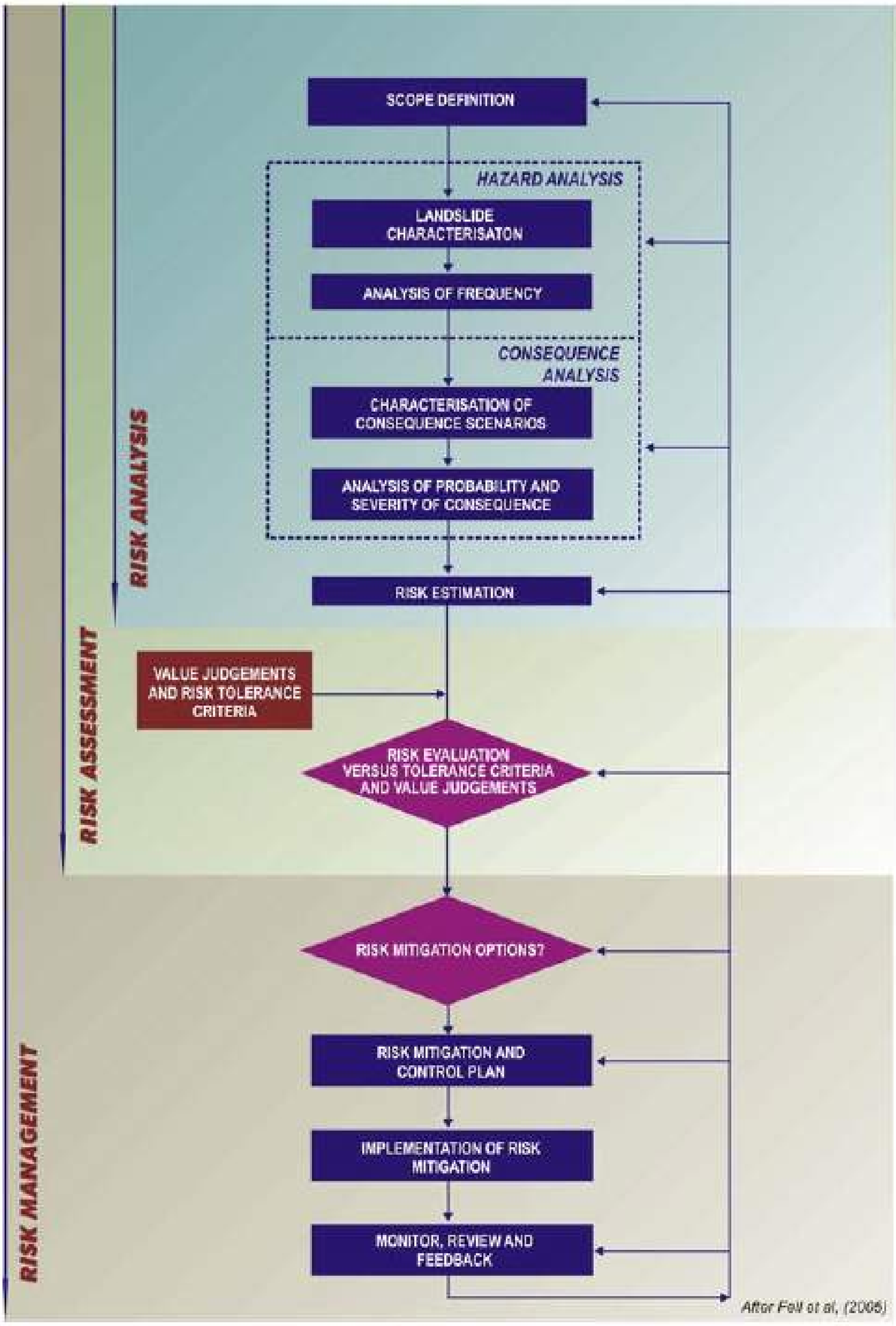
The Australian GeoGuides (LR series) are a set of publications intended for property owners; local councils; planning authorities; developers; insurers; lawyers and, in fact, anyone who lives with, or has an interest in, a natural or engineered slope, a cutting, or an excavation. They are intended to 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.

PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007

APPENDIX G - SOME GUIDELINES FOR HILLSIDE CONSTRUCTION

	GOOD ENGINEERING PRACTICE	POOR ENGINEERING PRACTICE
ADVICE		
GEOTECHNICAL ASSESSMENT	Obtain advice from a qualified, experienced geotechnical practitioner at early stage of planning and before site works.	Prepare detailed plan and start site works before geotechnical advice.
PLANNING		
SITE PLANNING	Having obtained geotechnical advice, plan the development with the risk arising from the identified hazards and consequences in mind.	Plan development without regard for the Risk.
DESIGN AND CONSTRUCTION		
HOUSE DESIGN	Use flexible structures which incorporate properly designed brickwork, timber or steel frames, timber or panel cladding. Consider use of split levels. Use decks for recreational areas where appropriate.	Floor plans which require extensive cutting and filling. Movement intolerant structures.
SITE CLEARING	Retain natural vegetation wherever practicable.	Indiscriminately clear the site.
ACCESS & DRIVEWAYS	Satisfy requirements below for cuts, fills, retaining walls and drainage. Council specifications for grades may need to be modified. Driveways and parking areas may need to be fully supported on piers.	Excavate and fill for site access before geotechnical advice.
EARTHWORKS	Retain natural contours wherever possible.	Indiscriminatory bulk earthworks.
CUTS	Minimise depth. Support with engineered retaining walls or batter to appropriate slope. Provide drainage measures and erosion control.	Large scale cuts and benching. Unsupported cuts. Ignore drainage requirements
FILLS	Minimise height. Strip vegetation and topsoil and key into natural slopes prior to filling. Use clean fill materials and compact to engineering standards. Batter to appropriate slope or support with engineered retaining wall. Provide surface drainage and appropriate subsurface drainage.	Loose or poorly compacted fill, which if it fails, may flow a considerable distance including onto property below. Block natural drainage lines. Fill over existing vegetation and topsoil. Include stumps, trees, vegetation, topsoil, boulders, building rubble etc in fill.
ROCK OUTCROPS & BOULDERS	Remove or stabilise boulders which may have unacceptable risk. Support rock faces where necessary.	Disturb or undercut detached blocks or boulders.
RETAINING WALLS	Engineer design to resist applied soil and water forces. Found on rock where practicable. Provide subsurface drainage within wall backfill and surface drainage on slope above. Construct wall as soon as possible after cut/fill operation.	Construct a structurally inadequate wall such as sandstone flagging, brick or unreinforced blockwork. Lack of subsurface drains and weepholes.
FOOTINGS	Found within rock where practicable. Use rows of piers or strip footings oriented up and down slope. Design for lateral creep pressures if necessary. Backfill footing excavations to exclude ingress of surface water.	Found on topsoil, loose fill, detached boulders or undercut cliffs.
SWIMMING POOLS	Engineer designed. Support on piers to rock where practicable. Provide with under-drainage and gravity drain outlet where practicable. Design for high soil pressures which may develop on uphill side whilst there may be little or no lateral support on downhill side.	
DRAINAGE		
SURFACE	Provide at tops of cut and fill slopes. Discharge to street drainage or natural water courses. Provide general falls to prevent blockage by siltation and incorporate silt traps. Line to minimise infiltration and make flexible where possible. Special structures to dissipate energy at changes of slope and/or direction.	Discharge at top of fills and cuts. Allow water to pond on bench areas.
SUBSURFACE	Provide filter around subsurface drain. Provide drain behind retaining walls. Use flexible pipelines with access for maintenance. Prevent inflow of surface water.	Discharge roof runoff into absorption trenches.
SEPTIC & SULLAGE	Usually requires pump-out or mains sewer systems; absorption trenches may be possible in some areas if risk is acceptable. Storage tanks should be water-tight and adequately founded.	Discharge sullage directly onto and into slopes. Use absorption trenches without consideration of landslide risk.
EROSION CONTROL & LANDSCAPING	Control erosion as this may lead to instability. Revegetate cleared area.	Failure to observe earthworks and drainage recommendations when landscaping.
DRAWINGS AND SITE VISITS DURING CONSTRUCTION		
DRAWINGS	Building Application drawings should be viewed by geotechnical consultant	
SITE VISITS	Site Visits by consultant may be appropriate during construction/	
INSPECTION AND MAINTENANCE BY OWNER		
OWNER'S RESPONSIBILITY	Clean drainage systems; repair broken joints in drains and leaks in supply pipes. Where structural distress is evident see advice. If seepage observed, determine causes or seek advice on consequences.	

FRAMEWORK FOR LANDSLIDE RISK MANAGEMENT



APPENDIX B - LANDSLIDE TERMINOLOGY

The following provides a summary of landslide terminology which should (for uniformity of practice) be adopted when classifying and describing a landslide. It has been based on Cruden & Varnes (1996) and the reader is recommended to refer to the original documents for a more detailed discussion, other terminology and further examples of landslide types and processes.

Landslide

The term ***landslide*** denotes "the movement of a mass of rock, debris or earth down a slope". The phenomena described as landslides are not limited to either the "land" or to "sliding", and usage of the word has implied a much more extensive meaning than its component parts suggest. Ground subsidence and collapse are excluded.

Classification of Landslides

Landslide classification is based on Varnes (1978) system which has two terms: the first term describes the material type and the second term describes the type of movement.

The material types are ***Rock***, ***Earth*** and ***Debris***, being classified as follows:-

The material is either rock or soil.

Rock: is "a hard or firm mass that was intact and in its natural place before the initiation of movement."

Soil: is "an aggregate of solid particles, generally of minerals and rocks, that either was transported or was formed by the weathering of rock in place. Gases or liquids filling the pores of the soil form part of the soil."

Earth: "describes material in which 80% or more of the particles are smaller than 2 mm, the upper limit of sand sized particles."

Debris: "contains a significant proportion of coarse material; 20% to 80% of the particles are larger than 2 mm and the remainder are less than 2 mm."

The terms used should describe the displaced material in the landslide <u>before</u> it was displaced.

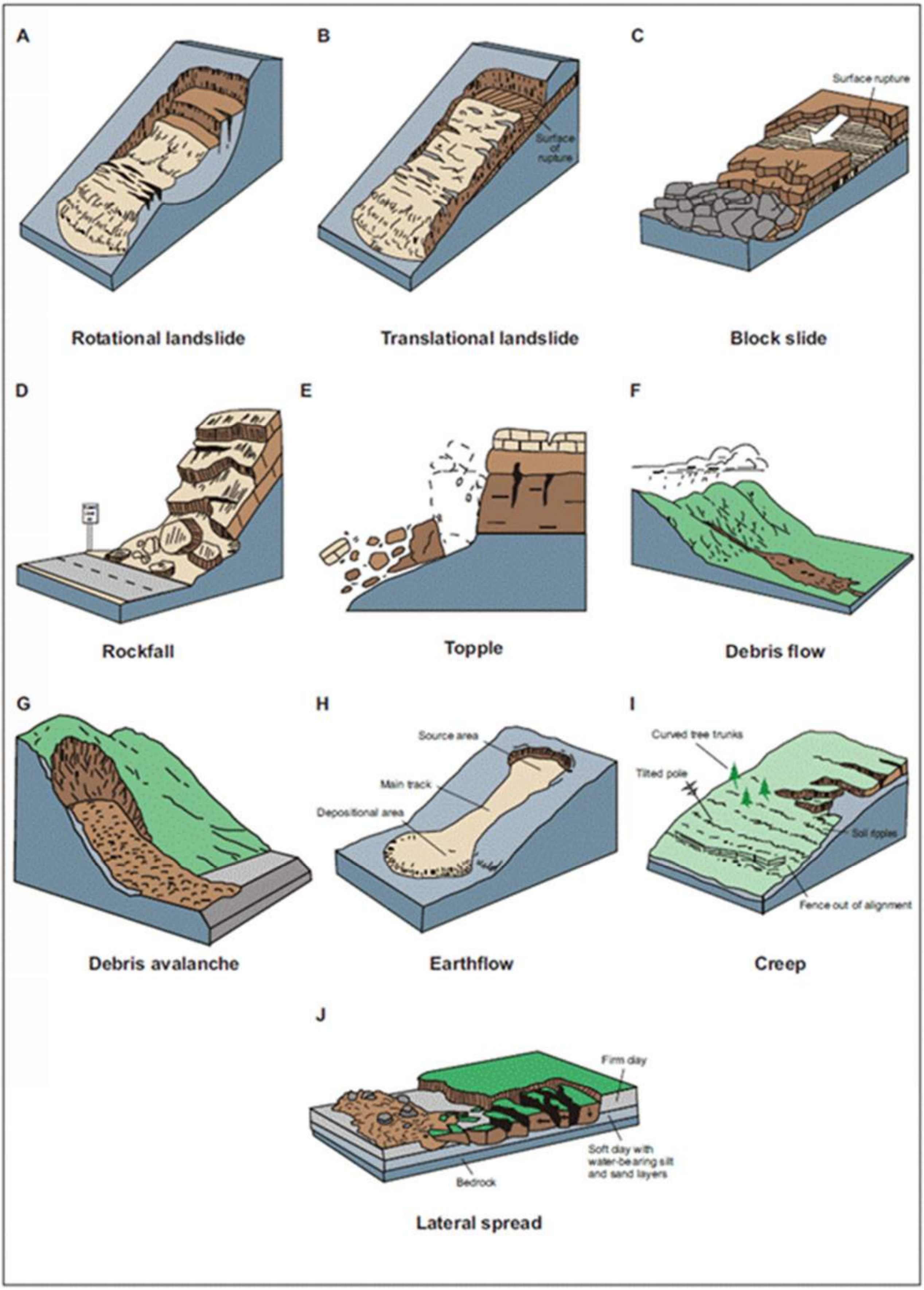
The types of movement describe how the landslide movement is distributed through the displaced mass. The five kinematically distinct types of movement are described in the sequence ***fall***, ***topple***, ***slide***, ***spread*** and ***flow***.

The following table shows how the two terms are combined to give the landslide type:

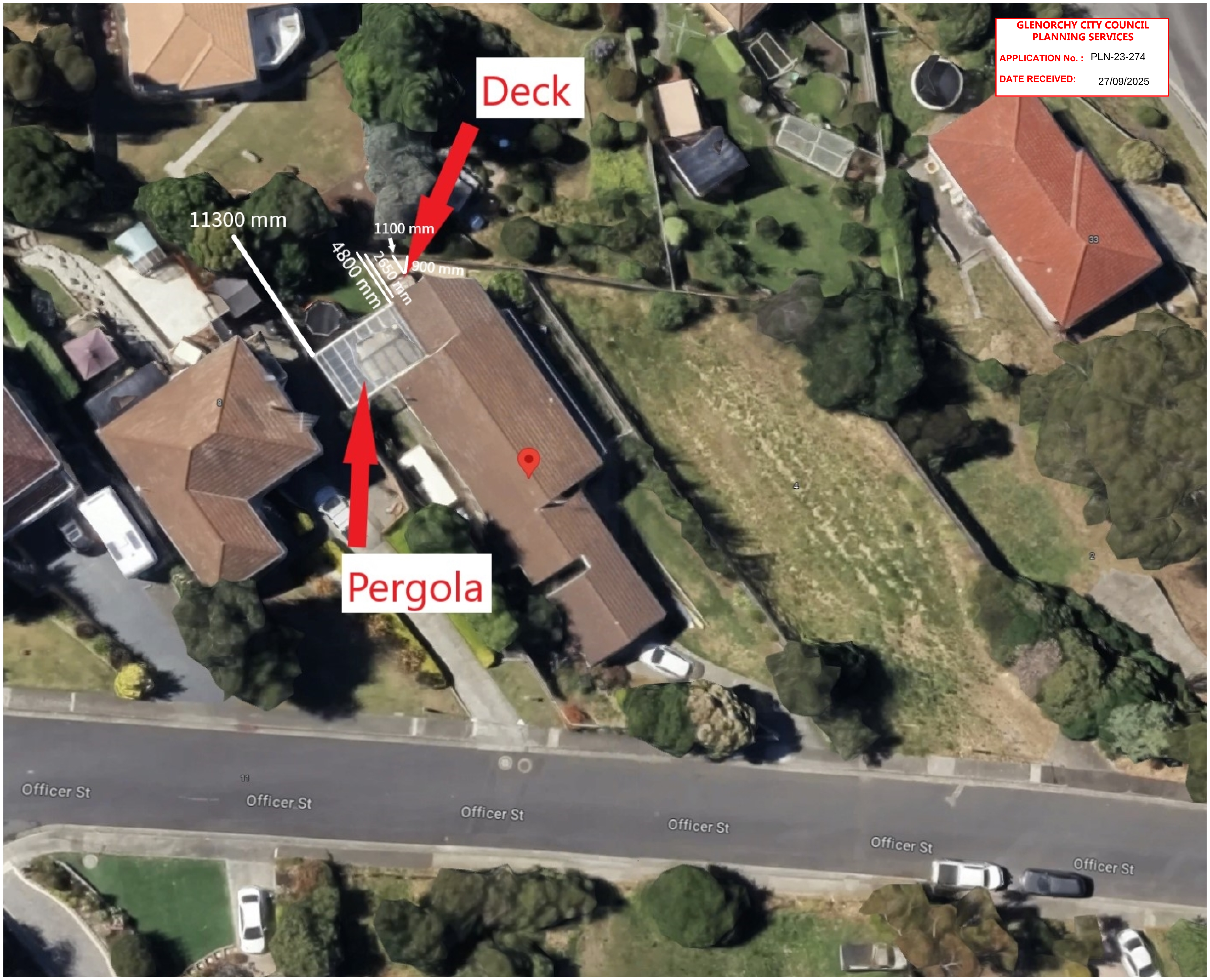
Table B1: Major types of landslides. Abbreviated version of Varnes' classification of slope movements (Varnes, 1978).

TYPE OF MOVEMENT		TYPE OF MATERIAL		
		BEDROCK	ENGINEERING SOILS	
			Predominantly Coarse	**Predominantly Fine**
FALLS		Rock fall	Debris fall	Earth fall
TOPPLES		Rock topple	Debris topple	Earth topple
SLIDES	ROTATIONAL	Rock slide	Debris slide	Earth slide
	TRANSLATIONAL			
LATERAL SPREADS		Rock spread	Debris spread	Earth spread
FLOWS		Rock flow (Deep creep)	Debris flow (Soil creep)	Earth flow
COMPLEX	Combination of two or more principle types of movement			

Figure B1 gives schematics to illustrate the major types of landslide movement. Further information and photographs of landslides are available on the USGS website at http://landslides.usgs.gov.


A
Rotational landslide
B
Surface of rupture
Translational landslide
C
Surface rupture
Block slide
D
Rockfall
E
Topple
F
Debris flow
G
Debris avalanche
H
Source area
Main track
Depositional area
Earthflow
I
Curved tree trunks
Tilted pole
Soil ripples
Fence out of alignment
Creep
J
Firm clay
Soft clay with water-bearing silt and sand layers
Bedrock
Lateral spread

Appendix 4 Site Photos

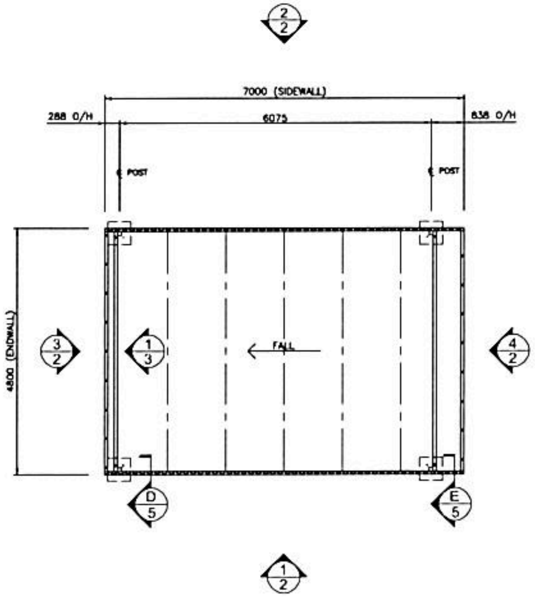


GLENORCHY CITY COUNCIL
PLANNING SERVICES
APPLICATION No. : PLN-23-274
DATE RECEIVED: 27/09/2025

GLENORCHY CITY COUNCIL
PLANNING SERVICES

APPLICATION No. : PLN-23-274

DATE RECEIVED: 3/10/2024



FOUNDATION PLAN
SCALE 1:100

CHANGE REQUIREMENTS:
- MOVED POSTS 250mm FROM LOW SIDE AND 600mm HIGH SIDE
- POST CAST IN FOOTINGS.

LEGEND:
- ROOF PURLIN
- BEAM
- RAFTER
- EAVE PURLIN

SHEET	1 OF 5
JOB NO	PAUL84756
DATE	17/12/2019
CERTIFIED	TM
CHECK 2	DL
DRAWN	FDS
CHECK 1	TB

STEELBUILDING BY (CONTACT)
P & J SHEDS PTY LTD
0362444300
FOR
LUKE KIELY
AT
6 OFFICER STREET
ROSETTA

fairdinkum SHEDS

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
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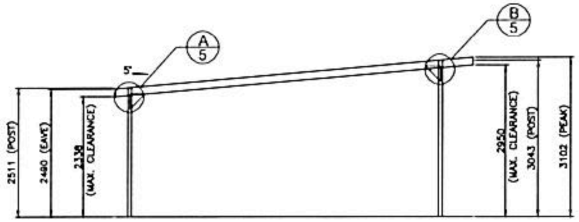
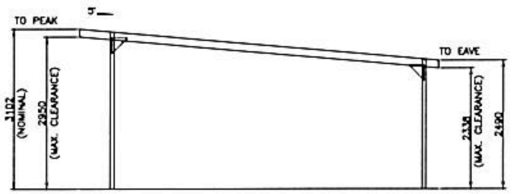
ABN 341 008 173 56

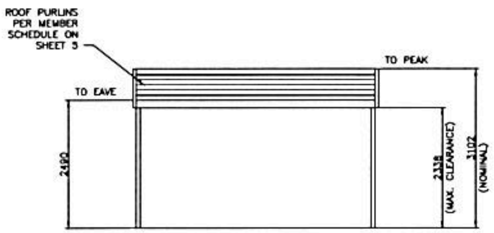
Mr Timothy Roy Messer BE MIEAust RPEQ
Registered Professional Engineer 2558980
Signature
Date 17/12/2019
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register



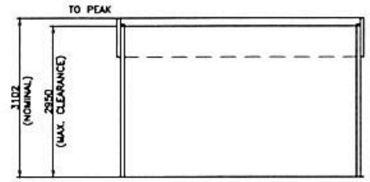
1/2 SIDEWALL EXTERIOR ELEVATION
SCALE: 1:100



2/2 SIDEWALL EXTERIOR ELEVATION
SCALE: 1:100



3/2 ENDWALL EXTERIOR ELEVATION
SCALE: 1:100



4/2 ENDWALL EXTERIOR ELEVATION
SCALE: 1:100

SHEET	2 of 5
JOB NO.	PAUL84756
DATE	17/12/2019
CERTIFIED	TM
DRAWN	FDS
CHECK 2	DL
CHECK 1	TB

STEEL BUILDING BY (CONTACT)
P & J SHEDS PTY LTD
0362444300
FOR
LUKE KIELY
AT
6 OFFICER STREET
ROSETTA

fairdinkum SHEDS

SHED SAFE

NORTHERN CONSULTING engineers
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ABN 341 008 173 56

Registered Chartered Professional Engineer — Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD — Regn. No. 9065
Registered Certifying Engineer (Structural) N.T. — Regn. No. 116373ES
Registered Engineer - (Civil) VIC — Regn. No. EC38662
Registered Engineer - (Civil) TAS — Regn. No. CC5548M

Mr Timothy Roy Messer BE MIEAust RPEQ
Registered Professional Engineer 2558980
Signature ....
Date ....17/12/2019....
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

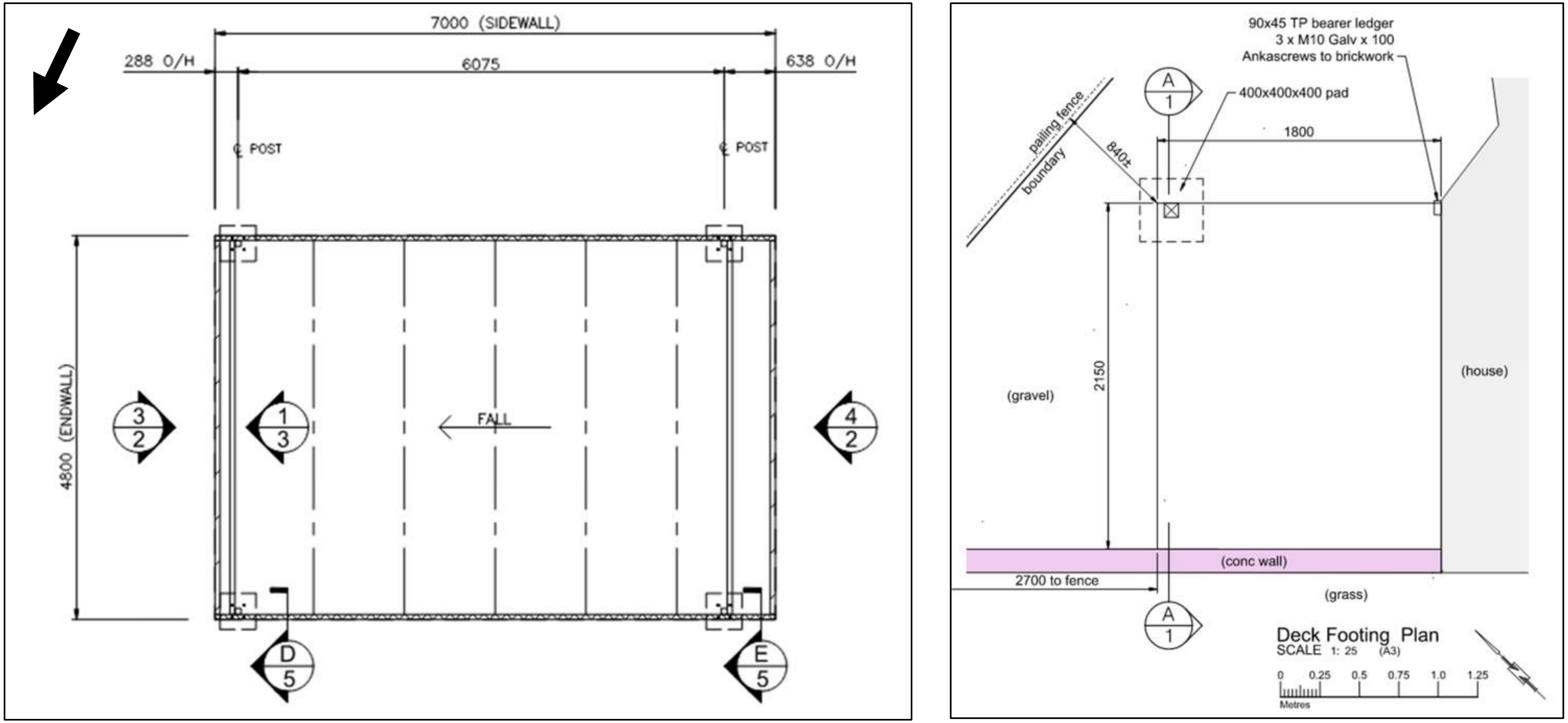

Figure 3 - Site Plan showing proposed extent of patio works (left) and clothesline deck (right)

GLENORCHY CITY COUNCIL
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**GLENORCHY CITY COUNCIL
PLANNING SERVICES**

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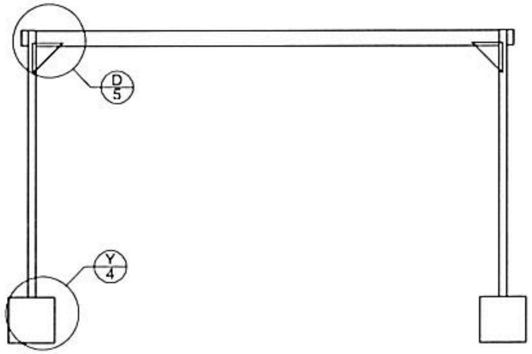

1/3 INTERNAL FRAME SECTION
SCALE: 1:50

(Refer to Sheet #4 for concrete specification).

SHEET	3 OF 5
JOB NO.	PAUL84756
DATE	17/12/2019
CERTIFIED	TM
CHECK 2	DL
DRAWN	FDS
CHECK 1	TB

STEEL BUILDING BY (CONTACT)
P & J SHEDS PTY LTD
0362444300

FOR
LUKE KIELY

AT
6 OFFICER STREET
ROSETTA

fairdinkum SHEDS

NORTHERN CONSULTING engineers
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ABN 341 008 173 56

Registered Chartered Professional Engineer	Regn. No 2558980
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Registered Certifying Engineer (Structural) N T	Regn. No 116373FS
Registered Engineer - (Civil) VIC	Regn. No EC36692
Registered Engineer - (Civil) TAS	Regn. No CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
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Signature ...T. Messer...
Date ...17/12/2019...
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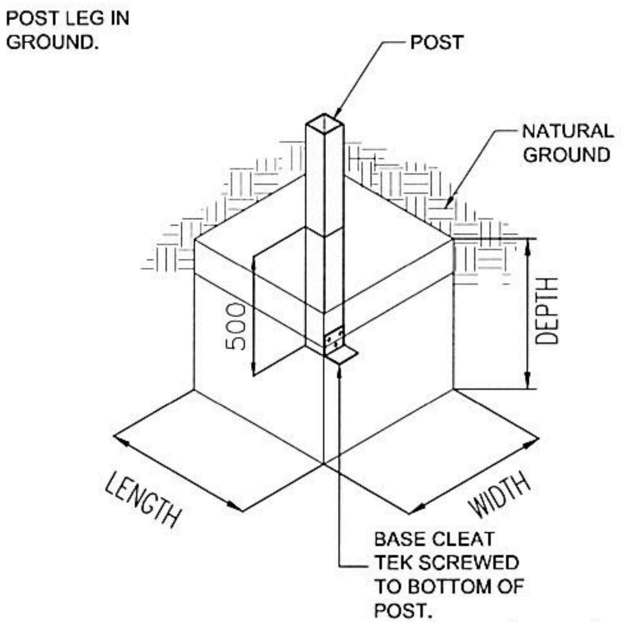

length x width x depth (mm)
450 x 450 x 600

Y	PAD FOOTING DETAIL	SCALE: NO SCALE

STRUCTURAL GENERAL NOTES

1. **GOVERNING CODE:** BUILDING CODE OF AUSTRALIA (BCA), LOADING TO AS1170 - ALL SECTIONS.
2. **DRAWING OWNERSHIP:**
THESE DRAWINGS REMAIN THE PROPERTY OF AGAS BUILDING SYSTEMS PTY. LTD (AGAS). ENGINEERING SIGNATURE AND CERTIFICATION IS ONLY VALID WHEN BUILDING IS SUPPLIED BY A DISTRIBUTOR OF AGAS. DRAWINGS ARE PROVIDED FOR THE [illegible] PURPOSE OF OBTAINING BUILDING PERMITS AND AIDING CONSTRUCTION. ANY OTHER USE OR REPRODUCTION IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM AGAS.
3. **DRAWING SIGNATURE REQUIREMENTS:**
THESE DRAWINGS ARE NOT VALID UNLESS SIGNED BY THE ENGINEER. THE ENGINEER ACCEPTS NO LIABILITY OR RESPONSIBILITY FOR DRAWINGS WITHOUT A SIGNATURE. EACH TITLE BLOCK CONTAINS A WATER MARK UNDER THE CUSTOMERS NAME CONTAINING THE DATE OF PRODUCTION OF THE DRAWINGS; THE DRAWINGS ARE TO BE SUBMITTED TO COUNCIL WITHIN 21 DAYS OF THIS DATE. THIS IS TO ENSURE THAT ONLY CURRENT DRAWINGS ARE IN CIRCULATION.
4. **CONTRACTOR RESPONSIBILITIES:**
CERTIFIER AND CONTRACTOR TO CONFIRM [illegible] THAT [illegible] LOADINGS APPLIED TO THIS DESIGN ARE TRUE AND CORRECT FOR THE ADDRESS STATED IN THE TITLE BLOCK.
CONTRACTOR SHALL VERIFY AND CONFIRM ALL EXISTING CONDITIONS AND DIMENSIONS. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS PRIOR TO START OF WORK.
CONTRACTOR MUST NOT MAKE ANY DEVIATION FROM THE PROVIDED PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE UNDERSIGNING ENGINEERS. THE ENGINEER [illegible] TAKE NO RESPONSIBILITY FOR CHANGES MADE WITHOUT WRITTEN APPROVAL.
CONTRACTOR IS RESPONSIBLE FOR ENSURING NO PART OF THE STRUCTURE BECOMES OVERSTRESSED DURING CONSTRUCTION.
BUILDING IS NOT STRUCTURALLY ADEQUATE UNTIL THE INSTALLATION OF ALL COMPONENTS AND [illegible] IS SHOWN IS COMPLETED IN ACCORDANCE WITH THESE DRAWINGS.
THE INDICATED DRAWING SCALES ARE APPROXIMATE. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES.
FOR FUTHER DIRECTIONS ON CONSTRUCTION THE CONTRACTOR SHOULD CONSULT THE APPROPRIATE INSTRUCTION MANUAL.
5. **ENGINEERING:**
THE ENGINEER / AGAS ARE NOT ACTING AS PROJECT MANAGERS FOR THIS DEVELOPMENT, AND WILL NOT BE PRESENT DURING CONSTRUCTION.
THE UNDERSIGNING ENGINEERS HAVE REVIEWED THIS BUILDING FOR CONFORMITY ONLY TO THE STRUCTURAL DESIGN PORTIONS OF THE GOVERNING CODE. THE PROJECT MANAGER IS RESPONSIBLE FOR ADDRESSING ANY OTHER CODE REQUIREMENTS APPLICABLE TO THIS DEVELOPMENT.
THESE DOCUMENTS ARE STAMPED ONLY AS TO THE COMPONENTS SUPPLIED BY AGAS. IT IS THE RESPONSIBILITY OF THE PURCHASER TO COORDINATE DRAWINGS PROVIDED BY AGAS WITH OTHER PLANS AND/OR OTHER COMPONENTS THAT ARE PART OF THE OVERALL PROJECT. IN CASES OF DISCREPANCIES, THE LATEST DRAWINGS PROVIDED BY AGAS SHALL GOVERN.
6. **INSPECTIONS:**
NO SPECIAL INSPECTIONS ARE REQUIRED BY THE GOVERNING CODE ON THIS JOB. ANY OTHER INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT SHALL BE CONDUCTED AT THE OWNER'S EXPENSE.
7. **SOIL REQUIREMENTS:**
SITE CLASSIFICATION TO BE A, S OR M ONLY. SOIL SAFE BEARING CAPACITY VALUE INDICATED ON DRAWING SHEET 4 OCCURS AT 100mm BELOW FINISH GRADE, EXISTING NATURAL GRADE, OR AT FROST DEPTH SPECIFIED BY LOCAL BUILDING DEPARTMENT, WHICHEVER IS THE LOWEST ELEVATION. REGARDLESS OF DETAIL Y ON SHEET 4 THE MINIMUM FOUNDATION DEPTH SHOULD BE 100MM INTO NATURAL GROUND OR BELOW FROST DEPTH SPECIFIED BY LOCAL COUNCIL. ROLLED OR COMPACTED FILL MAY BE USED UNDER SLAB, COMPACTED IN 150mm LAYERS TO A MAXIMUM DEPTH OF 900mm. CONCRETE FOUNDATION EMBEDMENT DEPTHS DO NOT APPLY TO LOCATIONS WHERE ANY UNCOMPACTED FILL OR DISTURBED GROUND EXISTS OR WHERE WALLS OF THE EXCAVATION WILL NOT STAND WITHOUT SUPPLEMENTAL SUPPORT. IN THIS CASE SEEK FURTHER ENGINEERING ADVICE.
8. **CLASS 10a FOOTING DESIGNS:**
THE FOUNDATION DOCUMENTED IS APPROPRIATE FOR CLASS 10a BUILDING DESIGNS ON 'H-D', 'E', 'H-D' OR 'E' CLASS SOILS, IF TOTAL SLAB AREA IS UNDER 100m sqr AND THE MAXIMUM SLAB DIMENSION (LENGTH AND WIDTH) IS LESS THAN 12m.
PLEASE BE AWARE THAT THE SLAB DESIGN FOR H & E CLASS SOILS IN THESE INSTANCES ARE DESIGNED TO EXPERIENCE SOME CRACKING. THIS CRACKING IS NOT CONSIDERED A STRUCTURAL FLAW OR AS AN ISSUE, AND IS SIMPLY COSMETIC IN NATURE. IF THIS IS A CONCERN TO THE CLIENT IT IS ADVISED THEY DISCUSS OTHER OPTIONS WITH THE RELEVANT DISTRIBUTOR PRIOR TO THE POURING OF THE SLAB.
FOR [illegible] ONLY [illegible] BUILDING [illegible] PREVAILS OVER SLAB [illegible].
9. **CONCRETE REQUIREMENTS:**
ALL CONCRETE DETAILS AND PLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH AS2870 AND AS3600. CONCRETE SHALL HAVE A MIN. 28-DAY STRENGTH OF 20MPA FOR EXPOSURE A1 & A1, 25MPA FOR EXPOSURE A2 & B1 AND 32MPA FOR EXPOSURE C. CEMENT TO BE TYPE A. MAX AGGREGATE SIZE OF 20mm. SLUMP TO BE 80mm +/-15mm. SLABS TO BE CURED FOR 7 DAYS BY WATERING OR COVERING WITH A PLASTIC MEMBRANE, AFTER WHICH CONSTRUCTION CAN BEGIN, BUT CARE GIVEN NOT TO OVER-TIGHTEN HOLD DOWN BOLTS. GIVEN ALLOWABLE SOIL TYPES 1 LAYER OF F72 REINFORCING MESH IS TO BE INSTALLED ON STANDARD SLABS WITH A MINIMUM 30mm COVER FROM CONCRETE SURFACE. CONCRETE REINFORCING TO CONFORM TO AS 1302, AS1303 & AS 1304. ALL REINFORCING COVER TO BE A MINIMUM OF 30mm.
10. **STRUCTURAL STEEL REQUIREMENTS:**
ALL STRUCTURAL STEEL, INCLUDING SHEETING THROUGH EXCLUDING CONCRETE REINFORCING, SHALL CONFORM TO AS 1397 (GAUGE <= 1mm fy = 550MPa, GAUGE > 1mm < 1.5mm fy = 500MPa, GAUGE >= 1.5mm fy = 450MPa).
NO WELDING IS TO BE PERFORMED ON THIS BUILDING.
ALL STRUCTURAL MEMBERS AND CONNECTIONS DESIGNED TO AS4600. ALL BOLT HOLE DIAMETERS TO [illegible] GENERAL PUNCHINGS.

PROJECT DESIGN CRITERIA
ROOF LIVE LOAD: 0.25 kPa
BASIC WIND SPEED: VR 45 m/s
WIND REGION: Reg A
TERRAIN CATEGORY: TCat 2
SEISMIC ZONE: 4
SOIL SAFE BEARING CAPACITY: 100 kPa
IMPORTANCE LEVEL: 2

GLENORCHY CITY COUNCIL
PLANNING SERVICES
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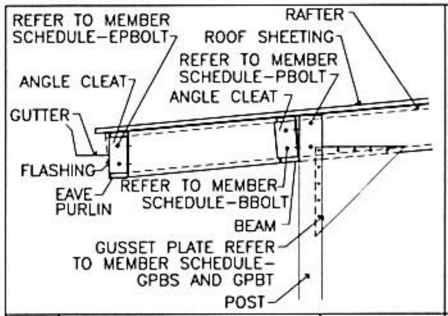
SHEET	JOB NO	DATE	CERTIFIED	DRAWN		
4 of 5	PAUL84756	17/12/2019	TM	FDS	STEEL BUILDING BY	(CONTACT) P & J SHEDS PTY LTD 0362444300
			CHECK 2 DL	CHECK 1 TB	FOR	LUKE KIELY
					AT	6 OFFICER STREET ROSETTA

fairdinkum SHEDS

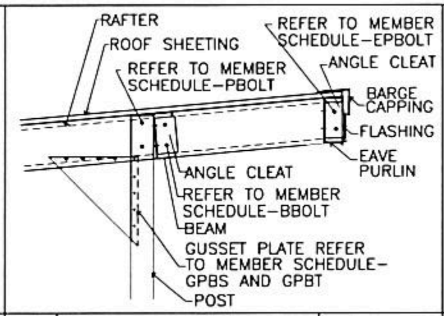
SHED SAFE

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56
Registered Chartered Professional Engineer — Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD — Regn. No. 9985
Registered Certifying Engineer (Structural) N T — Regn. No. 116373ES
Registered Engineer - (Civil) VIC — Regn. No. EC36692
Registered Engineer - (Civil) TAS — Regn. No. CC5649M

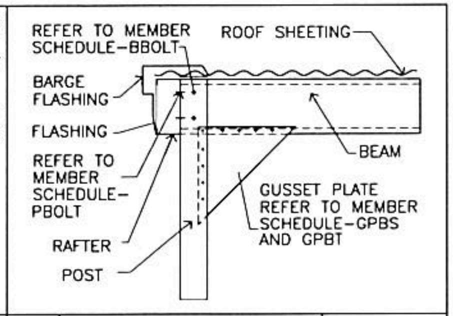
Mr Timothy Roy Messer BE MIEAust RPEQ
Registered Professional Engineer 2558980
Signature ....
Date ....17/12/2019....
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register



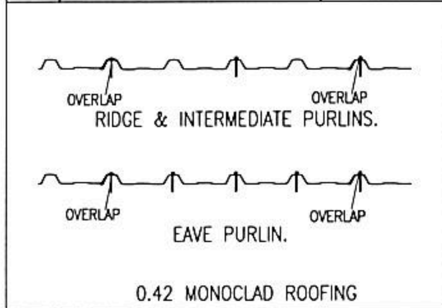
A	HAUNCH CONNECTION AT LOW END	DWG NO FBHL



B	HAUNCH CONNECTION AT HIGH END	DWG NO FBHH



D	POST CONNECTION	DWG NO FBPC



G	ROOF SHEETING PROFILE	DWG NO R1

MEMBER AND MATERIAL SCHEDULE

1	C.S. FRAME RAFTER	Single C15024	X
2	C.S. FRAME POST(LOW)	Single Post 75x75x2.5 SHS 2.65m stock length	
3	POST(LOW) CUT LENGTH	3.01m	X
4	C.S. FRAME POST(HIGH)	Single Post 75x75x2.5 SHS 3.00m stock length	
5	POST(HIGH) CUT LENGTH	3.54m *	X
6	ANCHOR BOLTS (# PER DETS.)	Sleeve Anchor 16.0x110 G/Y	
7	POST SLEEVE BOLTS	Hex 4.6 Gal M12x100	
8	EAVE PURLIN	C15019	
9	BEAMS	C15019	
10	ROOF PURLIN	C15019	
11	ROOF PURLIN SPACING	1.139 m. (1.5m Max.)	
12	ROOF CLADDING	Monoclad Polycarbonate	X
13	ROOF CLADDING FASTENERS	12-14x45 H/Grip C/S CB	
14	FRAME SCREW FASTENERS	14-13x22 Hex C/S (SP HD 5/16" Hex Drive)	
15	FRAME BOLT FASTENERS	Purlin Assy M12x30 Z/P	
16	GUSSET PLATE BRACKET SIZE (GPBS)	300 x 300	
17	GUSSET PLATE BRACKET TEKS (GPBT)	8x14-13x22 Hex C/S (SP HD 5/16" Hex Drive)	
18	POST BOLTS (PBOLT)	2xHex 4.6 Gal M12x100	
19	ROOF PURLIN BOLTS (RPBOLT)	4xPurlin Assy M12x30 Z/P	
20	EAVE PURLIN BOLTS (EPBOLT)	4xPurlin Assy M12x30 Z/P	
21	BEAM BOLTS (BBOLT)	4xPurlin Assy M12x30 Z/P	
22	ROOF COLOUR	SURFMIST	
23	DOWNPIPE COLOUR	CLASSIC_CREAM	
24	GUTTER COLOUR	CLASSIC_CREAM	
25	BARGE COLOUR	CLASSIC_CREAM	

C.S. = CLEARSPAN
* MID POSTS TO BE CUT TO SUIT ACTUAL HEIGHT USING THE CUT LENGTH OF THE HIGH POSTS

GLENORCHY CITY COUNCIL
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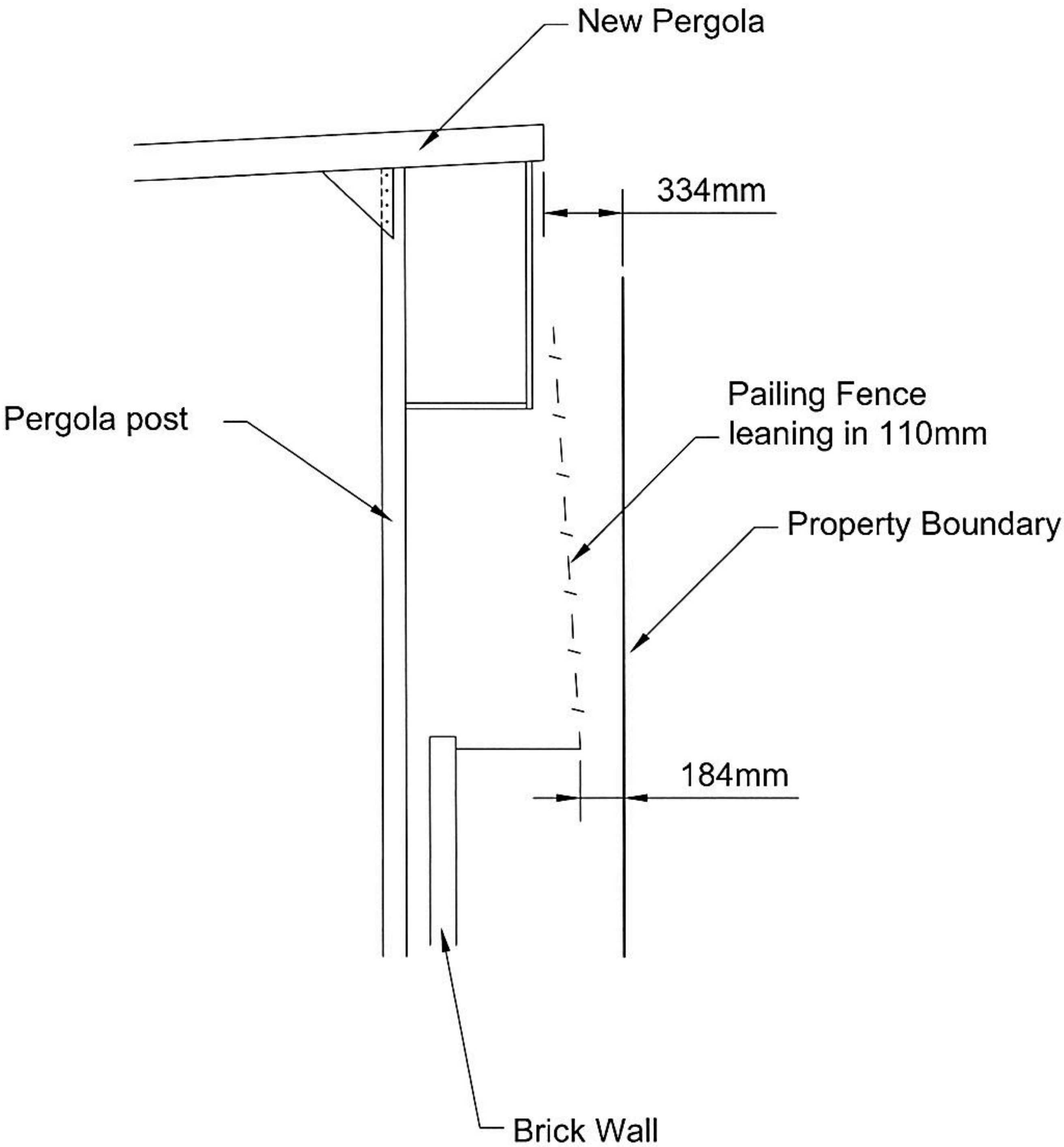
SHEET 5 OF 5
JOB NO. PAUL84756
DATE 17/12/2019
CERTIFIED TM
DRAWN FDS
CHECK 2 DL
CHECK 1 TB

STEEL BUILDING BY
(CONTACT)
P & J SHEDS PTY LTD
0362444300
FOR
LUKE KIELY
AT
6 OFFICER STREET
ROSETTA

fairdinkum SHEDS

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56
Registered Chartered Professional Engineer — Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD — Regn. No. 9955
Registered Certifying Engineer (Structural) N.T. — Regn. No. 116373ES
Registered Engineer - (Civil) VIC — Regn. No. EC38692
Registered Engineer - (Civil) TAS — Regn. No. CC5545M

Mr Timothy Roy Messer BE MIEAust RPEQ
Registered Professional Engineer 2558980
Signature
Date 17/12/2019
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register


New Pergola
334mm
Pergola post
Pailing Fence
leaning in 110mm
Property Boundary
184mm
Brick Wall

domain.com.au/property-profile/6-officer-street-rosetta-tas-7010

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6 Officer Street, Rosetta TAS 7010

Thumbnails

GLENORCHY CITY COUNCIL
PLANNING SERVICES
APPLICATION No. : PLN-23-274
DATE RECEIVED: 19/09/2025

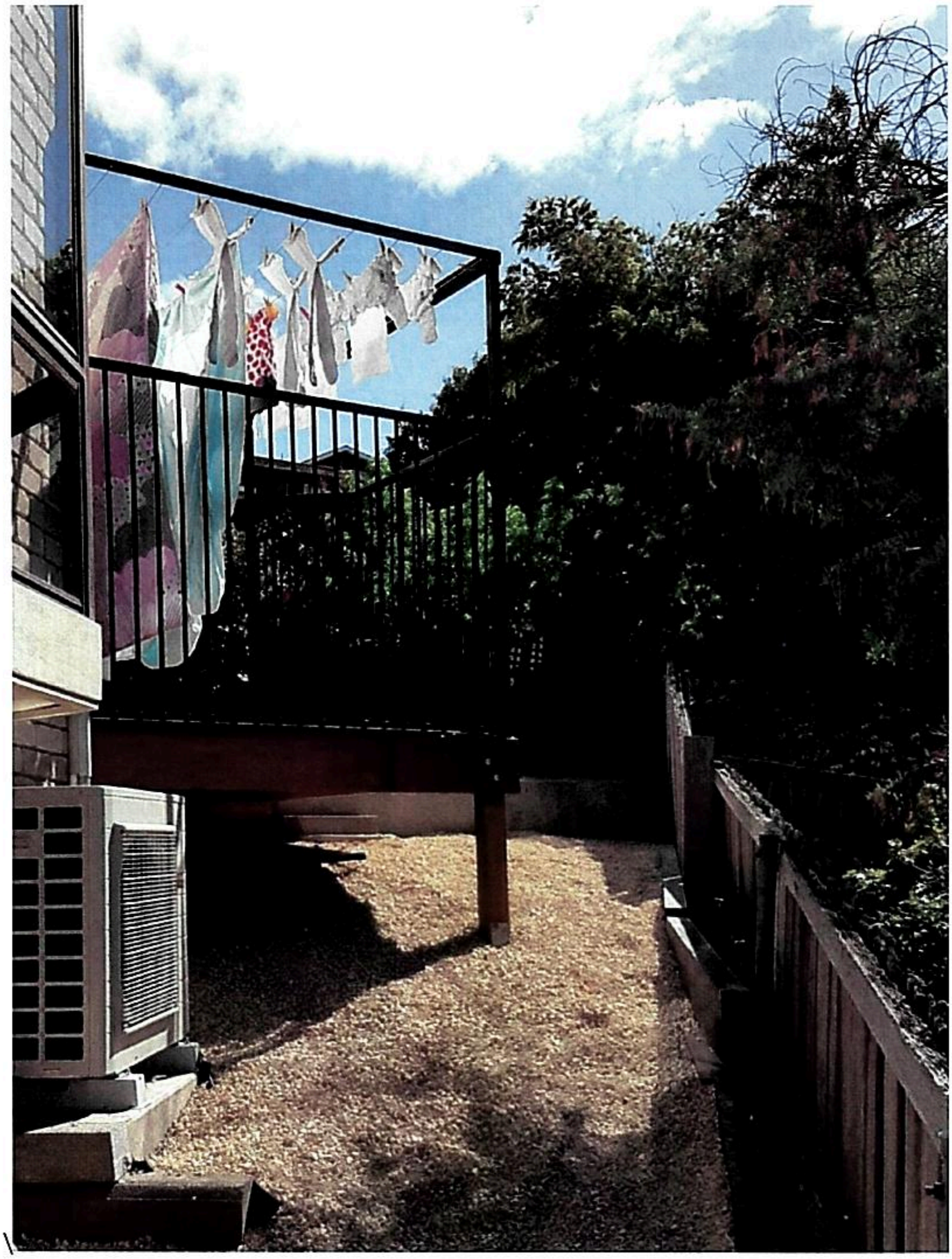
August, 2023

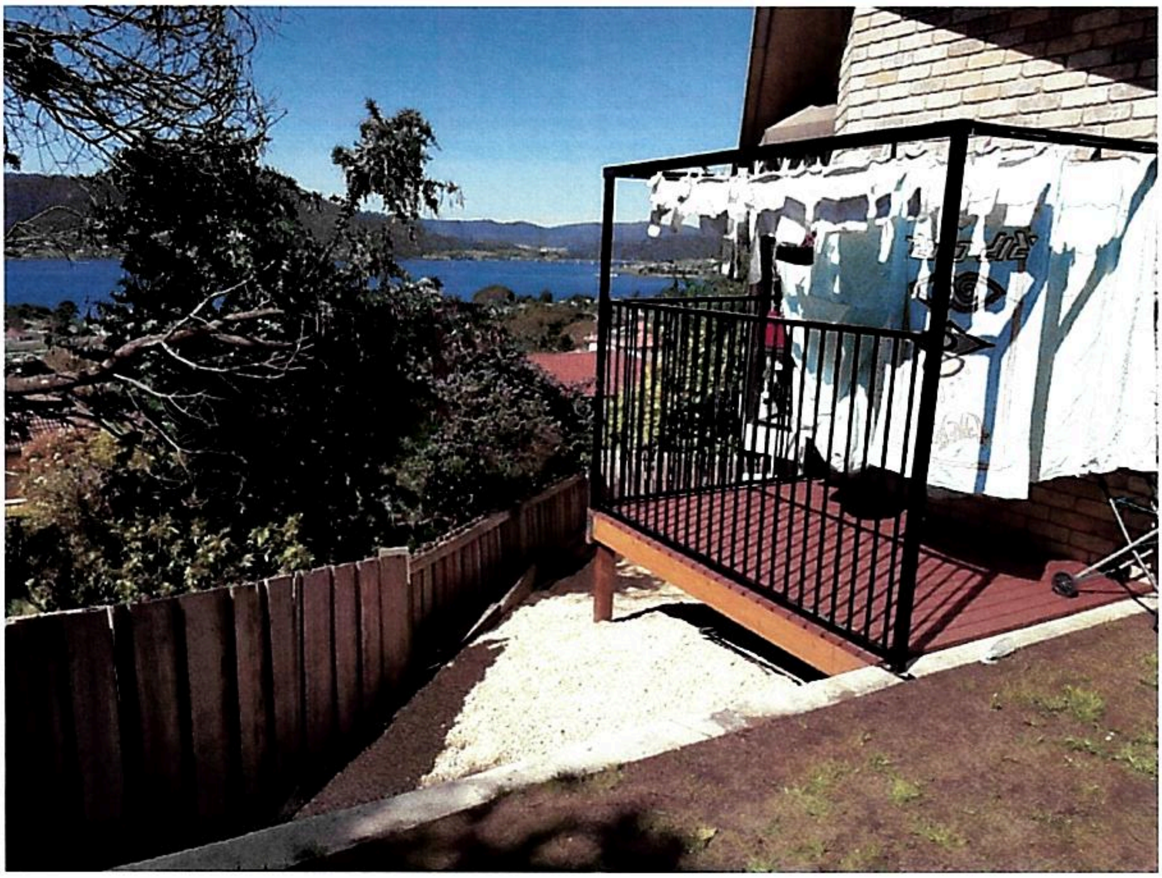
Breakdown of the clothesline platform (deck):

We needed to install a clothes line and this north facing location served no other purpose.

The deck structure was designed and built to provide safe and easy access to the clothesline. The deck is 710mm off the ground, which we believed meant it doesn't require council approval. There is 1200mm high pool fencing installed as a precaution for our young children.

The deck measures 1800 wide x 2150 long. It provides a minimum 840mm clearance to the fence.





GLENORCHY CITY COUNCIL
PLANNING SERVICES

APPLICATION No. : PLN-23-274

DATE RECEIVED: 03/10/2024