

## PLANNING APPLICATION FORM

Section 57 & 58

OFFICE USE  
ONLY

Application Number	PA2025212
Assess No:	A8828
PID No:	6099646

Applicant Name:	My Build Collective					
Postal Address:						
Contact Phone:	Home		Work		Mobile	
Email Address:						

## Planning Application Lodgement Checklist

### The following documents have been submitted to support the consideration of this application:

1. A current copy of the property title text, folio plan and schedule of easements ☐
2. A completed application form including a detailed description of the proposal ☐
3. A complete plan set: ☐
  - a) Floor plans ☐
  - b) Elevations (from all orientations/sides and showing natural ground level and finished surface level) ☐
  - c) Site Plan showing: ☐
    - Orientation
    - All title boundaries
    - Location of buildings and structure (both existing and proposed)
    - Setbacks from all boundaries
    - Native vegetation to be removed
    - Onsite services, connections and drainage details (including sewer, water and stormwater)
    - Cut and/or Fill
    - Car parking and access details (including construction material of all trafficable areas)
    - Fence details
    - Contours
4. Other: ☐

*If submitting plans in over the counter please ensure they are A3.  
All plans must be to scale.*

# WEST TAMAR COUNCIL



Application Number: «Application Number»

## APPLICANT DETAILS

**Applicant Name:** My Build Collective

**Note:** Full name(s) of person(s) or company making the application and postal address for correspondence.

## LAND DETAILS

**Owner/Authority Name:**  
(as per certificate of title) Lucia Plane

**Location / Address:** 62 Bower Street, Manly NSW 2095

**Title Reference:** 64037/7

**Zone(s):** Low Density Residential

**Existing Development/Use:** Residential

**Existing Developed Area:** Vacant block

**Are any of the components in this Application seeking retrospective approval?**  
E.g. Use and/or development that has commenced without a Planning Permit.

YES ☐

NO ☒

(If yes please specify the relevant components):

**Proposed Use:**

Residential: ☒

Visitor Accommodation: ☐

Commercial: ☐

Other: ☐

Proposed main dwelling, secondary dwelling, shed/workshop & gym, boat shed/sauna

**Development Type:**

Building work: ☐

Demolition: ☐

Subdivision: ☐

Other: ☐

Description of development:

**New or Additional Area:**

refer to My Build cover page for total floor areas

**Estimated construction cost of the proposed development:**

\$ 2,000,000.00

**Building Materials:**

Wall Type: lightweight + blockwork

Colour:

Roof Type: colorbond

Colour:

# WEST TAMAR COUNCIL



Application Number: «Application Number»

<b>SUBDIVISION</b>	<input type="checkbox"/> N/A
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Subdivision creating additional lots ☐

Boundary adjustment with no additional lots created ☐

<b>Number of Lots (existing) :</b>		<b>Number of Lots (proposed) :</b>	
<b>Description:</b>			
<b>If applying for a subdivision which creates a new road(s), please supply three proposed names for the road(s), in order of preference:</b>			
1.			
2.			
3.			

<b>COMMERCIAL, INDUSTRIAL OR OTHER NON-RESIDENTIAL DEVELOPMENT/USE</b>	<input type="checkbox"/> N/A
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<b>Hours of Operation:</b>	Monday / Friday:		To	
	Saturday:		To	
	Sunday:		To	

<b>Existing Car Parking:</b>	
<b>Proposed Car Parking:</b>	

<b>Number of Employees:</b> <i>(Existing)</i>	
<b>Number of Employees:</b> <i>(Proposed)</i>	

<b>Type of Machinery installed:</b>	
<b>Details of trade waste and method of disposal:</b>	

Application Number: «Application Number»

APPLICANT DECLARATION

**Owner:** As the owner of the land, I declare that the information contained in this application is a true and accurate representation of the proposal and I consent to this application being submitted and for Council Officers to conduct inspections as required for the proposal,

Name (print)

Signed

Date

**Applicant:** As the applicant, I declare that I have notified the owner of my intention to make this application and that the information contained in this application is a true and accurate representation of the proposal,

(if not the owner)

Name (print)

Signed

Date

Please Note: If the application involves Crown Land you will need to provide a letter of consent and this form signed by the Minister, or a delegated officer of the Crown with a copy of the delegation.

**Crown  
Consent**  
(if required)

Name (print)

Signed

Date

**Chief  
Executive  
Officer**  
(if required)

Name (print)

Signed

Date

If the subject site is accessed via a right of way, the owner of the ROW must also be notified of the application.

**Right of Way Owner:**

As the applicant, I declare that I have notified the owner of the land encumbered by the Right Of Way, of my intent to lodge this application that will affect their land.

Name (print)

Signed

Date



## Planning Design Response & Assessment; Rev 00

### Site Details:

<b>Address</b>	420 Deviot Road, Deviot
<b>Property ID</b>	6099646
<b>Title</b>	64037/3
<b>Land Area</b>	2408m <sup>2</sup>
<b>Planning Authority</b>	West Tamar Council
<b>Proposed Use</b>	Residential
<b>Proposed Development</b>	Proposed Main Dwelling, Secondary Dwelling and Shed/Workshop & Store
<b>Zone(s)</b>	10.0 Low Density Residential
<b>Code Overlay(s)</b>	C2.0 Parking and Transport Code C7.0 Natural Assets Code C10.0 Coastal Erosion Hazard Code C11.0 Coastal Inundation Hazard Code C13.0 Bushfire-Prone Areas Code ( <i>Bushfire Hazard Report to be completed during Building Documentation stage</i> )
<b>Existing Access</b>	Vehicular access from Deviot Road
<b>Water</b>	Taswater Water Service
<b>Sewer</b>	New Onsite Wastewater Design, refer to concept design by Tasman Geotechnics
<b>Stormwater</b>	New Onsite Stormwater Design, refer to Site Stormwater Plan by Exceed Engineering

### Proposal:

New residential development including a main dwelling, a secondary dwelling, shed/workshop/gym and boat shed/sauna.

### Subject Site:

The subject site is bound by Deviot Road to the South-West, neighbouring residential dwellings to both the North-West and South-East of the site, and River Tamar to the North-East. The surrounding area is predominantly zoned Low Density Residential and Rural Living with the River Tamar zoned Environmental Management.



Figure 1 – Aerial view of the subject site (Source: LISTmap)

## Zoning & Overlays:



Figure 2 – Zoning of subject site (Source: LISTmap)



Figure 3 – Overlays of subject site (Source: LISTmap)

## Planning Assessment:

### 10.0 Low Density Residential Zone

#### 10.1 Zone Purpose:

The purpose of the Low Density Residential Zone is:

10.1.1 To provide for residential use and development in residential areas where there are infrastructure or environmental constraints that limit the density, location or form of development.

10.1.2 To provide for non-residential use that does not cause an unreasonable loss of amenity, through scale, intensity, noise, traffic generation and movement, or other off site impacts.

10.1.3 To provide for Visitor Accommodation that is compatible with residential character.

#### 11.2 Use Table:

Relevant requirements under the Use Table of the Tasmanian Planning Scheme:

Use Class	Qualification
<b>No Permit Required</b>	
Residential	If for a single dwelling

#### 10.3.2 Visitor Accommodation

**A1** N/A; visitor accommodation is not proposed.

**A2** N/A; visitor accommodation is not proposed.

#### 10.4 Development Standards for Dwellings:

##### 10.4.1 Residential Density for Multiple Dwellings

**A1** N/A; a multiple dwelling is not proposed.

##### 10.4.2 Building Height

**A1** Complies; the height of all proposed buildings is less than 8.5m, refer to elevations.

##### 10.4.3 Setback

**A1** Complies; the main dwelling is setback more than 8.0m from the front boundary/high water line of the River Tamar.

**P2** The proposed secondary dwelling and main dwelling have been sited to respond sensitively to the natural contours of the land while maximising views toward the Tamar River. The main dwelling is designed over two levels, stepping down with the slope to integrate into the landscape rather than dominate it.

Given the narrow configuration of the lot, balancing the client's brief, the site's topography, and compliance with setback requirements has presented design challenges. Nevertheless, the layout proves both effective and appropriate for its setting.

Additionally, existing and new vegetation along both side boundaries provides effective visual screening, maintaining privacy for the neighbouring property from the secondary dwelling's north-east-facing window.

#### 10.4.4 Site Coverage

**A1** *Complies; the main dwelling and secondary dwelling has a site coverage of 11%.*

#### 10.4.5 Frontage Fences for all Dwellings

**A1** *N/A; a frontage fence is not proposed.*

### 10.5 Development Standards for Non-Dwellings:

#### 10.5.1 Non-Dwelling Development

**A1** *Complies; the height of all non-dwelling buildings is less than 8.5m, refer to elevations.*

**P2 & P3** *The Boat shed/sauna is less than 8.0 from the frontage, and 5.0m from the side boundaries. The shed/workshop & gym is positioned less than 5.0m from the south-east side boundary. However, there is no loss of privacy, overshadowing or loss of sunlight for neighbouring properties. The Boat shed/sauna will be at the lowest point of the block and cannot be viewed from the road, also with the use of charred timber cladding for all buildings, will visually recede into the landscape, blending with the natural surroundings.*

**A4** *Complies; the shed/workshop & gym, boat shed/sauna, including main dwelling and secondary dwelling carports has a site coverage of 8%.*

**A5** *N/A; a frontage fence is not proposed.*

**A6** *N/A; an outdoor storage area is not proposed.*

**A7** *N/A; air extraction, pumping, refrigeration systems or compressors are not proposed.*

### C2.0 Parking and Sustainable Transport Code:

#### C2.1 Code Purpose:

The purpose of the Parking and Sustainable Transport Code is:

**C2.1.1** To ensure that an appropriate level of parking facilities is provided to service use and development.

**C2.1.2** To ensure that cycling, walking and public transport are encouraged as a means of transport in urban areas.

**C2.1.3** To ensure that access for pedestrians, vehicles and cyclists is safe and adequate.

**C2.1.4** To ensure that parking does not cause an unreasonable loss of amenity to the surrounding area.

**C2.1.5** To ensure that parking spaces and accesses meet appropriate standards.

**C2.1.6** To provide for parking precincts and pedestrian priority streets.

#### C2.2 Application of this Code:

**C2.2.1** Unless stated otherwise in a particular purpose zone, or sub-clause C2.2.2, C2.2.3 or C2.2.4, this code applies to all use and development.

**C2.2.2** Clause C2.5.3 does not apply to use or development within the Low Density Residential Zone.

**C2.2.3** Clause C2.5.4 does not apply to use or development within the Low Density Residential Zone.

**C2.2.4** Clause C2.5.5 does not apply to use or development within the Low Density Residential Zone.

## C2.4 Use or Development Exempt from this Code:

**C2.4.1** There are no exemptions to this Code.

## C2.5 Use Standards:

### C2.5.1 Car Parking Numbers

**A1** *Complies; refer to site plan on page A02.*

### C2.5.2 Bicycle Parking Numbers

**A1** *N/A.*

### C2.5.3 Motorcycle Parking Numbers

**A1** *N/A.*

### C2.5.4 Loading Bays

**A1** *N/A.*

### C2.5.5 Number of Car Parking Spaces within the General Residential Zone and Inner Residential Zone

**A1** *N/A.*

## C2.6 Development Standards of Buildings and Works:

### C2.6.1 Construction of Parking Areas

**A1** *Complies; The driveway is proposed to be finished in gravel, while the existing crossover will be upgraded to a concrete surface. The gravel surface is in keeping with the driveways of nearby properties and maintains the area's existing low-residential character. A designated hardstand area will also be included to meet the fire truck access requirements outlined in the bushfire assessment.*

### C2.6.2 Design and Layout of Parking Areas

**A1.1** *Complies; the maximum gradient of the driveway will be 15%, a 4.0m wide access is proposed to meet bushfire assessment requirements, and will allow vehicles to enter and exit in a forward direction.*

**A1.2** *N/A.*



### C2.6.3 Number of Accesses for Vehicles

A1 *Complies; (b) a new access is not proposed.*

A2 *N/A.*

### C2.6.4 Lighting of Parking Areas within the General Business Zone and Central Business Zone

A1 *N/A.*

### C2.6.5 Pedestrian Access

A1.1 *N/A.*

A1.2 *N/A.*

### C2.6.6 Loading Bays

A1 *N/A.*

A2 *N/A.*

### C2.6.7 Bicycle Parking and Storage Facilities within the General Business Zone and Central Business Zone

A1 *N/A.*

A2 *N/A.*

### C2.6.8 Siting of Parking and Turning Areas

A1 *N/A.*

A2 *N/A.*

## C7.0 Natural Assets Code:

### C7.1 Code Purpose:

The purpose of the Natural Assets Code is:

C7.1.1 To minimise impacts on water quality, natural assets including native riparian vegetation, river condition and the natural ecological function of watercourses, wetlands and lakes.

C7.1.2 To minimise impacts on coastal and foreshore assets, native littoral vegetation, natural coastal processes and the natural ecological function of the coast.

C7.1.3 To protect vulnerable coastal areas to enable natural processes to continue to occur, including the landward transgression of sand dunes, wetlands, saltmarshes and other sensitive coastal habitats due to sea-level rise.

C7.1.4 To minimise impacts on identified priority vegetation.

C7.1.5 To manage impacts on threatened fauna species by minimising clearance of significant habitat.

## C7.2 Application of this Code:

**C7.2.1** This code applies to development on land within the following areas: (a) a waterway and coastal protection area; (b) a future coastal refugia area; and (c) a priority vegetation area only if within the following zones: (i) Rural Living Zone; (ii) Rural Zone; (iii) Landscape Conservation Zone; (iv) Environmental Management Zone; (v) Major Tourism Zone; (vi) Utilities Zone; (vii) Community Purpose Zone; (viii) Recreation Zone; (ix) Open Space Zone; (x) Future Urban Zone; (xi) Particular Purpose Zone; or (xii) General Residential Zone or Low Density Residential Zone, only if an application for subdivision.

## C7.4 Use or Development Exempt from this Code:

**C7.4.1** The following use or development is exempt from this code: (a) works by or on behalf of the Crown, State authority, or council to remedy an unacceptable risk to public or private safety or to mitigate or prevent environmental harm; (b) development assessed as a Level 2 Activity; (c) clearance of native vegetation within a priority vegetation area, (i) on existing pasture or crop production land; or (ii) if the vegetation is within a private garden, public garden or park, national park, or within State-reserved land or a council reserve, provided the native vegetation is not protected by legislation, a permit condition, an agreement made under section 71 of the Act, or a covenant; (d) forest practices or forest operations in accordance with a forest practices plan certified under the Forest Practices Act 1985, unless for the construction of a building or the carrying out of any associated development; (e) works by or on behalf of the Crown, State authority, or council for the protection of a water supply, watercourse, lake, wetland, or tidal waters or coastal assets as part of an endorsed or approved management plan; (f) coastal protection works by or on behalf of the Crown, State authority, or council that have been designed by a suitably qualified person; and (g) consolidation of lots.

## C7.5 Use Standards:

**C7.5.1** There are no Use Standards in this code.

## C7.6 Development Standards for Buildings and Works:

**C7.6.1 Buildings and Works within a Waterway and Coastal Protection Area or a Future Coastal Refugia Area**

**P1.1 Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:**

**(a) impacts caused by erosion, siltation, sedimentation and runoff;**

*A concept stormwater design has been completed for the proposal. It details the capture of all stormwater from driveway and roofs via a sediment trap to settle solids, which is then discharged to the Tamar River via a spreader bar to a geofabric lined rock apron. This will act to dissipate flows and prevent erosion and mobilisation of sedimentation at the discharge point.*

**(b) impacts on riparian or littoral vegetation;**

*There is not any riparian or littoral vegetation in the area where the development is proposed.*

**(c) maintaining natural streambank and streambed condition, where it exists;**

*There is no existing natural streambank or streambed.*

**(d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;**

*This development will not impact on any in-stream natural habitat.*

**(e) the need to avoid significantly impeding natural flow and drainage;**

*The proposal will not impede natural flow and drainage.*

**(f) the need to maintain fish passage, where known to exist;**

*There is no fish passage at the site.*

**(g) the need to avoid land filling of wetlands;**

*Land filling of wetlands is not proposed.*

**(h) the need to group new facilities with existing facilities, where reasonably practical;**

*Not applicable.*

**(i) minimising cut and fill;**

*The development is not expected to disturb natural value areas, or areas vulnerable to erosion.*

**(j) building design that responds to the particular size, shape, contours or slope of the land;**

*The proposed development is sited and designed to replace the existing and maintain the natural contours of the site as much as possible.*

**(k) minimising impacts on coastal processes, including sand movement and wave action;**

*The proposal will not impact on coastal process.*

**(l) minimising the need for future works for the protection of natural assets, infrastructure and property;**

*The potential development area will not impact natural assets. Any maintenance work of existing development in future must protect the natural assets.*

**(m) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and**

*All works to be in accordance with this manual.*

**(n) The guidelines in the Tasmanian Coastal Works Manual.**

*All works to be in accordance with this manual.*

**P1.2** N/A.

**A2** N/A.

**A3** A concept stormwater design has been completed for the proposal. It details the capture of all stormwater from driveway and roofs via a sediment trap to settle solids, which is then discharged to the Tamar River via a spreader bar to a geofabric lined rock apron. This will act to dissipate flows and prevent erosion and mobilisation of sedimentation at the discharge point. Refer to Exceed Engineering's design.

**A4** N/A.

**A5** N/A.

<b>C7.6.2 Clearance within a Priority Vegetation Area</b>
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**A1** N/A.



## C10.0 Coastal Erosion Hazard Code:

### C10.1 Code Purpose:

C10.1.1 To ensure that use or development subject to risk from coastal erosion is appropriately located and managed, so that: (a) people, property and infrastructure are not exposed to an unacceptable level of risk; (b) future costs associated with options for adaptation, protection, retreat or abandonment of property and infrastructure are minimised; (c) it does not increase the risk from coastal erosion to other land or public infrastructure; and (d) works to protect land from coastal erosion are undertaken in a way that provides appropriate protection without increasing risks to other land. C10.1.2 To provide for appropriate use or development that relies upon a coastal location to fulfil its purpose.

### C10.2 Application of this Code:

C10.2.1 This code applies to: (a) use and development of land within a coastal erosion hazard area; or (b) development identified in a report, that is lodged with an application, or required in response to a request under section 54 of the Act, as located on an actively mobile landform within the coastal zone. C10.2.2 The planning authority may only make a request under clause C10.2.1(b) where it reasonably believes, based on information in its possession, that the land is located on an actively mobile landform within the coastal zone. C10.2.3 For the purposes of C10.5.1, Residential and Visitor Accommodation are not Use Classes that are reliant on a coastal location.

### C10.4 Use or Development Exempt from this Code:

C10.4.1 Excluding where development occurs on an actively mobile landform in the coastal zone, the following use or development is exempt from this code: (a) use or development that is building work or plumbing work as defined in the Building Act 2016, excluding: (i) a critical use, hazardous use, or vulnerable use; (ii) if located within a high coastal erosion hazard band; or (iii) coastal protection works; (b) intensification of an existing use, if not for a critical, hazardous, or vulnerable use; (c) alterations or extensions to an existing building located within a high coastal erosion hazard band, if: (i) the site coverage is not increased by more than 20m<sup>2</sup> from that existing at the effective date; and (ii) not for a critical, hazardous, or vulnerable use; (d) use or development of land for: (i) Natural and Cultural Values Management; (ii) Passive Recreation; (iii) Port and Shipping in a proclaimed wharf area; (iv) Resource Development, excluding use or development in the high coastal erosion hazard band that is building work or plumbing work as defined in the Building Act 2016; or (v) minor utilities; (e) planting or disturbance of vegetation on existing pasture or crop production land; or (f) consolidation of lots.

### C10.5 Use Standards:

#### C10.5.1 Use within a High Coastal Erosion Hazard Band

A1 N/A.

#### C10.5.2 Uses located within a Non-Urban Zone and within a Low or Medium Coastal Erosion Hazard Band

A1 N/A.

**C10.5.3 That Critical, Hazardous and Vulnerable Uses Located within a Coastal Erosion Hazard Band can Achieve and maintain a Tolerable Risk from Coastal Erosion**

A1 N/A.

A2 N/A.

A3 N/A.

A4 N/A.

**C10.5.4 That Use within a Coastal Erosion Investigation Area can Achieve and maintain a Tolerable Risk from Coastal Erosion**

A1 N/A.

**C11.0 Coastal Inundation Hazard Code:**

**C11.1 Code Purpose:**

C11.1.1 To ensure that use or development subject to risk from coastal inundation is appropriately located and managed so that: (a) people, property and infrastructure are not exposed to an unacceptable level of risk; (b) future costs associated with options for adaptation, protection, retreat or abandonment of property and infrastructure are minimised; (c) it does not increase the risk from coastal inundation to other land or public infrastructure; and (d) works to protect land from coastal inundation are undertaken in a way that provides appropriate protection without increasing risks to other land.

**C11.2 Application of this Code:**

C11.2.1 This code applies to use and development of land within a coastal inundation hazard area. C11.2.2 This code applies to land in a coastal inundation investigation area where a suitably qualified person has provided a land survey showing an AHD for the land that falls within one of the coastal inundation hazard band levels shown in the coastal inundation hazard bands AHD levels list in the relevant Local Provisions Schedule and the standards relevant to each band apply. C11.2.3 This code does not apply to land in a coastal inundation investigation area where a suitably qualified person has provided a land survey showing an AHD for the land in excess of the low hazard band level relevant for that land, as shown in the coastal inundation hazard bands AHD levels list in the relevant Local Provisions Schedule. C11.2.4 For the purposes of C11.5.1 and C11.5.2, Residential or Visitor Accommodation are not Use Classes that are reliant on a coastal location.

**C11.4 Use or Development Exempt from this Code:**

C11.4.1 The following use or development is exempt from this Code: (a) use or development that is building work or plumbing work as defined in the Building Act 2016, excluding: (i) a critical use, hazardous use, or vulnerable use; (ii) if located within a high coastal inundation

hazard band; (iii) located within a non-urban zone and within a medium coastal inundation hazard band; or (iv) coastal protection works; (b) intensification of an existing use, if not for a critical, hazardous, or vulnerable use; (c) alterations or extensions to an existing building located within a high coastal inundation hazard band, if: (i) the site coverage is not increased by more than 20m<sup>2</sup> from that existing at the effective date; and (ii) not for a critical, hazardous, or vulnerable use; (d) use or development of land for: (i) Natural and Cultural Values Management; (ii) Passive Recreation; (iii) Port and Shipping in a proclaimed wharf area; (iv) Resource Development; or (v) minor utilities; (e) planting or disturbance of vegetation on existing pasture or crop production land; or (f) consolidation of lots.

### C11.5 Use Standards:

#### C11.5.1 Use within a High Coastal Inundation Hazard Band

A1 N/A.

#### C11.5.2 Uses Located within a Non-Urban Zone and within a Medium Coastal Inundation Hazard Band

A1 N/A.

#### C11.5.3 Uses Located within a Non-Urban Zone and within a Low Coastal Inundation Hazard Band

A1 N/A.

#### C11.5.4 Critical Use, Hazardous Use or Vulnerable Use

A1 N/A.

A2 N/A.

A3 N/A.

A4 N/A.

### C11.6 Development Standards for Buildings and Works:

#### C11.6.1 Buildings and Works, Excluding Coastal Protection Works within a Coastal Inundation Hazard Area

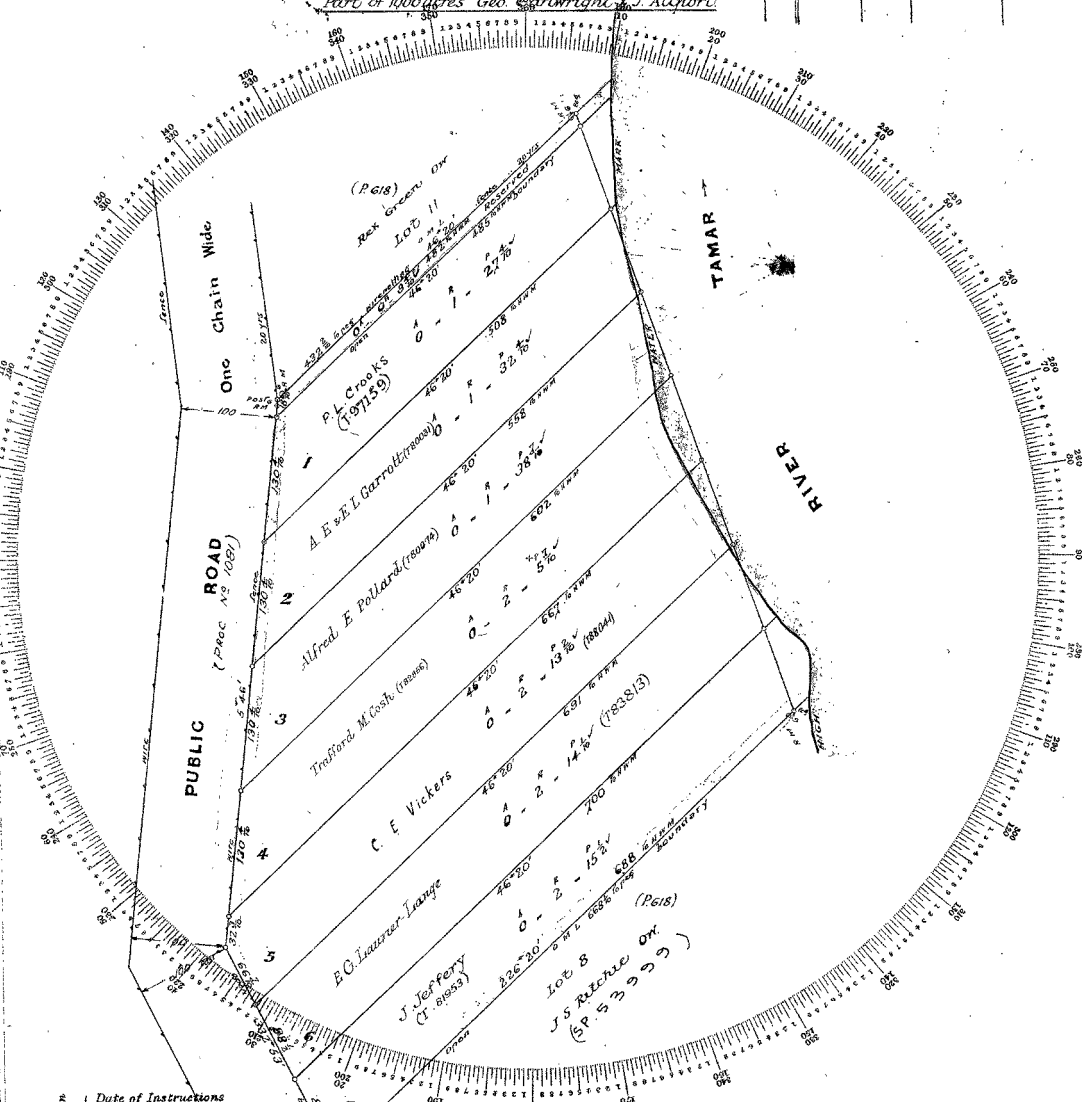
#### C11.6.2 That Coastal Protection Works Located within a Coastal Inundation Hazard Area are kept to a Minimum, Appropriately Located, Fit for Purpose and do not Increase the Likely Risks from Coastal Inundation to Adjacent Land

**P1.1 & P1.2 (C11.6.1) and P1 (C11.6.2)** *A small portion of the proposed boat shed/sauna—approximately 0.4m<sup>2</sup>—falls within the Low Coastal Inundation Hazard band. Given the minimal area involved, it is not expected to contribute to erosion or pose a significant risk. Refer to Tasman Geotechnics Coastal Hazards Report for all details, Document ref: TG24257/3 – 02report.*

**N.S.**

COA.	BEARING	DISTANCE IN LINKS	FROM
mod. <u>latya</u>			

Part of 1000 acres Geo. Cartwright & J. Allport



~~Justice of the Peace~~

*A. W. M. Newer*  
*Authorised Surveyor.*



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South Launceston TAS 7249

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www.mybuildcollective.com.au

### Drawing Schedule

- A 01 Cover Page
- A 02 Proposed Site Plan
- A 03 Landscaping Plan
- A 04 Proposed Main Dwelling - Floor Plan
- A 05 Proposed Main Dwelling - Northern Elevations
- A 06 Proposed Main Dwelling - Southern Elevations
- A 07 Proposed Main Dwelling - Proposed Roof Plan
- A 08 Proposed Secondary Dwelling - Floor & Roof Plan
- A 09 Proposed Secondary Dwelling - Elevations
- A 10 Proposed Shed/Workshop & Gym - Floor & Roof Plan
- A 11 Proposed Shed/Workshop & Gym - Elevations
- A 12 Proposed Boat Shed - Floor & Roof plans and Elevations

Total Floor Area	m²	sq
Boat Shed/Sauna	23.85	2.57
Main Dwelling	238.88	25.71
Main Dwelling Carport	30.95	3.33
Secondary Dwelling	39.40	4.24
Secondary Dwelling Carport	24.50	2.64
Shed/Workshop & Gym	118.33	12.74
Total	475.91	51.23

# PROPOSED NEW RESIDENCE FOR MR S. & MRS L. PLANE 420 DEVIOT ROAD, DEVIOT

LOCAL COUNCIL:  
WEST TAMAR COUNCIL

ACCREDITATION COMPLIANCE:  
MURRAY GRIFFITHS CC 11171

PROJECT:  
PROPOSED NEW RESIDENCE  
420 DEVIOT ROAD,  
DEVIOT

TITLE REFERENCE: 64037/7  
CLIMATE ZONE: 7  
SOIL CLASSIFICATION: P  
DESIGN WIND SPEED: N3  
BAL RATING: TBC  
SITE HAZARDS: REFER TO SITE PLAN

JOB No: MBD-418  
DATE: 15.07.25

planning

REVISION NO. DRAWING NO.  
Rev09 A01

PLEASE REFER TO INDICATED DIMENSIONS ONLY, DRAWINGS ARE NOT SUITABLE TO BE SCALED FROM.

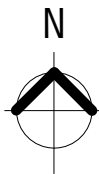
DISCLAIMER: THESE PLANS SHOULD BE READ IN CONJUNCTION WITH ACCREDITED ENGINEERING DRAWINGS. STRUCTURAL ENGINEERS CERTIFICATES MAY BE REQUIRED CERTIFY STRUCTURAL DESIGN, WIND CLASSIFICATIONS AND/OR SOIL CONDITIONS, THIS WORK IS OUTSIDE THE SCOPE OF THIS DRAFTING SERVICE. THE DRAFTER DOES NOT ACCEPT ANY RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN THE PLANS DUE TO WRONGLY SUPPLIED INFORMATION, NOR FOR MISCONSTRUCTION OR INTERPRETATION.

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PROPOSED SITE PLAN

1 : 500



WATERWAY & COASTAL PROTECTION AREA LEGEND:

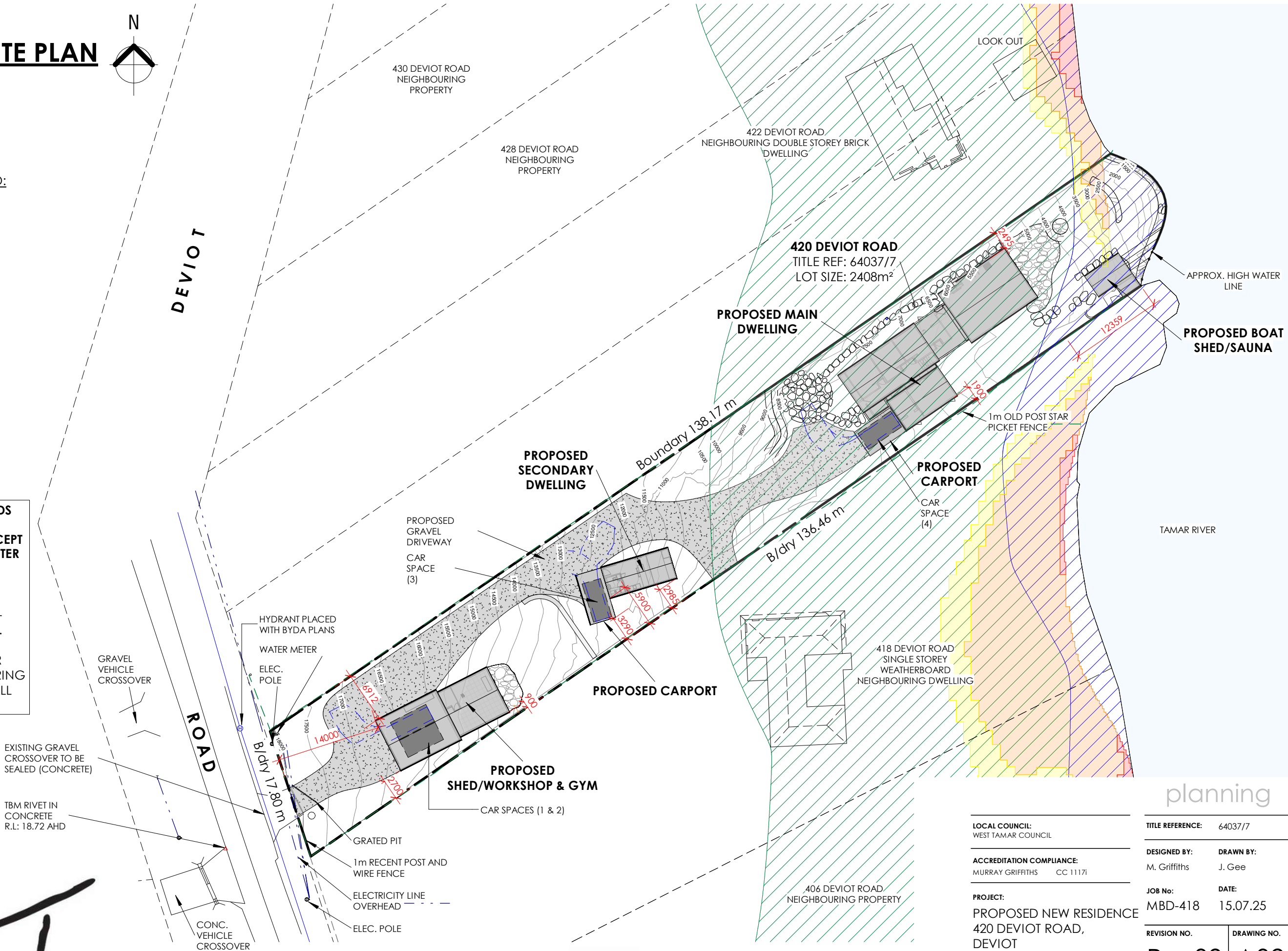
- [Green hatched box] = BUFFER AREA
- [Blue hatched box] = WETLAND

COASTAL INUNDATION HAZARD BAND LEGEND:

- [Yellow box] = LOW
- [Orange box] = MEDIUM
- [Red box] = HIGH

REFER TO COASTAL HAZARDS REPORT, GEOTECHNICAL INVESTIGATION AND CONCEPT DESIGN - ONSITE WASTEWATER MANAGEMENT SYSTEM BY TASMAN GEOTECHNICS DOC REF: TG24257/3 - 02REPORT AND TG24257/3 - 01REPORT FOR ALL DETAILS.

REFER TO SITE STORMWATER PLAN BY EXCEED ENGINEERING PROJECT NO.EE1291 FOR ALL DETAILS.



PLEASE REFER TO INDICATED DIMENSIONS ONLY, DRAWINGS ARE NOT SUITABLE TO BE SCALED FROM.

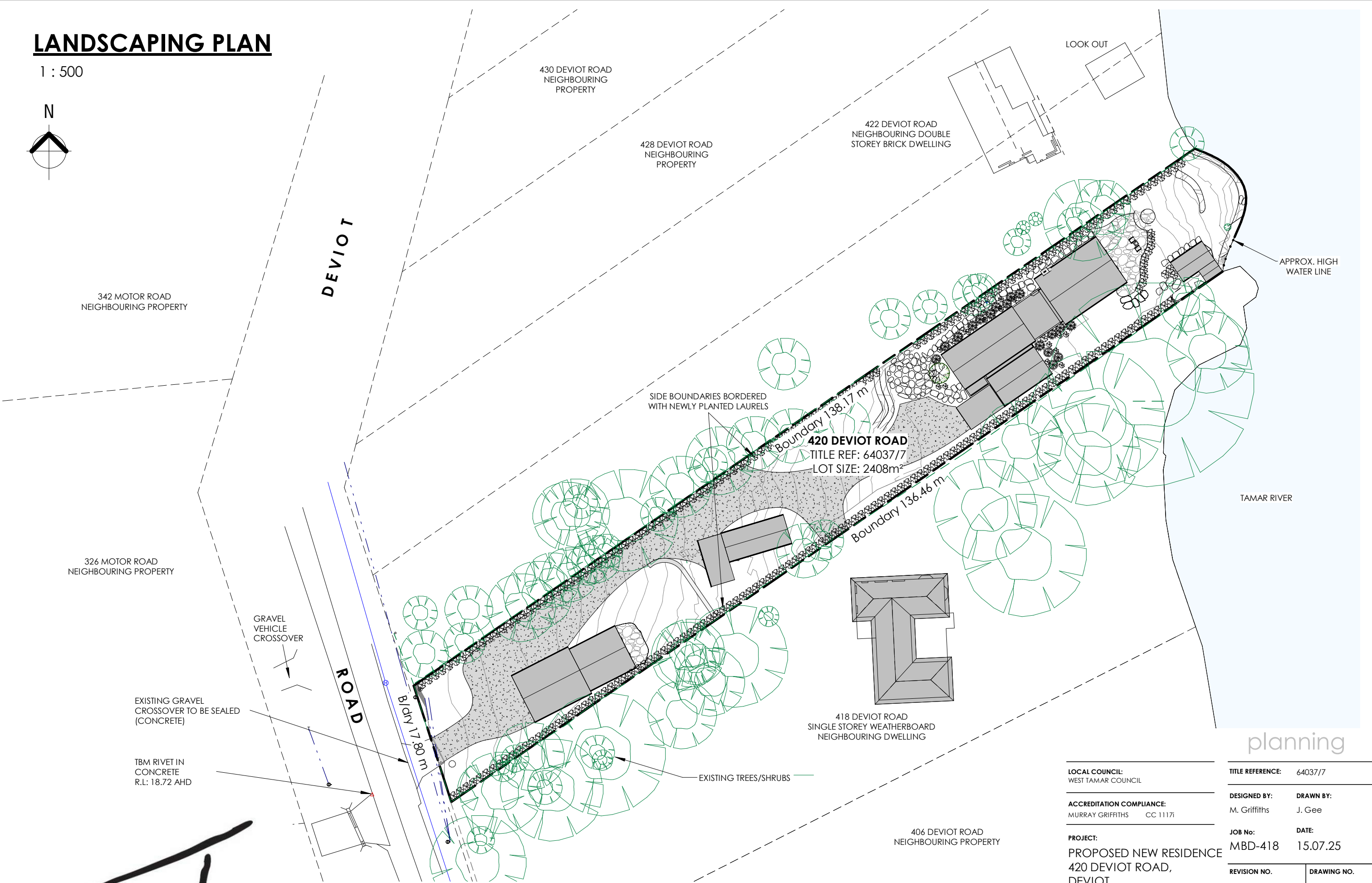
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LOCAL COUNCIL: WEST TAMAR COUNCIL	
ACCREDITATION COMPLIANCE: MURRAY GRIFFITHS CC 11171	
PROJECT: PROPOSED NEW RESIDENCE 420 DEVIOT ROAD, DEVIOT FOR MR S. & MRS L. PLANE	

TITLE REFERENCE: 64037/7	
DESIGNED BY: M. Griffiths	DRAWN BY: J. Gee
JOB No: MBD-418	DATE: 15.07.25
REVISION NO.	DRAWING NO.
Rev09	A02

LANDSCAPING PLAN

1 : 500



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TITLE REFERENCE: 64037/7	
DESIGNED BY: M. Griffiths	DRAWN BY: J. Gee
JOB No: MBD-418	DATE: 15.07.25
REVISION NO.	DRAWING NO.
Rev09	A03



LEGEND:

- c.s.d.

= Cavity Sliding Door
- s/d

= Sliding Door
- bal.

= Balustrade
- g.s.s.

= Glass Shower Screen
- hr

= Handrail
- gt

= Shower Grate
- t.r.

= Towel Rail
- col.1

= Timber Column
- col.2

= SHS Column
- col.3

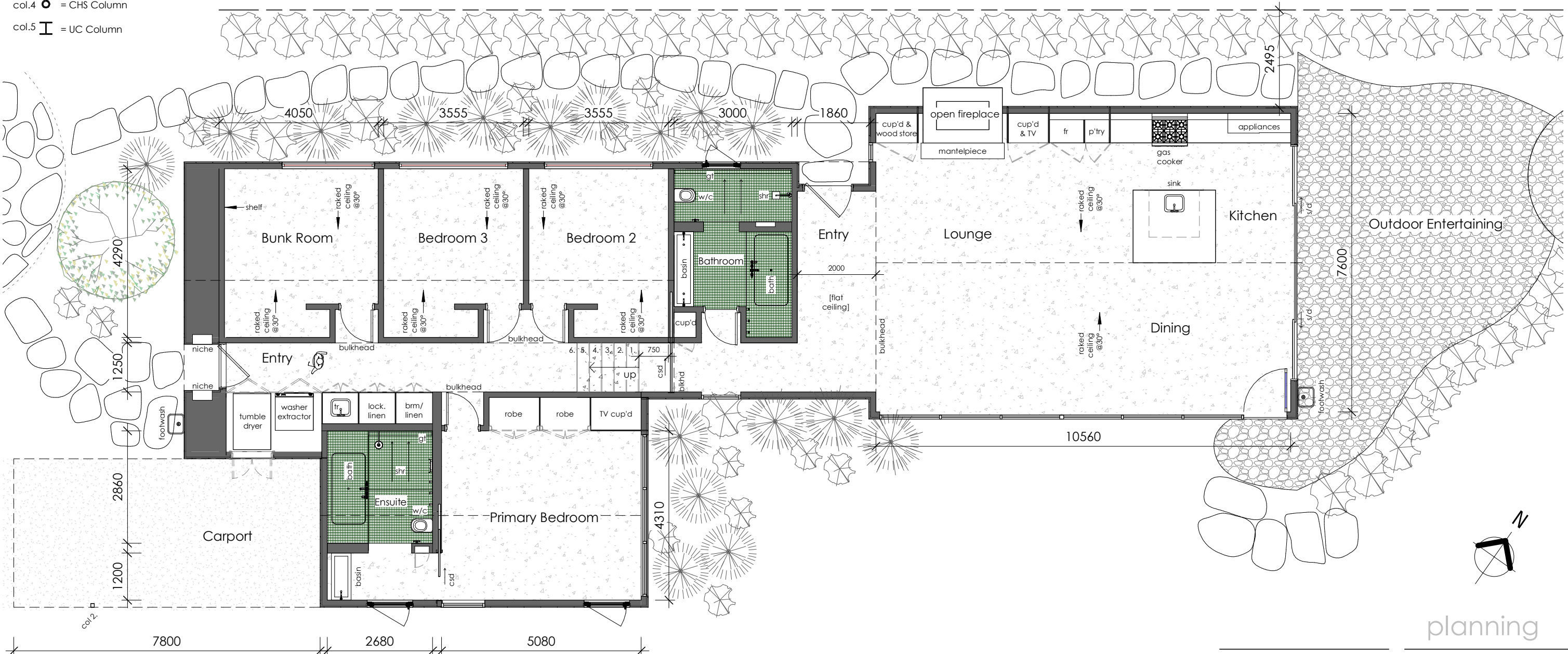
= RHS Column
- col.4

= CHS Column
- col.5

= UC Column
- = 90mm Stud walls with 10mm plasterboard lining throughout (Wet area plasterboard to Bathroom, Ensuite & Laundry walls)
- = 190mm Blockwork walls
- = 140mm Stud walls with (Shou Sugi Ban) 19mm charred timber cladding
- = 90mm Stud walls with (Shou Sugi Ban) 19mm charred timber cladding
- = Shower screen

MAIN DWELLING

Total Floor Area	m <sup>2</sup>	sq
Boat Shed/Sauna	23.85	2.57
Main Dwelling	238.88	25.71
Main Dwelling Carport	30.95	3.33
Secondary Dwelling	39.40	4.24
Secondary Dwelling Carport	24.50	2.64
Shed/Workshop & Gym	118.33	12.74



PROPOSED FLOOR PLAN

1 : 100

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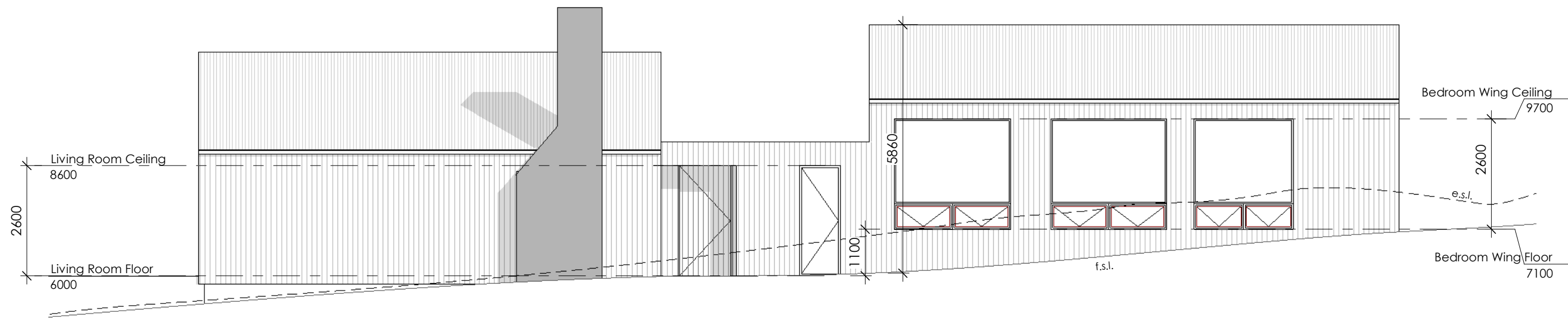
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ACCREDITATION COMPLIANCE: MURRAY GRIFFITHS CC 11171		DESIGNED BY: M. Griffiths	DRAWN BY: J. Gee
PROJECT: PROPOSED NEW RESIDENCE 420 DEVIOT ROAD, DEVIOT FOR MR S. & MRS L. PLANE		JOB No: MBD-418	DATE: 15.07.25
		REVISION NO.	DRAWING NO.
		Rev09	A04



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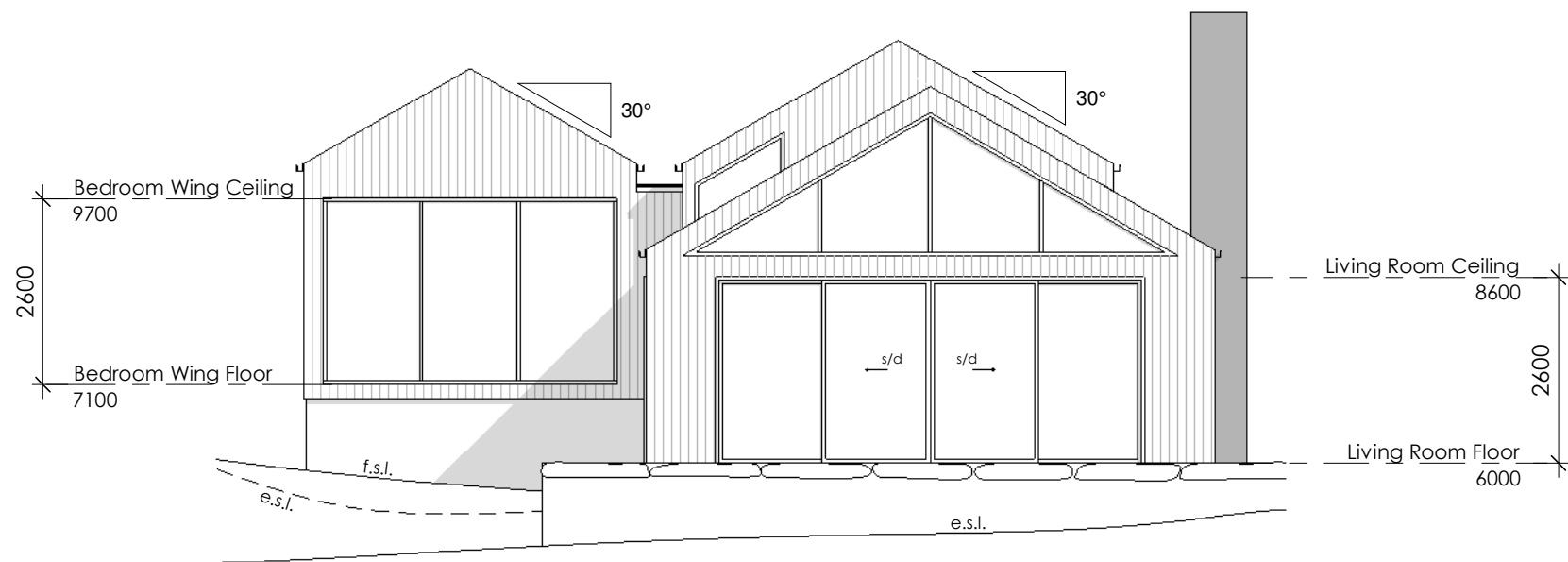


MAIN DWELLING



NORTH-WEST ELEVATION

1 : 100



NORTH-EAST ELEVATION

1 : 100

planning

LOCAL COUNCIL:  
WEST TAMAR COUNCIL

ACCREDITATION COMPLIANCE:  
MURRAY GRIFFITHS CC 11171

PROJECT:  
PROPOSED NEW  
RESIDENCE  
420 DEVIOT ROAD,  
DEVIOT  
FOR MR S. & MRS L. PLANE

TITLE REFERENCE: 64037/7

DESIGNED BY: M. Griffiths  
DRAWN BY: J. Gee

JOB No: MBD-418  
DATE: 15.07.25

REVISION NO.

Rev09

DRAWING NO.

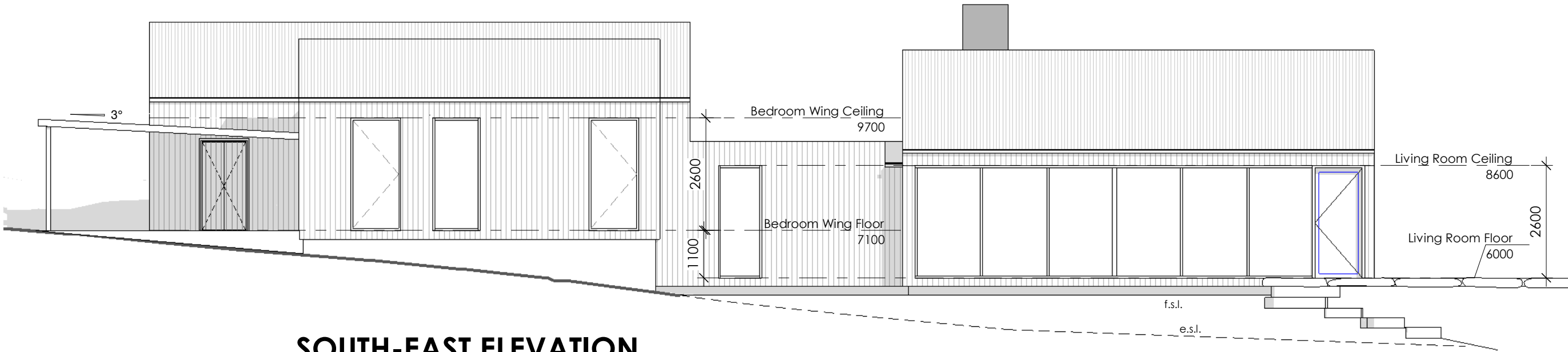
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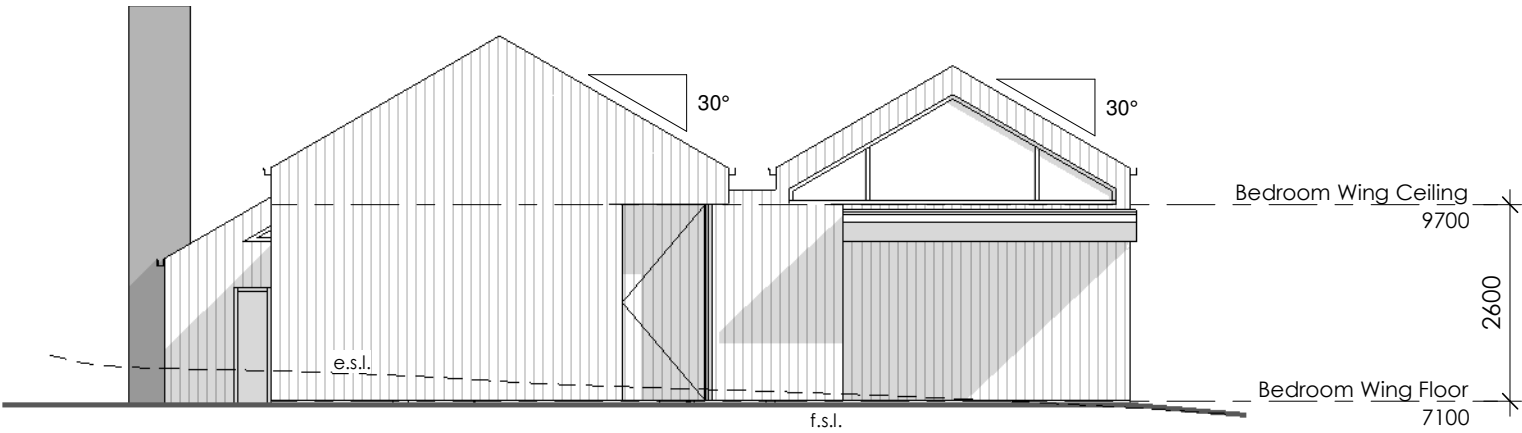
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MAIN DWELLING



SOUTH-EAST ELEVATION

1 : 100



SOUTH-WEST ELEVATION

1 : 100

planning

LOCAL COUNCIL:  
WEST TAMAR COUNCIL

ACCREDITATION COMPLIANCE:  
MURRAY GRIFFITHS CC 11171

PROJECT:  
PROPOSED NEW  
RESIDENCE  
420 DEVIOT ROAD,  
DEVIOT  
FOR MR S. & MRS L. PLANE

TITLE REFERENCE: 64037/7

DESIGNED BY: M. Griffiths  
DRAWN BY: J. Gee

JOB No: MBD-418  
DATE: 15.07.25

REVISION NO.

Rev09

DRAWING NO.

A06



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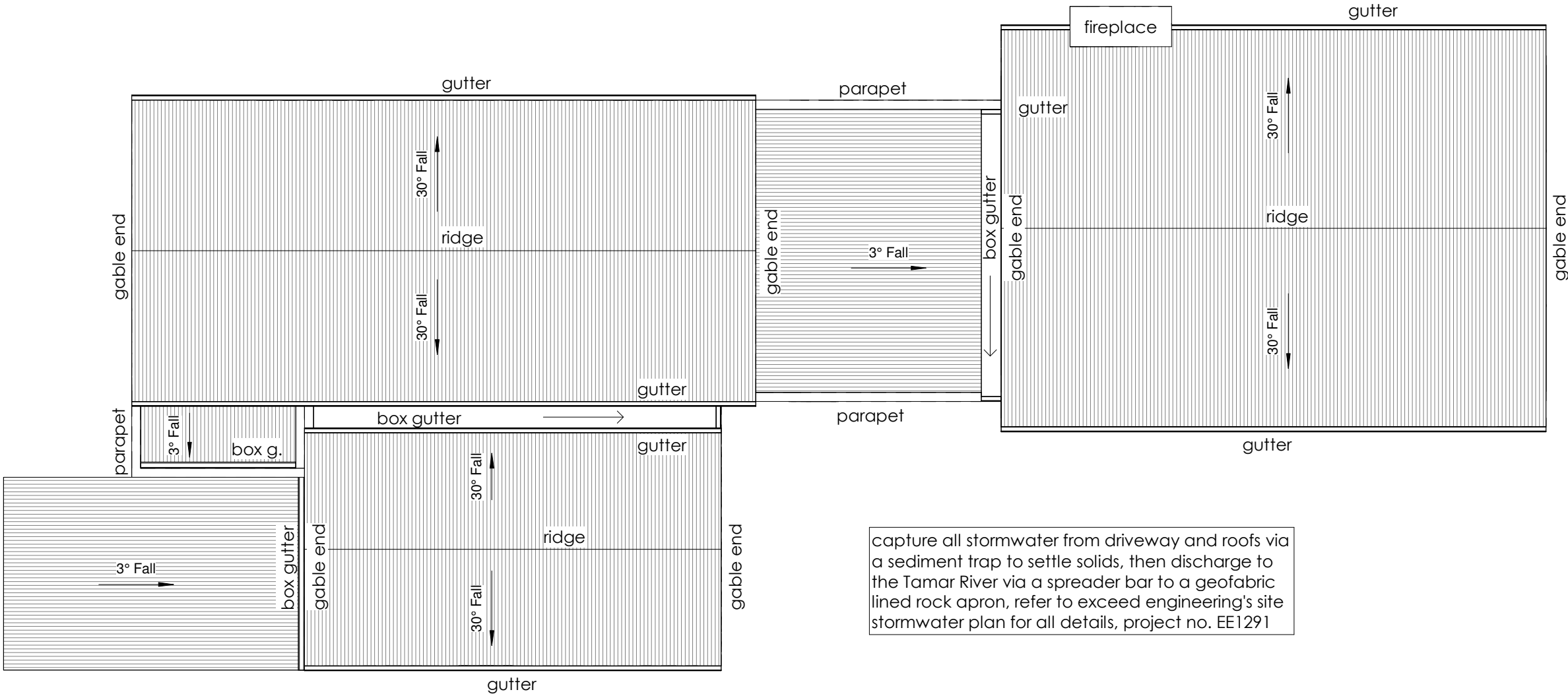
LEGEND:

- D.P. ● = DOWNPIPES  
SP. ● = SPREADERS

PLEASE NOTE:

COLORBOND CLADDING FITTED TO ROOF AS PER  
AS1562.1 AND PART 7.2 OF NCC.

MAIN DWELLING



capture all stormwater from driveway and roofs via a sediment trap to settle solids, then discharge to the Tamar River via a spreader bar to a geofabric lined rock apron, refer to exceed engineering's site stormwater plan for all details, project no. EE1291



planning

LOCAL COUNCIL: WEST TAMAR COUNCIL	
ACCREDITATION COMPLIANCE: MURRAY GRIFFITHS CC 11171	
PROJECT: PROPOSED NEW RESIDENCE 420 DEVIOT ROAD, DEVIOT FOR MR S. & MRS L. PLANE	

TITLE REFERENCE:	64037/7
DESIGNED BY:	DRAWN BY:
M. Griffiths	J. Gee
JOB No:	DATE:
MBD-418	15.07.25

REVISION NO.	DRAWING NO.
Rev09	A07

PROPOSED ROOF PLAN

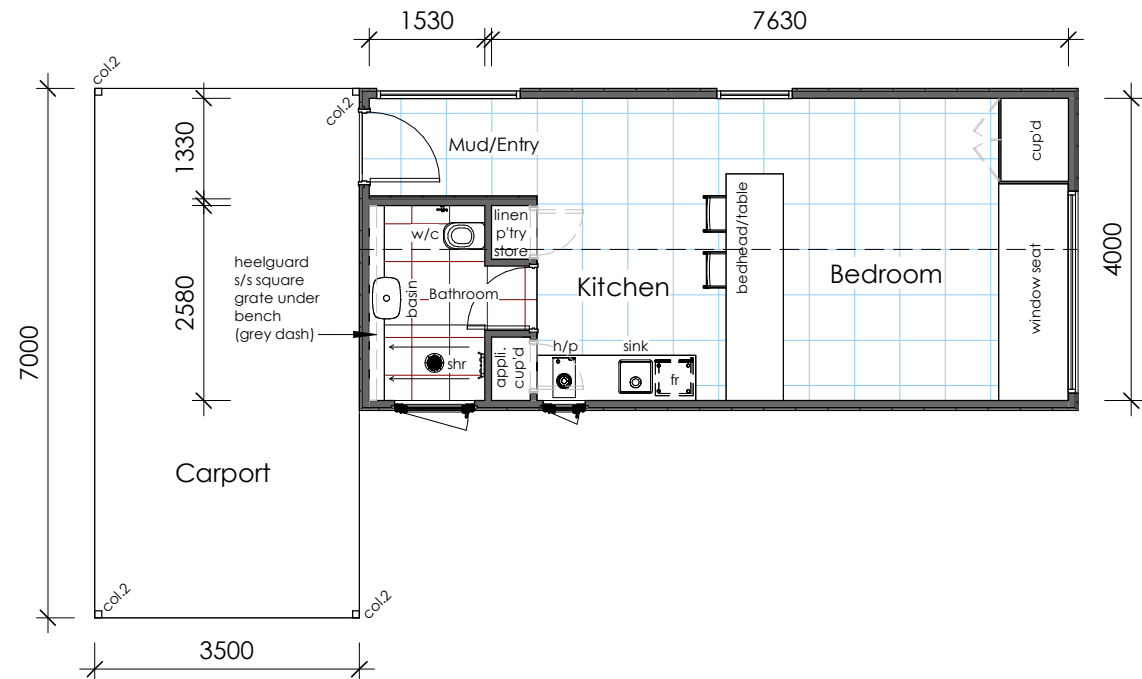
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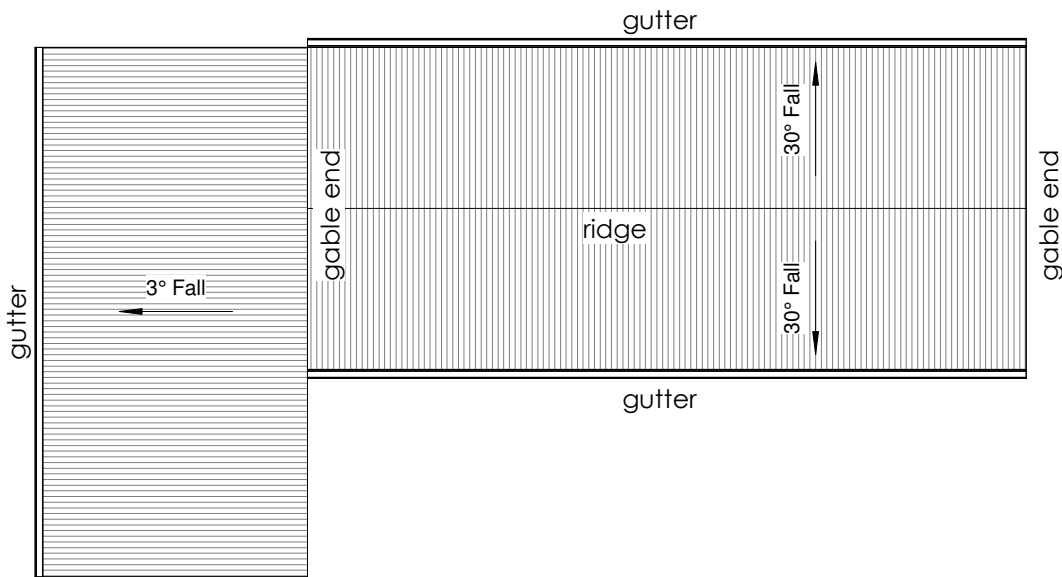


# SECONDARY DWELLING & CARPORT



## PROPOSED FLOOR PLAN

1 : 100



## PROPOSED ROOF PLAN

1 : 100

capture all stormwater from driveway and roofs via a sediment trap to settle solids, then discharge to the Tamar River via a spreader bar to a geofabric lined rock apron, refer to exceed engineering's site stormwater plan for all details, project no. EE1291

### LEGEND:

- csd = Cavity Sliding Door
- s/d = Sliding Door
- bal. = Balustrade
- gss = Glass Shower Screen
- hr = Handrail
- gt = Shower Grate
- t.r. = Towel Rail
- col.1 = Timber Column
- col.2 = SHS Column
- col.3 = RHS Column
- col.4 = CHS Column
- col.5 = UC Column

- 90mm Stud walls with 10mm plasterboard lining throughout (Wet area plasterboard to Bathroom, Ensuite & Laundry walls)
- 190mm Blockwork walls
- 140mm Stud walls with (Shou Sugi Ban) 19mm charred timber cladding
- 90mm Stud walls with (Shou Sugi Ban) 19mm charred timber cladding
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planning

LOCAL COUNCIL:  
WEST TAMAR COUNCIL

ACCREDITATION COMPLIANCE:  
MURRAY GRIFFITHS CC 11171

PROJECT:  
PROPOSED NEW RESIDENCE  
420 DEVIOT ROAD,  
DEVIOT  
FOR MR S. & MRS L. PLANE

TITLE REFERENCE: 64037/7

DESIGNED BY: M. Griffiths  
DRAWN BY: J. Gee

JOB No: MBD-418  
DATE: 15.07.25

REVISION NO.

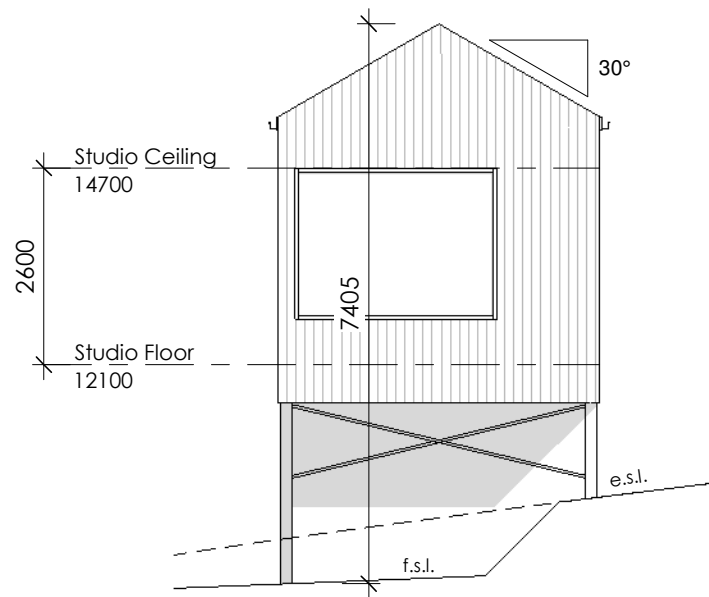
Rev09

DRAWING NO.

A08

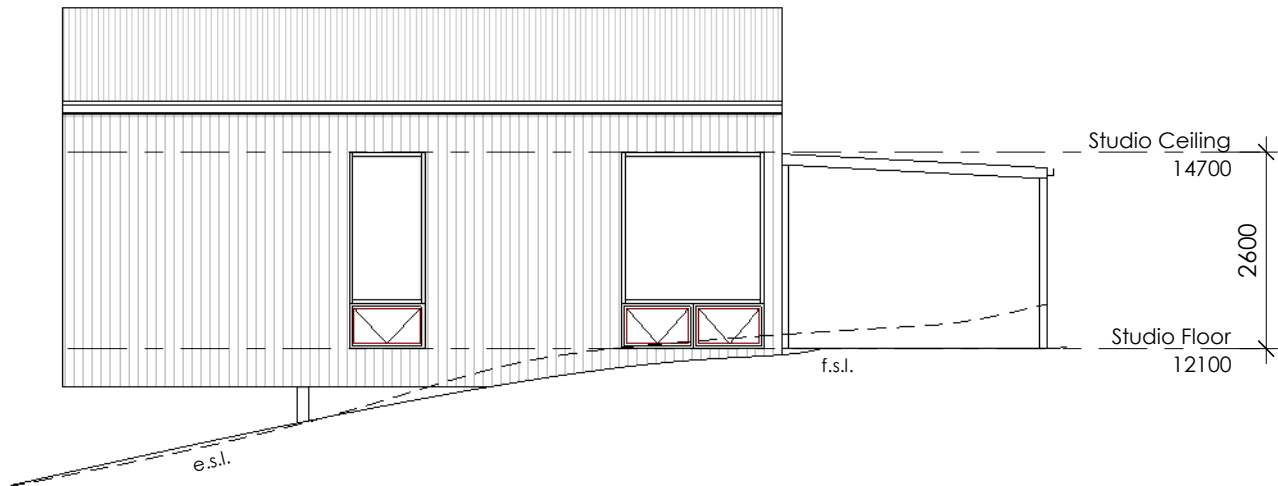


SECONDARY DWELLING & CARPORT



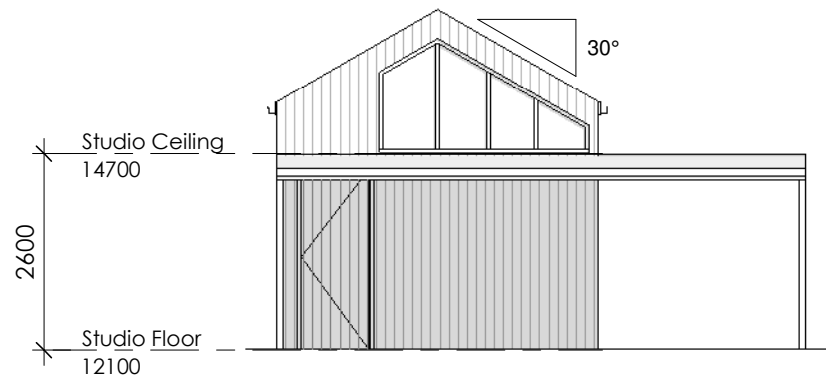
NORTH-EAST ELEVATION

1 : 100



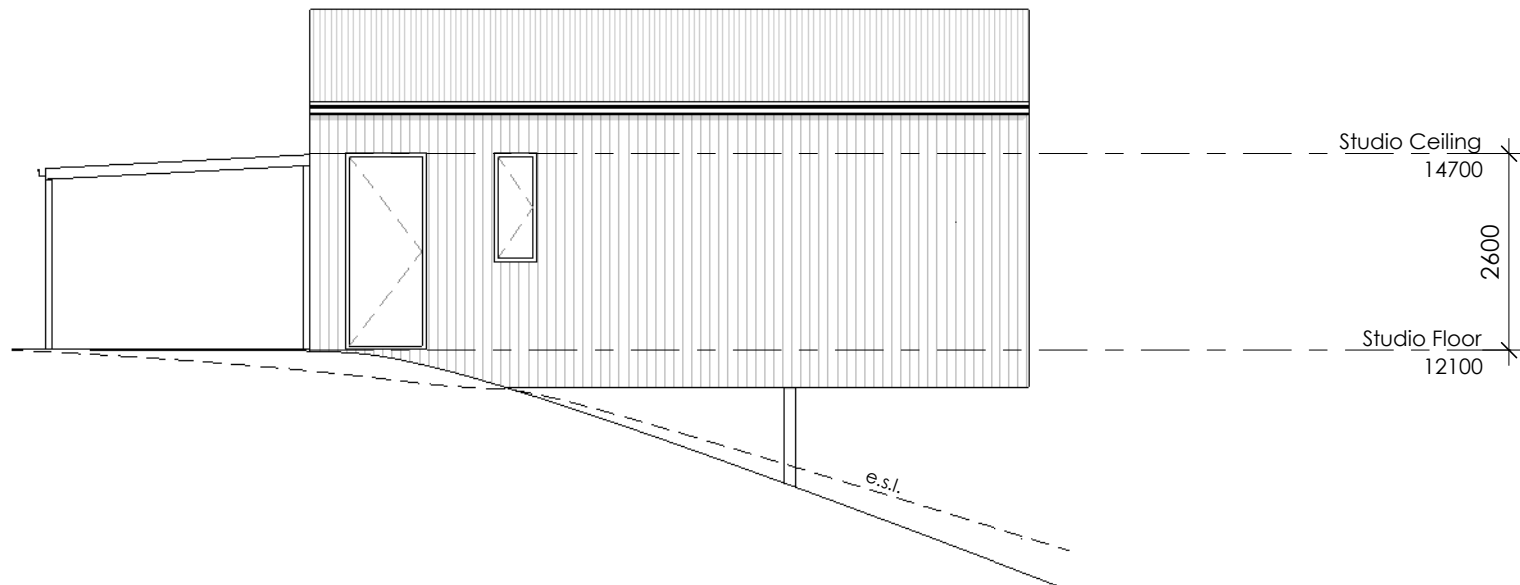
NORTH-WEST ELEVATION

1 : 100



SOUTH-WEST ELEVATION

1 : 100



SOUTH-EAST ELEVATION

1 : 100



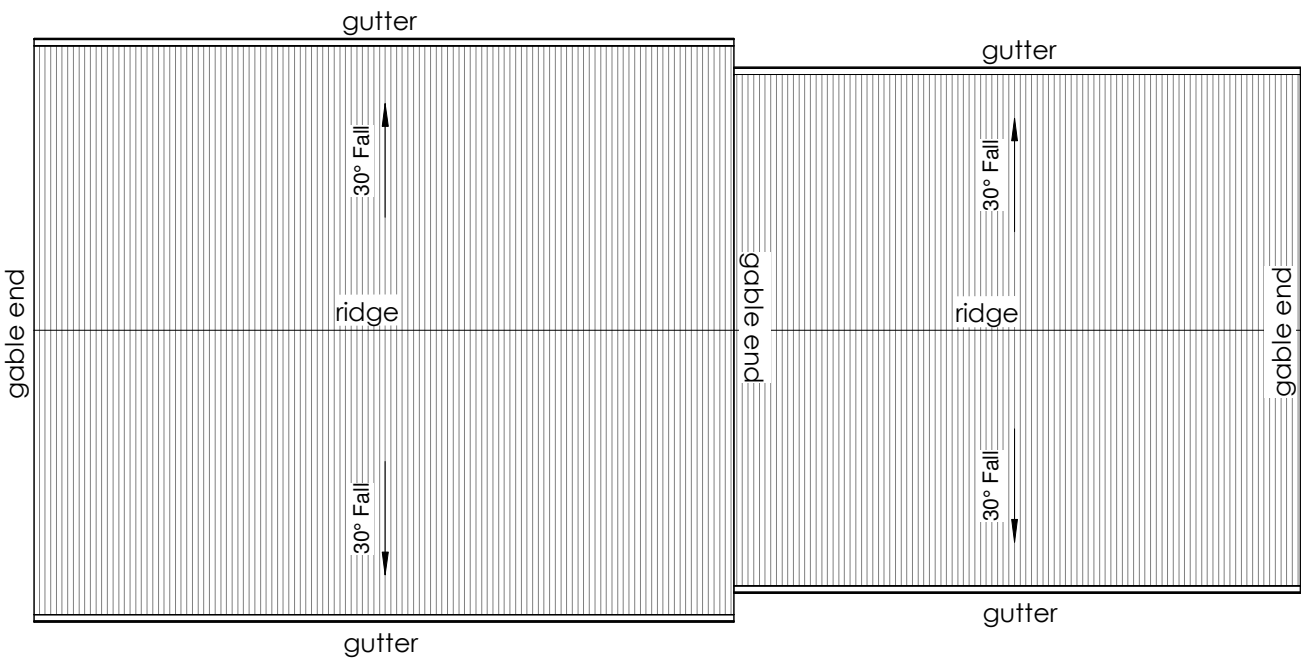
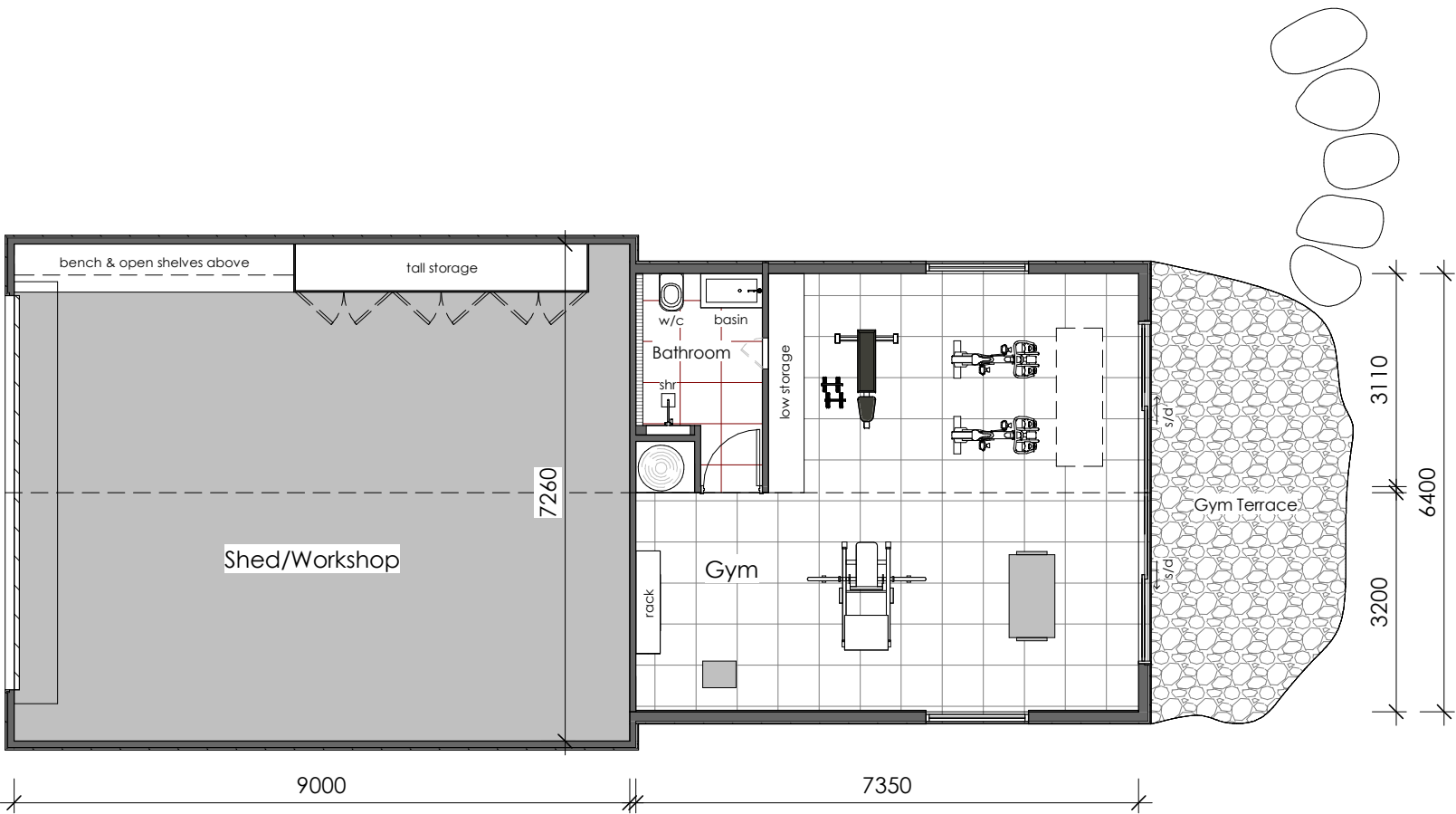
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PROJECT: PROPOSED NEW RESIDENCE 420 DEVIOT ROAD, DEVIOT FOR MR S. & MRS L. PLANE	

planning

TITLE REFERENCE: 64037/7	
DESIGNED BY: M. Griffiths	DRAWN BY: J. Gee
JOB No: MBD-418	DATE: 15.07.25
REVISION NO. Rev09	DRAWING NO. A09



PROPOSED FLOOR PLAN

1 : 100

PROPOSED ROOF PLAN

1 : 100

capture all stormwater from driveway and roofs via a sediment trap to settle solids, then discharge to the Tamar River via a spreader bar to a geofabric lined rock apron, refer to exceed engineering's site stormwater plan for all details, project no. EE1291

LEGEND:

- csd = Cavity Sliding Door
- s/d = Sliding Door
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- Shower screen



planning

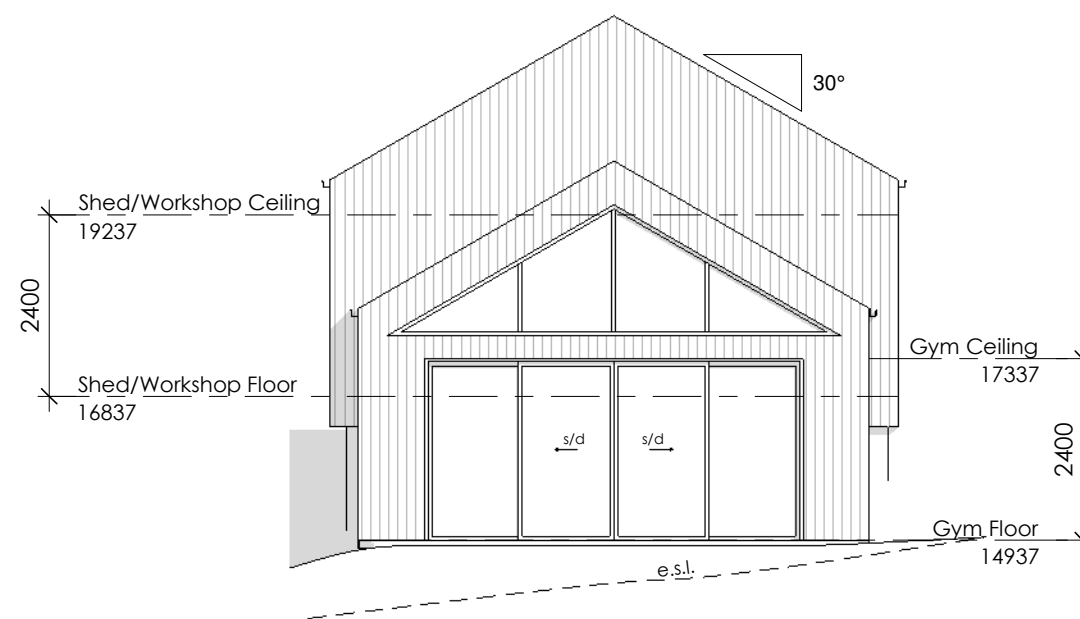
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ACCREDITATION COMPLIANCE: MURRAY GRIFFITHS CC 11171		DESIGNED BY: M. Griffiths	DRAWN BY: J. Gee
PROJECT: PROPOSED NEW RESIDENCE 420 DEVIOT ROAD, DEVIOT FOR MR S. & MRS L. PLANE		JOB No: MBD-418	DATE: 15.07.25
		REVISION NO.	DRAWING NO.
		Rev09	A10

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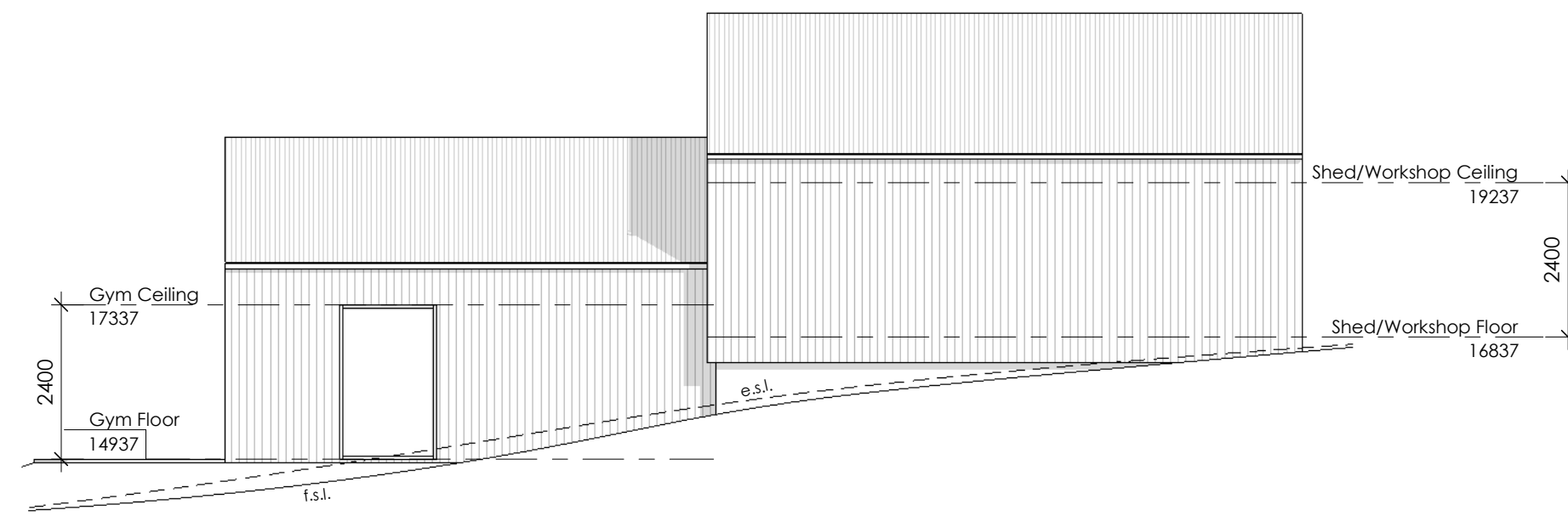


# SHED/WORKSHOP & GYM



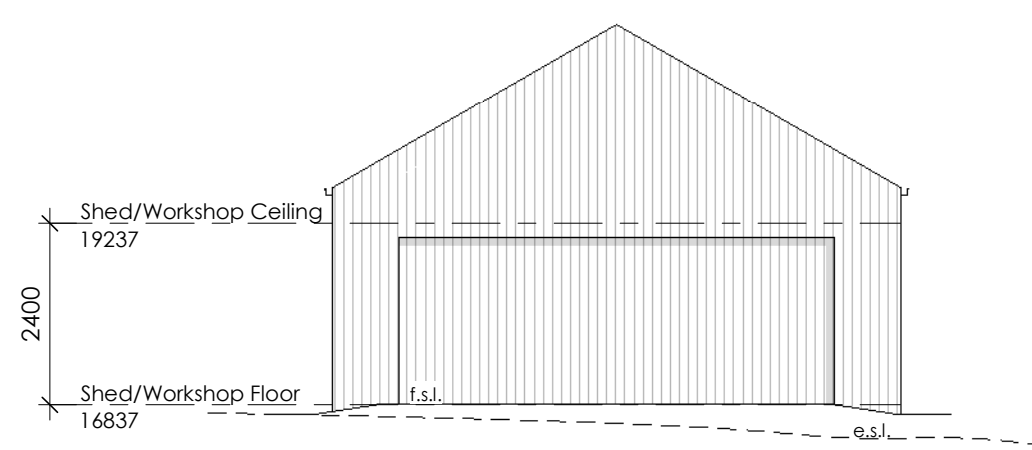
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1 : 100



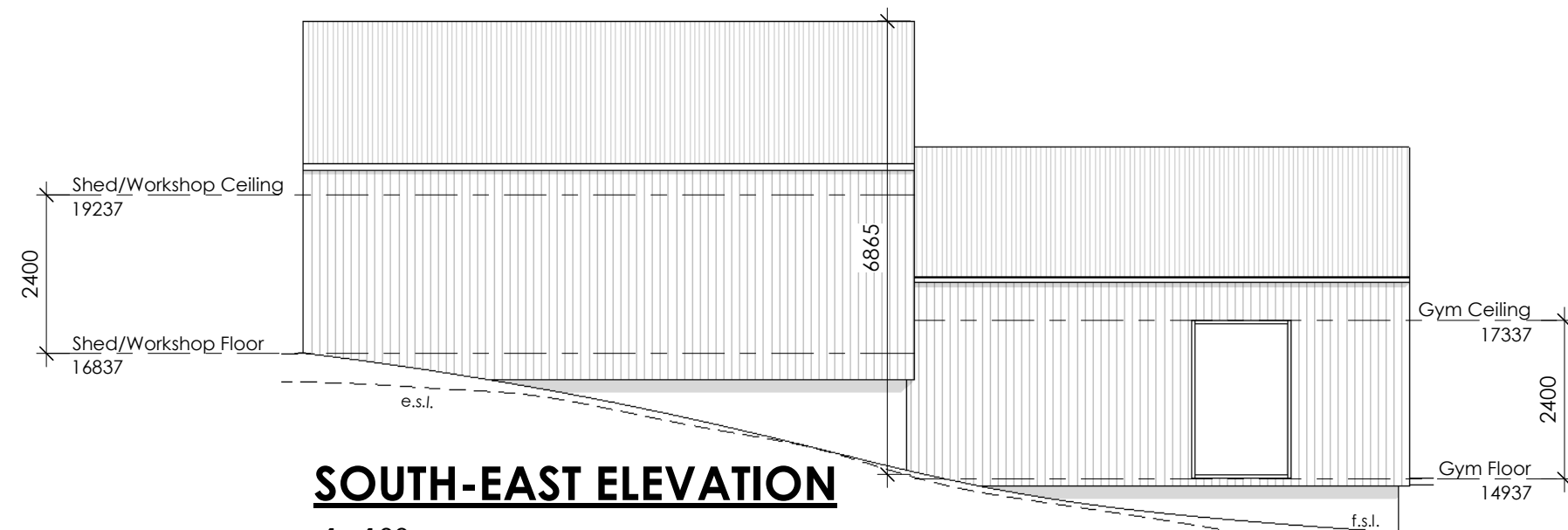
**NORTH-WEST ELEVATION**

1 : 100



**SOUTH-WEST ELEVATION**

1 : 100



**SOUTH-EAST ELEVATION**

1 : 100



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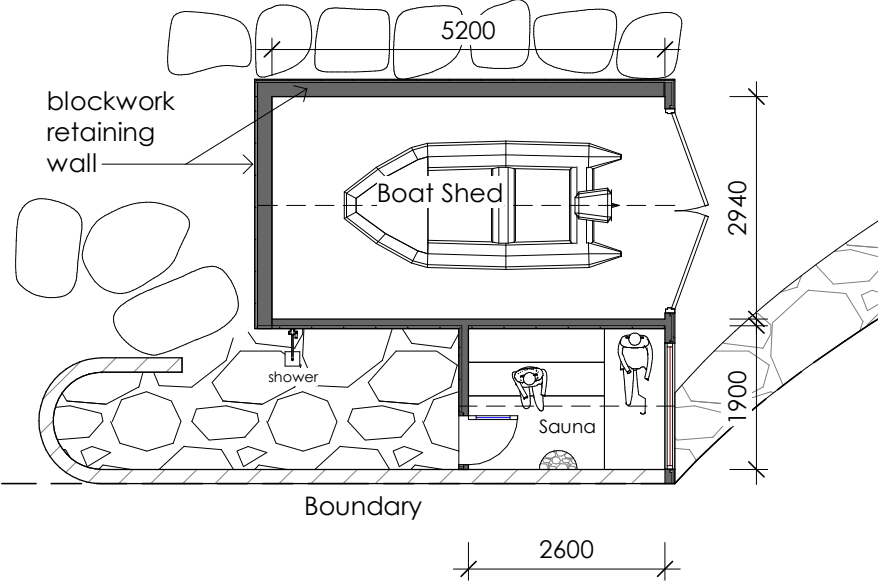
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ACCREDITATION COMPLIANCE: MURRAY GRIFFITHS CC 11171	
PROJECT: PROPOSED NEW RESIDENCE 420 DEVIOT ROAD, DEVIOT FOR MR S. & MRS L. PLANE	

TITLE REFERENCE: 64037/7	
DESIGNED BY: M. Griffiths	DRAWN BY: J. Gee
JOB No: MBD-418	DATE: 15.07.25
REVISION NO.	DRAWING NO.
Rev09	A11

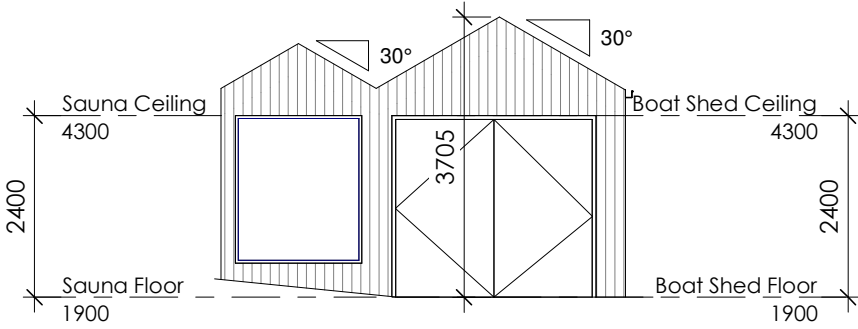
planning

BOAT SHED/SAUNA



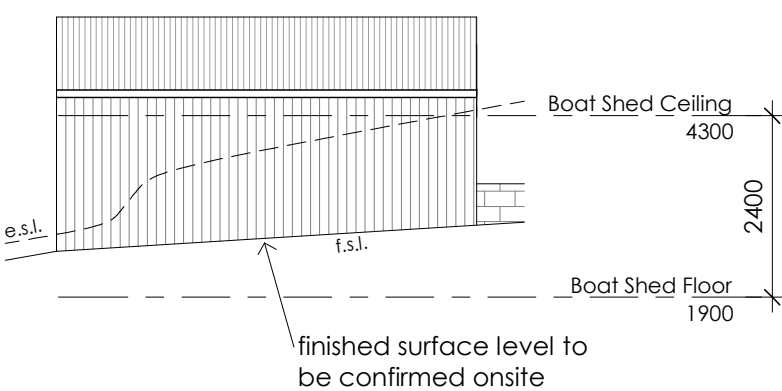
PROPOSED FLOOR PLAN

1 : 100



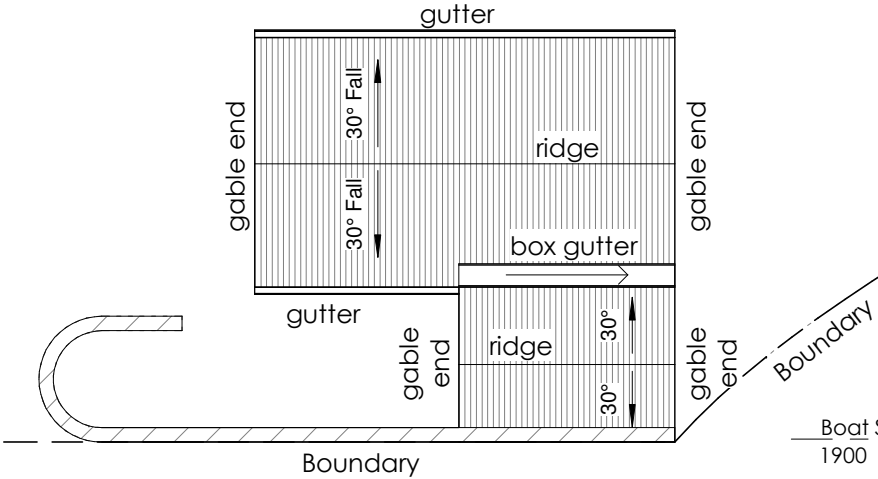
NORTH-EAST ELEVATION

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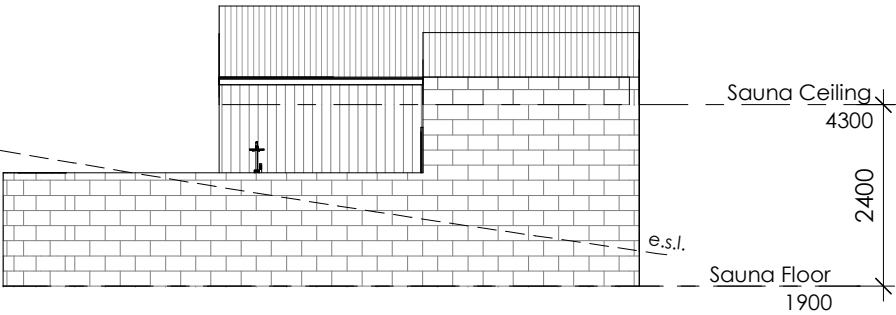
NORTH-WEST ELEVATION

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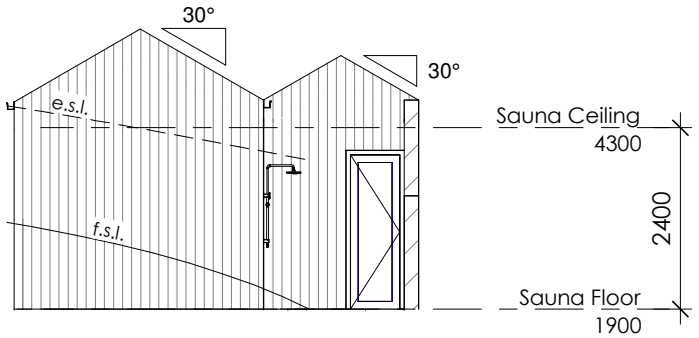
PROPOSED ROOF PLAN

1 : 100



SOUTH-EAST ELEVATION

1 : 100



SOUTH-WEST ELEVATION

1 : 100



planning

LOCAL COUNCIL: WEST TAMAR COUNCIL	
ACCREDITATION COMPLIANCE: MURRAY GRIFFITHS CC 11171	
PROJECT: PROPOSED NEW RESIDENCE 420 DEVIOT ROAD, DEVIOT FOR MR S. & MRS L. PLANE	

TITLE REFERENCE: 64037/7	
DESIGNED BY: M. Griffiths	DRAWN BY: J. Gee
JOB No: MBD-418	DATE: 15.07.25
REVISION NO. Rev09	DRAWING NO. A12



capture all stormwater from driveway and roofs via a sediment trap to settle solids, then discharge to the Tamar River via a spreader bar to a geofabric lined rock apron, refer to exceed engineering's site stormwater plan for all details, project no. EE1291



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DRAWING TABLE		
SHEET	DESCRIPTION	REV
C100	COVER PAGE	01
C101	SITE STORMWATER PLAN	01
C102	ROCK PAD DETAIL	01
N1	CIVIL NOTES	01
	LGAT-TSD-SW01-v3	

IMPORTANT  
WORKS ARE TO BE IN ACCORDANCE WITH THE  
APPLICABLE AUSTRALIAN STANDARDS,  
CONSTRUCTION CODES (NCC) & REQUIREMENTS  
OF ANY RELEVANT LOCAL AUTHORITIES

DRAWINGS TO BE READ IN CONJUNCTION WITH  
ANY WRITTEN SPECIFICATIONS AND ASSOCIATED  
DOCUMENTATION PREPARED BY THE ARCHITECT  
OR BUILDING DESIGNER AND THE RELEVANT  
SUB-CONSULTANTS

BASE DRAWING(S) PREPARED AND PROVIDED BY:  
• MY BUILD COLLECTIVE

THE FOLLOWING ARE SURVEY DETAILS USED AS  
BASIS FOR DESIGN:  
SURVEYOR: LAND DIMENSIONS  
SURVEY REF: 24370FL  
SURVEY DATE: 19-26 SEPTEMBER 2024  
COORDINATE SYSTEM: MGA2020  
VERTICAL DATUM: AHD

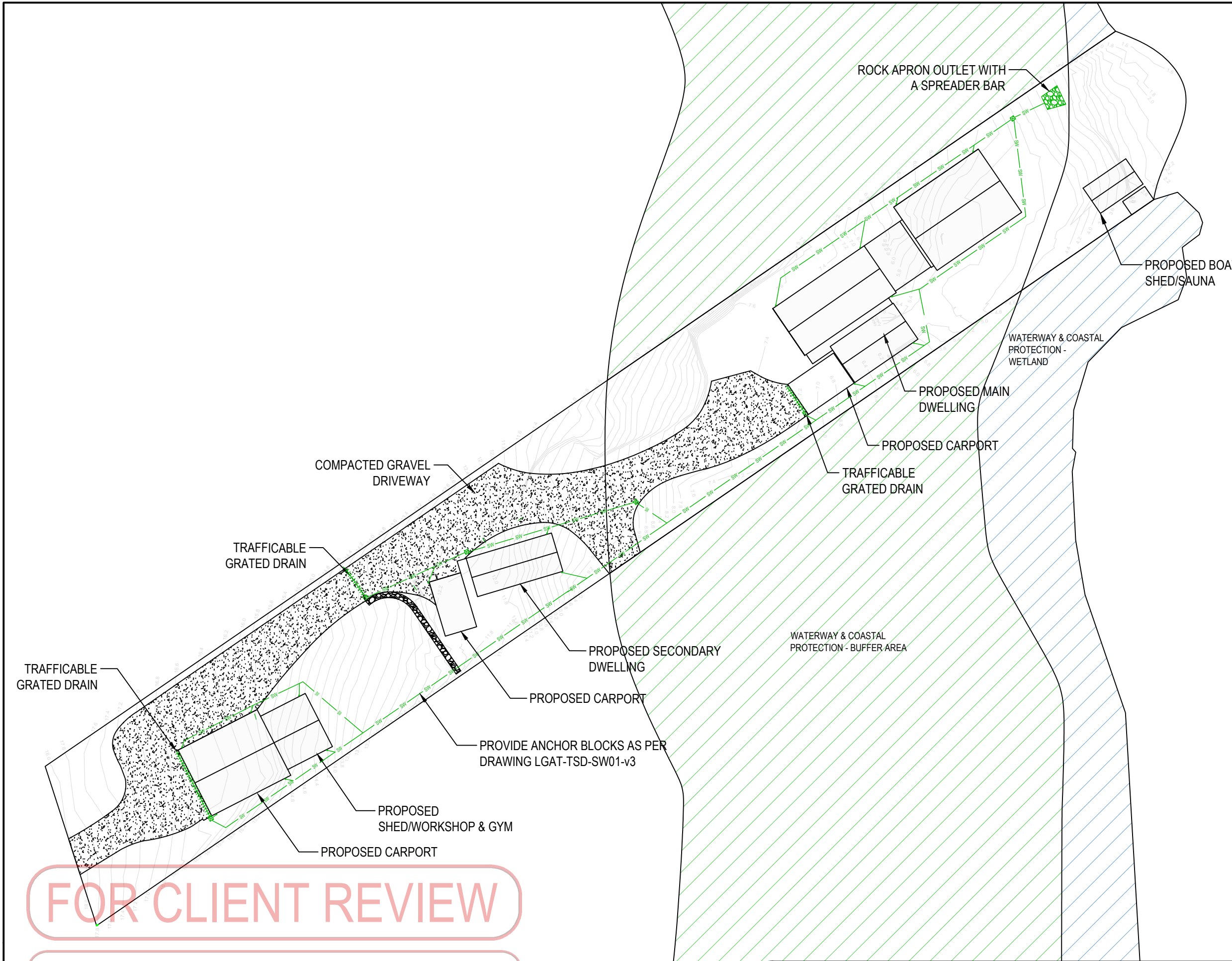
WRITTEN DIMENSIONS TAKE PRECEDENCE OVER  
SCALED DIMENSIONS  
DIMENSIONS IN MILLIMETRES UNLESS NOTED  
OTHERWISE

DOCUMENTATION IS SUBJECT TO STATUTORY  
APPROVALS

THIS DESIGN IS INTENDED TO BE BUILT ONLY ONCE  
AND ONLY ON THE SITE THAT THE DESIGN WAS  
PREPARED FOR

FOR CLIENT REVIEW

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SOME ITEMS LISTED BELOW MAY NOT BE APPLICABLE

	PROPRIETARY STORMWATER PIT (TRAFFICABLE WHERE APPLICABLE) SIZED AS PER TABLE 7.5.2.1
	INSPECTION OPENING (IO)
	MANHOLE
	SURFACE FALL (MIN 1:100 UNLESS OTHERWISE SPECIFIED)
	RL (TO VERTICAL DATUM)
	NEW SEWER LINE
	NEW PUMPED SEWER LINE
	EXISTING SEWER LINE
	NEW STORMWATER LINE
	NEW AG DRAIN
	NEW SWALE
	NEW CHARGED STORMWATER LINE
	NEW PUMPED STORMWATER LINE
	EXISTING STORMWATER LINE
	EXISTING SWALE
	NEW WATER LINE
	EXISTING WATER LINE
	NEW GAS LINE
	EXISTING GAS LINE
	NEW ELECTRICAL CABLE
	EXISTING ELECTRICAL CABLE
	NEW COMMUNICATIONS CABLE
	EXISTING COMMUNICATION CABLE

ADJACENT SURFACES TO BE FALLING AWAY FROM BUILDING

IO TO BE INSTALLED AT MAJOR BENDS IN STORMWATER AND SEWER LINES AND ALL LOW POINTS IN DOWNPIPES

PRODUCTS AND SYSTEMS TO BE INSTALLED AND/OR USED AS PER MANUFACTURERS INSTRUCTIONS

**IMPORTANT**  
WORKS ARE TO BE IN ACCORDANCE WITH THE APPLICABLE AUSTRALIAN STANDARDS, CONSTRUCTION CODES (NCC) AND REQUIREMENTS OF ANY RELEVANT LOCAL AUTHORITIES

ALL WORKS IN ACCORDANCE WITH WATER SUPPLY CODE OF AUSTRALIA WSA03-2011-3.1 VERSION 3.1 MRWA EDITION V2.0 AND SEWERAGE CODE OF AUSTRALIA MELBOURNE RETAIL WATER AGENVIES CODE WSA02-2014-3.1 MRWA VERSION 2 AND TASWATER SUPPLEMENTS TO THESE CODE

THIS DRAWING MUST BE DISTRIBUTED IN FULL COLOUR

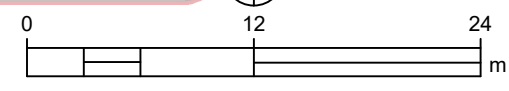


BEWARE OF ALL UNDERGROUND SERVICES. THE LOCATION OF UNDERGROUND SERVICES SHOWN ON THE DRAWING ARE APPROXIMATE ONLY AND NOT ALL MAY BE SHOWN. EXACT POSITIONS OF ALL UNDERGROUND SERVICES SHOULD BE LOCATED ONSITE AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

FOR CLIENT REVIEW

NOT FOR CONSTRUCTION

01	FOR CLIENT REVIEW	HR	HR	SD	SD	09/07/2025
REV	DESCRIPTION	DRAFT	DES	CHKD	APP	DATE
PLOTTED: Jul 09, 2025 - 4:31pm FILE: G:\Projects\EXCEED\1291 My Build Collective - Deviot Rd Deviot\WORKING FILES\EE1291 SW Design_4.dwg						



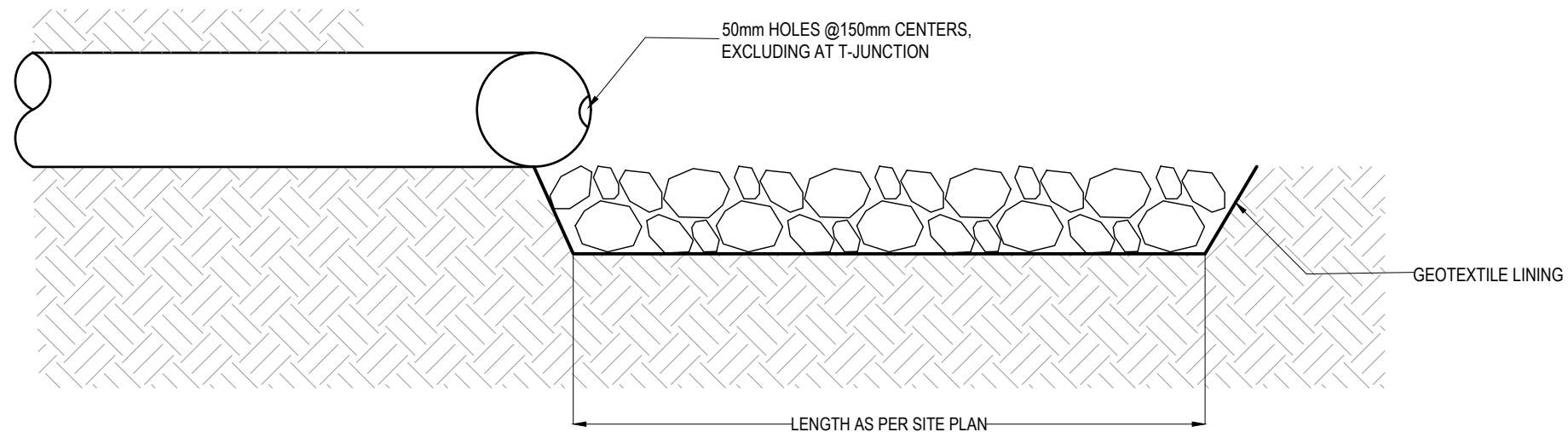
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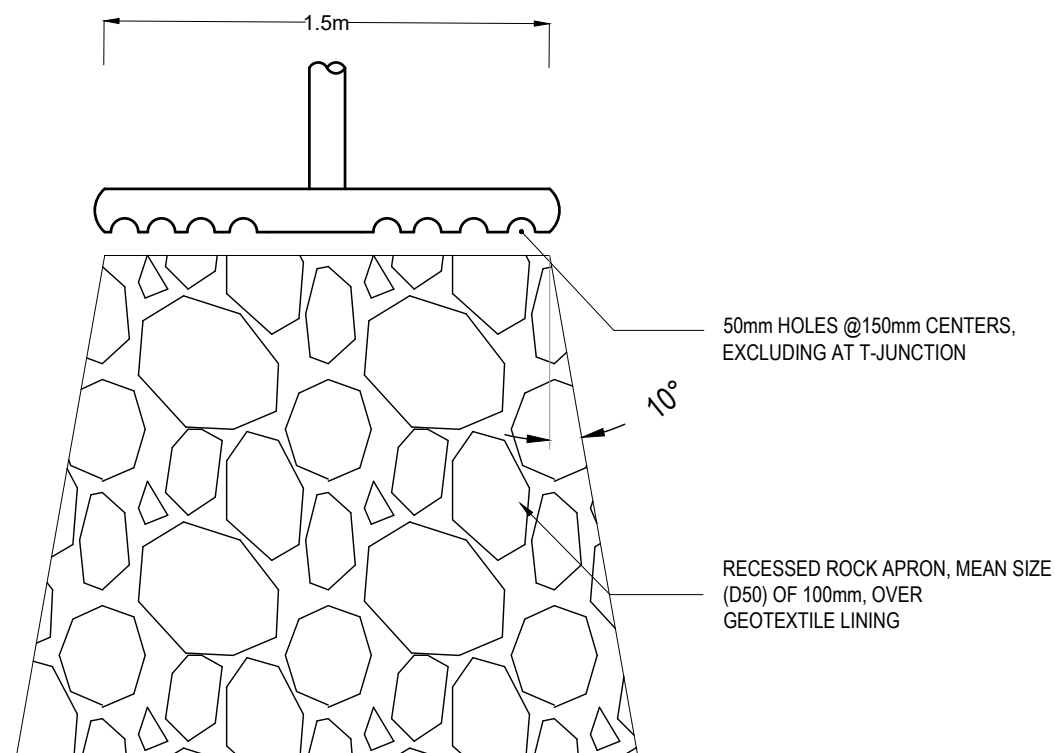
51 YORK STREET, PO BOX 1971  
LAUNCESTON, TAS 7250  
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E: info@exceedeng.com.au  
www.exceedeng.com.au

ENGINEERING FOR STORMWATER  
420 DEVIOT ROAD, DEVIOT  
SITE STORMWATER PLAN

PROJECT #:	SHEET #:	REVISION #:
EE1291	C101	01



**ROCK PAD OUTLET SECTION**  
N.T.S.



**ROCK PAD OUTLET PLAN VIEW**  
N.T.S.

FOR CLIENT REVIEW

NOT FOR CONSTRUCTION



GENERAL									
G1	NO ATTEMPT HAS BEEN MADE TO LOCATE ALL SERVICES. ONLY THOSE SERVICES CONSPICUOUS DURING FIELD SURVEYS ARE SHOWN. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITY(S) SHOULD BE CONTACTED FOR POSSIBLE LOCATION OF FURTHER UNDERGROUND SERVICE AND DETAILED LOCATIONS OF ALL SERVICES. ALL EXISTING SERVICES ARE TO BE PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO EXISTING SERVICES IS TO BE MADE GOOD AT THE CONTRACTOR'S EXPENSE.				E7	ALL CHEMICAL STORAGE SHALL BE MANAGED (E.G., BUNDED) IN ACCORDANCE WITH WORKCOVER OR EPA GUIDELINES			
G2	NOMINATION OF PROPRIETARY ITEMS DOES NOT INDICATE EXCLUSIVE PREFERENCE BUT INDICATES THE REQUIRED PROPERTIES OF THE ITEM. SIMILAR ALTERNATIVES HAVING THE REQUIRED PROPERTIES MAY BE OFFERED FOR APPROVAL. INSTALL PROPRIETARY ITEMS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS.				E8	THE EXTENT OF CUT AND FILLS SHALL BE MINIMISED. CUT AND FILL BATTER GRADES SHALL IDEALLY BE AT 1:3			
G3	REFER ANY DISCREPANCY TO THE SUPERINTENDENT BEFORE PROCEEDING WITH THE WORK.				E9	DISTURBED SOIL AREAS SHALL BE EFFECTIVELY MANAGED BY STAGING, MINIMISING AREA EXPOSED AT ANY ONE TIME, AND MINIMISING THE EXPOSURE TIMEFRAME OF EACH			
G4	DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWINGS. DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METRES U.N.O.				E10	SEDIMENT FILTERS (E.G., SEDIMENT FENCE) SHALL BE USED TO FILTER ALL 'SHEET FLOW' RUNOFF FROM DISTURBED AREAS AND STOCKPILES TO PREVENT SEDIMENT FROM ENTERING STORMWATER SYSTEMS			
G5	THE DATUM FOR ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY.				E11	TEMPORARY CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE CATCHMENT THEY ARE SERVICING IS STABILISED (FOR GRASS THIS WILL MEAN 70% GROUND COVER).			
G6	ALL CODES REFERENCED IN THESE DOCUMENTS WILL BE THE LATEST EDITION AVAILABLE UNLESS NOTED OTHERWISE.				E12	ALL SOIL LOADED TRUCKS LEAVING OR ENTERING THE SITE SHALL BE TARPED			
G7	WHERE ANY COMMON TRENCHING IS REQUIRED, THE FOLLOWING CLEARANCE DISTANCES (BARREL TO BARREL) MUST BE MAINTAINED FROM EXISTING OR PROPOSED SERVICES: HORIZONTALLY: 300mm ALONG A LENGTH GREATER THAN 2 METRES. 500mm MINIMUM FROM ANY MAIN GREATER THAN 200mm DIA. 150mm MINIMUM ALONG A LENGTH LESS THAN 2 METRES. VERTICALLY: 150mm MINIMUM 300mm MINIMUM FROM ANY MAIN GREATER THAN 200mm DIA. ELECTRICAL CABLES SHOULD BE LOCATED ON THE OPPOSITE SIDE OF THE STREET. WHERE THIS IS NOT POSSIBLE A 400mm MINIMUM DISTANCE MUST BE OBSERVED OF WHICH 300mm SHOULD BE IN NATURAL AND UNDISTURBED MATERIAL.				E13	TOPSOIL SHALL BE RE-SPREAD OVER ALL EXPOSED SOIL SURFACES WHERE VEGETATION IS REQUIRED. A MAXIMUM DEPTH OF 50MM SHALL BE PLACED ON SLOPES STEEPER THAN 1:3 AND A MINIMUM DEPTH OF 100MM SHALL BE PLACED ON SLOPES LESS THAN 1:3			
G8	THE SCOPE OF WORKS ARE SHOWN IN THESE DOCUMENTS AND THE SPECIFICATION. IT IS EXPECTED THE CONTRACTOR WILL RESOLVE ALL ISSUES UNCOVERED ON SITE THAT ARE NOT DETAILED IN CONJUNCTION WITH THE SUPERINTENDENT.				E14	AN NPK 11-34-11 FERTILISER OR SIMILAR AS APPROPRIATE SHALL BE APPLIED AT A RATE OF 200-400KG/HA. CARE IS TO BE TAKEN TO AVOID ANY FERTILISER DIRECTLY ENTERING WATERCOURSES.			
G9	CLEARANCE REQUIREMENTS AS FOLLOWS UNLESS NOTED OTHERWISE: - - GAS MAIN - 500mm HORIZONTAL; 300mm VERTICAL GAS HOUSE CONNECTIONS - 300mm HORIZONTAL; 150mm VERTICAL TELSTRA / NBN - 600mm HORIZONTAL; 150mm VERTICAL TASNETWORKS HV / LV CABLES - 450mm STORMWATER - 600mm HORIZONTAL; 150mm VERTICAL TASWATER SEWER MAIN - 600mm HORIZONTAL; 500mm VERTICAL				E15	SCARIFYING OR DIRECT DRILLING SHOULD BE USED TO IMPROVE SEED STRIKE RATES			
WATER SENSITIVE URBAN DESIGN / ENVIRONMENTAL					E16	REVEGETATION WORKS SHALL BE MAINTAINED/ENHANCED (E.G., RESEEDING, FERTILISING, WATERING) UNTIL A MINIMUM OR 70% GROUND COVER IS ESTABLISHED			
E1	CONSTRUCTION SHALL COMPLY WITH ALL ENVIRONMENTAL AND LEGISLATIVE REQUIREMENTS.				E17	NO TREES TO BE REMOVED WITHOUT THE APPROVAL OF THE SUPERINTENDENT REPRESENTATIVE			
E2	ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH 'SOIL & WATER MANAGEMENT ON BUILDING & CONSTRUCTION SITES' GUIDELINES AVAILABLE FROM EPA/NRM SOUTH, COMPRISING THE FOLLOWING: FACT SHEET 1: SOIL & WATER MANAGEMENT ON LARGE BUILDING & CONSTRUCTION SITES FACT SHEET 2: SOIL & WATER MANAGEMENT ON STANDARD BUILDING & CONSTRUCTION SITES FACT SHEET 3: SOIL & WATER MANAGEMENT PLANS FACT SHEET 4: DISPERSIVE SOILS - HIGH RISK OF TUNNEL EROSION FACT SHEET 5: MINIMISE SOIL DISTURBANCE FACT SHEET 6: PRESERVE VEGETATION FACT SHEET 7: DIVERT UP-SLOPE WATER FACT SHEET 8: EROSION CONTROL MATS & BLANKETS FACT SHEET 9: PROTECT SERVICE TRENCHES & STOCKPILES FACT SHEET 10: EARLY ROOF DRAINAGE CONNECTION FACT SHEET 11: SCOUR PROTECTION - STORM WATER PIPE OUTFALLS & CHECK DAMS FACT SHEET 12: STABILISED SITE ACCESS FACT SHEET 13: WHEEL WASH FACT SHEET 14: SEDIMENT FENCES & FIBRE ROLLS FACT SHEET 15: PROTECTION OF STORM WATER PITS FACT SHEET 16: MANAGE CONCRETE, BRICK & TILE CUTTING FACT SHEET 17: SEDIMENT BASINS FACT SHEET 18: DUST CONTROL FACT SHEET 19: SITE RE-VEGETATION				E18	MINIMISE AIR POLLUTION INCLUDING DUST AND NOISE THAT MIGHT INTERFERE WITH NEIGHBOURING PROPERTIES			
E4	WORK SHALL BE RESTRICTED TO THE WELL-DEFINED WORKS ZONES				STORMWATER				
E5	A SOIL RETENTION SYSTEM (E.G., GRAVEL SHAKEDOWN ZONE) SHALL BE PROVIDED AT ALL SITE ACCESS				SW1	ALL STORM WATER PLUMBING & DRAINAGE TO COMPLY WITH A.S 3500.3:2021 STORM WATER DRAINAGE.			
E6	ANY SOIL MATERIAL TRACKED OFF-SITE ONTO ROADWAYS SHALL BE IMMEDIATELY REMOVED				SW2	WHERE RELEVANT, REFER TO IPWEA/LGAT TASMANIAN STANDARD DRAWINGS ISSUED MAY 2020			
					SW3	ALL DRAINAGE WORKS SHALL BE SUBJECT TO THE TESTS PRESCRIBED BY THE AUTHORITIES HAVING JURISDICTION OVER THE VARIOUS SERVICES. ANY SECTION FAILING SUCH TESTS SHALL BE REMOVED AND PROPERLY INSTALLED AT THE CONTRACTOR'S EXPENSE.			
					WATER				
					W1	ALL WATER SUPPLY CONSTRUCTION TO: WATER SUPPLY CODE OF AUSTRALIA (WSA 03-2011-3.1 VERSION MRWA EDITION V2.0) - PART 2: CONSTRUCTION WATER SERVICES ASSOCIATION OF AUSTRALIA - TASWATER SUPPLEMENT TASWATER'S STANDARD DRAWINGS TWS-W-0002 SERIES WATER METERING POLICY/METERING GUIDELINES TASWATER'S STANDARD DRAWINGS TWS-W-0003 - FOR PROPERTY SERVICE CONNECTIONS - CAGE FOR WATER METER ASSEMBLY BOUNDARY BACKFLOW CONTAINMENT REQUIREMENTS AND AS3500.1:2021. ANY DEPARTURES FROM THESE STANDARDS REQUIRES THE PRIOR APPROVAL OF THE SUPERINTENDENT AND THE LOCAL WATER AUTHORITY WORKS SUPERVISOR.			
					WORK HEALTH AND SAFETY				
					WHS1	ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH: RELEVANT WORK HEALTH AND SAFETY LEGISLATION RELEVANT SAFE WORK AUSTRALIA CODES OF PRACTICE SITE SPECIFIC SAFETY PLANS IF THE CONTRACTORS PROPOSES AN ALTERNATIVE DESIGN, A SAFETY RISK ASSESSMENT SHOULD BE UNDERTAKEN AND SUBMITTED TO THE SUPERINTENDENT FOR REVIEW			
					EARTHWORKS				
					EW1	EARTHWORKS SHALL BE IN ACCORDANCE WITH THIS SPECIFICATION AND AS 3798.			
					EW2	AREAS OF FILL REMOVE TOP SOIL AND ORGANIC MATERIAL PROOF ROLL SUBGRADE IN ACCORDANCE WITH AS1289 TO: 98% STANDARD DRY DENSITY UNDER BUILDING 100% STANDARD DRY DENSITY UNDER ROADS AND CARPARKS REMOVE ANY SOFT SPOTS AND COMPACT WITH 2% OF OPTIMUM MOISTURE CONTENT TO STANDARD DRY DENSITY AS STATED ABOVE PLACE FILL AS SPECIFIED AND COMPACT WITHIN 2% OF OPTIMUM MOISTURE CONTENT TO STANDARD DRY DENSITY AS STATED ABOVE			
					EW3	AREAS OF CUT REMOVE TOP SOIL AND ORGANIC MATERIAL B. PROOF ROLL SUBGRADE IN ACCORDANCE WITH AS1289 TO: 98% STANDARD DRY DENSITY UNDER BUILDINGS 100% STANDARD DRY DENSITY UNDER ROADS AND CAR PARKS REMOVE ANY SOFT SPOTS AND COMPACT WITH 2% OF OPTIMUM MOISTURE CONTENT TO STANDARD DRY DENSITY AS STATED ABOVE			
					ROAD WORKS				
					WERE RELEVANT, REFER TO IPWEA/ LGATS TASMANIAN SUBDIVISION STANDARD DRAWINGS ISSUED - MAY 2020.				
					SURVEY				
					SU1	SURVEY DETAILS ON COVER PAGE			
					SU2	PROPERTY BOUNDARY OVERLAYS, WHERE SUPPLIED, VARY IN ACCURACY BUT ARE GENERALLY TO 0.5m. THEREFORE A LAND SURVEY, AS DEFINED UNDER THE SURVEYING ACT 2002, SHOULD BE UNDERTAKEN BEFORE ANY CONSTRUCTION ACTIVITY IS CARRIED OUT ON OR NEAR THE LAND BOUNDARIES DEPICTED BY THIS MODEL.			
					SU3	SURVEY CONTROL INFORMATION IS REGARDED AS SUITABLE FOR THE SURVEY AND CORRECT AT THE TIME OF SURVEY. BUT SHOULD BE VERIFIED BEFORE BEING USED FOR ANY PURPOSE.			
					SU4	NO DESIGN SHOULD BE UNDERTAKEN OUTSIDE OF SURVEY EXTENTS. IF DESIGN EXCEEDS SURVEY EXTENTS, ADDITIONAL SURVEY DATA SHOULD BE ACQUIRED.			
					SU5	UNDERGROUND SERVICES: THE LOCATION OF ALL EXISTING UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY. EXCEED TAKES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF SUCH INFORMATION. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONFIRM THE LOCATION & DEPTH/ INVERT LEVEL OF ALL EXISTING UNDERGROUND SERVICES, IN CONJUNCTION WITH THE RELEVANT SERVICE AUTHORITY & ANY CONFLICTS WITH THE PROPOSED DESIGN/ PIPE ALIGNMENT ARE TO BE RESOLVED PRIOR TO CONSTRUCTION			
					SEWERAGE				
					S1	ALL SEWER WORKS TO BE IN ACCORDANCE WITH WSA SEWER CODE AND TAS WATER STANDARDS AND SUPPLEMENTS. ANY MODIFICATIONS TO THESE STANDARDS REQUIRES APPROVAL FROM SUPERINTENDENT AND TAS WATER.			
					S2	ALL NEW LIVE SEWER CONNECTIONS TO EXISTING TAS WATER SEWERAGE INFRASTRUCTURE TO BE COMPLETED BY TAS WATER UNLESS OTHERWISE AGREED AND APPROVED AT OWNERS EXPENSE.			
					S3	ALL DRAINAGE WORKS TO BE INSPECTED AND TESTED IF REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ORGANISING INSPECTIONS AT BUT NOT LIMITED TO THE FOLLOWING STAGES; TRENCHING AND PIPEWORK BEDDING PIPE INSTALLED AND PRIOR TO BACKFILLING AFTER BACKFILLING SHOULD ANY INSPECTIONS OR TESTING FAIL TO MEET THE REQUIREMENTS PRESCRIBED BY THE STATUTORY AUTHORITY THE SECTION FAILING THE TESTING/INSPECTION SHOULD BE REMOVED AND REINSTALLED TO MEET THE STATUTORY REQUIREMENTS AND DIRECTIONS PROVIDED. COST OF REINSTALLATION IS AT CONTRACTORS EXPENSE.			
					S4	TRENCHES ARE TO BE EXCAVATED AND BACKFILLED IN ACCORDANCE WITH THE DESIGN DRAWINGS AND TAS WATER STANDARDS. ELECTROMAGNETIC METAL IMPREGNATED TAPE SHOULD BE INSTALLED IN ALL NON METALLIC PIPE TRENCHES			
					S5	ALL MANHOLES ARE TO BE PRECAST CONCRETE MINIMUM 1050ID AND INSTALLED IN ACCORDANCE WITH WSA AND TAS WATER STANDARDS. MANHOLE COVERS TO BE HEAVY DUTY CLASS D GATIC COVERS AND SURROUNDS IN TRAFFICABLE AREAS AND MEDIUM DUTY CLASS B GATIC COVERS AND SURROUNDS IN NON TRAFFICABLE AREA.			
					S6	THE CONTRACTOR IS RESPONSIBLE FOR THE PRODUCTION OF ALL AS CONSTRUCTED DRAWINGS AND DOCUMENTATION. AS CONSTRUCTION DOCUMENTATION SHOULD BE IN ACCORDANCE WITH TAS WATER REQUIREMENTS AND STANDARDS AND BE CERTIFIED BY CHARTERED OR REGISTERED ENGINEER.			
					S7	ALL REDUNDANT SECTIONS OF PIPE TO BE FILLED WITH "LIQUIFILL" GRADE PC.1 0.5-2.0MPa OR APPROVED EQUIVALENT			

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EXCEED

ENGINEERING

51 YORK STREET, PO BOX 1971  
LAUNCESTON, TAS 7250  
Ph: 03 6332 6955  
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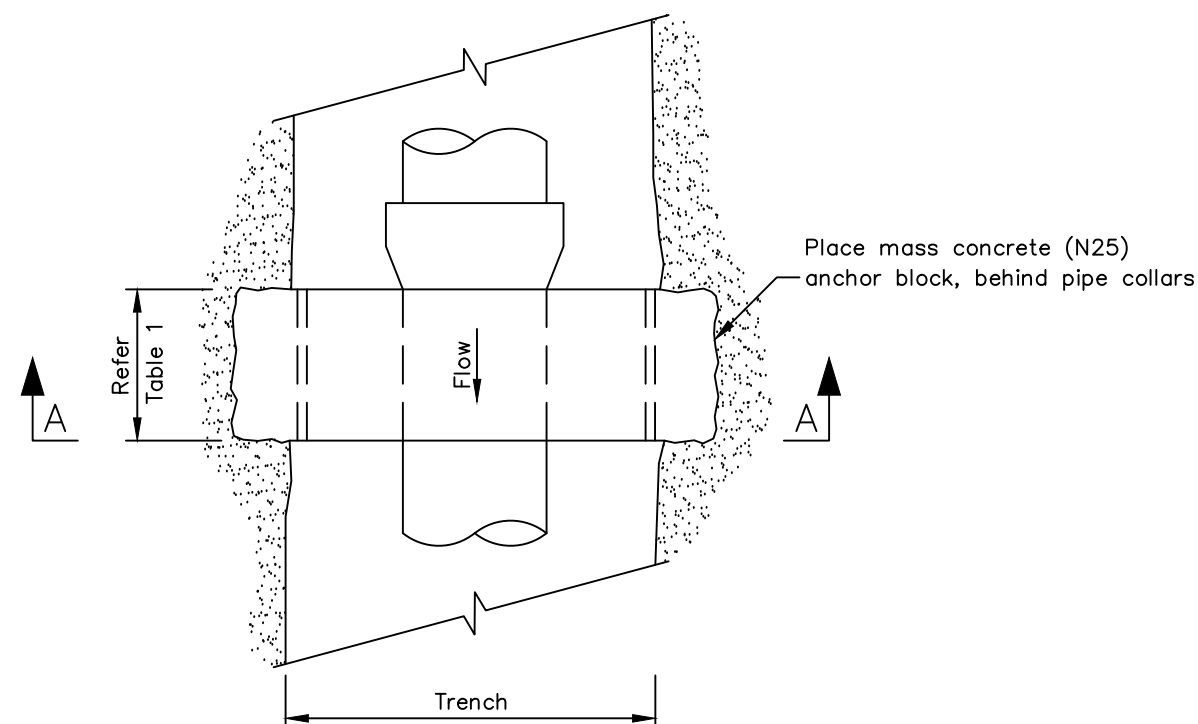
ENGINEERING FOR STORMWATER  
420 DEVIOT ROAD, DEVIOT  
CIVIL NOTES

PROJECT #:  
EE1291

SHEET #:  
N1

REVISION #:  
01

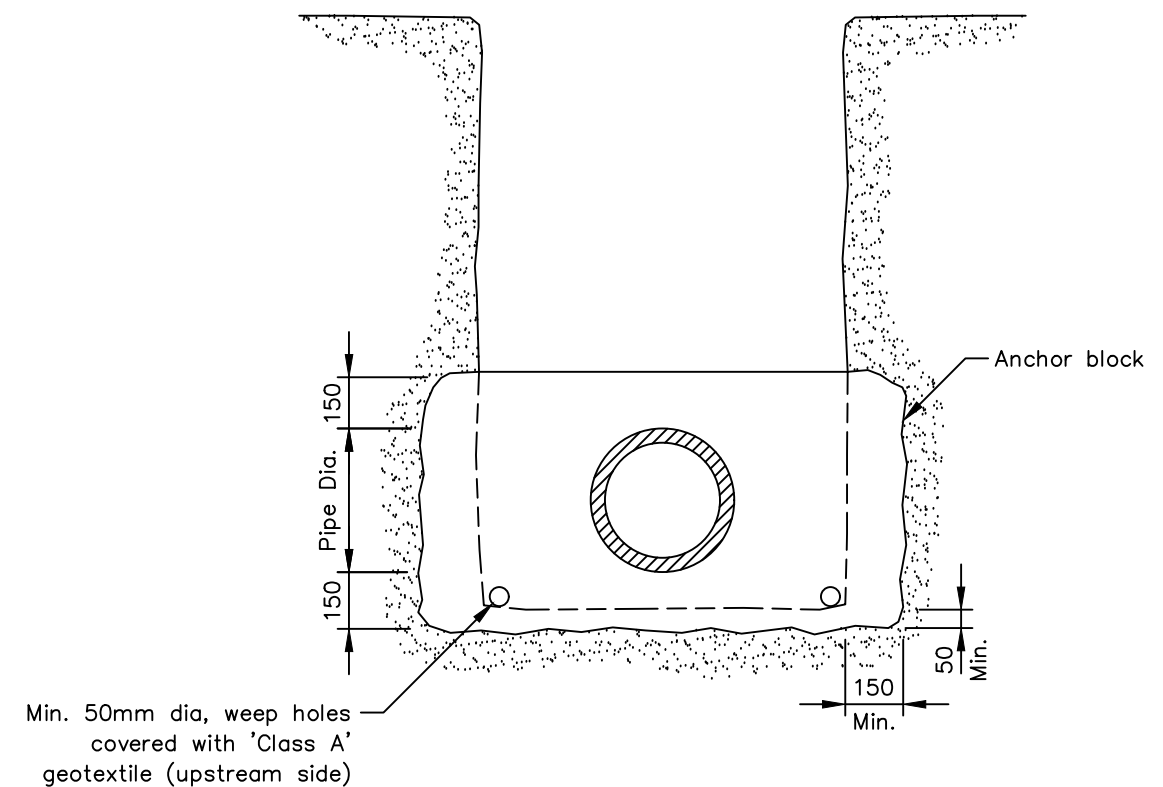
01	FOR CLIENT REVIEW	HR	HR	SD	SD	09/07/2025
REV	DESCRIPTION	DRAFT	DES	CHKD	APP	DATE
PLOTTED: Jul 09, 2025 - 4:32pm FILE: G:\Projects\EXCEED\1291 My Build Collective - Deviot Rd Deviot\WORKING FILES\IEE1291 SW Design_4.dwg						
SHEET: A3						



PLAN  
N.T.S.

TABLE 1

PIPE DIAMETER	ANCHOR BLOCK WIDTH
≤ 450	Pipe diameter + 150 mm
> 450	Design required



SECTION A-A  
N.T.S.

#### NOTES

- Construct anchor blocks where pipe grades exceed  $\geq 10\%$  at
  - 9.6m centres for Concrete pipes
  - 12.0m centres for P.V.C. pipes
- Landslip areas – site specific design required to ensure land stability risk is not increased.
- Install bulkheads and trench stops in accordance with Table 5.7 of AS/NZS 2566.2:2002 and provide concrete encasement in accordance with Clause 5.8.3 of AS/NZS 2566.2:2002

SCALES: AS SHOWN  
(All scales are correct at A3)

XRef File: TSD-SW01-v3.dwg

REFERENCES

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TAS Division  
**IPWEA**  
INSTITUTE OF PUBLIC WORKS  
ENGINEERING AUSTRALASIA



## STANDARD DRAWING

### PIPE INSTALLATION ANCHOR BLOCKS

GPO Box 1521, Hobart Tasmania 7001 | 326 Macquarie Street, Hobart Tasmania 7000  
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ISSUE DATE: 18-09-2020  
DWG No.

TSD-SW01-v3



11 July 2025

My Build Collective  
347-349 Wellington Street,  
South Launceston, TAS, 7249

**Attention: Jocelyn Gee**

Dear Madam,

**RE: Concept Design - Onsite Wastewater Management System**  
**420 Deviot Road, Deviot TAS 7275**

## **1 INTRODUCTION**

This On-site Wastewater Management System (OWMS) concept design has been prepared for My Build Collective at the site of a proposed dwelling, workshop/gym and studio at 420 Deviot Road, Deviot TAS (title reference 64037/7). The preliminary concept design is shown on a site plan provided by the client, see Drawing 26 attached.

The investigation has been conducted to allow the design of an OWMS in accordance with *AS/NZS 1547:2012 On-site domestic wastewater management* (the Standard) and *Director's Guidelines for On-site Wastewater Management Systems v2.0*.

In accordance with the Site and Soil Evaluation (S.S.E.), the OWMS concept design presented in this report is a Secondary Treatment System (STS) comprised of an Advanced STS tank (with nutrient reduction), followed by further polishing of the effluent through sand/media filters and disinfection (UV and chlorination) to gain effluent treatment to a Tertiary level. The resulting Tertiary treated output will be captured in a holding tank, ready to be irrigated to garden beds and landscaping. Details of the nutrient reduction, sand/media filters and disinfection are to be decided at a later stage.

This Tertiary level of treatment was chosen as the most suitable OWMS due to the uneven and at times steep topography of the site, clay soil type, narrow site, and limited suitable area available at the site for a typical Land Application Area (LAA). The Tertiary level of treatment allows the effluent to be drip irrigated to garden beds and landscaped areas, via covered dripper lines, without the usual concern for setback distances to downslope boundaries, buildings and surface water.

This is a performance solution for a 4 bedroom dwelling plus 1 bedroom studio, being the equivalent of a household of 8 persons.

## 2 FIELD INVESTIGATION

On 12 November 2024, two Geotechnicians from Tasman Geotechnics attended the site and completed the following:

- Drilling of nine boreholes (BH1-BH9) to the termination depths of 1.3m, 3.8m, 0.8m, 1.5m, 3.0m, 0.6m, 2.7m, 5.0m, and 3.0m below ground level respectively, using a 4WD-mounted Eziprobe rig;
- Installation of two groundwater monitoring wells (in BH5 and BH8).

The engineering borehole logs are attached, and the borehole locations are shown on Figure 1.

On 14 January 2025, a Site and Soil Evaluation (S.S.E.) was conducted by the Tasman Geotechnics Wastewater Designer and a Geotechnician. This involved:

- A site walkover to determine possible locations for the STS tank and suitable LAA areas.

## 3 SITE CONDITIONS

The narrow 2408m<sup>2</sup> site is located adjacent to the river edge, on east facing slopes on the western bank of the Tamar River.

The Mineral Resources Tasmania (MRT) 1:25,000 Series Digital Geological map, Beaconsfield Sheet, shows the surface geology of the site is mapped as Cenozoic-aged sediments described as “*dominantly non-marine sequences of gravel, sand, silt, clay and regolith*”.

The subsurface conditions encountered at the site consist of the following:

- 0.1m to 0.4m of FILL, consisting of fine to coarse grained (Silty, Clayey, Sandy) GRAVEL, low plasticity SILT and low to medium plasticity (Silty, Gravelly) CLAY, overlying
- Natural Cenozoic-aged sediments, consisting of minor fine to medium/coarse grained GRAVEL and Clayey SAND, and dominated by low plasticity SILT and medium to high plasticity CLAY and Gravelly CLAY to depths ranging from 0.6m to 3m below ground level, overlying
- Extremely Weathered Jurassic-aged DOLERITE to borehole termination depth. The Extremely Weathered dolerite exhibits soil properties, and predominantly presents as high plasticity Clayey SILT or medium to high plasticity CLAY and Sandy CLAY.

The boreholes (excluding BH7 and BH8) were terminated before the planned depth due to refusal, assumed to be on Highly Weathered dolerite, similar to that exposed on the foreshore to the east of the site.

Based on the surface and subsurface observations, the dolerite bedrock appears to gently rise from the foreshore at about 6° towards the west. The rock boundary does not appear to be planar based on the variable depths at which it was encountered in the boreholes.

No groundwater inflow was observed while drilling the boreholes. Groundwater monitoring wells were installed in BH5 and BH8 to 5m below ground level. The wells were dipped on 19 November 2024 (7-days after installation) and both were dry.

The MRT Landslide Inventory Map shows that the site is not located on any known landslides, however known landslides are mapped nearby.

The proposed development will involve demolition of the existing dwelling and shed, and construction of a new 4-bedroom dwelling. The proposed dwelling will be located approximately where the existing dwelling is currently situated, in the eastern portion of the site.

The ancillary buildings/structures include a separate 1 bedroom studio and workshop/gym with amenities located to the west (upslope) of the proposed 4 bedroom dwelling, as well as a boat shed and jetty located to the east (downslope) of the proposed dwelling.

The site will therefore require a new on-site wastewater system to cater for the increased daily hydraulic loading expected at the site.

The existing primary treatment OWMS will need to be decommissioned.

**Table 1: Summary - Site-and-Soil Evaluation (SSE)**

Area of land	2408m <sup>2</sup> site.
Boundaries confirmed	Yes.
Disposal Area Orientation	The proposed LAA being the garden beds and grassed landscaping has an easterly orientation.
Existing buildings	Dwelling and shed. To be demolished.
Flood potential	Low
Power supply	Mains power is available.
Ground slope & slope stability	The slope of the site is generally in an easterly direction between 5 and 20 degrees. The site is not in a landslide hazard zone.
Soil type	Possible FILL to around 0.1m below ground level, overlying sandy gravelly SILT or sandy gravelly CLAY to 0.55 m below ground level, overlying High Plasticity (HP) CLAY (trace sand and gravel). The soil has been classed as a Category 5 soil, well structured, for OWMS design calculations.
Adopted permeability	0.12 – 0.5m/day
Adopted DLR	A rate of 3L/m <sup>2</sup> /day for Secondary/Tertiary treated effluent.
Surface drainage	Good.
Vegetation	Grasses and scattered mature trees and shrubs.
Water courses/surface water	The Tamar River forms the eastern boundary.
Water table depth	Unknown. Likely to be greater than 5.0m across the site.
Water reticulation/Source	Town water.
Wells/Bores/Groundwater	The ground water portal (DPIPWE) shows there are no groundwater bores in the area.

## 4 CALCULATIONS

The OWMS will be comprised of a Secondary Treatment System (STS) with further effluent polishing via sand or media filters, followed by disinfection and nutrient reduction. The resulting final output will be captured in a holding tank, ready for covered drip irrigation to garden beds and landscaping.

### 4.1 Hydraulic Load - Waste Water Volume

The proposed dwelling has 4 bedrooms or an equivalent of 6 persons and the Studio has 1 bedroom or an equivalent of 2 person (as per Table 1 of *Director's Guidelines for On-site Wastewater Management Systems v2.0*). Thus a household of 8 persons total.



The typical daily allowance of waste water volume (daily hydraulic load)) in accordance with the standard, is 150L/person/day for a town water supply.

Therefore, the total daily hydraulic load = 8 persons x 150L/day = **1200L/day**.

#### **4.2 Secondary Treatment System (STS) Sizing**

The first part of the wastewater treatment process will be done by a typical domestic STS unit. A minimum 10EP-sized STS is recommended. This will be located adjacent to, and downslope of the 4 bedroom dwelling. The secondary treated effluent (without chlorination/disinfection) is to be pumped to the western end of the site for further polishing through sand/media filters.

#### **4.3 Tertiary Treatment Sand/Media Filtration Sizing**

The sand/media filters will further polish the secondary treated effluent to a tertiary level. A minimum of **5m<sup>3</sup> to 10m<sup>3</sup>** of filter volume is recommended, depending on the type of filter medium to be used.

#### **4.4 Disinfection Station**

Disinfection via UV and Chlorination will then be applied to allow the final output to be drip irrigated to garden beds and landscaping though out the property. The disinfection station is to be sized to allow for the 1200L daily hydraulic load.

#### **4.5 Final Holding Tank/Irrigation Pump Well Sizing**

The final holding tank used to capture the tertiary treated, disinfected and nutrient reduced effluent should be around 1600L in size to allow for the 200L to 400L dosing rate and 1200L of 24hrs emergency capacity. The pump well should be set to irrigate around 200L to 400L at a time.

#### **4.6 Irrigation Area**

The required irrigation area was calculated as follows:

- Daily waste water volume = 1200 L/day
- A Design Loading Rate (DLR) for this design has been taken as 3L/m<sup>2</sup>/day based on Category 5 (well structured) soil, tertiary treated effluent and covered drip irrigation throughout the garden beds and landscaping of the property.
- Required Irrigation area = 1200L/day / 3L/m<sup>2</sup>/day = **400m<sup>2</sup>**.
- No reserve LAA is required.
- It should be considered that wherever town water could be irrigated, so could the tertiary treated effluent.
- Pressure compensating dripper lines are to be used to allow even distribution on the steep terrain.
- Alternate dosing to 3 zones via a sequencing valve will allow loading and then resting of soil in each zone.

## 4.7 Setbacks

System clearances for compliance to the *Director's Guidelines for On-site Wastewater Management Systems v2.0* are as follows:

Acceptable Solutions	Performance Criteria	Compliance
<p>A1</p> <p>Horizontal Separation distance from a building to a land application area must comply with one of the following:</p> <p>(a) be no less than 6 metres;</p> <p>(b) be no less than:</p> <p>(i) 3 m from an upslope or level building;</p> <p>(ii) if Primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a down slope building;</p> <p>(iii) if Secondary treated effluent and sub-surface application, no less than 2m plus 0.25m for every degree of average gradient from a downslope building.</p>	<p>P1</p> <p>The land application area is located so that:</p> <p>(i) the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low; and</p> <p>(ii) is setback a sufficient distance from a downslope excavation around or under a building to prevent inadequately treated wastewater seeping out of that excavation.</p>	<p><b>Tertiary treated effluent -</b></p> <p>Complies with P1 (i) and (ii).</p> <p>A minimum of 1.0m setback to upslope, level or downslope buildings is recommended.</p> <p>No greater than 3L/m<sup>2</sup>/day irrigation rate recommended.</p>
<p>A2</p> <p>Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b).</p> <p>(a) be no less than 100m; or</p> <p>(b) be no less than the following:</p> <p>(i) if Primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or</p> <p>(ii) If Secondary treated effluent and subsurface application, 15m plus 2m for every degree of average gradient to downslope surface water.</p>	<p>P2</p> <p>Horizontal separation distance from downslope surface water to a land application area must comply with the following:</p> <p>(a) Setbacks must be consistent with AS/NZS 1547 Appendix R;</p> <p>(b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.</p>	<p><b>Tertiary treated effluent -</b></p> <p>Complies with P1.</p> <p>A minimum setback of 15m to downslope surface water, the Tamar River, is recommended.</p>
<p>A3</p> <p>Horizontal separation distance from a property boundary to a land application area must comply with either of the following;</p> <p>(a) be no less than 40m from a property boundary;</p> <p>or</p> <p>(b) be no less than;</p> <p>(i) 1.5m from an upslope or level property boundary; and</p> <p>(ii) If Primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or</p> <p>(iii) If Secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary.</p>	<p>P3</p> <p>Horizontal separation distance from a property boundary to a land application area must comply with all of the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.</p>	<p><b>Tertiary treated effluent -</b></p> <p>Complies with P3.</p> <p>The tertiary treated, disinfected and nutrient reduced effluent will have very low risk to health and the environment.</p> <p>Setback distances to upslope, level or downslope boundaries for covered drip irrigation need only be 0.5m to upslope boundaries, and 1.0m to downslope boundaries.</p>

<p>A4</p> <p>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must not be less than 50m and not be within the zone of influence of the bore whether up or down gradient.</p>	<p>P4</p> <p>Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following;</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable.</p>	<p><b>Tertiary treated effluent -</b></p> <p>Complies with A4.</p> <p>There are no groundwater bores in the area.</p>
<p>A5</p> <p>Vertical Separation distance between groundwater and a land application area must be no less than:</p> <p>(a) 1.5m if Primary Treated effluent; OR</p> <p>(b) 0.5m if Secondary Treated effluent</p>	<p>P5</p> <p>Vertical separation distance between groundwater and a land application area must comply with the following:</p> <p>(a) Setback must be consistent with AS/NZS 1547 Appendix R; and</p> <p>(b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 that demonstrates that the risk is acceptable.</p>	<p><b>Tertiary treated effluent -</b></p> <p>Complies with A5.</p> <p>Ground water likely to be greater than 4.0m below ground level across the site.</p>
<p>A6</p> <p>Vertical separation distance between a limiting layer and a land application area must be not less than;</p> <p>(a) 1.5 m if Primary Treated effluent; OR</p> <p>(b) 0.5m if Secondary Treated effluent</p>	<p>P6</p> <p>Vertical setback must be consistent with AS/NZS 1547 Appendix R.</p>	<p><b>Tertiary treated effluent -</b></p> <p>Complies with A6. No limiting layer existing to 0.5m below ground.</p>
<p>A7</p> <p>nil</p>	<p>P7</p> <p>A wastewater treatment unit must be located a sufficient distance from buildings or neighbouring properties so that emissions (odour, noise or aerosols) from the unit do not create an environmental nuisance to the residents of those properties.</p>	<p><b>Tertiary treated effluent -</b></p> <p>Complies with A7.</p>

## 5 RECOMMENDATIONS

Based on the above site and soil assessment, the following performance wastewater disposal system is recommended:

- An STS with minimum capacity to process a 1200L/day hydraulic load (based on *AS/NZS 1547:2012 – Table J1 – All-waste septic tank operational capacities – 6 person capacity*). A 10 EP Advanced STS unit is recommended (i.e. with nutrient reduction).
- The STS should be set to deliver approximately 200L doses to the polishing filter. Smaller more frequent doses suit a polishing filter.
- Effluent is to be pumped from the STS to the Tertiary Treatment polishing filter.
- A minimum of 5m<sup>3</sup> and 10m<sup>3</sup> of polishing filter is to be established. The type of media is yet to be finalised.
- The polishing filter is followed by a disinfection module, being chlorination or UV or both.
- Finally, a holding tank/pump well of around 1600L is recommended. The pump well should be set to pump around 200L to 400L to the irrigation field at a time.
- Around 400m<sup>2</sup> of covered drip irrigation to be established within the garden beds and grassed landscaping is to be established using pressure compensation drip irrigation lines.
- An STS must, by law, be serviced on a regular basis (quarterly or six monthly depending on model) and a fee is payable for this service. The service agent sets the fee and what is covered by the agreement. This servicing should also include the servicing of the Tertiary Treatment module (polishing filter and disinfection station).

This concept Tertiary Treatment design is a performance solution for a 4 bedroom dwelling plus 1 bedroom studio, being the equivalent of a household of 8 persons.

For and on behalf of Tasman Geotechnics Pty Ltd



**Dr Wayne Griffioen**

Principal Geotechnical Engineer

**Attachments:** Important information about your report (1 page)  
Drawing 26 - Concept Design Site Plan (1 page)

**References:** *AS/NZS 1547 – 2012 On-site domestic-wastewater management.*  
*Director's Guidelines for On-site Wastewater Management Systems v2.0.*



## **Important information about your report**

**These notes are provided to help you understand the limitations of your report.**

### **Project Scope**

Your report has been developed on the basis of your unique project specific requirements as understood by Tasman Geotechnics at the time, and applies only to the site investigated. Tasman Geotechnics should be consulted if there are subsequent changes to the proposed project, to assess how the changes impact on the report's recommendations.

### **Subsurface Conditions**

Subsurface conditions are created by natural processes and the activity of man.

A site assessment identifies subsurface conditions at discrete locations. Actual conditions at other locations may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time.

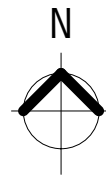
Nothing can be done to change the conditions that exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, the services of Tasman Geotechnics should be retained throughout the project, to identify variable conditions, conduct additional investigation or tests if required and recommend solutions to problems encountered on site.

### **Advice and Recommendations**

Your report contains advice or recommendations which are based on observations, measurements, calculations and professional interpretation, all of which have a level of uncertainty attached.

The recommendations are based on the assumption that subsurface conditions encountered at the discrete locations are indicative of an area. This can not be substantiated until implementation of the project has commenced. Tasman Geotechnics is familiar with the background information and should be consulted to assess whether or not the report's recommendations are valid, or whether changes should be considered.

The report as a whole presents the findings of the site assessment, and the report should not be copied in part or altered in any way.



DEVIO T

430 DEVIO T ROAD  
NEIGHBOURING  
PROPERTY

428 DEVIO T ROAD  
NEIGHBOURING  
PROPERTY

422 DEVIO T ROAD  
NEIGHBOURING DOUBLE STOREY BRICK  
DWELLING

LOOK OUT

APPROX. HIGH WATER  
LINE

TAMAR RIVER

418 DEVIO T ROAD  
SINGLE STOREY  
WEATHERBOARD  
NEIGHBOURING DWELLING

406 DEVIO T ROAD  
NEIGHBOURING PROPERTY

WATER METER  
ELEC.  
POLE

B/dry 17.80 m

Boundary 138.17 m

B/dry 136.46 m

=564m<sup>2</sup>

55m<sup>2</sup>

69m<sup>2</sup>

118m<sup>2</sup>

73m<sup>2</sup>

119m<sup>2</sup>

74m<sup>2</sup>

56m<sup>2</sup>

my build  
design > build > live

**bdaa**  
BUILDING DESIGNERS  
ASSOCIATION OF AUSTRALIA

PLEASE REFER TO INDICATED DIMENSIONS ONLY, DRAWINGS ARE NOT SUITABLE TO BE SCALED FROM.

DISCLAIMER: THESE PLANS SHOULD BE READ IN CONJUNCTION WITH ACCREDITED ENGINEERING DRAWINGS. STRUCTURAL ENGINEERS CERTIFICATES MAY BE REQUIRED CERTIFY STRUCTURAL DESIGN, WIND CLASSIFICATIONS AND/OR SOIL CONDITIONS. THIS WORK IS OUTSIDE THE SCOPE OF THIS DRAFTING SERVICE. THE DRAFTER DOES NOT ACCEPT ANY RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN THE PLANS DUE TO WRONGLY SUPPLIED INFORMATION, NOR FOR MISCONSTRUCTION OR INTERPRETATION.

LOCAL COUNCIL:

ACCREDITATION COMPLIANCE:  
MURRAY GRIFFITHS CC 11171

PROJECT:  
PROPOSED NEW RESIDENCE  
420 DEVIO T ROAD,  
DEVIO T  
FOR MR S. & MRS L. PLANE

TITLE REFERENCE: 64037/7

DESIGNED BY: DRAWN BY:  
Designer Author

JOB No: DATE:  
MBD-418 01.07.25

REVISION NO. DRAWING NO.  
Rev09 26



**GEOTECHNICAL INVESTIGATION  
PROPOSED DWELLING & ANCILLARY BUILDINGS  
420 DEVIOT ROAD, DEVIOT**

Prepared for: **My Build Collective**

Date: 14 July 2025

Document Reference: TG24257/3 - 01report



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## **Important information about your report**

### **Figures**

Figure 1	Site Layout and Borehole Locations
Figure 2	Extract of MRT Deviot Simplified Geology Map
Figure 3	Extract of MRT Landslide Inventory Map
Figure 4	Extract of MRT Deep-seated Landslide Susceptibility Map
Figure 5	Site Layout & MRT Coastal Erosion Hazard Bands
Figure 6	Site Layout & MRT Coastal Inundation Hazard Bands

## Appendices

- Appendix A     Engineering Borehole Logs  
Appendix B     Site Photographs  
Appendix C     Point Load Strength Index Test Results

Version	Date	Prepared by	Reviewed by	Distribution
Original	14 July 2025	Nev Vanderslink	Dr Wayne Griffioen	Electronic

## 1 INTRODUCTION

Tasman Geotechnics was commissioned by My Build Collective to carry out a geotechnical investigation for a proposed development at 420 Deviot Road, Deviot (title reference 64037/7).

The proposed development involves the demolition of the existing dwelling and shed, and construction of a new dwelling, ancillary buildings and driveway. The ancillary buildings include a secondary dwelling (and carport), a shed/workshop/gym, and boat shed/sauna.

A site plan showing the location of the proposed development was provided by the client.

The aim of the investigation is to assess the subsurface conditions at the site (including groundwater), and provide recommendations for:

- Site Classification in accordance with AS2870:2011
- Bearing capacity for high-level footings
- End bearing capacity for bored pier design
- Wind Classification in accordance with AS4055:2021

## 2 FIELD INVESTIGATION

The investigation was conducted in accordance with Australian Standard AS 1726-2017 - *Geotechnical Site Investigations* on two separate site visits.

On 12 November 2024, two Geotechnicians from Tasman Geotechnics attended the site and completed the following:

- Drilling of nine boreholes (BH1-BH9) to the termination depths of 1.3m, 3.8m, 0.8m, 1.5m, 3.0m, 0.6m, 2.7m, 5.0m, and 3.0m below ground level respectively, using a 4WD-mounted Eziprobe rig;
- Installation of two groundwater monitoring wells (in BH5 and BH8).

On 19 November 2024, two Senior Engineering Geologists from Tasman Geotechnics visited the site and completed the following:

- A site walkover to note geomorphological features and assess the site for coastal hazards;
- Collect samples from bedrock exposures for rock strength testing (Point Load Strength Index);
- Dynamic Cone Penetrometer (DCP) test (DCP1) adjacent to BH4, to determine the consistency of the Extremely Weathered dolerite encountered at the site. The DCP test was recorded as blows/100mm.
- Dip groundwater monitoring wells to note standing groundwater level (if present).

The engineering borehole logs are provided in Appendix A and the location of the boreholes are shown in Figure 1.

Selected site photographs are provided in Appendix B.

The borehole locations were determined in the field by hand-held GPS (accuracy  $\pm 3\text{m}$ ), with some references to existing buildings and/or other permanent structures.

Six soil samples were analysed by Tasman Geotechnics for Atterberg Limits and particle size distribution. The results are presented in Section 4.4.1.

Point Load Strength Index testing was completed by Tasman Geotechnics on 11 rock samples. The results are discussed in Section 4.4.2 and presented in Appendix C. The sampling locations are shown in Figure 1.

### 3 BACKGROUND INFORMATION

#### 3.1 Regional Setting

The site is located within the Tamar Graben, a narrow (~5km wide) but elongate (~60km long) northwest/southeast trending basin. The basin contains a thick sequence of Cenozoic-aged sediments and basalt overlying (generally) a Jurassic-aged dolerite basement. The central part of the graben is occupied by the modern River Tamar (or Tamar Estuary).

The site is located adjacent to the river edge, on east facing slopes on the western bank of the river.

#### 3.2 Geology

The Mineral Resources Tasmania (MRT) 1:25,000 Series Digital Geological map, Beaconsfield Sheet, shows the surface geology of the site is mapped as Cenozoic-aged sediments described as *“dominantly non-marine sequences of gravel, sand, silt, clay and regolith”*.

The 1:25,000 MRT geological maps are generally considered authoritative, however in the area around Deviot there are known errors in the published mapping particularly as it relates to the distribution of Tertiary (Cenozoic) basalt, but also in terms of the spatial distribution of Cenozoic-aged sediments and colluvium derived therefrom.

Whilst the 1:25,000 Beaconsfield geology map sheet dates from 1971 to 2001, the 1:25,000 scale Deviot Landslide Map Series Simplified Geology sheet issued in 2014 reflects a more recent MRT geological interpretation in the vicinity of the site. The Deviot Simplified Geology map sheet shows the surface geology of the site to predominantly be Jurassic-aged dolerite, with a relatively small area at the eastern end of the site (between the existing dwelling and eastern boundary of the lot) mapped on Pleistocene-aged sediments, described as *“alluvial and marine terraces of various elevations. May be overlain by alluvial sediments, slope deposits”*.

An extract of the Deviot Landslide Map Series Simplified Geology is presented on Figure 2.

#### 3.3 Landslide Mapping

MRT has been actively mapping landslides and landslide susceptibility since the 1950s, with a particular focus on urban growth areas beginning in the 1960s.

The MRT Landslide Inventory Map shows that the site is not located on any known landslides, however known landslides are mapped nearby.

A roughly 2km continuous zone of landsliding is mapped to the north of the site, extending from Brickmakers Point in the north to about halfway between Rowleys Beach and Miserable Inlet to the south. The landslides in the complex are mapped as extending from between about 190m to 660m upslope to the head scarps, with all landslides terminating at the River Tamar foreshore.

Most of the individual landslides within the broader complex are of Unknown Activity state, however there are also eight smaller Recent or Active landslides. The landslides within this complex that are nearest to the site are Landslide ID 4442 and 4441, located about 80m and 160m to the north of the site respectively. Both landslides are classified as ‘recent or active’ soil or earth slides, and are reported to have been active prior to 1975.

An extract of the Landslide Inventory Map is presented in Figure 3.

In 2003, MRT embarked on a new phase of landslide zoning in Tasmania. This work targeted the major urban areas of the State and areas of likely future development where it was assessed that a significant landslide hazard may exist. Consequently, there have been landslide hazard parameters developed within specific geographic areas such as the Tamar Valley and the Hobart-Glenorchy region. The parameters may include ground slope angles representative of potential source, regression, and runout areas, applicable specifically to the relevant geologic units within those areas.

This mapping activity has been undertaken for the site based on the trigger slope angles for the Jurassic-aged dolerite mapped at the site (Deviot Simplified Geology map sheet). For the dolerite, threshold values of source, regression and runout areas are 15°, 89° and 12° respectively. Based on these parameters, the site is not mapped as a possible source, regression or runout area.

An extract of the MRT deep-seated landslide susceptibility map is provided in Figure 4.

### **3.4 Coastal Erosion and Inundation Hazard Mapping**

According to The List, roughly the eastern half of the site is mapped within 'Medium' and 'Low' Coastal Erosion Hazard Bands.

Land within a 'Medium' Coastal Erosion Hazard Band is identified as potentially vulnerable to coastal recession by the year 2050. The eastern part of the site is mapped within a 'Medium' Coastal Erosion Hazard Band, covering an area of approximately 20% of the site and including the majority of the proposed main dwelling footprint and roughly the western half of the proposed boatshed/sauna. The eastern half of the proposed boat shed is not mapped within the 'Medium' Hazard Band but is downslope to the proposed dwelling (closer to the river), and thus assumed to be as or more vulnerable to coastal recession.

Land within a 'Low' Coastal Erosion Hazard Band is identified as potentially vulnerable to coastal recession by the year 2100. This includes part of the site directly to the west of the 'Medium' hazard band, and covers an area of about 30% of the site. The proposed secondary dwelling and northwestern corner of the proposed main dwelling are located within the 'Low' hazard band.

A small portion in the northeast corner of the site is mapped within 'Medium' and 'Low' Coastal Inundation Hazard Bands, i.e., vulnerable to a 1% AEP storm event by 2050 and 2100 respectively. The proposed buildings are not located within the Coastal Inundation Hazard Bands. However, based on 2013 LiDAR survey data, a larger area of the site falls below the elevation levels for 'Medium' and 'Low' Hazard Bands than the hazard band overlay suggests, and this area includes the roughly the eastern half of the proposed boat shed/sauna.

The shoreline at the site is classified in the Coastal Vulnerability Clayey Shores overlay on The List as "*Sloping clayey-gravelly shores - prone to slumping and/or progressive erosion*".

An assessment of the coastal hazards at the site is subject to a separate report.

An extract of the MRT Coastal Erosion Hazard Bands and Coastal Inundation Hazard Bands are provided in Figure 5 and 6 respectively.

### **3.5 Proposed Development**

The proposed development will involve demolition of the existing dwelling and shed, and construction of a new main dwelling, separate ancillary buildings, and a new driveway. The proposed main dwelling will be located roughly where the existing dwelling is currently situated, in the eastern portion of the site.

The ancillary buildings include a separate secondary dwelling and a combined shed/workshop/gym located to the west (upslope) of the proposed main dwelling, and a boat shed with attached sauna located to the east (downslope) of the proposed dwelling.

Details regarding proposed cut and fill were not provided by the client.

The design life of the proposed new dwelling, garage, studio, and gym is assumed to be 50 years. The design life of the proposed boatshed is assumed to be 20 years.

The site will require on-site wastewater and stormwater disposal design, recommendations for which will be provided in a separate report.



## 4 RESULTS

### 4.1 Surface Conditions

The circa 2405m<sup>2</sup> site is located between Deviot Road and the River Tamar, with the eastern (downslope) boundary coinciding roughly with the high-water mark.

The site has an overall moderate natural fall of about 8° to 10° towards the east; however, some flattening by cut/fill earthworks has been done around the existing dwelling and shed. The cut slopes are retained by dry-stacked dolerite boulder retaining walls up to about 1.2m high.

The existing dwelling and shed are accessed from Deviot Road, via a gravel driveway. The dwelling appears to be timber framed with a fiber-cement sheet type cladding; however, this is not confirmed. The shed is constructed from Colorbond metal sheeting. The exterior of the existing dwelling and shed appears to be in good condition.

The remainder of the site consists of overgrown vegetation, including grasses, shrubs and mature trees.

Surface soils at the site are predominantly silts and gravels, with no outcropping bedrock observed within the boundaries of the lot. However, Highly Weathered Dolerite bedrock is exposed in the roadside drain on the western side of Deviot Road, directly opposite the site and the bedrock is overlain by a colluvium.

No springs or seeps were observed on the site, and there were no other indications of high groundwater. The site appears to be well drained.

Near the eastern boundary of the lot, adjacent to the foreshore, a dry-stacked dolerite boulder wall about 1.2m high has been constructed as a protective barrier. The wall is in relatively good condition; however, some erosion was observed on the land-side of the wall, along with an accumulation of driftwood, indicating that the present Highest Astronomical Tide (HAT) is at or slightly above the top of the wall.

Two dolerite boulder groynes extend from the wall in a northeast direction towards the river and were likely constructed for additional foreshore protection. The remnants of an old timber jetty or pier are visible between the groynes.

On the foreshore there is a silty, sandy and gravelly beach which is more pronounced in front of the neighbouring lots on the outer sides of the rock groynes. In front of the lot, inside the rock groynes, the beach is largely absent and the foreshore consists of exposed in-situ bedrock of dolerite and sandstone.

The dolerite is Moderately to Highly weathered with rounded Slightly Weathered kernels, produced by spherical or "onion-skin" weathering. The dolerite is of variable rock strength (Very Low to High) depending on the degree of weathering. The sandstone is located to the east and north of the dolerite, about 30m to the east and north of the lot boundary respectively. The contact between the sandstone and dolerite appears to be roughly consistent with the MRT mapping (Deviot Simplified Geology map sheet). The sandstone is Highly weathered and Very Low strength. The sandstone appears to be overlying the dolerite and is therefore assumed to be younger (most likely Cenozoic) in age. Bedding in the sandstone dips at shallow angles ranging from about 11° to 28° towards the east to northeast.

## 4.2 Subsurface Conditions

The subsurface conditions encountered at the site consist of the following:

- 0.1m to 0.4m of FILL , consisting of fine to coarse grained (Silty, Clayey, Sandy) GRAVEL (Unit F1), low plasticity SILT and low to medium plasticity (Silty, Gravelly) CLAY (Unit F2), overlying
- Natural Cenozoic-aged sediments, consisting of minor fine to medium/coarse grained GRAVEL (Unit S1) and Clayey SAND (Unit S2), and dominated by low plasticity SILT (Unit S3) and medium to high plasticity CLAY and Gravelly CLAY (Unit S4) to depths ranging from 0.6m to 3m below ground level, overlying
- Extremely Weathered Jurassic-aged DOLERITE to borehole termination depth. The Extremely Weathered dolerite exhibits soil properties, and predominantly presents as high plasticity Clayey SILT or medium to high plasticity CLAY and Sandy CLAY.

A comparison of the typical fill, natural soil and rock types encountered in the boreholes are summarised in Table 1 below.

The boreholes (excluding BH7 and BH8) were terminated before the planned depth due to refusal, assumed to be on Highly Weathered dolerite, similar to that exposed on the foreshore to the east of the site.

Based on the surface and subsurface observations, the dolerite bedrock appears to gently rise from the foreshore at about 6° towards the west. The rock boundary does not appear to be planar based on the variable depths at which it was encountered in the boreholes.

No groundwater inflow was observed while drilling the boreholes. Groundwater monitoring wells were installed in BH5 and BH8. The wells were dipped 19 November 2024 (7-days after installation) and both were dry.

**Table 1. Typical Subsurface Conditions**

Material Type	Borehole ID								
	BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9
	Depth to Top (m Below Ground Level)								
<b>Fill Type:</b>									
F1 – Gravel (incl Silty, Clayey, Sandy)	-	-	-	0	0	0	0	-	0
F2 – Clay or Silt	0	0	-	-	-	-	0.2	0	0.2
<b>Natural Soil Type:</b>									
S1 - Gravel	-	-	-	-	-	0.3	-	-	-
S2 – Sand (Clayey)	-	-	-	-	-	-	1	-	-
S3 – Silt (incl Gravelly)	0.2	0.3	0	-	-	-	0.4	-	0.35
S4 – Clay (incl Gravelly)	0.7	0.6	0.1	0.1	0.3	0.4	1.4	0.1	0.6
<b>Natural Rock Type:</b>									
R1 – Dolerite (XW)	-	1.1	-	0.6	1	-	-	1.95	-
<b>Borehole Termination Depth (m BGL)</b>	1.3	3.8	0.8	1.5	3	0.6	2.7	5	3
<b>Borehole Termination Reason</b>	Refusal probably on Dolerite	Refusal in Dolerite	Refusal probably on Dolerite	Refusal in Dolerite	Refusal in Dolerite	Refusal probably on Dolerite	Still Going in Clay	Very Hard Going in Dolerite	Refusal probably on Dolerite

### 4.3 Dynamic Cone Penetrometer Testing

One DCP test (DCP1) was completed adjacent to borehole BH4. The purpose of the DCP test was to determine the relative density of the coarse-grained soils and consistency of the fine-grained soils encountered in the borehole, predominantly the Extremely Weathered dolerite (Unit R1), presenting as clay and clayey silt, as it was generally too friable for Pocket Penetrometer testing.

The DCP test was completed from current ground surface level, in undisturbed ground adjacent to BH4 and the results were recorded as blows/100mm. The DCP test was terminated at 1.1m due to refusal (>50 blows/100mm) in the Extremely Weathered dolerite.

The results are summarised in Table 2 and included on the borehole log.

The relative density of the coarse-grained soils and consistency of the fine-grained soils has been determined based on correlations provided in Australian Standards Handbook HB160-2006.

**Table 2. Dynamic Cone Penetrometer Results**

DCP Test ID	Location (Borehole)	Soil Unit	Soil Unit Depth Range Tested (m BGL)	Minimum Blows/100mm	Maximum Blows/100mm	Correlated Relative Density or Consistency
DCP1	BH4	F1	0-0.1	4	4	Loose
		S4	0.1-0.6	1	3	Firm-Stiff
		R1	0.6-1.1	6	>50	Very Stiff-Hard

Based on the results, the gravel fill (Unit F1) encountered in BH4 from surface to 0.1m is Loose. The natural clay encountered from 0.1m to 0.6m is Firm to Stiff, which is not consistent with the Pocket Penetrometer readings taken in the borehole, ranging from 140-200kPa (Stiff to Very Stiff). The Extremely Weathered dolerite (presenting as clay and clayey silt) encountered from 0.6m to termination depth is Very Stiff to Hard.

### 4.4 Laboratory Results

#### 4.4.1 Soil Test Results

Laboratory testing was carried out by Tasman Geotechnics on six soil samples for Atterberg Limits and particle size distribution, two from the natural clay (Unit S4) and four from the Extremely Weathered dolerite (Unit R1). The results are summarised in Table 3.

**Table 3. Laboratory Results**

Sample	Unit	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Linear Shrinkage (%)	% Gravel	% Sand	% Fines
BH2, 1.4-1.7m	R1	91	44	47	21	0	14	86
BH4, 0.3-0.6m	S4	97	25	72	21	7	5	88
BH4, 0.9-1.2m	R1	62	34	28	11	0	26	74
BH5, 2.7-3.0m	R1	53	25	28	12	2	28	70
BH8, 0.9-1.2m	S4	72	20	52	17	12	13	75
BH8, 2.1-2.4m	R1	76	35	41	16	0	16	84

Thus, the Unit S4 samples analysed from BH4 (0.3-0.6m) and BH8 (0.9-1.2m) are classified as high plasticity CLAY, trace sand and gravel. The Unit R1 samples analysed from BH2 (1.4-1.7m), BH4 (0.9-1.2m) and BH8 (2.1-2.4m) are classified as high plasticity Clayey SILT, trace/with sand. The Unit R1 sample analysed from BH5 (2.7-3.0m) is classified as high plasticity CLAY, with sand and trace gravel. The Unit R1 samples plot close to the A-line, indicating that they contain a combination of silt and clay.

#### 4.4.2 Rock Test Results

Point Load Strength Index testing was conducted by Tasman Geotechnics on a total of 11 rock samples (irregular lump), collected from outcropping bedrock exposures on the shoreline to the east of the lot. The samples included 8 samples of dolerite (taken from three locations, RS1-RS3), and 3 samples of sandstone (taken from one location, RS4). The rock samples were wrapped in plastic to retain the natural moisture content.

The results are summarised in Table 4 and presented in Appendix C. The sample locations are shown in Figure 1.

In calculating the equivalent Uniaxial Compressive Strength (UCS), we have assumed that the conversion from  $I_{s(50)}$  to UCS is 20 for igneous rocks (AS 1726:2017) and 10 for sedimentary rocks (Johnston, 1991). The rock strength classification is based on the  $I_{s(50)}$  values.

These results show that the strength of the rock samples varies depending on the degree of weathering. On average, the Highly, Moderately, and Slightly Weathered dolerite is Very Low, Low, and High strength respectively. Note that the Slightly Weathered sample tested from location RS3 was a rounded kernel within a predominantly Moderately Weathered rock mass produced by an in-situ weathering process called spherical or "onion-skin" weathering. The Highly Weathered sandstone was consistently Very Low strength.

**Table 4. Summary of Point Load Strength Index Test Results**

Rock Type	Degree of Weathering	Sample Location	Number of Samples	Minimum $I_{s(50)}$	Maximum $I_{s(50)}$	Average $I_{s(50)}$	Rock Strength (AS1726 Classification)	Equivalent Average UCS
				(MPa)	(MPa)	(MPa)		(MPa)
Dolerite	Highly	RS1 & RS2	4	0.03	0.06	0.05	Very Low	0.9
	Moderately	RS3	3	0.11	0.21	0.16	Low	3.2
	Slightly	RS3	1	1.40	1.40	1.40	High	28
Sandstone	Highly	RS4	3	0.06	0.09	0.08	Very Low	0.75

## 5 DISCUSSION AND RECOMMENDATIONS

Jurassic-aged dolerite bedrock was encountered across the site at relatively shallow depths, ranging from 0.6m to about 3m below ground level within the lot boundaries, and current ground surface on the foreshore directly to the east of the lot. The dolerite ranges from Extremely Weathered to Slightly Weathered and varies from less than Very Low strength (soil properties) to High strength. Within the lot boundaries, the dolerite is overlain by up to 0.4m of fill and between 0.2m to about 2.7m of Cenozoic-aged sediments (silt, clay and minor sand and gravel).

Information regarding expected cut/fill depths for the proposed development have not been provided by the client at this stage, thus recommendations for both high-level pad footings and large diameter bored piers are given below based on the possible soil or rock foundation. In the absence of knowing actual loads (horizontal, vertical and bending moments) we only provide general recommendations.

Tasman Geotechnics should be involved (e.g. by site visits) at strategic times during the execution of the works.

## 5.1 Site Classification

In accordance with the Director's Determination – Coastal Erosion Hazard Areas, the default classification of the site is:

### **CLASS P (AS 2870 - 2011)**

Footings should be designed for the specific conditions by an appropriately qualified engineer.

Nevertheless, after allowing due consideration of the site geology, drainage and soil conditions, the natural site has been classified as follows:

### **CLASS H2 (AS2870 – 2011)**

#### **Characteristic surface movement, $y_s = 70$ mm**

Foundation designs in accordance with this classification are subject to the conditions of Section 5.2. If cut or fill earthworks in excess of 0.5m are carried out, then the Site Classification will need to be re-assessed, and possibly changed.

## 5.2 Footings

Particular attention should be paid to the design of footings as required by AS 2870 – 2011.

In addition to normal founding requirements arising from the classification in Section 5.1, particular conditions at this site dictate that the founding medium for all footings (excluding the proposed stargazing deck/jetty) should be:

**CLAY (Unit S4)**, high plasticity (CH), typically encountered from 0.1m to 0.7m below ground level (2m below ground level in BH7).

**Or**

**DOLERITE (Unit R1)**, Extremely Weathered, typically encountered from 0.6m to about 3m below ground level.

An allowable bearing pressure of 100 kPa is available for edge beams, strip and pad footings founded on the natural soil or rock. Bored piers founded at least 2m below ground level may be proportioned for an allowable end bearing capacity of 250kPa.

If the site is filled, it is recommended that no structure be founded across cut and fill without the footings extending through the fill to the natural soils, allowance made in the structural design for differential settlements or engineer designed pier or pile foundations adopted.

The site classification presented in Section 5.1 assumes that the current natural drainage and infiltration conditions at the site will not be markedly affected by the proposed site development work. Care should therefore be taken to ensure that surface water is not permitted to collect adjacent to the structure and that significant changes to seasonal soil moisture equilibria do not develop as a result of service trench construction or tree root action.

Attention is drawn to Appendix B of AS 2870 and CSIRO Building Technical File BTF18 "Foundation Maintenance and Footing Performance: A Homeowner's Guide" as a guide to maintenance requirement for the proposed structure.

Variations in soil conditions may occur in areas of the site not specifically covered by the field investigation. The base of all footing or beam excavations should therefore be inspected to ensure that the founding medium meets the requirements discussed above.



### 5.3 Wind Classification

The wind classification for the site is as follows:

#### **N3 (AS 4055 - 2021)**

Based on region, terrain, shielding and topography as follows:

<b>Region</b>	<b>Terrain category</b>	<b>Topography</b>	<b>Shielding</b>
A	TC1	T0	NS

## 6 REFERENCES

Johnston. I.W, 1991, *Geomechanics and the Emergence of Soft Rock Technology*, Australian Geomechanics Society, Issue Number 21, Page 3-26

Standards Australia, 2006. HB 160-2006: Handbook – Soils Testing

Standards Australia, 2011. AS2870-2011: Residential Slabs and Footings

Standards Australia, 2017. AS1726-2017: Geotechnical Site Investigations

Standards Australia, 2021. AS4055-2021: Wind Loads for Housing



## **Important information about your report**

**These notes are provided to help you understand the limitations of your report.**

### **Project Scope**

Your report has been developed on the basis of your unique project specific requirements as understood by Tasman Geotechnics at the time, and applies only to the site investigated. Tasman Geotechnics should be consulted if there are subsequent changes to the proposed project, to assess how the changes impact on the report's recommendations.

### **Subsurface Conditions**

Subsurface conditions are created by natural processes and the activity of man.

A site assessment identifies subsurface conditions at discrete locations. Actual conditions at other locations may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time.

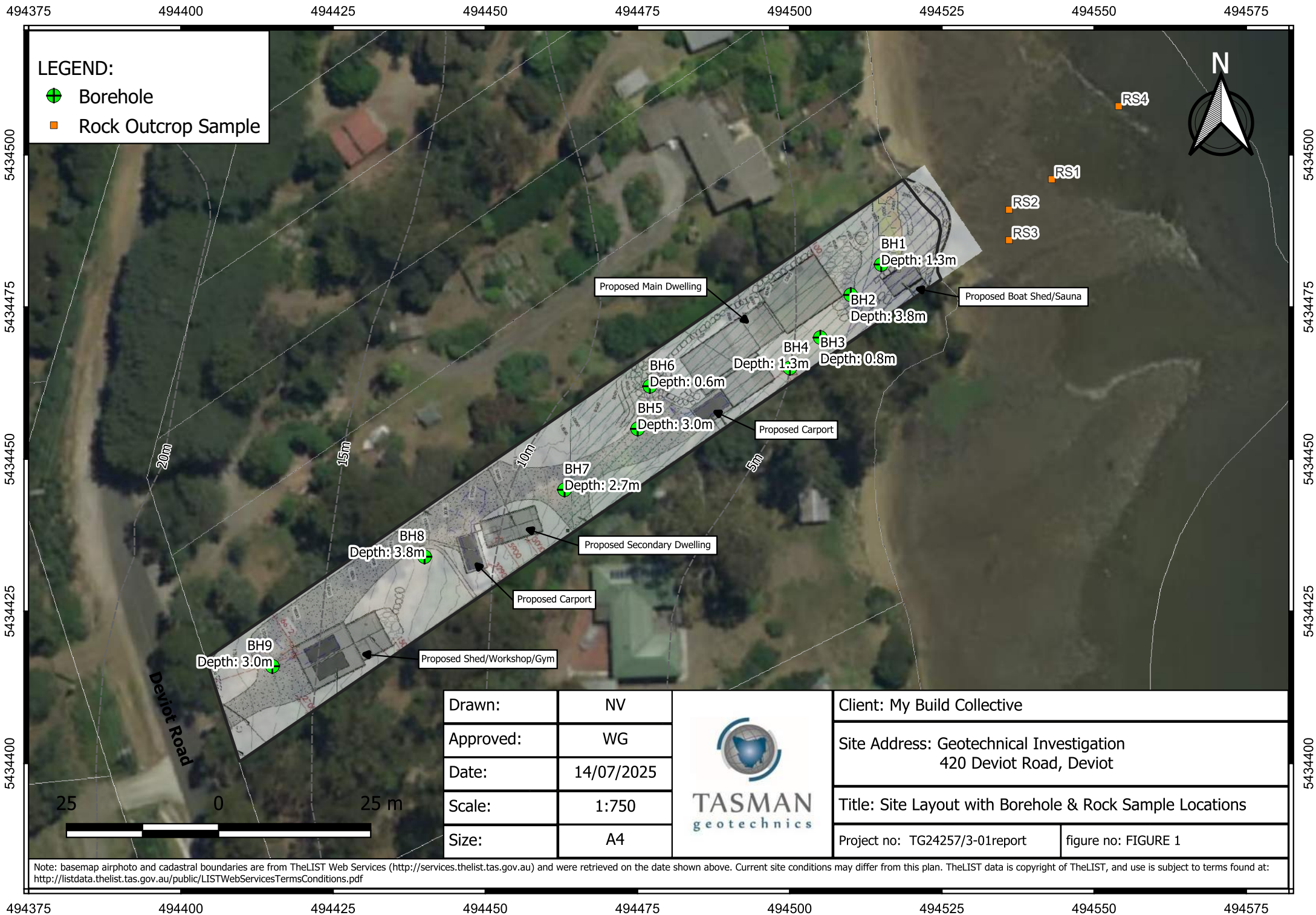
Nothing can be done to change the conditions that exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, the services of Tasman Geotechnics should be retained throughout the project, to identify variable conditions, conduct additional investigation or tests if required and recommend solutions to problems encountered on site.

### **Advice and Recommendations**

Your report contains advice or recommendations which are based on observations, measurements, calculations and professional interpretation, all of which have a level of uncertainty attached.

The recommendations are based on the assumption that subsurface conditions encountered at the discrete locations are indicative of an area. This can not be substantiated until implementation of the project has commenced. Tasman Geotechnics is familiar with the background information and should be consulted to assess whether or not the report's recommendations are valid, or whether changes should be considered.

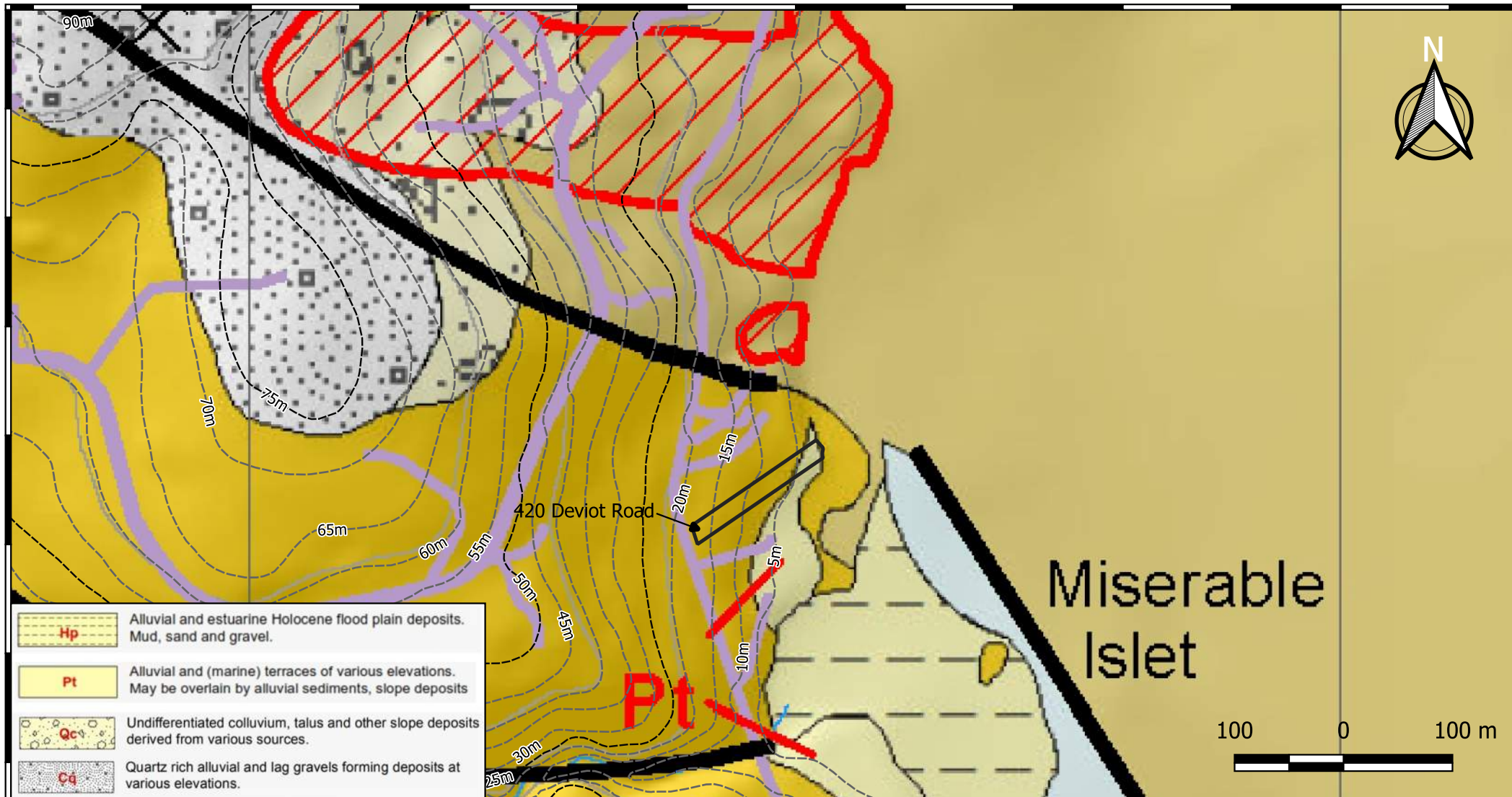
The report as a whole presents the findings of the site assessment, and the report should not be copied in part or altered in any way.





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	Alluvial and estuarine Holocene flood plain deposits. Mud, sand and gravel.
	Alluvial and (marine) terraces of various elevations. May be overlain by alluvial sediments, slope deposits
	Undifferentiated colluvium, talus and other slope deposits derived from various sources.
	Quartz rich alluvial and lag gravels forming deposits at various elevations.
	Undifferentiated Paleogene basalt. Basalts and minor basanite. Deeply weathered in places.
	Undifferentiated Launceston Group (Paleogene). Clays, sands and conglomerates. Deeply weathered in places.
	Tasmanian Dolerite (Jurassic). Doleritic sheets, sills and dykes. Deeply weathered in places.
	Landslides (excluding headscarps and possible features)

Drawn:	NV
Approved:	WG
Date:	14/07/2025
Scale:	1:5000
Size:	A4



Client: My Build Collective	
Site Address: Geotechnical Investigation 420 Deviot Road, Deviot	
Title: Extract of MRT Deviot Simplified Geology Map	
Project no: TG24257/3-01report	figure no: FIGURE 2

Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (<http://services.thelist.tas.gov.au>) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: <http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf>

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420 Deviot Road

Miserable  
Islet

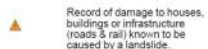
100 0 100 m

#### Landslide Features

	Recent or active landslide.		1061 Recent or active earth or debris flow.		1066 Earth or debris flow, activity unknown.
	Activity unknown.		1062 Recent or active rock or soil slide.		1067 Rock or soil slide, activity unknown.
	Possible landslide.		1063 Recent or active rock fall.		1068 Rock fall, activity unknown.
			1064 Possible landslide, activity not specified.		

Note: Not all landslide points have an associated polygon. Some polygons not shown if too small for map scale. Landslide point with landslide ID from GEOHAZARD (landslide) database. Further details of landslides may be obtained from MRT.

#### Damaged Points



Record of damage to houses, buildings or infrastructure (roads & rail) known to be caused by a landslide.

Note: Damage due to other causes (eg. reactive soil) are also recorded in the GEOHAZARD (landslide) database.

#### Miscellaneous

- Municipality boundary.
- Limit of Geomorphological mapping.
- Boundary between Airborne Laser Scanning and 1:5 000 / 1:25 000 topographic contours - for DEM derivatives.

Note: Landslides outside the limit of geomorphological mapping have not been reviewed or refined in this map series.

Drawn:	NV
Approved:	WG
Date:	14/07/2025
Scale:	1:5000
Size:	A4



TASMAN  
geotechnics

Client: My Build Collective

Site Address: Geotechnical Investigation  
420 Deviot Road, Deviot

Title: Extract of MRT Landslide Inventory Map

Project no: TG24257/3-01report

figure no: FIGURE 3

Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (<http://services.thelist.tas.gov.au>) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: <http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf>

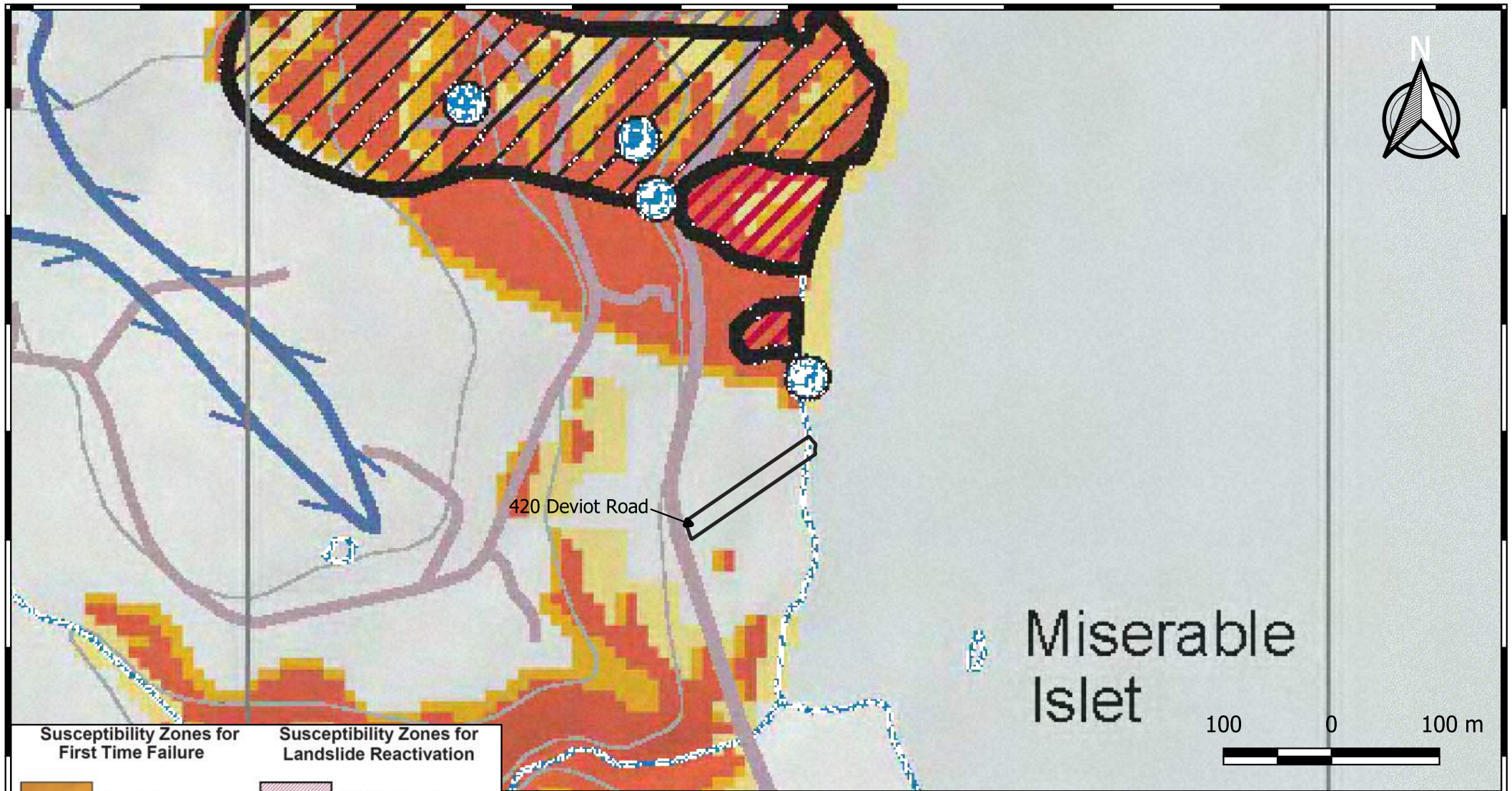
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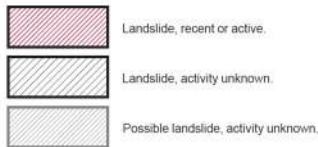


**Susceptibility Zones for First Time Failure**



Regression area: An area up-slope of a source area that could fail following a landslide movement (a.k.a retrogression or set-back area).  
Source area: An area of hillside with the potential to form a slope failure, identified largely on the basis of slope angle and geology.  
Runout area: An area down-slope of a source area where the moving earth, debris or rock can potentially travel.

**Susceptibility Zones for Landslide Reactivation**



Spring or seep - which have a known association with landslides in many cases.

Drawn:	NV
Approved:	WG
Date:	14/07/2025
Scale:	1:5000
Size:	A4

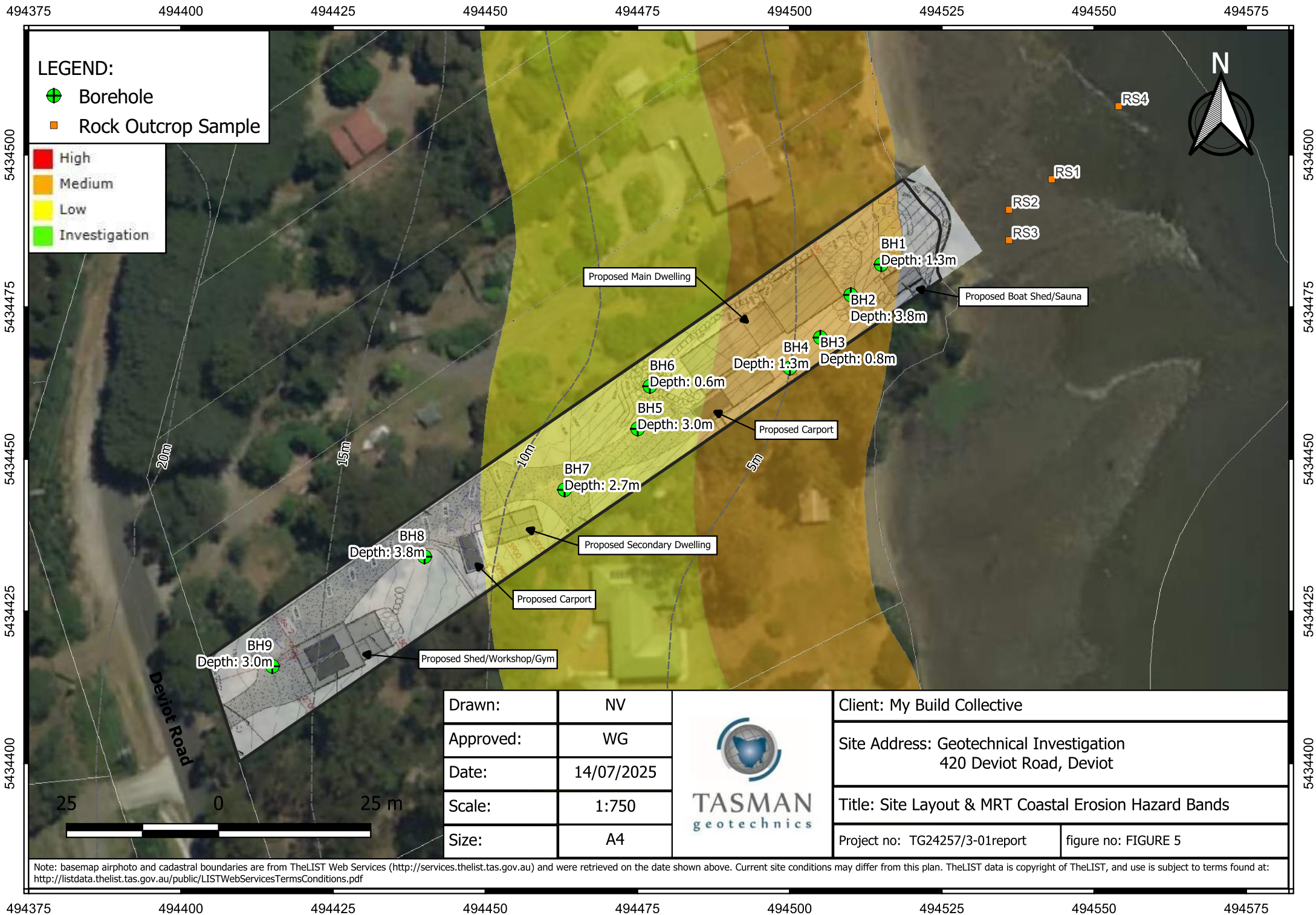


Client: My Build Collective	
Site Address: Geotechnical Investigation 420 Deviot Road, Deviot	
Title: Extract of MRT Deep-Seated Landslide Susceptibility Map	
Project no: TG24257/3-01report	figure no: FIGURE 4

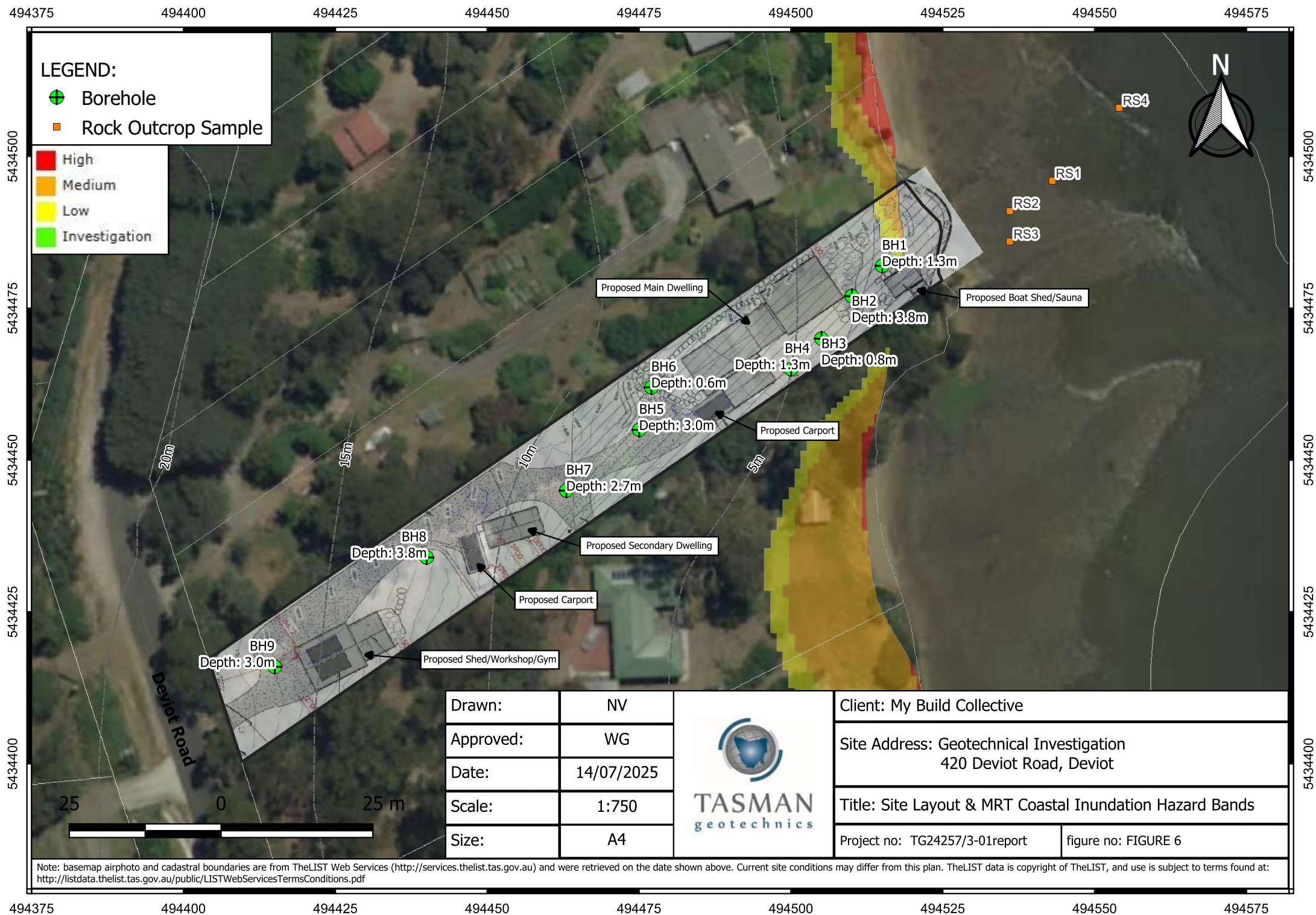
Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (<http://services.thelist.tas.gov.au>) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: <http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf>

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# **Appendix A**

## **Engineering Borehole Logs**

Soils are described in accordance with the Unified Soil Classification System (USCS), as shown in the following table.

**FIELD IDENTIFICATION**

COARSE GRAINED SOILS	more than 65% of material less than 63mm is larger than 0.075mm	GRAVELS	GW	Well graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELLY SOILS	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
		SANDS	SW	Well graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		SANDY SOILS	SM	Silty sand, sand-silt mixtures, non-plastic fines
			SC	Clayey sands, sand-clay mixtures, plastic fines

				DRY STRENGTH	DILATANCY	TOUGHNESS	
FINE GRAINED SOILS	more than 35% of material less than 63mm is less than 0.075mm	SILT & CLAY, liquid limit less than 50%	ML	Inorganic silts, very fine sands or clayey fine sands	None to low	Quick to slow	None
			CL	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays and silty clays	Medium to high	None to very slow	Medium
			OL	Organic silts and organic silty clays of low plasticity	Low to medium	Slow	Low
	SILT & CLAY, liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts	Low to medium	Slow to none	Low to medium	
		CH	Inorganic clays of high plasticity, fat clays	High	None	High	
		OH	Organic clays of medium to high plasticity	Medium to high	None to very slow	Low to medium	
PEAT		Pt	Peat muck and other highly organic soils				

**Particle size descriptive terms**

Name	Subdivision	Size
Boulders		>200mm
Cobbles		63mm to 200mm
Gravel	coarse	19mm to 63mm
	medium	6.7mm to 19mm
	fine	2.36mm to 6.7mm
Sand	coarse	600µm to 2.36mm
	medium	210µm to 600µm
	fine	75µm to 210µm

**Moisture Condition**

Dry (D)	Looks and feels dry. Cohesive soils are hard, friable or powdery. Granular soils run freely through fingers.
Moist (M)	Soil feels cool, darkened in colour. Cohesive soils are usually weakened by moisture presence, granular soils tend to cohere.
Wet (W)	As for moist soils, but free water forms on hands when sample is handled

Cohesive soils can also be described relative to their plastic limit, ie: <Wp, =Wp, >Wp

The plastic limit is defined as the minimum water content at which the soil can be rolled into a thread 3mm thick.

**Consistency of cohesive soils**

Term	Undrained strength	Field guide
Very soft VS	<12kPa	A finger can be pushed well into soil with little effort
Soft S	12 - 25kPa	Easily penetrated several cm by fist
Firm F	25 - 50kPa	Soil can be indented about 5mm by thumb
Stiff St	50-100kPa	Surface can be indented but not penetrated by thumb
Very stiff VSt	100-200kPa	Surface can be marked but not indented by thumb
Hard H	>200kPa	Indented with difficulty by thumb nail
Friable Fb	-	Crumbles or powders when scraped by thumb nail

**Density of granular soils**

Term	Density index
Very loose	<15%
Loose	15 to 35%
medium dense	35 to 65%
Dense	65 to 85%
Very dense	>85%

**Minor Components**

Term	Proportions	Observed properties
Trace of	Coarse grained: <5% Fine grained: <15%	Presence just detectable by feel or eye. Soil properties little or no different to general properties of primary component.
With some	Coarse grained: 5-12% Fine grained: 15-30%	Presence easily detected by feel or eye. Soil properties little different to general properties of primary component.

ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH1  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494515  
GDA94 Northing: 5434482  
Elevation: 4.2

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4									100 200 300 400 500	
Push Tube							0		CI	Possible FILL: Silty CLAY; medium plasticity; brown; with sand, fine to medium grained; trace gravel	<Wp	Fb		
								X	ML	SILT; low plasticity; brown and dark brown; with sand, fine to medium grained				
							0.5	X						
								X	CH	CLAY; high plasticity; brown mottled orange-brown; trace sand, fine grained	>Wp	VSt	330	
							1			Becoming Gravelly, brown mottled orange-brown; trace sand, fine grained; gravel is fine to coarse grained; angular fresh dolerite		St/VSt	225	
							1.5			Terminated at 1.3m due to refusal				
							2							
							2.5							
							3							
							3.5							
							4							

<b>method</b> DT     Diatube AS     Auger screwing AH     Auger drilling RR     Roller/tricone CB     Claw/blade bit NMLC   NMLC core NQ, HQ   Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50     Undisturbed sample 50mm diameter D       Disturbed sample N       Standard Penetration Test (SPT) N*      SPT - sample recovered Nc      SPT with solid cone V       Vane Shear (kPa) P       Pressure Meter Bs      Bulk Sample R       Refusal E       Environmental Sample PID     PID Measurement WS      Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  Cohesive soils can also be described relative to their plastic limit, ie: <Wp =Wp >Wp	<b>Consistency</b> VS      Very soft S       Soft F       Firm St      Stiff VSt     Very stiff H       Hard Fb      Friable VL      Very Loose L       Loose MD     Medium Dense D       Dense VD      Very Dense
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ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH2  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494510  
GDA94 Northing: 5434477  
Elevation: 4.8

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4									100 200 300 400 500	
Push Tube							0		ML	Possible FILL: SILT; low plasticity; brown; with sand, fine to medium grained; with gravel, fine to coarse grained	<Wp	Fb		
							0.5			SILT; low plasticity; brown; with sand, fine to medium grained; with gravel, fine to medium grained; rounded quartz				
							1		CH	CLAY; high plasticity; orange-brown mottled grey; trace sand, fine grained	≈Wp	Fb/VSt	360 300	
							1.5		CI	Extremely Weathered DOLERITE presenting as Sandy CLAY; medium plasticity; orange-brown, white and grey; sand is fine to medium grained	<Wp	Fb		
					D		2		MH	Presenting as Clayey SILT; high plasticity, orange-brown/brown with grey/white seams, with sand, fine to medium grained	≤Wp	Fb/VSt	280	
					D		2.5						210	Generally too friable for PP
							3						290	PP crumbled at 290kPa
							3.5			As above with trace kernels of slightly less weathered material, i.e. trace gravel, angular/sub-angular, Very Low strength			200	
							4			Terminated at 3.8m due to refusal				

<b>method</b> DT     Diatube AS     Auger screwing AH     Auger drilling RR     Roller/tricone CB     Claw/blade bit NMLC   NMLC core NQ, HQ   Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50     Undisturbed sample 50mm diameter D       Disturbed sample N       Standard Penetration Test (SPT) N*      SPT - sample recovered Nc      SPT with solid cone V       Vane Shear (kPa) P       Pressure Meter Bs      Bulk Sample R       Refusal E       Environmental Sample PID     PID Measurement WS      Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  <b>Cohesive soils can also be described relative to their plastic limit, ie:</b> <Wp =Wp >Wp	<b>Consistency</b> VS      Very soft S       Soft F       Firm St      Stiff VSt     Very stiff H       Hard Fb      Friable VL      Very Loose L       Loose MD      Medium Dense D       Dense VD      Very Dense
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**Client:** My Build Collective  
**Project:** Geotechnical Investigation  
**Location:** 420 Deviot Road, Deviot



**TASMAN**  
geotechnics

**GDA94 Easting:** 494505  
**GDA94 Northing:** 5434470  
**Elevation:** 4.9

[illegible][illegible]

<b>method</b>		<b>water</b>	<b>Notes, Samples, Tests</b>	<b>Moisture Condition</b>	<b>Consistency</b>
DT	Diatube	 17/03/18 water level on date shown	U50 Undisturbed sample 50mm diameter	Dry (D)	VS Very soft
AS	Auger screwing		D Disturbed sample	Moist (M)	S Soft
AH	Auger drilling	 water inflow	N Standard Penetration Test (SPT)	Wet (W)	F Firm
RR	Roller/tricone	 partial drill fluid loss	N* SPT - sample recovered		St Stiff
CB	Claw/blade bit		Nc SPT with solid cone	<b>Cohesive soils can also be described relative to their plastic limit, ie:</b>	VSt Very stiff
NMLC	NMLC core		V Vane Shear (kPa)		H Hard
NQ, HQ	Wireline core	 complete drill fluid loss	P Pressure Meter		Fb Friable
			Bs Bulk Sample	<Wp	VL Very Loose
			R Refusal	=Wp	L Loose
			E Environmental Sample	>Wp	MD Medium Dense
			PID PID Measurement		D Dense
			WS Water Sample		VD Very Dense

ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm/120mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH4  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494500  
GDA94 Northing: 5434465  
Elevation (2013 LiDAR): 5.1

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	DCP (blows per 100mm)	
	1	2	3	4									100 200 300 400 500	10	20
Push Tube							0		GC	FILL: Clayey GRAVEL; fine to coarse grained; angular to rounded; brown/dark grey; high plasticity clay; trace sand, fine to medium grained CLAY; high plasticity; brown mottled orange-brown; trace sand, fine grained	D	L			
									CH		>Wp	F/St	200		
									CH		≥Wp	VSt	140		
									CH		<Wp	H/Fb	200		
									MH		<Wp	H/Fb			
Auger							1		CI	Presenting as CLAY, medium plasticity; brown; with sand, fine to medium grained	<Wp	H/Fb			
							1.5			Terminated at 1.5m due to refusal					
							2								
							2.5								
							3								
							3.5								
							4								

<b>method</b> DT      Diatube AS      Auger screwing AH      Auger drilling RR      Roller/tricone CB      Claw/blade bit NMLC   NMLC core NQ, HQ   Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50    Undisturbed sample 50mm diameter D      Disturbed sample N      Standard Penetration Test (SPT) N*    SPT - sample recovered Nc    SPT with solid cone V      Vane Shear (kPa) P      Pressure Meter Bs    Bulk Sample R      Refusal E      Environmental Sample PID   PID Measurement WS    Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  Cohesive soils can also be described relative to their plastic limit, ie: <Wp =Wp >Wp	<b>Consistency</b> VS    Very soft S      Soft F      Firm St     Stiff VSt   Very stiff H      Hard Fb     Friable VL    Very Loose L      Loose MD    Medium Dense D      Dense VD    Very Dense
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ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm/120mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH5  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494475  
GDA94 Northing: 5434455  
Elevation: 7.6

Method	Penetration 1 2 3 4	Notes Samples Tests	Piezo	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
										100 200 300 400 500	
Push Tube				0			FILL: Sandy GRAVEL; fine to coarse grained; dark grey and pale brown; with silt, non-plastic; angular and sub-angular, sand fine to medium grained	D	MD		
				0.5			CLAY; high plasticity; orange-brown mottled grey; trace sand, fine grained; with gravel, fine to coarse grained; angular (fresh dolerite) and rounded (quartz)	>Wp	VSt		
				1			CLAY; medium plasticity; brown; with gravel, fine to coarse grained; sub-rounded and sub-angular	≥Wp	St		
				1.5			Extremely Weathered DOLERITE presenting as CLAY; medium plasticity; brown mottled yellow; with sand, fine to medium grained; trace gravel, fine to medium grained; sub-rounded and sub-angular	≥Wp	St/VSt		
				2							
				2.5							
				3			Presenting as Silty CLAY; high plasticity; brown; with sand, fine to medium grained, trace gravel, fine to medium grained	<Wp	VSt		
				3.5							
				4			Terminated at 3.0m due to refusal				

**method**  
DT     Diatube  
AS     Auger screwing  
AD     Auger drilling  
RR     Roller/tricone  
CB     Claw/blade bit  
NMLC   NMLC core  
NQ, HQ   Wireline core

**water**  
 17/03/18 water level on date shown  
 water inflow  
 partial drill fluid loss  
 complete drill fluid loss

**Piezometer Legend**  
 Backfill  
 Bentonite  
 Sand Packing  
 Screen  
 End Cap

**Moisture Condition**  
Dry (D)  
Moist (M)  
Wet (W)  
**Cohesive soils can also be described relative to their plastic limit, ie:**  
<Wp  
=Wp  
>Wp




**Consistency**  
VS     Very soft  
S     Soft  
F     Firm  
St     Stiff  
VSt   Very stiff  
H     Hard  
Fb   Friable  
VL   Very Loose  
L     Loose  
MD   Medium Dense  
D     Dense  
VD   Very Dense

ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH6  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494477  
GDA94 Northing: 5434462  
Elevation: 7.6

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter	Structure, additional observations
	1	2	3	4									kPa 100 200 300 400 500	
Push Tube							0		GM	FILL: Silty GRAVEL; fine to medium grained; dark brown low plasticity; sub-rounded and sub-angular FILL: GRAVEL; fine to medium grained; brown and grey; trace silt, non-plastic; angular, various lithologies, with fine to medium grained sand GRAVEL; fine to coarse grained; grey; trace silt, non-plastic, trace sand, fresh dolerite, probably broken up cobble; angular Gravelly CLAY; high plasticity; brown; with sand, fine to medium grained; gravel is fine to coarse grained; sub-rounded and sub-angular weathered dolerite  Terminated at 0.6m due to refusal	D	MD		
								GP						
								CH	≈Wp		VSt			

<b>method</b> DT     Diatube AS     Auger screwing AH     Auger drilling RR     Roller/tricone CB     Claw/blade bit NMLC   NMLC core NQ, HQ   Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50     Undisturbed sample 50mm diameter D       Disturbed sample N       Standard Penetration Test (SPT) N*      SPT - sample recovered Nc      SPT with solid cone V       Vane Shear (kPa) P       Pressure Meter Bs      Bulk Sample R       Refusal E       Environmental Sample PID     PID Measurement WS      Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  Cohesive soils can also be described relative to their plastic limit, ie: <Wp =Wp >Wp	<b>Consistency</b> VS      Very soft S       Soft F       Firm St      Stiff VSt     Very stiff H       Hard Fb      Friable VL      Very Loose L       Loose MD     Medium Dense D       Dense VD      Very Dense
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ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH7  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494463  
GDA94 Northing: 5434445  
Elevation: 9.5

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4									100 200 300 400 500	
Push Tube							0		GP-GM	FILL: Sandy GRAVEL; fine to medium grained; brown and grey; with silt, non-plastic; sand fine to medium grained, gravel is angular	D	MD		
									CI	Probable FILL: CLAY; medium plasticity; grey and brown; trace sand, fine to medium grained; trace gravel, fine to medium grained; sub-rounded and sub-angular	>Wp	St/VSt		
							-0.5		ML	SILT; low plasticity; grey-brown; with sand, fine to medium grained; trace gravel, fine grained; sub-rounded	<Wp	Fb		
									SC	Clayey SAND; fine to medium grained; grey and dark brown, low to medium plasticity fines, trace fine grained gravel	M	MD/D		
							-1.5		CI-CH	CLAY; medium to high plasticity; grey and orange-brown; with sand, fine to medium grained; with gravel, fine grained; sub-rounded and sub-angular	<Wp	Fb/VSt		
					D								200	PP crumbled at 270kPa
							-2							
									CH	CLAY; high plasticity; grey mottled orange-brown; trace sand, fine grained; trace gravel, fine grained	≥Wp	VSt		
							-2.5						380	PP crumbled at 200KPa
													440	
							-3			Terminated at planned depth of 2.7m, still going				
							-3.5							
							4							

<b>method</b> DT      Diatube AS      Auger screwing AH      Auger drilling RR      Roller/tricone CB      Claw/blade bit NMLC   NMLC core NQ, HQ Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50    Undisturbed sample 50mm diameter D      Disturbed sample N      Standard Penetration Test (SPT) N*     SPT - sample recovered Nc     SPT with solid cone V      Vane Shear (kPa) P      Pressure Meter Bs     Bulk Sample R      Refusal E      Environmental Sample PID    PID Measurement WS     Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  Cohesive soils can also be described relative to their plastic limit, ie: <Wp =Wp >Wp	<b>Consistency</b> VS    Very soft S      Soft F      Firm St     Stiff VSt   Very stiff H      Hard Fb     Friable VL     Very Loose L      Loose MD    Medium Dense D      Dense VD    Very Dense
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# ENGINEERING BOREHOLE LOG

**Client:** My Build Collective  
**Project:** Geotechnical Investigation  
**Location:** 420 Deviot Road, Deviot  
**Drill model:** Eziprobe  
**Hole diameter:** 58mm/120mm  
**Slope:** -90      **Bearing:** 0



**Borehole no:** TG24257/3-BH8  
**Sheet no.** 1 of 1  
**Job no.** TG24257/3  
**Date:** 12 Nov 2024  
**Logged By:** DG  
**GDA94 Easting:** 494440  
**GDA94 Northing:** 5434434  
**Elevation:** 13.8

Method	Penetration 1 2 3 4	Notes Samples Tests	Piezo	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
										100 200 300 400 500	
Push Tube				0			Probable FILL: Silty Gravelly CLAY; medium plasticity; brown; gravel is fine to coarse grained; rounded and angular	<Wp	Fb		
				0.5			CLAY; low plasticity; brown; with sand, fine to medium grained; with gravel, fine grained; sub-rounded and sub-angular	<Wp	Fb		
			D	1			CLAY; high plasticity; orange-brown mottled grey; trace sand, fine grained; trace gravel (ironstone), fine to medium grained; sub-rounded and sub-angular	>Wp	VSt		+
				1.5			Becoming grey mottled orange-brown; trace sand, fine grained	>Wp	VSt		+
			D	2			Extremely Weathered DOLERITE presenting as Sandy SILT; low plasticity; yellow-brown; sand is fine grained	<Wp	Fb		+
				2.5			Presenting as Clayey SILT, high plasticity, grey and white; with sand, fine grained	<Wp	Fb		+
Auger				3							
			D	3.5			Presenting as CLAY, medium plasticity, orange-brown flecked cream, with thin grey seams, with fine to medium grained sand	<Wp	Fb		
				4			Change to Auger drilling method, same material as above	<Wp	Fb		
				4.5							
				5			Terminated at 5m, very hard going				
				5.5							

<b>method</b> DT Diatube AS Auger screwing AD Auger drilling RR Roller/tricone CB Claw/blade bit NMLC NMLC core NQ, HQ Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Piezometer Legend</b> Backfill Bentonite Sand Packing Screen End Cap	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W) <b>Cohesive soils can also be described relative to their plastic limit, ie:</b> <Wp =Wp >Wp	<b>Consistency</b> VS Very soft S Soft F Firm St Stiff VSt Very stiff H Hard Fb Friable VL Very Loose L Loose MD Medium Dense D Dense VD Very Dense
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ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH9  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494415  
GDA94 Northing: 5434416  
Elevation: 16.5

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4										
Push Tube							0		GW	FILL: Sandy GRAVEL; fine to coarse grained; pale brown and grey; trace silt, non-plastic; sand fine to medium grained, gravel angular and sub-angular	D	MD		
									CI	Probable FILL: CLAY; medium plasticity; brown; with sand, fine to medium grained; with gravel, fine to coarse grained; sub-angular	≥Wp	St/VSt		
							0.5		ML	SILT; low plasticity; brown and grey; with sand, fine to medium grained; trace gravel, fine grained	<Wp	Fb		
									CH	CLAY; high plasticity; brown mottled orange-brown; trace sand, fine to medium grained; trace gravel, fine grained	≥Wp	St	195	
							1						185	
										Becoming Very Stiff		VSt	210	
							1.5						240	
							2						280	
													310	
							2.5						330	
							3			Terminated at 3.0m due to refusal			250	
							3.5							
							4							

<b>method</b> DT      Diatube AS      Auger screwing AH      Auger drilling RR      Roller/tricone CB      Claw/blade bit NMLC   NMLC core NQ, HQ Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50    Undisturbed sample 50mm diameter D      Disturbed sample N      Standard Penetration Test (SPT) N*     SPT - sample recovered Nc     SPT with solid cone V      Vane Shear (kPa) P      Pressure Meter Bs     Bulk Sample R      Refusal E      Environmental Sample PID    PID Measurement WS     Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  <b>Cohesive soils can also be described relative to their plastic limit, ie:</b> <Wp =Wp >Wp	<b>Consistency</b> VS      Very soft S       Soft F       Firm St      Stiff VSt    Very stiff H       Hard Fb      Friable VL      Very Loose L       Loose MD     Medium Dense D       Dense VD      Very Dense
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# **Appendix B**

## **Site Photographs**



Photo 1: Dolerite bedrock exposed in drain on Deviot Road, opposite site driveway entrance, looking north-northwest.



Photo 2: Borehole BH9 location (foreground) and driveway entrance to site (background), looking west.





Photo 3: Existing dwelling and borehole BH5 location (water monitoring well), looking northeast.



Photo 4: Dry-stacked dolerite boulder retaining wall adjacent to existing dwelling, looking north.





Photo 5: Existing shed and borehole BH8 (water monitoring well), looking east.



Photo 6: Borehole BH4 and Dynamic Cone Penetrometer Test DCP1 location, looking northwest.





Photo 7: Borehole BH1 location, looking southwest.



Photo 8: Foreshore and River Tamar to the east of the site, looking east. Note dolerite boulder groynes extending out from the site.





Photo 9: Dry-stacked dolerite boulder wall on eastern boundary of site to protect site from erosion.



Photo 10: Moderately to Highly Weathered dolerite bedrock (Rock Sample location, RS3), and remnants of timber jetty/pier on foreshore to the east of the site, looking southwest. Note spherical or “onion-skin” weathering in the dolerite.





Photo 11: Contact between outcropping dolerite and sandstone bedrock on foreshore, looking north-northeast.



Photo 12: Highly Weathered sandstone bedrock (Rock Sample location, RS4) outcropping on foreshore to the east of the site.

## **Appendix C**

### **Point Load Strength Index Test Results**

Client: My Build Collective

Location: 420 Deviot Road, Deviot

Project No: TG24257/3

Date: 21/11/2024

Tested by: Nev.V



Borehole ID	Sample Depth From (m BGL)	Sample Depth To (m BGL)	Test Date	Rock Description	Rock Weathering	Sample Moisture Content	Axial, Block & Irregular lump Testing								Notes:	Strength Classification (AS1726:2017)
							W	D	D <sub>e</sub> <sup>2</sup>	GP	P	I <sub>s</sub>	F	I <sub>s,50</sub>		
							[mm]	[mm]	[mm <sup>2</sup> ]	[kN]	[kN]	[MPa]	[-]	[MPa]		
RS1, 1 of 2	0	0	21/11/24	Dolerite	HW	Natural	49.4	37.1	2333.52	0.12		0.05	0.98	0.05	Irregular Lump test	VLS
RS1, 2 of 2	0	0	21/11/24	Dolerite	HW	Natural	61.5	38.0	2975.56	0.16		0.05	1.04	0.06	Irregular Lump test	VLS
RS2, 1 of 2	0	0	21/11/24	Dolerite	HW	Natural	61.5	33.4	2615.36	0.08		0.03	1.01	0.03	Irregular Lump test	VLS
RS2, 2 of 2	0	0	21/11/24	Dolerite	HW	Natural	67.6	42.8	3683.84	0.12		0.03	1.09	0.04	Irregular Lump test	VLS
RS3, 1 of 4	0	0	21/11/24	Dolerite	MW	Natural	67.9	41.0	3544.57	0.45		0.13	1.08	0.14	Irregular Lump test	LS
RS3, 2 of 4	0	0	21/11/24	Dolerite	MW	Natural	77.0	42.9	4205.89	0.41		0.09	1.12	0.11	Irregular Lump test	LS
RS3, 3 of 4	0	0	21/11/24	Dolerite	SW	Natural	47.1	36.3	2176.90	3.15		1.45	0.97	1.40	SW kernel within MW rock mass, Irregular Lump test	HS
RS3, 4 of 4	0	0	21/11/24	Dolerite	MW	Natural	51.0	36.4	2363.64	0.51		0.21	0.99	0.21	Irregular Lump test	LS
RS4, 1 of 3	0	0	21/11/24	Sandstone	HW	Natural	79.0	46.3	4657.13	0.35		0.08	1.15	0.09	Irregular Lump test	VLS
RS4, 2 of 3	0	0	21/11/24	Sandstone	HW	Natural	75.0	50.7	4841.49	0.25		0.05	1.16	0.06	Irregular Lump test	VLS
RS4, 3 of 3	0	0	21/11/24	Sandstone	HW	Natural	74.7	58.7	5583.02	0.46		0.09	1.20	0.09	Irregular Lump test	VLS

<b>Notes:</b> 1 - L/D >1.0; 0.3<D/W<1.0 2 - 0.3W<D<W 3 - Quote I <sub>s,50</sub> to two decimal places	<b>Rock Weathering:</b> DW = Distinctly Weathered SW = Slightly Weathered FR = Fresh	<b>Moisture Content:</b> N = Natural D = Dry S = Saturated	L = Sample Length (mm) D = Platen Separation (mm) W = Width of Specimen (mm) GP = Gauge Pressure (kN) F = Size correction factor (-)	<b>For Diametral Test:</b> F = (D/50) <sup>0.45</sup> I <sub>s</sub> = (GP/D <sup>2</sup> ) X 1000 I <sub>s,50</sub> = I <sub>s</sub> X F	<b>For Axial/Irregular Lump Test:</b> D <sub>e</sub> <sup>2</sup> = (4/π) X (W x D) F = (D <sub>e</sub> /50) <sup>0.45</sup> I <sub>s</sub> = (GP/D <sub>e</sub> <sup>2</sup> ) X 1000 I <sub>s,50</sub> = I <sub>s</sub> X F	<b>Strength Classification:</b> VLS = Very Low Strength LS = Low Strength MS = Medium Strength HS = High Strength VHS = Very High Strength EHS = Extremely High Strength
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**COASTAL HAZARDS REPORT**  
**PROPOSED DEMOLITION, NEW DWELLING &**  
**ANCILLARY STRUCTURES**  
**420 DEVIOT ROAD, DEVIOT**

Prepared for: **My Build Collective**

Date: 14 July 2025

Document Reference: TG24257/3 - 02report

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Version	Date	Prepared by	Reviewed by	Distribution
Original	14 July 2025	Nev Vanderslink	Dr Wayne Griffioen	Electronic



## 1 INTRODUCTION

### 1.1 Practitioner details

Lead/coordinating consultant name	Jacobus (Wayne) Griffioen
Academic Qualification/s	BE (Hons) University of Western Australia PhD Civil Engineering, University of Western Australia
Relevant Experience	
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Signature	
Date	14 July 2025

### 1.2 Investigation Scope

A coastal erosion and inundation hazard investigation has been conducted for My Build Collective at the site of a proposed development at 420 Deviot Road, Deviot (title reference 64037/7).

The proposed development involves the demolition of an existing dwelling and shed, and construction of the new dwelling, and ancillary buildings. The ancillary buildings include a secondary dwelling (and carport), a combined shed/workshop/gym, and boat shed with attached sauna.

The design life of the proposed new main dwelling, secondary dwelling, and shed/workshop/gym is assumed to be 50 years. The design life of the proposed boat shed is assumed to be 20 years.

The LIST hazard band overlays show that parts of the site are mapped within 'Medium' and 'Low' Coastal Erosion Hazard Bands, i.e. potentially vulnerable to coastal recession by 2050 and 2100 respectively.

Part of the site is also mapped within 'Medium' and 'Low' Coastal Inundation Hazard Band, i.e., vulnerable to a 1% AEP storm event by 2050 and 2100 respectively.

The shoreline at the site is classified in the Coastal Vulnerability Clayey Shores as "*Sloping clayey-gravelly shores - prone to slumping and/or progressive erosion*".

The scope of the work was to consider the risks of coastal hazards to the proposed development.



The site location is shown in Figure 1.

### 1.3 Methodology

This report has been prepared in accordance with the **Director's Determination – Coastal Inundation Hazard Areas**, version 1.2 dated 27 September 2021 and the **Director's Determination – Coastal Erosion Hazard Areas**, version 1.2 dated 27 September 2021.

### 1.4 Geotechnical Site Investigation Report

The **Director's Determination – Coastal Erosion Hazard Areas** requires that a coastal erosion and inundation hazard report includes a report of a geotechnical site investigation undertaken consistent with AS1726. Accordingly, a geotechnical site investigation report undertaken consistent with Australian Standard AS 1726-2017 - *Geotechnical Site Investigations* is included at Appendix A.

## 2 BACKGROUND INFORMATION

### 2.1 Definition of Terms

Coastal erosion and coastal inundation are natural processes that have the potential to significantly harm people, properties, communities, industries, infrastructure and the environment. This means coastal erosion and coastal inundation are *hazards*.

**Coastal erosion** involves the erosion (wearing away) of coastal areas by water, wind and general weather conditions, or long-term changes to coastal land due to sea level rise.

**Coastal inundation** is the temporary or permanent flooding of land by the sea due to storm surge, tides or sea level rise.

An individual coastal site may be vulnerable to one, or both, of these hazards.

### 2.2 Sea Level Rise

Coastal hazards are expected to be magnified by climate change and sea level rise.

In 2016, CSIRO produced projections of sea level rise for the Tasmanian Department of Premier and Cabinet (DPaC) (McInnes KI, 2016). Whilst sea levels vary on a broad range of time and space scales, on a global scale it is recognised that climate change is causing an increase in the volume of the ocean and hence a rise in global mean sea level. This is occurring largely through the expansion of oceanic waters as they warm, and an increase in the mass of the ocean as glaciers and ice sheets lose mass (i.e., melt).

Locally, sea levels change not only because of the global change in volume of the ocean but also from a series of regional factors, such as local changes in the density of the ocean (which is dependent on temperature and salinity) and changes in ocean currents (McInnes KI, 2016).

Projections of sea level rise are subject to significant uncertainty. Nevertheless, sea levels are known to be rising:

*After accounting for and removing the effects of vertical land movements due to glacial rebound and the effects of natural climate variability and changes in atmospheric pressure, sea levels have risen around the Australian coastline at an average rate of 2.1 mm/yr over 1966–2009 and 3.1 mm/yr over 1993–2009. These observed rates of rise for Australia are consistent with global average values. (CSIRO, 2020).*

It should be noted that sea levels are presently expected to continue rising beyond 2100, but the sea level rise allowances are designed to align with projections provided by the Intergovernmental Panel on Climate Change (IPCC), which extend to 2100 (Tasmanian Climate Change Office, 2012).

The projected sea level rises forecast by CSIRO for DPaC are shown in Figure 1.

## 2.3 Planning Considerations

Due to the local factors which influence sea levels, DPaC engaged CSIRO to develop individual sea level rise projections for the various Tasmanian councils which have shoreline exposures within their municipalities. These projections were then incorporated into the Local Provisions Schedules for the various councils.

The sea level rise 'planning allowances' for the West Tamar Municipality are 0.22m by 2050, and 0.82m by 2100 (Department of Premier and Cabinet, 2016), relative to 2010 (Tasmanian Climate Change Office, 2012). That is, an asset (such as a house or shed) would need to be 0.82m higher in elevation in 2100, to experience the same frequency of flood events a similar asset would have been exposed to in the year 2010.

The site slopes towards the east from an elevation of about 18m AHD at the western boundary to about 1.6m AHD at the eastern boundary, which coincides with the present Highest Astronomical Tide (HAT). A small portion at the eastern end of the site is forecast to be at risk of coastal inundation from rising sea levels.

As sea level rises, shorelines may recess, i.e., the location of the shoreline moves further inland. The degree to which this occurs is partially dependent on the rate of shoreline erosion, which in turn is influenced by the type of material at the shoreline (natural or artificial), the extent to which the shoreline is exposed to wind waves and swell, and the shoreline profile. Roughly the eastern half of the site is forecast to be at risk of coastal erosion.

The Tasmanian Planning Scheme has Codes for both Coastal Erosion Hazards (C10.0) and Coastal Inundation Hazards (C11.0). However, there are various exemption categories and coastal hazards are often exempted from consideration for planning permits. Instead, coastal hazards are required to be addressed prior to the issuance of a building permit, and there are a series of requirements for building (or demolition) works in coastal hazard areas. These are set out in the relevant Director's Determinations listed in Section 1.3 of this document.

## 2.4 Coastal Inundation Hazard Bands

In the West Tamar Local Provisions Schedule of the Tasmanian Planning Scheme, the following values are given for Deviot for Coastal Inundation:

- **Defined Flood Level:** 2.9m AHD. This means the area is vulnerable to a 1% AEP storm surge event in 2100. Annual Exceedance Probability (AEP) is a term used to describe how likely a flood is to occur each year. For example, a 1% AEP flood is a flood that has a 1% chance of occurring, or being exceeded, in any one year. It is also referred to as the '100-year flood' or '1 in 100-year flood'. Based on 2013 LiDAR data, approximately 100m<sup>2</sup> of the site is lower than this elevation, equating to about 4% of the site area.
- **Low Hazard Band:** 3.2m AHD. This is the elevation above which an area is not considered vulnerable to a 1% AEP storm surge in 2100, after allowing for an additional 0.3m of 'freeboard' to account for wave setup and runup. Parts of the site are lower than this elevation, and hence fall into this category.
- **Medium Hazard Band:** 2.6m AHD. This is the elevation above which an area is not considered vulnerable to a 1% AEP storm surge in 2050, after allowing for an additional 0.3m of 'freeboard' to account for wave setup and runup. Parts of the site are lower than this elevation, and hence fall into this category.
- **High Hazard Band:** 1.4m AHD. This is the elevation above which an area is not considered presently vulnerable to the Highest Astronomical Tide (HAT), after allowing for an additional 0.3m of 'freeboard' to account for wave setup and runup. It is vulnerable to inundation from the mean high tide by 2050. HAT is defined as the highest water level which can be predicted to occur under average meteorological conditions and any combination of astronomical conditions. HAT does not necessarily occur every year. Storm surges can exceed HAT. The site is entirely above this elevation.

According to The LIST, the 'Medium' and 'Low' Hazard Bands cover an area of about 15m<sup>2</sup> and 20m<sup>2</sup> respectively at the site, equating to less than 1% of the total site area. However, according to the 2013 LiDAR survey data, a larger area than that suggested by the hazard band overlay falls below the elevation levels used to delineate the 'Medium' and 'Low' Hazard Bands. Approximately 85m<sup>2</sup> of the site falls below the 2.6m AHD elevation used to define the 'Medium' Hazard Band, equated to about 4% of the total site area. Approximately 115m<sup>2</sup> of the site falls below the 3.2m AHD elevation used to define the 'Low' Hazard Band, equating to about 5% of the total site area.

The proposed buildings are not located within the Coastal Inundation Hazard Bands on The LIST. However, based on the 2013 LiDAR survey, roughly the eastern half of the proposed boat shed/sauna is located below the 2.6m and 3.2m AHD elevation levels used to define the 'Medium' and 'Low' Hazard Bands respectively. The proposed buildings are located above the 1.4m AHD elevation level used to define the 'High' Hazard Band.

An extract of the MRT Coastal Inundation Hazard Bands, and the 1.4m, 2.6m and 3.2m AHD elevation contours from the 2013 LiDAR survey are shown in Figure 2.

## 2.5 Coastal Erosion Hazard Bands

The Coastal erosion hazard bands mapped at the site relate to both the distance to the shoreline, and geological materials shown in the published mapping.

According to The LIST, roughly the eastern half of the site is mapped within 'Medium' and 'Low' Coastal Erosion Hazard Bands.

Land within a 'Medium' Coastal Erosion Hazard Band is identified as potentially vulnerable to coastal recession by the year 2050. The eastern-most part of the site is mapped within a 'Medium' Coastal Erosion Hazard Band, covering an area of approximately 20% of the site and including the majority of the proposed dwelling footprint and roughly the western half of the proposed boat shed/sauna. The eastern half of the proposed boat shed/sauna is not mapped within the 'Medium' Hazard Band but is downslope to the proposed dwelling (closer to the river), and thus assumed to be as or more vulnerable to coastal recession.

Land within a 'Low' Coastal Erosion Hazard Band is identified as potentially vulnerable to coastal recession by the year 2100. This includes part of the site directly to the west of the 'Medium' hazard band, and covers an area of about 30% of the site. The proposed secondary dwelling and northwestern corner of the proposed main dwelling are located within the 'Low' hazard band.

The Coastal Erosion Hazard Bands at the site are based on the MRT 1:25,000 Beaconsfield geology map sheet, according to which the site is located on Cenozoic-aged sediments, described as '*Dominantly non-marine sequences of gravel, sand, silt, clay and regolith.*' These materials are usually clay dominated and are considered to be '*semi-lithified soft-rock substrates*' in the context of the Coastal Erosion Hazard Bands mapping (Sharples, 2013).

Sharples notes that, unlike for open coast sandy beaches:

*...there are no well-established and widely adopted methods available for modelling erosion and recession of swell-sheltered sandy shore, nor for soft-rock and hard-rock shores. Moreover, with the exception of rocky sea cliffs in NSW (Patterson Britton 2005), no other Australian state jurisdictions have previously attempted to define erosion susceptibility zones for coastal substrate types other than open coast sandy beaches.*

Because of this, the approach used to generate the hazard bands was based on:

*...empirical data (from historic air photos and shoreline profiling surveys) to define erosion and recession setbacks based on actual measured erosion cuts and shoreline recession rates for Tasmanian shores, with a precautionary factor applied to allow for the limited scope of the available empirical data.*

The example cited include Pipe Clay Lagoon and Five Mile Beach at Pittwater, which are in different geomorphic settings to the site.

### 3 SUMMARY OF SITE CONDITIONS AND COASTAL HAZARDS

The subsurface conditions encountered at the site consists of 0.1m to 0.4m of fill (clays and gravels), overlying natural Cenozoic-aged silts, clays and minor sands/gravels to depths ranging from 0.6m to about 3m below ground level, overlying Extremely Weathered Jurassic-aged dolerite to borehole termination depth (refer Appendix A). The proposed dwelling and ancillary buildings will be founded on the Cenozoic-aged sediments or underlying Jurassic-aged Dolerite depending on cut depths (yet to be confirmed).

In-situ Jurassic-aged dolerite bedrock is exposed on the shoreline directly to the east of the site. The dolerite is Moderately to Highly weathered with rounded Slightly Weathered kernels, produced by spherical or "onion-skin" weathering. The dolerite is of variable rock strength (Very Low to High) depending on the degree of weathering. Highly weathered, Very Low strength sandstone is also exposed on the shoreline to the east of the dolerite, with the contact about 30m to the east and north of the lot boundary respectively. The sandstone appears to be overlying the dolerite and is therefore assumed to be younger (most likely Cenozoic) in age. Bedding in the sandstone dips at shallow angles ranging from about 10° to 30° towards the east to northeast. None of the proposed buildings will be founded on the sandstone.

Based on the surface and subsurface observations, the dolerite bedrock appears to gently rise from the foreshore at about 6° towards the west. The rock boundary does not appear to be planar based on the variable depths at which it was encountered in the boreholes.

Near the eastern boundary of the lot, adjacent to the foreshore, a dry-stacked dolerite boulder wall about 1.2m high has been constructed as a protective barrier or for landscaping purposes. The wall is in relatively good condition; however, some erosion was observed on the land-side of the wall, along with an accumulation of driftwood, indicating that the present Highest Astronomical Tide (HAT) is at or slightly above the top of the wall.

Two dolerite boulder groynes extend from the wall in a northeast direction towards the river and were likely constructed for additional foreshore protection or shelter for swimming.

With regards to coastal inundation, the 2.6m and 3.2m AHD elevation levels which define the 'Medium' and 'Low' Coastal Inundation Hazard Bands are located within the site, between about 3m to 8m to the west of the eastern boundary. Roughly the eastern half of the proposed boat shed/sauna are located below these elevation levels and is therefore potentially vulnerable to a 1% AEP storm event by 2050 and 2100 respectively. The proposed main dwelling, secondary dwelling, and shed/workshop/gym are located at an elevation of at least 4.8m AHD and are therefore not considered to be at risk of coastal inundation.

With regards to coastal erosion, the Cenozoic-aged sediments encountered at the site are consistent with the 'soft rock' category outlined by Sharples (2013). These generally cohesive clayey materials are considered to be more resistant to erosion than soft sediment, but not as resistant as well-lithified rock, and may erode slowly but significantly over time.

The combination of an erodible substrate (predominantly clay and silt) and a rising dolerite bedrock platform will result in shoreline recession to a point where the rising bedrock intersects the new shoreline. Based on the projected sea level rise, we assess that this will result in approximately 8m of shoreline recession by the year 2100. This is visually represented in the cross-section provided in Figure 4. However, this is a potentially "worst case" scenario, as the existing rock wall located on the eastern boundary of the lot will likely reduce erosion at the site.

The proposed boat shed/sauna is located within the footprint of the projected coastal recession, whereas the proposed main dwelling, secondary dwelling, and shed/workshop/gym are not.

#### 4 CONCLUSIONS ABOUT THE PROPOSAL

##### **Likelihood of the proposed use or development to cause or contribute to the occurrence of coastal erosion and/or coastal inundation on the site or adjacent land**

Part of the proposed boat shed/sauna is located below the 3.2m AHD elevation level used to define the 'Low' Coastal Inundation Hazard Band, and is within the predicted shoreline recession footprint based on where the rising bedrock intersects the new shoreline by 2100 (Figure 4).

However, it is our assessment that the proposed development (demolition as well as new construction) will not cause or contribute to the occurrence of coastal inundation or coastal erosion on the site or adjacent land as we expect that the proposed boat shed/sauna will not require significant earthworks or clearing of existing vegetation, and will not disrupt or alter the existing river flow or tidal movement.

The proposed demolition of the existing dwelling and shed, and construction of the new main dwelling, secondary dwelling, and shed/workshop/gym are located at an elevation of at least 4.8m AHD and are therefore not at risk of coastal inundation.

The proposed demolition of the existing dwelling and shed, and construction of the new main dwelling, secondary dwelling, and shed/workshop/gym are located within the 'Low' and 'Medium' Coastal Erosion Hazard Bands. However, it is our assessment that they will not cause or contribute to the occurrence of coastal erosion as they are located away from the shoreline and outside (to the west) of the predicted shoreline recession footprint based on where the rising bedrock intersects the new shoreline by 2100.

##### **Can the proposed use or development achieve and maintain a tolerable risk for the intended life of the use or development, having regard to:**

the nature, intensity and duration of the use	<p>The design life of the proposed main dwelling, secondary dwelling, and shed/workshop/gym to be at least 50 years. The design life of the proposed boat shed is assumed to be at least 20 years.</p> <p>Part of the proposed boat shed is located below the 3.2m AHD elevation level used to define the 'Low' Coastal Inundation Band, and is within the predicted coastal recession footprint based on the 2100 HAT (Figure 4).</p> <p>However, it is our assessment that the proposed development can achieve and maintain a tolerable level of risk with regards to coastal inundation and coastal erosion as the proposed boat shed is not a habitable structure, will be constructed from durable materials, and has a shorter design life (20-years).</p>
the type, form and duration of any development	<p>The proposed development is typical residential construction. No aspect of the type, form and duration of the proposed development makes it less or more able to achieve and maintain a tolerable risk in relation to coastal erosion and inundation.</p>
the likely change in the risk across the intended life of the use or development	<p>Assuming sea levels continue to rise at the projected rates, the risk to the site of coastal erosion and inundation will increase over time. However, it is our assessment that the risk to the proposed development is tolerable and will continue to be so for the design life of the development.</p>
the ability to adapt to a change in the level of risk	<p>Since the area vulnerable to coastal hazards is much larger than the site itself, the site has limited ability to adapt to a change in the level of risk. Conceivably, erosion protection could be installed on the eastern boundary of the site, such as replacing or increasing the height of the</p>



	existing rock wall; however, we do not expect this to be a necessary measure for this site.
the ability to maintain access to utilities and services	The site is supplied with water and overhead power via Deviot Road. This is further inland than the site, and hence there is no risk of loss of water, power (or access) via coastal inundation or erosion.
the need for specific coastal erosion or coastal inundation hazard reduction or protection measures on the site	The site itself has an existing rock wall on the eastern boundary, providing coastal erosion protection. No additional hazard reduction or protection measures on the site will be necessary to enable the proposed use or development to achieve and maintain a tolerable risk for the intended life of the use or development.
the need for coastal erosion or coastal inundation reduction or protection measures beyond the boundary of the site	Neighbouring sites to the north and south of the site are similarly exposed to coastal erosion and inundation hazards, but also generally have some existing coastal erosion protection. We assume the individual property owners will be responsible for their own structures. No protective measure works beyond the boundary of the site by the site owners is required.
any coastal erosion or coastal inundation management plan in place for the site or adjacent land	Houses along Deviot Road are not all equally exposed to coastal erosion or inundation risks and at the present subject site, the risks have been assessed as (relatively) lower. At some other sites, the risks are almost certainly higher. We expect that at some point, a coastal erosion management plan may need to be developed for Deviot Road more generally, but we are not aware of any such plan for the site, or for adjacent land at this time.

**Any advice relating to the ongoing management of the use or development**

N/A

**Is the use or development located on an actively mobile landform within the coastal zone?**

☐ Yes

☒ No

**Conclusions relating to any matter specifically required by Performance Criteria in the Coastal Erosion Hazard Code (C10.5 – C10.7) or the Coastal Inundation Hazard Code (C11.5 – C11.7)**

N/A

## 5 REFERENCES

- Australian Standard (AS) 1726:2017, *Geotechnical Site Investigations*, Committee CE-015 – Site Investigations, Council of Standards Australia
- CSIRO. (2020, December 20). *Climate Change in Australia*. Retrieved from Coastal and Marine Projections: <https://www.climatechangeinaustralia.gov.au/en/projections-tools/coastal-marine-projections/>
- Department of Premier and Cabinet. (2016). *Coastal Hazards in Tasmania, Summary Report of Coastal Hazards Technical Report*. Hobart: Tasmanian Government.
- Department of Premier and Cabinet. (2016). *Coastal Hazards Technical Report*. Hobart: Tasmanian Government.
- McInnes KI, M. D. (2016). *Sea-Level Rise and Allowances for Tasmania based on the IPCC AR5*. CSIRO.
- Sharples, C. W. (2013). *Coastal erosion susceptibility zone mapping for hazard band definition in Tasmania*. Hobart: Department of Premier and Cabinet.
- Tasmanian Climate Change Office. (2012). *Derivation of the Tasmanian Sea Level Rise Planning Allowances*. Hobart: Tasmanian Climate Change Office.



## **Important information about your report**

**These notes are provided to help you understand the limitations of your report.**

### **Project Scope**

Your report has been developed on the basis of your unique project specific requirements as understood by Tasman Geotechnics at the time, and applies only to the site investigated. Tasman Geotechnics should be consulted if there are subsequent changes to the proposed project, to assess how the changes impact on the report's recommendations.

### **Subsurface Conditions**

Subsurface conditions are created by natural processes and the activity of man.

A site assessment identifies subsurface conditions at discrete locations. Actual conditions at other locations may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time.

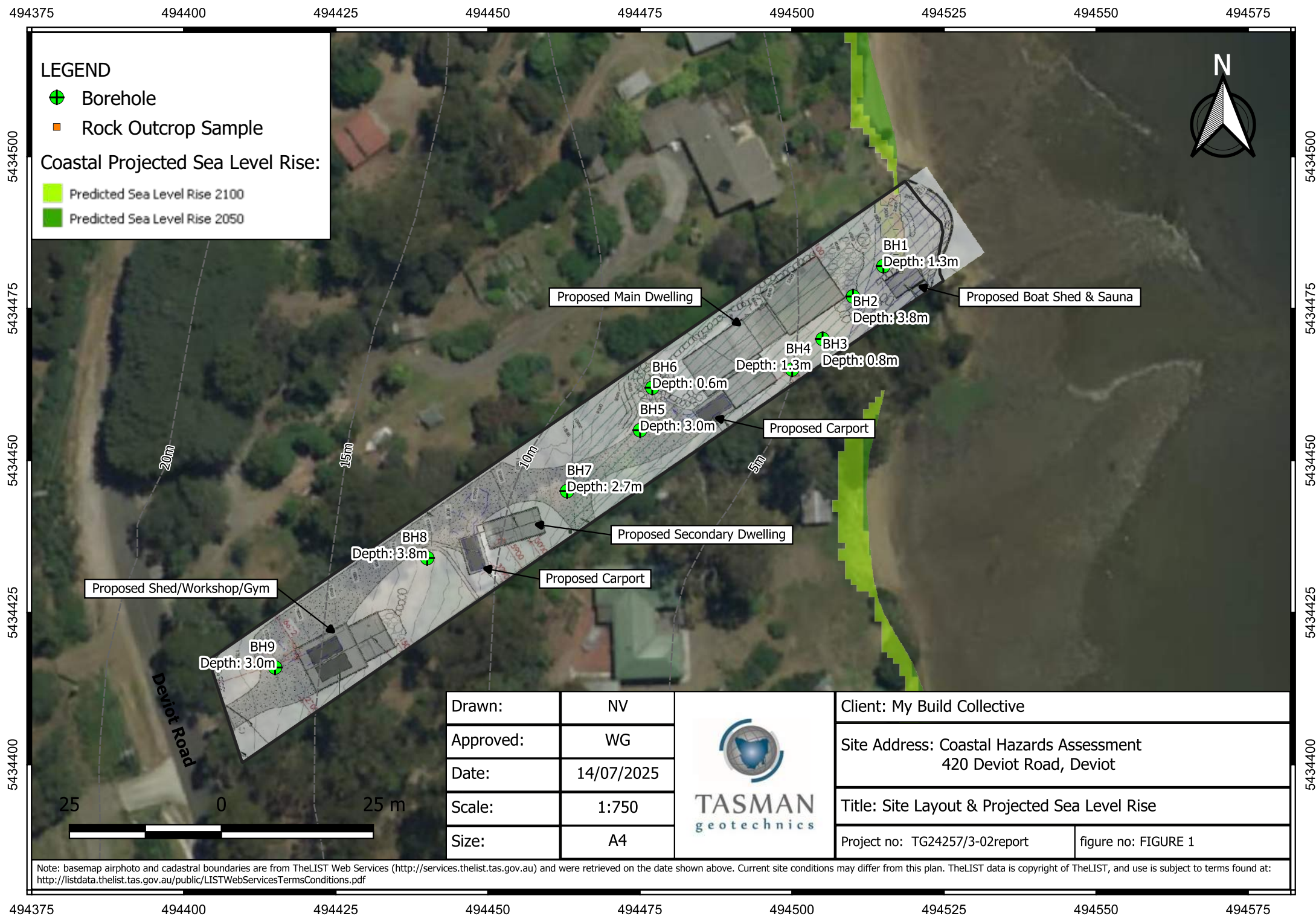
Nothing can be done to change the conditions that exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, the services of Tasman Geotechnics should be retained throughout the project, to identify variable conditions, conduct additional investigation or tests if required and recommend solutions to problems encountered on site.

### **Advice and Recommendations**

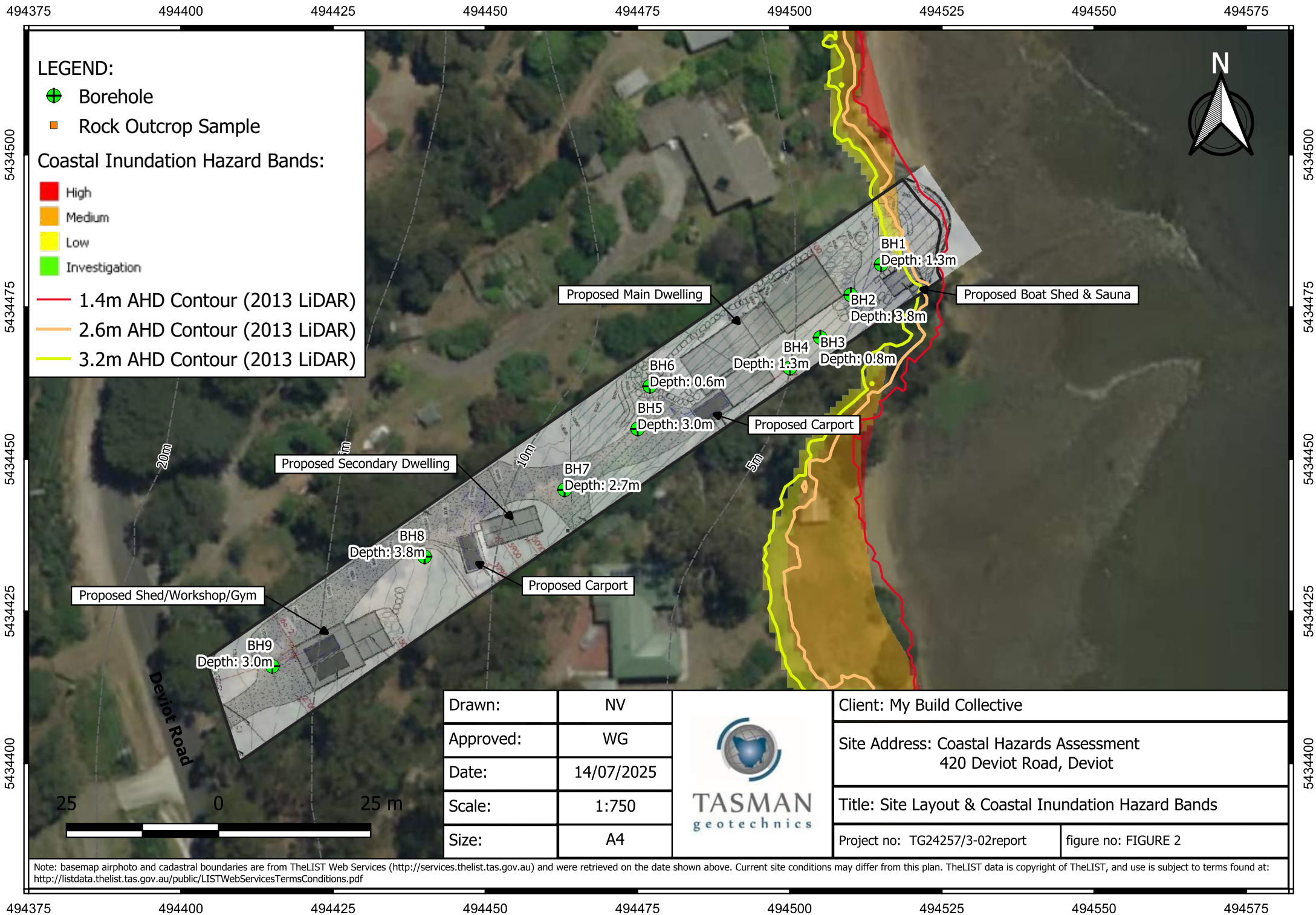
Your report contains advice or recommendations which are based on observations, measurements, calculations and professional interpretation, all of which have a level of uncertainty attached.

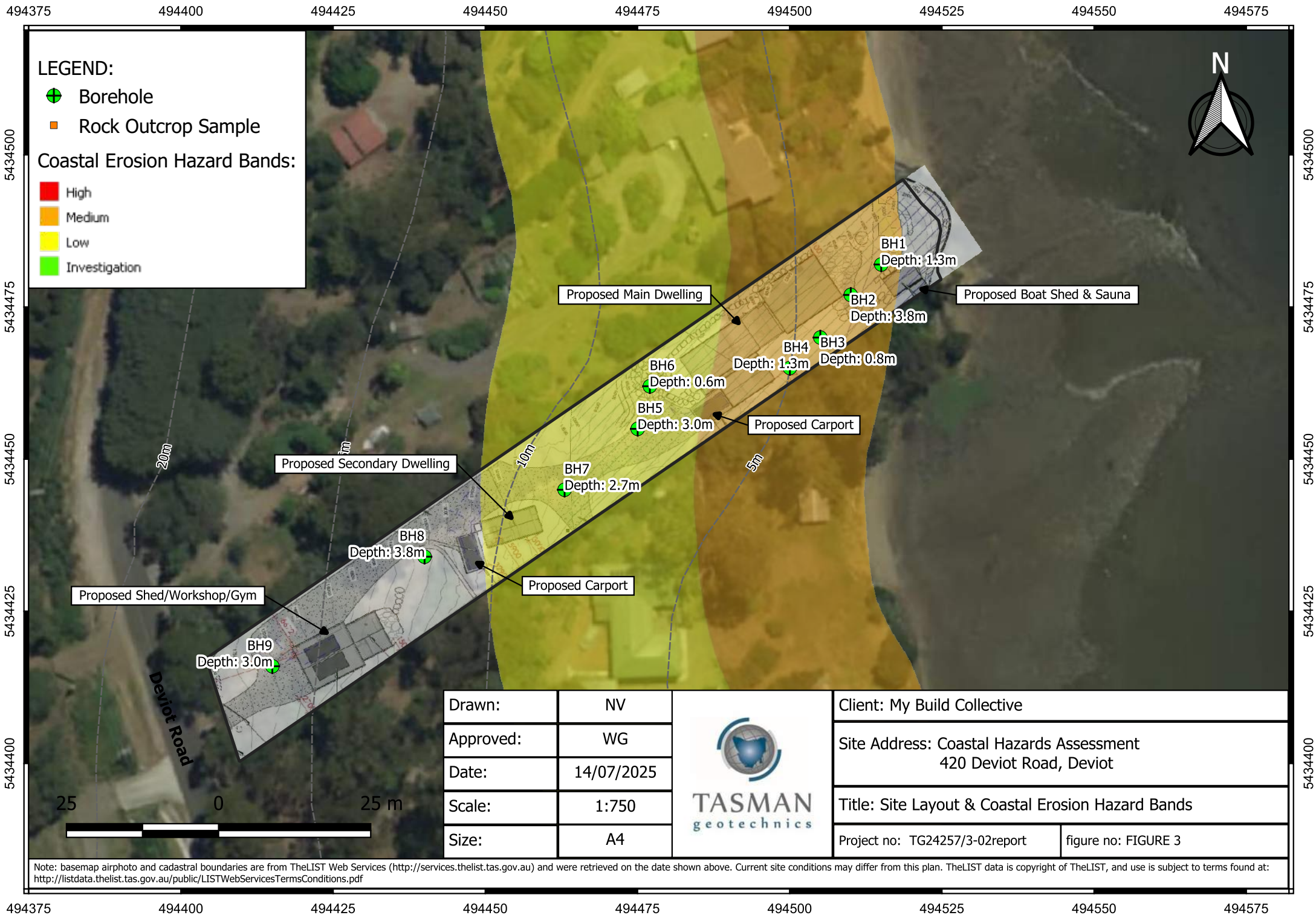
The recommendations are based on the assumption that subsurface conditions encountered at the discrete locations are indicative of an area. This can not be substantiated until implementation of the project has commenced. Tasman Geotechnics is familiar with the background information and should be consulted to assess whether or not the report's recommendations are valid, or whether changes should be considered.

The report as a whole presents the findings of the site assessment, and the report should not be copied in part or altered in any way.

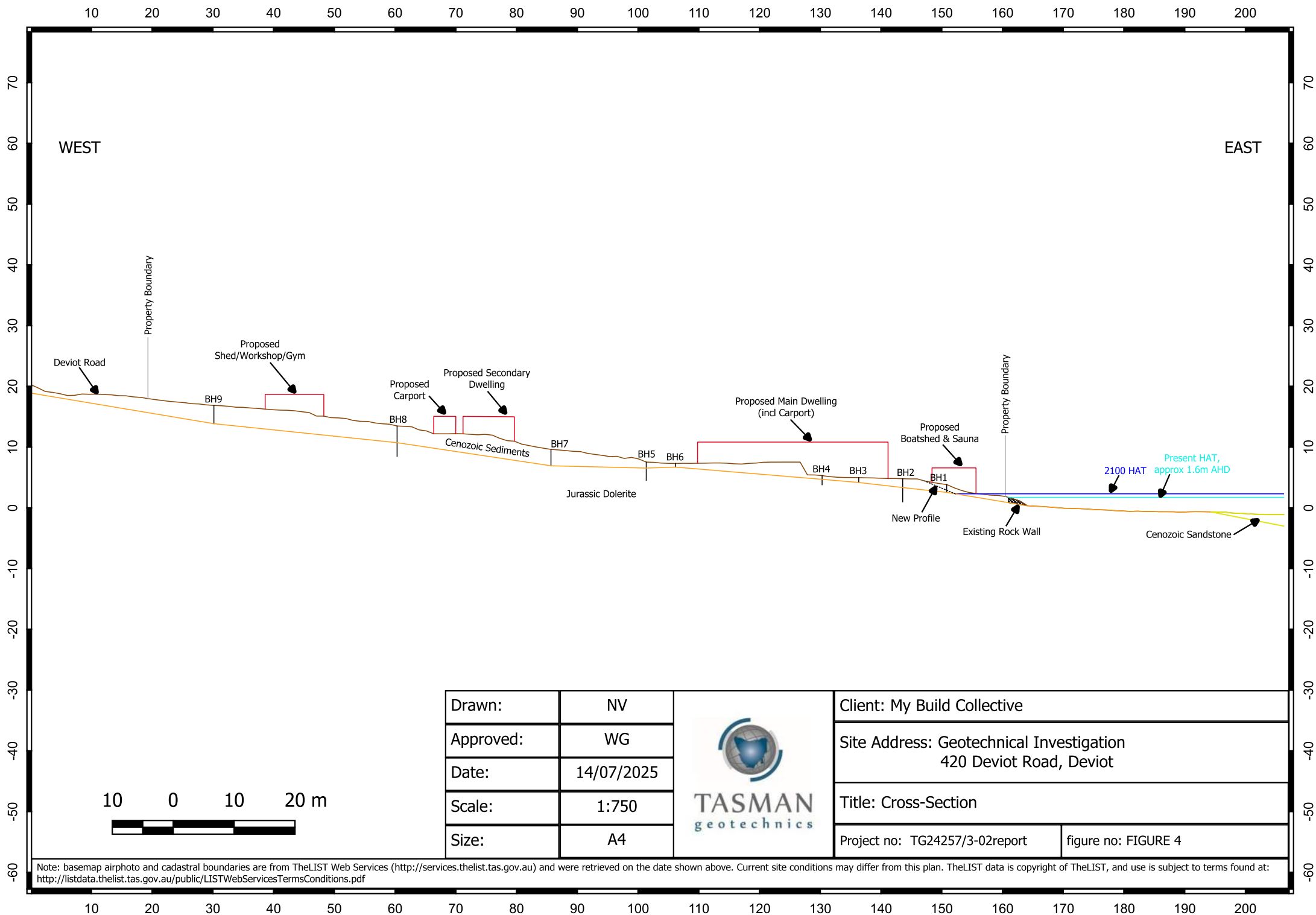












# **Appendix A**

## **Geotechnical Investigation Report**





**GEOTECHNICAL INVESTIGATION  
PROPOSED DWELLING & ANCILLARY BUILDINGS  
420 DEVIOT ROAD, DEVIOT**

Prepared for: **My Build Collective**

Date: 14 July 2025

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Figure 2	Extract of MRT Deviot Simplified Geology Map
Figure 3	Extract of MRT Landslide Inventory Map
Figure 4	Extract of MRT Deep-seated Landslide Susceptibility Map
Figure 5	Site Layout & MRT Coastal Erosion Hazard Bands
Figure 6	Site Layout & MRT Coastal Inundation Hazard Bands

## Appendices

- Appendix A     Engineering Borehole Logs  
Appendix B     Site Photographs  
Appendix C     Point Load Strength Index Test Results

Version	Date	Prepared by	Reviewed by	Distribution
Original	14 July 2025	Nev Vanderslink	Dr Wayne Griffioen	Electronic

## 1 INTRODUCTION

Tasman Geotechnics was commissioned by My Build Collective to carry out a geotechnical investigation for a proposed development at 420 Deviot Road, Deviot (title reference 64037/7).

The proposed development involves the demolition of the existing dwelling and shed, and construction of a new dwelling, ancillary buildings and driveway. The ancillary buildings include a secondary dwelling (and carport), a shed/workshop/gym, and boat shed/sauna.

A site plan showing the location of the proposed development was provided by the client.

The aim of the investigation is to assess the subsurface conditions at the site (including groundwater), and provide recommendations for:

- Site Classification in accordance with AS2870:2011
- Bearing capacity for high-level footings
- End bearing capacity for bored pier design
- Wind Classification in accordance with AS4055:2021

## 2 FIELD INVESTIGATION

The investigation was conducted in accordance with Australian Standard AS 1726-2017 - *Geotechnical Site Investigations* on two separate site visits.

On 12 November 2024, two Geotechnicians from Tasman Geotechnics attended the site and completed the following:

- Drilling of nine boreholes (BH1-BH9) to the termination depths of 1.3m, 3.8m, 0.8m, 1.5m, 3.0m, 0.6m, 2.7m, 5.0m, and 3.0m below ground level respectively, using a 4WD-mounted Eziprobe rig;
- Installation of two groundwater monitoring wells (in BH5 and BH8).

On 19 November 2024, two Senior Engineering Geologists from Tasman Geotechnics visited the site and completed the following:

- A site walkover to note geomorphological features and assess the site for coastal hazards;
- Collect samples from bedrock exposures for rock strength testing (Point Load Strength Index);
- Dynamic Cone Penetrometer (DCP) test (DCP1) adjacent to BH4, to determine the consistency of the Extremely Weathered dolerite encountered at the site. The DCP test was recorded as blows/100mm.
- Dip groundwater monitoring wells to note standing groundwater level (if present).

The engineering borehole logs are provided in Appendix A and the location of the boreholes are shown in Figure 1.

Selected site photographs are provided in Appendix B.

The borehole locations were determined in the field by hand-held GPS (accuracy  $\pm 3\text{m}$ ), with some references to existing buildings and/or other permanent structures.

Six soil samples were analysed by Tasman Geotechnics for Atterberg Limits and particle size distribution. The results are presented in Section 4.4.1.

Point Load Strength Index testing was completed by Tasman Geotechnics on 11 rock samples. The results are discussed in Section 4.4.2 and presented in Appendix C. The sampling locations are shown in Figure 1.



### 3 BACKGROUND INFORMATION

#### 3.1 Regional Setting

The site is located within the Tamar Graben, a narrow (~5km wide) but elongate (~60km long) northwest/southeast trending basin. The basin contains a thick sequence of Cenozoic-aged sediments and basalt overlying (generally) a Jurassic-aged dolerite basement. The central part of the graben is occupied by the modern River Tamar (or Tamar Estuary).

The site is located adjacent to the river edge, on east facing slopes on the western bank of the river.

#### 3.2 Geology

The Mineral Resources Tasmania (MRT) 1:25,000 Series Digital Geological map, Beaconsfield Sheet, shows the surface geology of the site is mapped as Cenozoic-aged sediments described as *“dominantly non-marine sequences of gravel, sand, silt, clay and regolith”*.

The 1:25,000 MRT geological maps are generally considered authoritative, however in the area around Deviot there are known errors in the published mapping particularly as it relates to the distribution of Tertiary (Cenozoic) basalt, but also in terms of the spatial distribution of Cenozoic-aged sediments and colluvium derived therefrom.

Whilst the 1:25,000 Beaconsfield geology map sheet dates from 1971 to 2001, the 1:25,000 scale Deviot Landslide Map Series Simplified Geology sheet issued in 2014 reflects a more recent MRT geological interpretation in the vicinity of the site. The Deviot Simplified Geology map sheet shows the surface geology of the site to predominantly be Jurassic-aged dolerite, with a relatively small area at the eastern end of the site (between the existing dwelling and eastern boundary of the lot) mapped on Pleistocene-aged sediments, described as *“alluvial and marine terraces of various elevations. May be overlain by alluvial sediments, slope deposits”*.

An extract of the Deviot Landslide Map Series Simplified Geology is presented on Figure 2.

#### 3.3 Landslide Mapping

MRT has been actively mapping landslides and landslide susceptibility since the 1950s, with a particular focus on urban growth areas beginning in the 1960s.

The MRT Landslide Inventory Map shows that the site is not located on any known landslides, however known landslides are mapped nearby.

A roughly 2km continuous zone of landsliding is mapped to the north of the site, extending from Brickmakers Point in the north to about halfway between Rowleys Beach and Miserable Inlet to the south. The landslides in the complex are mapped as extending from between about 190m to 660m upslope to the head scarps, with all landslides terminating at the River Tamar foreshore.

Most of the individual landslides within the broader complex are of Unknown Activity state, however there are also eight smaller Recent or Active landslides. The landslides within this complex that are nearest to the site are Landslide ID 4442 and 4441, located about 80m and 160m to the north of the site respectively. Both landslides are classified as ‘recent or active’ soil or earth slides, and are reported to have been active prior to 1975.

An extract of the Landslide Inventory Map is presented in Figure 3.

In 2003, MRT embarked on a new phase of landslide zoning in Tasmania. This work targeted the major urban areas of the State and areas of likely future development where it was assessed that a significant landslide hazard may exist. Consequently, there have been landslide hazard parameters developed within specific geographic areas such as the Tamar Valley and the Hobart-Glenorchy region. The parameters may include ground slope angles representative of potential source, regression, and runout areas, applicable specifically to the relevant geologic units within those areas.

This mapping activity has been undertaken for the site based on the trigger slope angles for the Jurassic-aged dolerite mapped at the site (Deviot Simplified Geology map sheet). For the dolerite, threshold values of source, regression and runout areas are 15°, 89° and 12° respectively. Based on these parameters, the site is not mapped as a possible source, regression or runout area.

An extract of the MRT deep-seated landslide susceptibility map is provided in Figure 4.

### **3.4 Coastal Erosion and Inundation Hazard Mapping**

According to The List, roughly the eastern half of the site is mapped within 'Medium' and 'Low' Coastal Erosion Hazard Bands.

Land within a 'Medium' Coastal Erosion Hazard Band is identified as potentially vulnerable to coastal recession by the year 2050. The eastern part of the site is mapped within a 'Medium' Coastal Erosion Hazard Band, covering an area of approximately 20% of the site and including the majority of the proposed main dwelling footprint and roughly the western half of the proposed boatshed/sauna. The eastern half of the proposed boat shed is not mapped within the 'Medium' Hazard Band but is downslope to the proposed dwelling (closer to the river), and thus assumed to be as or more vulnerable to coastal recession.

Land within a 'Low' Coastal Erosion Hazard Band is identified as potentially vulnerable to coastal recession by the year 2100. This includes part of the site directly to the west of the 'Medium' hazard band, and covers an area of about 30% of the site. The proposed secondary dwelling and northwestern corner of the proposed main dwelling are located within the 'Low' hazard band.

A small portion in the northeast corner of the site is mapped within 'Medium' and 'Low' Coastal Inundation Hazard Bands, i.e., vulnerable to a 1% AEP storm event by 2050 and 2100 respectively. The proposed buildings are not located within the Coastal Inundation Hazard Bands. However, based on 2013 LiDAR survey data, a larger area of the site falls below the elevation levels for 'Medium' and 'Low' Hazard Bands than the hazard band overlay suggests, and this area includes the roughly the eastern half of the proposed boat shed/sauna.

The shoreline at the site is classified in the Coastal Vulnerability Clayey Shores overlay on The List as "*Sloping clayey-gravelly shores - prone to slumping and/or progressive erosion*".

An assessment of the coastal hazards at the site is subject to a separate report.

An extract of the MRT Coastal Erosion Hazard Bands and Coastal Inundation Hazard Bands are provided in Figure 5 and 6 respectively.

### **3.5 Proposed Development**

The proposed development will involve demolition of the existing dwelling and shed, and construction of a new main dwelling, separate ancillary buildings, and a new driveway. The proposed main dwelling will be located roughly where the existing dwelling is currently situated, in the eastern portion of the site.

The ancillary buildings include a separate secondary dwelling and a combined shed/workshop/gym located to the west (upslope) of the proposed main dwelling, and a boat shed with attached sauna located to the east (downslope) of the proposed dwelling.

Details regarding proposed cut and fill were not provided by the client.

The design life of the proposed new dwelling, garage, studio, and gym is assumed to be 50 years. The design life of the proposed boatshed is assumed to be 20 years.

The site will require on-site wastewater and stormwater disposal design, recommendations for which will be provided in a separate report.

## 4 RESULTS

### 4.1 Surface Conditions

The circa 2405m<sup>2</sup> site is located between Deviot Road and the River Tamar, with the eastern (downslope) boundary coinciding roughly with the high-water mark.

The site has an overall moderate natural fall of about 8° to 10° towards the east; however, some flattening by cut/fill earthworks has been done around the existing dwelling and shed. The cut slopes are retained by dry-stacked dolerite boulder retaining walls up to about 1.2m high.

The existing dwelling and shed are accessed from Deviot Road, via a gravel driveway. The dwelling appears to be timber framed with a fiber-cement sheet type cladding; however, this is not confirmed. The shed is constructed from Colorbond metal sheeting. The exterior of the existing dwelling and shed appears to be in good condition.

The remainder of the site consists of overgrown vegetation, including grasses, shrubs and mature trees.

Surface soils at the site are predominantly silts and gravels, with no outcropping bedrock observed within the boundaries of the lot. However, Highly Weathered Dolerite bedrock is exposed in the roadside drain on the western side of Deviot Road, directly opposite the site and the bedrock is overlain by a colluvium.

No springs or seeps were observed on the site, and there were no other indications of high groundwater. The site appears to be well drained.

Near the eastern boundary of the lot, adjacent to the foreshore, a dry-stacked dolerite boulder wall about 1.2m high has been constructed as a protective barrier. The wall is in relatively good condition; however, some erosion was observed on the land-side of the wall, along with an accumulation of driftwood, indicating that the present Highest Astronomical Tide (HAT) is at or slightly above the top of the wall.

Two dolerite boulder groynes extend from the wall in a northeast direction towards the river and were likely constructed for additional foreshore protection. The remnants of an old timber jetty or pier are visible between the groynes.

On the foreshore there is a silty, sandy and gravelly beach which is more pronounced in front of the neighbouring lots on the outer sides of the rock groynes. In front of the lot, inside the rock groynes, the beach is largely absent and the foreshore consists of exposed in-situ bedrock of dolerite and sandstone.

The dolerite is Moderately to Highly weathered with rounded Slightly Weathered kernels, produced by spherical or "onion-skin" weathering. The dolerite is of variable rock strength (Very Low to High) depending on the degree of weathering. The sandstone is located to the east and north of the dolerite, about 30m to the east and north of the lot boundary respectively. The contact between the sandstone and dolerite appears to be roughly consistent with the MRT mapping (Deviot Simplified Geology map sheet). The sandstone is Highly weathered and Very Low strength. The sandstone appears to be overlying the dolerite and is therefore assumed to be younger (most likely Cenozoic) in age. Bedding in the sandstone dips at shallow angles ranging from about 11° to 28° towards the east to northeast.

## 4.2 Subsurface Conditions

The subsurface conditions encountered at the site consist of the following:

- 0.1m to 0.4m of FILL , consisting of fine to coarse grained (Silty, Clayey, Sandy) GRAVEL (Unit F1), low plasticity SILT and low to medium plasticity (Silty, Gravelly) CLAY (Unit F2), overlying
- Natural Cenozoic-aged sediments, consisting of minor fine to medium/coarse grained GRAVEL (Unit S1) and Clayey SAND (Unit S2), and dominated by low plasticity SILT (Unit S3) and medium to high plasticity CLAY and Gravelly CLAY (Unit S4) to depths ranging from 0.6m to 3m below ground level, overlying
- Extremely Weathered Jurassic-aged DOLERITE to borehole termination depth. The Extremely Weathered dolerite exhibits soil properties, and predominantly presents as high plasticity Clayey SILT or medium to high plasticity CLAY and Sandy CLAY.

A comparison of the typical fill, natural soil and rock types encountered in the boreholes are summarised in Table 1 below.

The boreholes (excluding BH7 and BH8) were terminated before the planned depth due to refusal, assumed to be on Highly Weathered dolerite, similar to that exposed on the foreshore to the east of the site.

Based on the surface and subsurface observations, the dolerite bedrock appears to gently rise from the foreshore at about 6° towards the west. The rock boundary does not appear to be planar based on the variable depths at which it was encountered in the boreholes.

No groundwater inflow was observed while drilling the boreholes. Groundwater monitoring wells were installed in BH5 and BH8. The wells were dipped 19 November 2024 (7-days after installation) and both were dry.

**Table 1. Typical Subsurface Conditions**

Material Type	Borehole ID								
	BH1	BH2	BH3	BH4	BH5	BH6	BH7	BH8	BH9
	Depth to Top (m Below Ground Level)								
<b>Fill Type:</b>									
F1 – Gravel (incl Silty, Clayey, Sandy)	-	-	-	0	0	0	0	-	0
F2 – Clay or Silt	0	0	-	-	-	-	0.2	0	0.2
<b>Natural Soil Type:</b>									
S1 - Gravel	-	-	-	-	-	0.3	-	-	-
S2 – Sand (Clayey)	-	-	-	-	-	-	1	-	-
S3 – Silt (incl Gravelly)	0.2	0.3	0	-	-	-	0.4	-	0.35
S4 – Clay (incl Gravelly)	0.7	0.6	0.1	0.1	0.3	0.4	1.4	0.1	0.6
<b>Natural Rock Type:</b>									
R1 – Dolerite (XW)	-	1.1	-	0.6	1	-	-	1.95	-
<b>Borehole Termination Depth (m BGL)</b>	1.3	3.8	0.8	1.5	3	0.6	2.7	5	3
<b>Borehole Termination Reason</b>	Refusal probably on Dolerite	Refusal in Dolerite	Refusal probably on Dolerite	Refusal in Dolerite	Refusal in Dolerite	Refusal probably on Dolerite	Still Going in Clay	Very Hard Going in Dolerite	Refusal probably on Dolerite

### 4.3 Dynamic Cone Penetrometer Testing

One DCP test (DCP1) was completed adjacent to borehole BH4. The purpose of the DCP test was to determine the relative density of the coarse-grained soils and consistency of the fine-grained soils encountered in the borehole, predominantly the Extremely Weathered dolerite (Unit R1), presenting as clay and clayey silt, as it was generally too friable for Pocket Penetrometer testing.

The DCP test was completed from current ground surface level, in undisturbed ground adjacent to BH4 and the results were recorded as blows/100mm. The DCP test was terminated at 1.1m due to refusal (>50 blows/100mm) in the Extremely Weathered dolerite.

The results are summarised in Table 2 and included on the borehole log.

The relative density of the coarse-grained soils and consistency of the fine-grained soils has been determined based on correlations provided in Australian Standards Handbook HB160-2006.

**Table 2. Dynamic Cone Penetrometer Results**

DCP Test ID	Location (Borehole)	Soil Unit	Soil Unit Depth Range Tested (m BGL)	Minimum Blows/100mm	Maximum Blows/100mm	Correlated Relative Density or Consistency
DCP1	BH4	F1	0-0.1	4	4	Loose
		S4	0.1-0.6	1	3	Firm-Stiff
		R1	0.6-1.1	6	>50	Very Stiff-Hard

Based on the results, the gravel fill (Unit F1) encountered in BH4 from surface to 0.1m is Loose. The natural clay encountered from 0.1m to 0.6m is Firm to Stiff, which is not consistent with the Pocket Penetrometer readings taken in the borehole, ranging from 140-200kPa (Stiff to Very Stiff). The Extremely Weathered dolerite (presenting as clay and clayey silt) encountered from 0.6m to termination depth is Very Stiff to Hard.

### 4.4 Laboratory Results

#### 4.4.1 Soil Test Results

Laboratory testing was carried out by Tasman Geotechnics on six soil samples for Atterberg Limits and particle size distribution, two from the natural clay (Unit S4) and four from the Extremely Weathered dolerite (Unit R1). The results are summarised in Table 3.

**Table 3. Laboratory Results**

Sample	Unit	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Linear Shrinkage (%)	% Gravel	% Sand	% Fines
BH2, 1.4-1.7m	R1	91	44	47	21	0	14	86
BH4, 0.3-0.6m	S4	97	25	72	21	7	5	88
BH4, 0.9-1.2m	R1	62	34	28	11	0	26	74
BH5, 2.7-3.0m	R1	53	25	28	12	2	28	70
BH8, 0.9-1.2m	S4	72	20	52	17	12	13	75
BH8, 2.1-2.4m	R1	76	35	41	16	0	16	84



Thus, the Unit S4 samples analysed from BH4 (0.3-0.6m) and BH8 (0.9-1.2m) are classified as high plasticity CLAY, trace sand and gravel. The Unit R1 samples analysed from BH2 (1.4-1.7m), BH4 (0.9-1.2m) and BH8 (2.1-2.4m) are classified as high plasticity Clayey SILT, trace/with sand. The Unit R1 sample analysed from BH5 (2.7-3.0m) is classified as high plasticity CLAY, with sand and trace gravel. The Unit R1 samples plot close to the A-line, indicating that they contain a combination of silt and clay.

#### 4.4.2 Rock Test Results

Point Load Strength Index testing was conducted by Tasman Geotechnics on a total of 11 rock samples (irregular lump), collected from outcropping bedrock exposures on the shoreline to the east of the lot. The samples included 8 samples of dolerite (taken from three locations, RS1-RS3), and 3 samples of sandstone (taken from one location, RS4). The rock samples were wrapped in plastic to retain the natural moisture content.

The results are summarised in Table 4 and presented in Appendix C. The sample locations are shown in Figure 1.

In calculating the equivalent Uniaxial Compressive Strength (UCS), we have assumed that the conversion from  $I_{s(50)}$  to UCS is 20 for igneous rocks (AS 1726:2017) and 10 for sedimentary rocks (Johnston, 1991). The rock strength classification is based on the  $I_{s(50)}$  values.

These results show that the strength of the rock samples varies depending on the degree of weathering. On average, the Highly, Moderately, and Slightly Weathered dolerite is Very Low, Low, and High strength respectively. Note that the Slightly Weathered sample tested from location RS3 was a rounded kernel within a predominantly Moderately Weathered rock mass produced by an in-situ weathering process called spherical or "onion-skin" weathering. The Highly Weathered sandstone was consistently Very Low strength.

**Table 4. Summary of Point Load Strength Index Test Results**

Rock Type	Degree of Weathering	Sample Location	Number of Samples	Minimum $I_{s(50)}$	Maximum $I_{s(50)}$	Average $I_{s(50)}$	Rock Strength (AS1726 Classification)	Equivalent Average UCS (MPa)
				(MPa)	(MPa)	(MPa)		
Dolerite	Highly	RS1 & RS2	4	0.03	0.06	0.05	Very Low	0.9
	Moderately	RS3	3	0.11	0.21	0.16	Low	3.2
	Slightly	RS3	1	1.40	1.40	1.40	High	28
Sandstone	Highly	RS4	3	0.06	0.09	0.08	Very Low	0.75

## 5 DISCUSSION AND RECOMMENDATIONS

Jurassic-aged dolerite bedrock was encountered across the site at relatively shallow depths, ranging from 0.6m to about 3m below ground level within the lot boundaries, and current ground surface on the foreshore directly to the east of the lot. The dolerite ranges from Extremely Weathered to Slightly Weathered and varies from less than Very Low strength (soil properties) to High strength. Within the lot boundaries, the dolerite is overlain by up to 0.4m of fill and between 0.2m to about 2.7m of Cenozoic-aged sediments (silt, clay and minor sand and gravel).

Information regarding expected cut/fill depths for the proposed development have not been provided by the client at this stage, thus recommendations for both high-level pad footings and large diameter bored piers are given below based on the possible soil or rock foundation. In the absence of knowing actual loads (horizontal, vertical and bending moments) we only provide general recommendations.

Tasman Geotechnics should be involved (e.g. by site visits) at strategic times during the execution of the works.

## 5.1 Site Classification

In accordance with the Director's Determination – Coastal Erosion Hazard Areas, the default classification of the site is:

### **CLASS P (AS 2870 - 2011)**

Footings should be designed for the specific conditions by an appropriately qualified engineer.

Nevertheless, after allowing due consideration of the site geology, drainage and soil conditions, the natural site has been classified as follows:

### **CLASS H2 (AS2870 – 2011)**

#### **Characteristic surface movement, $y_s = 70$ mm**

Foundation designs in accordance with this classification are subject to the conditions of Section 5.2. If cut or fill earthworks in excess of 0.5m are carried out, then the Site Classification will need to be re-assessed, and possibly changed.

## 5.2 Footings

Particular attention should be paid to the design of footings as required by AS 2870 – 2011.

In addition to normal founding requirements arising from the classification in Section 5.1, particular conditions at this site dictate that the founding medium for all footings (excluding the proposed stargazing deck/jetty) should be:

**CLAY (Unit S4)**, high plasticity (CH), typically encountered from 0.1m to 0.7m below ground level (2m below ground level in BH7).

**Or**

**DOLERITE (Unit R1)**, Extremely Weathered, typically encountered from 0.6m to about 3m below ground level.

An allowable bearing pressure of 100 kPa is available for edge beams, strip and pad footings founded on the natural soil or rock. Bored piers founded at least 2m below ground level may be proportioned for an allowable end bearing capacity of 250kPa.

If the site is filled, it is recommended that no structure be founded across cut and fill without the footings extending through the fill to the natural soils, allowance made in the structural design for differential settlements or engineer designed pier or pile foundations adopted.

The site classification presented in Section 5.1 assumes that the current natural drainage and infiltration conditions at the site will not be markedly affected by the proposed site development work. Care should therefore be taken to ensure that surface water is not permitted to collect adjacent to the structure and that significant changes to seasonal soil moisture equilibria do not develop as a result of service trench construction or tree root action.

Attention is drawn to Appendix B of AS 2870 and CSIRO Building Technical File BTF18 "Foundation Maintenance and Footing Performance: A Homeowner's Guide" as a guide to maintenance requirement for the proposed structure.

Variations in soil conditions may occur in areas of the site not specifically covered by the field investigation. The base of all footing or beam excavations should therefore be inspected to ensure that the founding medium meets the requirements discussed above.

### 5.3 Wind Classification

The wind classification for the site is as follows:

#### **N3 (AS 4055 - 2021)**

Based on region, terrain, shielding and topography as follows:

<b>Region</b>	<b>Terrain category</b>	<b>Topography</b>	<b>Shielding</b>
A	TC1	T0	NS

## 6 REFERENCES

Johnston. I.W, 1991, *Geomechanics and the Emergence of Soft Rock Technology*, Australian Geomechanics Society, Issue Number 21, Page 3-26

Standards Australia, 2006. HB 160-2006: Handbook – Soils Testing

Standards Australia, 2011. AS2870-2011: Residential Slabs and Footings

Standards Australia, 2017. AS1726-2017: Geotechnical Site Investigations

Standards Australia, 2021. AS4055-2021: Wind Loads for Housing



## **Important information about your report**

**These notes are provided to help you understand the limitations of your report.**

### **Project Scope**

Your report has been developed on the basis of your unique project specific requirements as understood by Tasman Geotechnics at the time, and applies only to the site investigated. Tasman Geotechnics should be consulted if there are subsequent changes to the proposed project, to assess how the changes impact on the report's recommendations.

### **Subsurface Conditions**

Subsurface conditions are created by natural processes and the activity of man.

A site assessment identifies subsurface conditions at discrete locations. Actual conditions at other locations may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time.

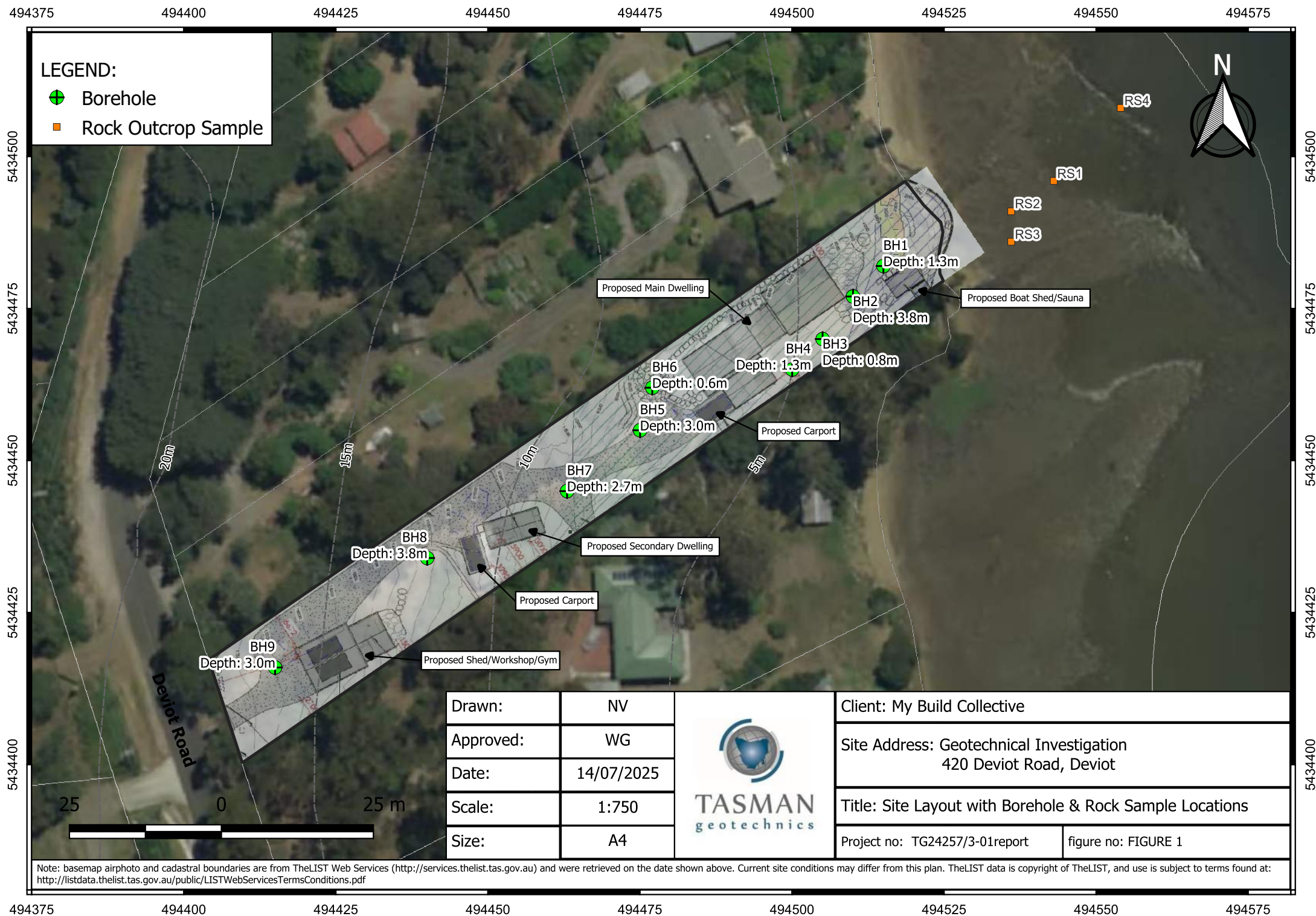
Nothing can be done to change the conditions that exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, the services of Tasman Geotechnics should be retained throughout the project, to identify variable conditions, conduct additional investigation or tests if required and recommend solutions to problems encountered on site.

### **Advice and Recommendations**

Your report contains advice or recommendations which are based on observations, measurements, calculations and professional interpretation, all of which have a level of uncertainty attached.

The recommendations are based on the assumption that subsurface conditions encountered at the discrete locations are indicative of an area. This can not be substantiated until implementation of the project has commenced. Tasman Geotechnics is familiar with the background information and should be consulted to assess whether or not the report's recommendations are valid, or whether changes should be considered.

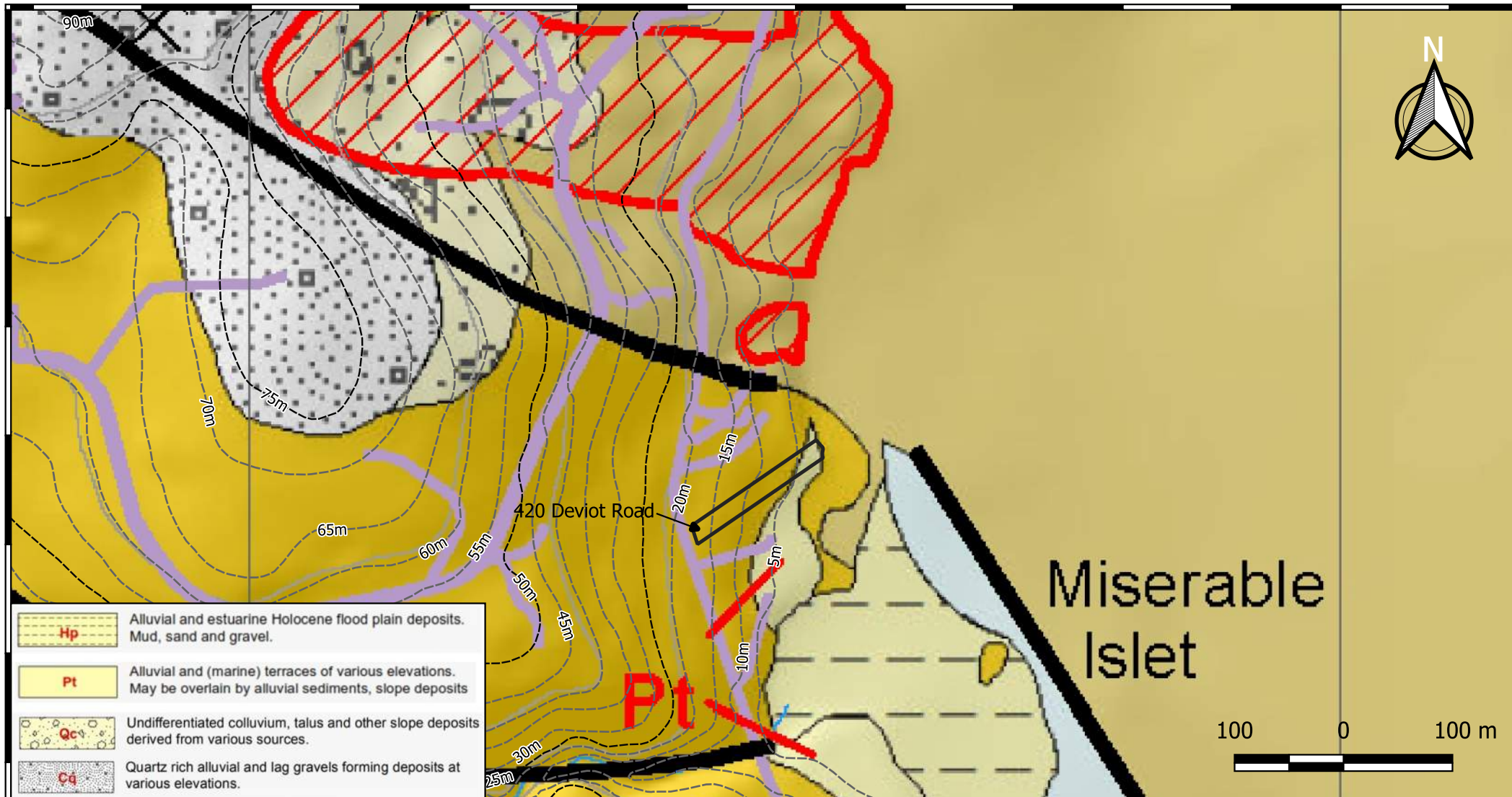
The report as a whole presents the findings of the site assessment, and the report should not be copied in part or altered in any way.





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	Alluvial and estuarine Holocene flood plain deposits. Mud, sand and gravel.
	Alluvial and (marine) terraces of various elevations. May be overlain by alluvial sediments, slope deposits
	Undifferentiated colluvium, talus and other slope deposits derived from various sources.
	Quartz rich alluvial and lag gravels forming deposits at various elevations.
	Undifferentiated Paleogene basalt. Basalts and minor basanite. Deeply weathered in places.
	Undifferentiated Launceston Group (Paleogene). Clays, sands and conglomerates. Deeply weathered in places.
	Tasmanian Dolerite (Jurassic). Doleritic sheets, sills and dykes. Deeply weathered in places.
	Landslides (excluding headscarps and possible features)

Drawn:	NV
Approved:	WG
Date:	14/07/2025
Scale:	1:5000
Size:	A4



Client: My Build Collective	
Site Address: Geotechnical Investigation 420 Deviot Road, Deviot	
Title: Extract of MRT Deviot Simplified Geology Map	
Project no: TG24257/3-01report	figure no: FIGURE 2

Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (<http://services.thelist.tas.gov.au>) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: <http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf>

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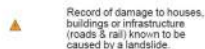
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#### Landslide Features

	Recent or active landslide.		1061 Recent or active earth or debris flow.		1066 Earth or debris flow, activity unknown.
	Activity unknown.		1062 Recent or active rock or soil slide.		1067 Rock or soil slide, activity unknown.
	Possible landslide.		1063 Recent or active rock fall.		1068 Rock fall, activity unknown.
			1064 Possible landslide, activity not specified.		

Note: Not all landslide points have an associated polygon. Some polygons not shown if too small for map scale. Landslide point with landslide ID from GEOHAZARD (landslide) database. Further details of landslides may be obtained from MRT.

#### Damaged Points



Record of damage to houses, buildings or infrastructure (roads & rail) known to be caused by a landslide.

Note: Damage due to other causes (eg. reactive soil) are also recorded in the GEOHAZARD (landslide) database.

#### Miscellaneous

- Municipality boundary.
- Limit of Geomorphological mapping.
- Boundary between Airborne Laser Scanning and 1:5 000 / 1:25 000 topographic contours - for DEM derivatives.

Note: Landslides outside the limit of geomorphological mapping have not been reviewed or refined in this map series.

Drawn:	NV
Approved:	WG
Date:	14/07/2025
Scale:	1:5000
Size:	A4



TASMAN  
geotechnics

Client: My Build Collective

Site Address: Geotechnical Investigation  
420 Deviot Road, Deviot

Title: Extract of MRT Landslide Inventory Map

Project no: TG24257/3-01report

figure no: FIGURE 3

Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (<http://services.thelist.tas.gov.au>) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: <http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf>

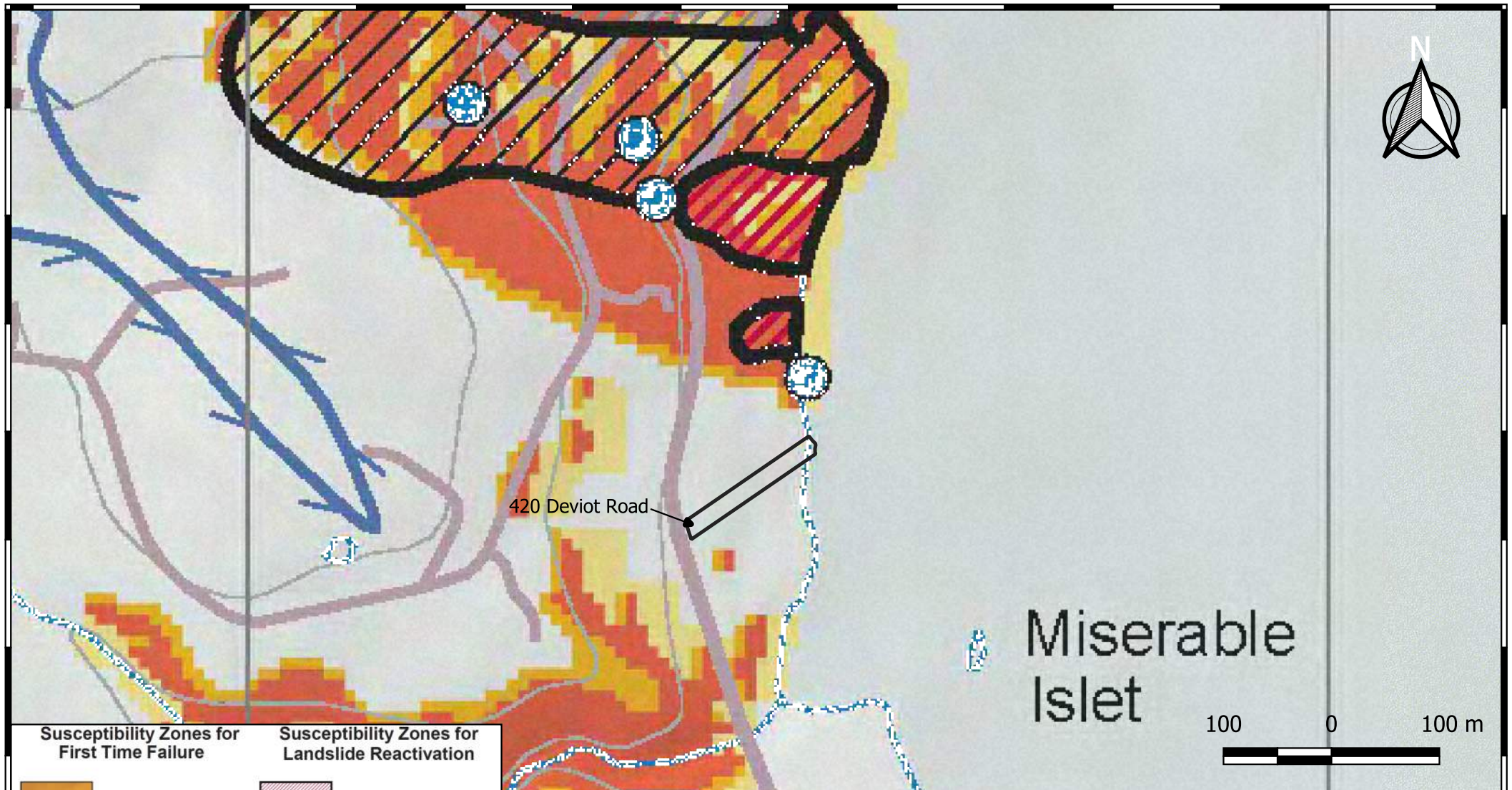
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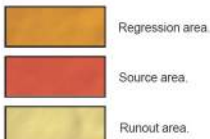
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5434400  
5434300  
5434200  
5434100  
5434000



**Susceptibility Zones for First Time Failure**

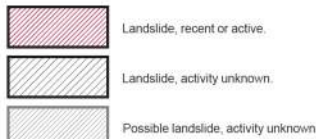


Regression area: An area up-slope of a source area that could fail following a landslide movement (a.k.a retrogression or set-back area).

Source area: An area of hillside with the potential to form a slope failure, identified largely on the basis of slope angle and geology.

Runout area: An area down-slope of a source area where the moving earth, debris or rock can potentially travel.

**Susceptibility Zones for Landslide Reactivation**



Spring or seep - which have a known association with landslides in many cases.

Drawn:	NV
Approved:	WG
Date:	14/07/2025
Scale:	1:5000
Size:	A4

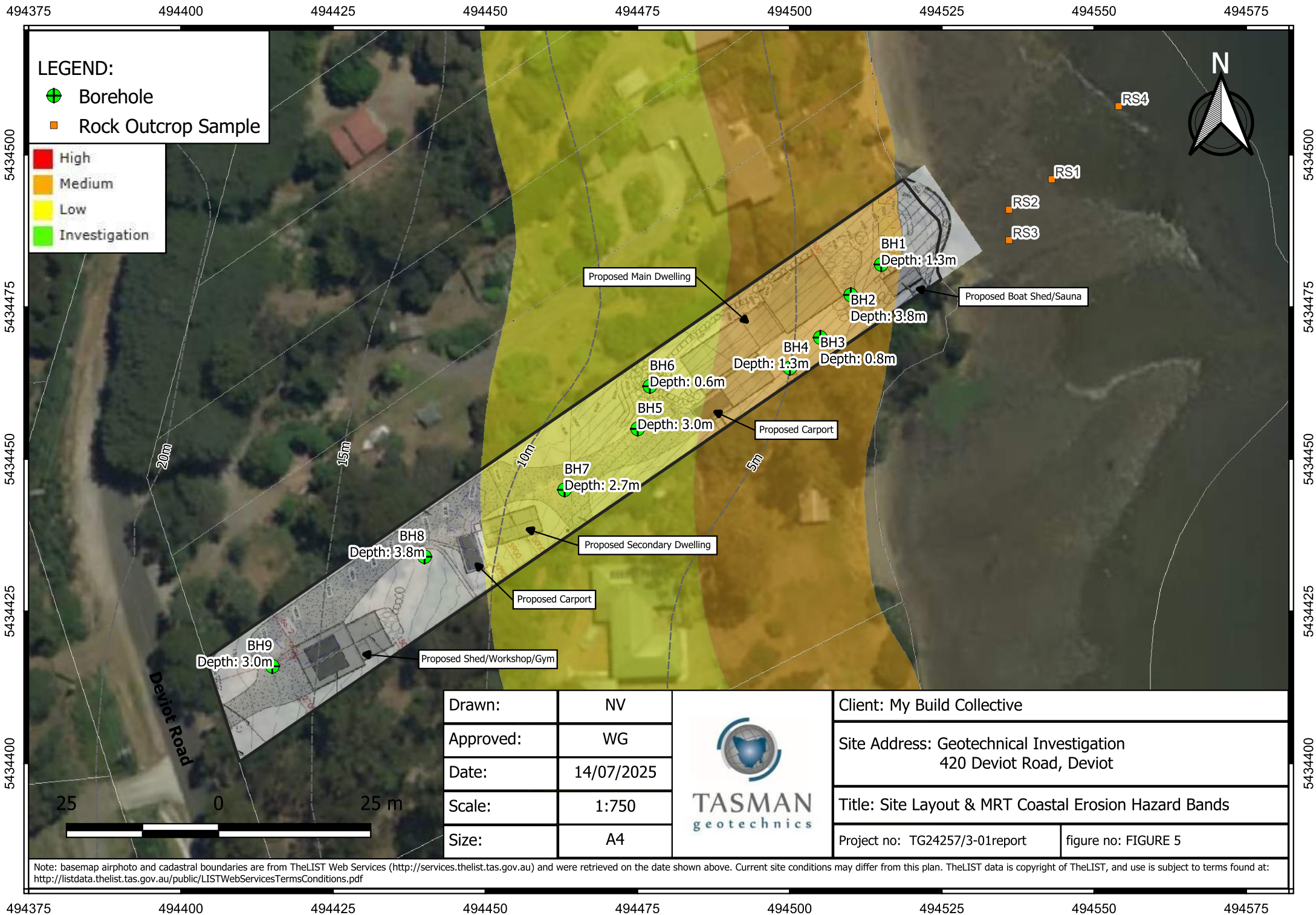


Client: My Build Collective	
Site Address: Geotechnical Investigation 420 Deviot Road, Deviot	
Title: Extract of MRT Deep-Seated Landslide Susceptibility Map	
Project no: TG24257/3-01report	figure no: FIGURE 4

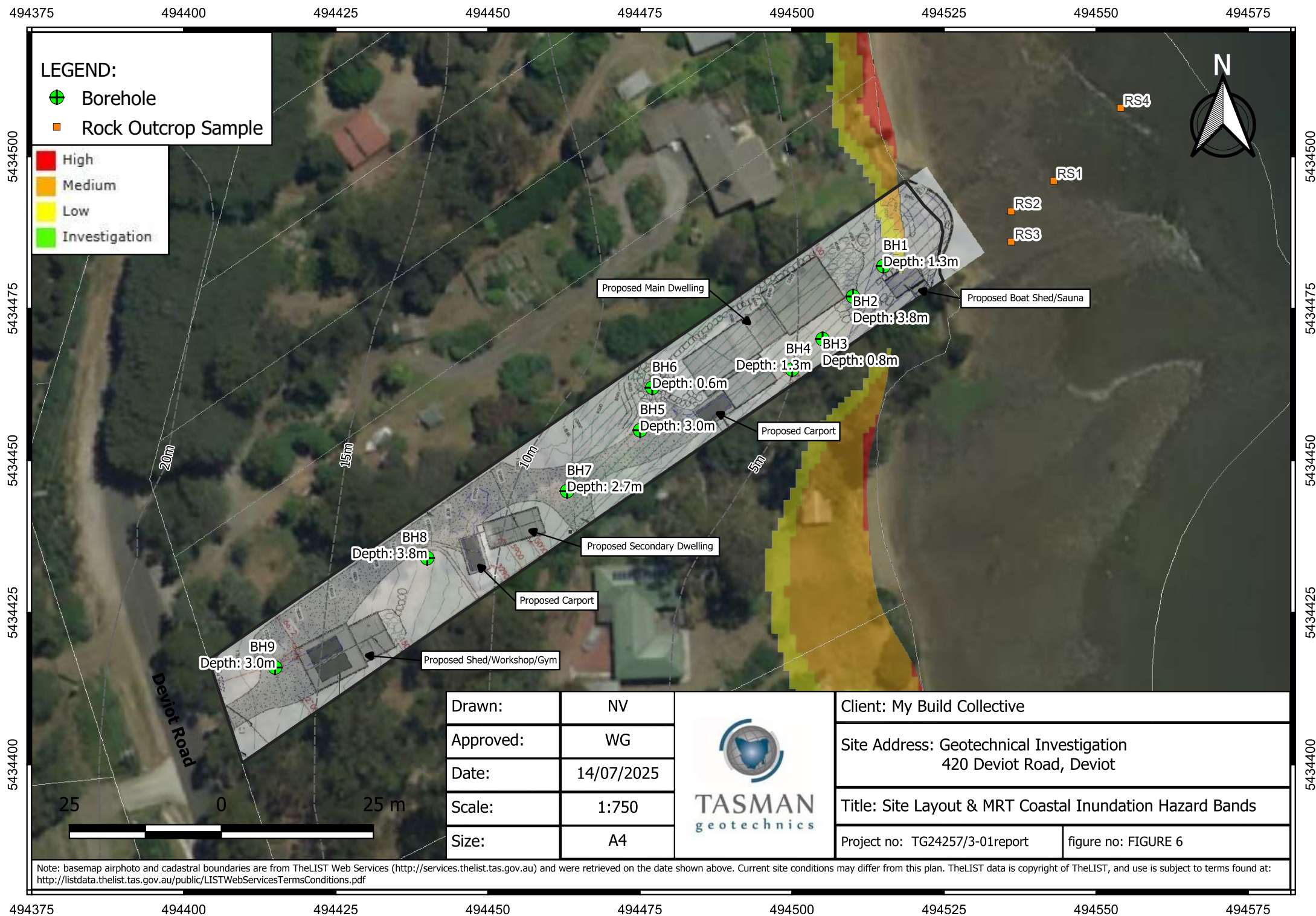
Note: basemap airphoto and cadastral boundaries are from TheLIST Web Services (<http://services.thelist.tas.gov.au>) and were retrieved on the date shown above. Current site conditions may differ from this plan. TheLIST data is copyright of TheLIST, and use is subject to terms found at: <http://listdata.thelist.tas.gov.au/public/LISTWebServicesTermsConditions.pdf>

493800 493900 494000 494100 494200 494300 494400 494500 494600 494700 494800 494900 495000 495100











# **Appendix A**

## **Engineering Borehole Logs**

Soils are described in accordance with the Unified Soil Classification System (USCS), as shown in the following table.

**FIELD IDENTIFICATION**

COARSE GRAINED SOILS	more than 65% of material less than 63mm is larger than 0.075mm	GRAVELS	GW	Well graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELLY SOILS	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
		SANDS	SW	Well graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		SANDY SOILS	SM	Silty sand, sand-silt mixtures, non-plastic fines
			SC	Clayey sands, sand-clay mixtures, plastic fines

				DRY STRENGTH	DILATANCY	TOUGHNESS	
FINE GRAINED SOILS	more than 35% of material less than 63mm is less than 0.075mm	SILT & CLAY, liquid limit less than 50%	ML	Inorganic silts, very fine sands or clayey fine sands	None to low	Quick to slow	None
			CL	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays and silty clays	Medium to high	None to very slow	Medium
			OL	Organic silts and organic silty clays of low plasticity	Low to medium	Slow	Low
	SILT & CLAY, liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts	Low to medium	Slow to none	Low to medium	
		CH	Inorganic clays of high plasticity, fat clays	High	None	High	
		OH	Organic clays of medium to high plasticity	Medium to high	None to very slow	Low to medium	
PEAT		Pt	Peat muck and other highly organic soils				

**Particle size descriptive terms**

Name	Subdivision	Size
Boulders		>200mm
Cobbles		63mm to 200mm
Gravel	coarse	19mm to 63mm
	medium	6.7mm to 19mm
	fine	2.36mm to 6.7mm
Sand	coarse	600µm to 2.36mm
	medium	210µm to 600µm
	fine	75µm to 210µm

**Moisture Condition**

Dry (D)	Looks and feels dry. Cohesive soils are hard, friable or powdery. Granular soils run freely through fingers.
Moist (M)	Soil feels cool, darkened in colour. Cohesive soils are usually weakened by moisture presence, granular soils tend to cohere.
Wet (W)	As for moist soils, but free water forms on hands when sample is handled

Cohesive soils can also be described relative to their plastic limit, ie: <Wp, =Wp, >Wp

The plastic limit is defined as the minimum water content at which the soil can be rolled into a thread 3mm thick.

**Consistency of cohesive soils**

Term	Undrained strength	Field guide
Very soft VS	<12kPa	A finger can be pushed well into soil with little effort
Soft S	12 - 25kPa	Easily penetrated several cm by fist
Firm F	25 - 50kPa	Soil can be indented about 5mm by thumb
Stiff St	50-100kPa	Surface can be indented but not penetrated by thumb
Very stiff VSt	100-200kPa	Surface can be marked but not indented by thumb
Hard H	>200kPa	Indented with difficulty by thumb nail
Friable Fb	-	Crumbles or powders when scraped by thumb nail

**Density of granular soils**

Term	Density index
Very loose	<15%
Loose	15 to 35%
medium dense	35 to 65%
Dense	65 to 85%
Very dense	>85%

**Minor Components**

Term	Proportions	Observed properties
Trace of	Coarse grained: <5% Fine grained: <15%	Presence just detectable by feel or eye. Soil properties little or no different to general properties of primary component.
With some	Coarse grained: 5-12% Fine grained: 15-30%	Presence easily detected by feel or eye. Soil properties little different to general properties of primary component.

ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH1  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494515  
GDA94 Northing: 5434482  
Elevation: 4.2

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4									100 200 300 400 500	
Push Tube							0		CI	Possible FILL: Silty CLAY; medium plasticity; brown; with sand, fine to medium grained; trace gravel	<Wp	Fb		
								X	ML	SILT; low plasticity; brown and dark brown; with sand, fine to medium grained				
							0.5	X						
								X	CH	CLAY; high plasticity; brown mottled orange-brown; trace sand, fine grained	>Wp	VSt	330	
							1			Becoming Gravelly, brown mottled orange-brown; trace sand, fine grained; gravel is fine to coarse grained; angular fresh dolerite		St/VSt	225	
							1.5			Terminated at 1.3m due to refusal				
							2							
							2.5							
							3							
							3.5							
							4							

<b>method</b> DT      Diatube AS      Auger screwing AH      Auger drilling RR      Roller/tricone CB      Claw/blade bit NMLC   NMLC core NQ, HQ Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50    Undisturbed sample 50mm diameter D      Disturbed sample N      Standard Penetration Test (SPT) N*     SPT - sample recovered Nc     SPT with solid cone V      Vane Shear (kPa) P      Pressure Meter Bs     Bulk Sample R      Refusal E      Environmental Sample PID    PID Measurement WS     Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  Cohesive soils can also be described relative to their plastic limit, ie: <Wp =Wp >Wp	<b>Consistency</b> VS     Very soft S      Soft F      Firm St     Stiff VSt    Very stiff H      Hard Fb     Friable VL     Very Loose L      Loose MD    Medium Dense D      Dense VD     Very Dense
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ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH2  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494510  
GDA94 Northing: 5434477  
Elevation: 4.8

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4									100 200 300 400 500	
Push Tube							0		ML	Possible FILL: SILT; low plasticity; brown; with sand, fine to medium grained; with gravel, fine to coarse grained	<Wp	Fb		
							0.5			SILT; low plasticity; brown; with sand, fine to medium grained; with gravel, fine to medium grained; rounded quartz				
							1		CH	CLAY; high plasticity; orange-brown mottled grey; trace sand, fine grained	≈Wp	Fb/VSt	360 300	
					D		1.5		CI	Extremely Weathered DOLERITE presenting as Sandy CLAY; medium plasticity; orange-brown, white and grey; sand is fine to medium grained	<Wp	Fb		
					D		2		MH	Presenting as Clayey SILT; high plasticity, orange-brown/brown with grey/white seams, with sand, fine to medium grained	≤Wp	Fb/VSt	280	
							2.5						210	Generally too friable for PP
							3						290	PP crumbled at 290kPa
							3.5			As above with trace kernels of slightly less weathered material, i.e. trace gravel, angular/sub-angular, Very Low strength			200	
							4			Terminated at 3.8m due to refusal				

<b>method</b> DT     Diatube AS     Auger screwing AH     Auger drilling RR     Roller/tricone CB     Claw/blade bit NMLC   NMLC core NQ, HQ   Wireline core		<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50     Undisturbed sample 50mm diameter D       Disturbed sample N       Standard Penetration Test (SPT) N*      SPT - sample recovered Nc      SPT with solid cone V       Vane Shear (kPa) P       Pressure Meter Bs      Bulk Sample R       Refusal E       Environmental Sample PID     PID Measurement WS      Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  <b>Cohesive soils can also be described relative to their plastic limit, ie:</b> <Wp =Wp >Wp	<b>Consistency</b> VS      Very soft S       Soft F       Firm St      Stiff VSt     Very stiff H       Hard Fb      Friable VL      Very Loose L       Loose MD     Medium Dense D       Dense VD      Very Dense
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**Client:** My Build Collective  
**Project:** Geotechnical Investigation  
**Location:** 420 Deviot Road, Deviot



**TASMAN**  
geotechnics

**Elevation:** 4.9

[illegible][illegible]

<b>method</b>		<b>water</b>	<b>Notes, Samples, Tests</b>	<b>Moisture Condition</b>	<b>Consistency</b>
DT	Diatube	 17/03/18 water level on date shown	U50 Undisturbed sample 50mm diameter	Dry (D)	VS Very soft
AS	Auger screwing		D Disturbed sample	Moist (M)	S Soft
AH	Auger drilling	 water inflow	N Standard Penetration Test (SPT)	Wet (W)	F Firm
RR	Roller/tricone	 partial drill fluid loss	N* SPT - sample recovered		St Stiff
CB	Claw/blade bit		Nc SPT with solid cone	<b>Cohesive soils can also be described relative to their plastic limit, ie:</b>	VSt Very stiff
NMLC	NMLC core		V Vane Shear (kPa)		H Hard
NQ, HQ	Wireline core	 complete drill fluid loss	P Pressure Meter		Fb Friable
			Bs Bulk Sample	<Wp	VL Very Loose
			R Refusal	=Wp	L Loose
			E Environmental Sample	>Wp	MD Medium Dense
			PID PID Measurement		D Dense
			WS Water Sample		VD Very Dense



ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm/120mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH4  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494500  
GDA94 Northing: 5434465  
Elevation (2013 LiDAR): 5.1

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	DCP (blows per 100mm)	
	1	2	3	4									100 200 300 400 500	10	20
Push Tube							0		GC	FILL: Clayey GRAVEL; fine to coarse grained; angular to rounded; brown/dark grey; high plasticity clay; trace sand, fine to medium grained CLAY; high plasticity; brown mottled orange-brown; trace sand, fine grained	D	L			
									CH		>Wp	F/St	200		
									CH		≥Wp	VSt	140		
									CH		<Wp	H/Fb	200		
									MH		<Wp	H/Fb			
Auger							1			Presenting as Clayey SILT; high plasticity; orange-brown/grey; with sand, fine to medium grained	<Wp	H/Fb			
							1.5		CI	Presenting as CLAY, medium plasticity; brown; with sand, fine to medium grained	<Wp	H/Fb			
							1.5			Terminated at 1.5m due to refusal					
							2								
							2.5								
							3								
							3.5								
							4								

<b>method</b> DT      Diatube AS      Auger screwing AH      Auger drilling RR      Roller/tricone CB      Claw/blade bit NMLC   NMLC core NQ, HQ Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50    Undisturbed sample 50mm diameter D      Disturbed sample N      Standard Penetration Test (SPT) N*     SPT - sample recovered Nc     SPT with solid cone V      Vane Shear (kPa) P      Pressure Meter Bs     Bulk Sample R      Refusal E      Environmental Sample PID    PID Measurement WS     Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  Cohesive soils can also be described relative to their plastic limit, ie: <Wp =Wp >Wp	<b>Consistency</b> VS    Very soft S      Soft F      Firm St     Stiff VSt   Very stiff H      Hard Fb     Friable VL    Very Loose L      Loose MD    Medium Dense D      Dense VD    Very Dense
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ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm/120mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH5  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494475  
GDA94 Northing: 5434455  
Elevation: 7.6

Method	Penetration 1 2 3 4	Notes Samples Tests	Piezo	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
										100 200 300 400 500	
Push Tube				0			FILL: Sandy GRAVEL; fine to coarse grained; dark grey and pale brown; with silt, non-plastic; angular and sub-angular, sand fine to medium grained	D	MD		
				0.5			CLAY; high plasticity; orange-brown mottled grey; trace sand, fine grained; with gravel, fine to coarse grained; angular (fresh dolerite) and rounded (quartz)	>Wp	VSt		
				1			CLAY; medium plasticity; brown; with gravel, fine to coarse grained; sub-rounded and sub-angular	≥Wp	St		
				1.5			Extremely Weathered DOLERITE presenting as CLAY; medium plasticity; brown mottled yellow; with sand, fine to medium grained; trace gravel, fine to medium grained; sub-rounded and sub-angular	≥Wp	St/VSt		
				2							
				2.5							
				3			Presenting as Silty CLAY; high plasticity; brown; with sand, fine to medium grained, trace gravel, fine to medium grained	<Wp	VSt		
				3.5							
				4			Terminated at 3.0m due to refusal				

**method**

DT      Diatube  
AS      Auger screwing  
AD      Auger drilling  
RR      Roller/tricone  
CB      Claw/blade bit  
NMLC   NMLC core  
NQ, HQ Wireline core

**water**

17/03/18 water level on date shown

water inflow

partial drill fluid loss

complete drill fluid loss

**Piezometer Legend**

Backfill

Bentonite

Sand Packing

Screen

End Cap

**Moisture Condition**

Dry (D)  
Moist (M)  
Wet (W)

**Cohesive soils can also be described relative to their plastic limit, ie:**

<Wp  
=Wp  
>Wp

**Consistency**

VS      Very soft  
S      Soft  
F      Firm  
St      Stiff  
VSt   Very stiff  
H      Hard  
Fb   Friable  
VL   Very Loose  
L      Loose  
MD   Medium Dense  
D      Dense  
VD   Very Dense

ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH6  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494477  
GDA94 Northing: 5434462  
Elevation: 7.6

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4									100 200 300 400 500	
Push Tube							0		GM	FILL: Silty GRAVEL; fine to medium grained; dark brown low plasticity; sub-rounded and sub-angular FILL: GRAVEL; fine to medium grained; brown and grey; trace silt, non-plastic; angular, various lithologies, with fine to medium grained sand GRAVEL; fine to coarse grained; grey; trace silt, non-plastic, trace sand, fresh dolerite, probably broken up cobble; angular Gravelly CLAY; high plasticity; brown; with sand, fine to medium grained; gravel is fine to coarse grained; sub-rounded and sub-angular weathered dolerite	D	MD		
									GP					
							-0.5		CH		≈Wp	VSt		
							1			Terminated at 0.6m due to refusal				
							1.5							
							2							
							2.5							
							3							
							3.5							
							4							

<b>method</b> DT     Diatube AS     Auger screwing AH     Auger drilling RR     Roller/tricone CB     Claw/blade bit NMLC   NMLC core NQ, HQ   Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50     Undisturbed sample 50mm diameter D       Disturbed sample N       Standard Penetration Test (SPT) N*      SPT - sample recovered Nc      SPT with solid cone V       Vane Shear (kPa) P       Pressure Meter Bs      Bulk Sample R       Refusal E       Environmental Sample PID     PID Measurement WS      Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  Cohesive soils can also be described relative to their plastic limit, ie: <Wp =Wp >Wp	<b>Consistency</b> VS      Very soft S       Soft F       Firm St      Stiff VSt     Very stiff H       Hard Fb      Friable VL      Very Loose L       Loose MD     Medium Dense D       Dense VD      Very Dense
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ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH7  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494463  
GDA94 Northing: 5434445  
Elevation: 9.5

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4									100 200 300 400 500	
Push Tube							0		GP-GM	FILL: Sandy GRAVEL; fine to medium grained; brown and grey; with silt, non-plastic; sand fine to medium grained, gravel is angular	D	MD		
									CI	Probable FILL: CLAY; medium plasticity; grey and brown; trace sand, fine to medium grained; trace gravel, fine to medium grained; sub-rounded and sub-angular	>Wp	St/VSt		
							-0.5		ML	SILT; low plasticity; grey-brown; with sand, fine to medium grained; trace gravel, fine grained; sub-rounded	<Wp	Fb		
									SC	Clayey SAND; fine to medium grained; grey and dark brown, low to medium plasticity fines, trace fine grained gravel	M	MD/D		
							-1.5		CI-CH	CLAY; medium to high plasticity; grey and orange-brown; with sand, fine to medium grained; with gravel, fine grained; sub-rounded and sub-angular	<Wp	Fb/VSt		PP crumbled at 270kPa
													200	
							-2							PP crumbled at 200KPa
									CH	CLAY; high plasticity; grey mottled orange-brown; trace sand, fine grained; trace gravel, fine grained	≥Wp	VSt		
							-2.5						380	
													440	
							-3			Terminated at planned depth of 2.7m, still going				
							-3.5							
							4							

<b>method</b> DT      Diatube AS      Auger screwing AH      Auger drilling RR      Roller/tricone CB      Claw/blade bit NMLC   NMLC core NQ, HQ Wireline core		<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50    Undisturbed sample 50mm diameter D      Disturbed sample N      Standard Penetration Test (SPT) N*     SPT - sample recovered Nc     SPT with solid cone V      Vane Shear (kPa) P      Pressure Meter Bs     Bulk Sample R      Refusal E      Environmental Sample PID    PID Measurement WS     Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  Cohesive soils can also be described relative to their plastic limit, ie: <Wp =Wp >Wp	<b>Consistency</b> VS    Very soft S      Soft F      Firm St     Stiff VSt   Very stiff H      Hard Fb     Friable VL    Very Loose L      Loose MD    Medium Dense D      Dense VD    Very Dense
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# ENGINEERING BOREHOLE LOG

**Client:** My Build Collective  
**Project:** Geotechnical Investigation  
**Location:** 420 Deviot Road, Deviot  
**Drill model:** Eziprobe  
**Hole diameter:** 58mm/120mm  
**Slope:** -90      **Bearing:** 0



**Borehole no:** TG24257/3-BH8  
**Sheet no.** 1 of 1  
**Job no.** TG24257/3  
**Date:** 12 Nov 2024  
**Logged By:** DG  
**GDA94 Easting:** 494440  
**GDA94 Northing:** 5434434  
**Elevation:** 13.8

Method	Penetration 1 2 3 4	Notes Samples Tests	Piezo	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
										100 200 300 400 500	
Push Tube				0			Probable FILL: Silty Gravelly CLAY; medium plasticity; brown; gravel is fine to coarse grained; rounded and angular	<Wp	Fb		
				0.5			CLAY; low plasticity; brown; with sand, fine to medium grained; with gravel, fine grained; sub-rounded and sub-angular	<Wp	Fb		
			D	1			CLAY; high plasticity; orange-brown mottled grey; trace sand, fine grained; trace gravel (ironstone), fine to medium grained; sub-rounded and sub-angular	>Wp	VSt		+
				1.5			Becoming grey mottled orange-brown; trace sand, fine grained	>Wp	VSt		+
			D	2			Extremely Weathered DOLERITE presenting as Sandy SILT; low plasticity; yellow-brown; sand is fine grained	<Wp	Fb		+
				2.5			Presenting as Clayey SILT, high plasticity, grey and white; with sand, fine grained	<Wp	Fb		+
Auger				3							
			D	3.5			Presenting as CLAY, medium plasticity, orange-brown flecked cream, with thin grey seams, with fine to medium grained sand	<Wp	Fb		
				4			Change to Auger drilling method, same material as above	<Wp	Fb		
				4.5							
				5			Terminated at 5m, very hard going				
				5.5							

<b>method</b> DT Diatube AS Auger screwing AD Auger drilling RR Roller/tricone CB Claw/blade bit NMLC NMLC core NQ, HQ Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Piezometer Legend</b> Backfill Bentonite Sand Packing Screen End Cap	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W) <b>Cohesive soils can also be described relative to their plastic limit, ie:</b> <Wp =Wp >Wp	<b>Consistency</b> VS Very soft S Soft F Firm St Stiff VSt Very stiff H Hard Fb Friable VL Very Loose L Loose MD Medium Dense D Dense VD Very Dense
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ENGINEERING BOREHOLE LOG

Client: My Build Collective  
Project: Geotechnical Investigation  
Location: 420 Deviot Road, Deviot  
Drill model: Eziprobe  
Hole diameter: 58mm  
Slope: -90      Bearing: 0



Borehole no: TG24257/3-BH9  
Sheet no. 1 of 1  
Job no. TG24257/3  
Date: 12 Nov 2024  
Logged By: DG  
GDA94 Easting: 494415  
GDA94 Northing: 5434416  
Elevation: 16.5

Method	Penetration				Notes Samples Tests	Water	Depth	Graphic Log	Classification	Material Description	Moisture Condition	Consistency density, index	Pocket Penetro- meter kPa	Structure, additional observations
	1	2	3	4									100 200 300 400 500	
Push Tube							0		GW	FILL: Sandy GRAVEL; fine to coarse grained; pale brown and grey; trace silt, non-plastic; sand fine to medium grained, gravel angular and sub-angular	D	MD		
									CI	Probable FILL: CLAY; medium plasticity; brown; with sand, fine to medium grained; with gravel, fine to coarse grained; sub-angular	≥Wp	St/VSt		
							0.5		ML	SILT; low plasticity; brown and grey; with sand, fine to medium grained; trace gravel, fine grained	<Wp	Fb		
									CH	CLAY; high plasticity; brown mottled orange-brown; trace sand, fine to medium grained; trace gravel, fine grained	≥Wp	St	195	
							1						185	
										Becoming Very Stiff		VSt	210	
							1.5						240	
							2						280	
													310	
							2.5						330	
							3						250	
										Terminated at 3.0m due to refusal				
							3.5							
							4							

<b>method</b> DT      Diatube AS      Auger screwing AH      Auger drilling RR      Roller/tricone CB      Claw/blade bit NMLC   NMLC core NQ, HQ Wireline core	<b>water</b> 17/03/18 water level on date shown water inflow partial drill fluid loss complete drill fluid loss	<b>Notes, Samples, Tests</b> U50    Undisturbed sample 50mm diameter D      Disturbed sample N      Standard Penetration Test (SPT) N*     SPT - sample recovered Nc     SPT with solid cone V      Vane Shear (kPa) P      Pressure Meter Bs     Bulk Sample R      Refusal E      Environmental Sample PID    PID Measurement WS     Water Sample	<b>Moisture Condition</b> Dry (D) Moist (M) Wet (W)  <b>Cohesive soils can also be described relative to their plastic limit, ie:</b> <Wp =Wp >Wp	<b>Consistency</b> VS     Very soft S      Soft F      Firm St     Stiff VSt    Very stiff H      Hard Fb     Friable VL     Very Loose L      Loose MD    Medium Dense D      Dense VD     Very Dense
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# **Appendix B**

## **Site Photographs**



Photo 1: Dolerite bedrock exposed in drain on Deviot Road, opposite site driveway entrance, looking north-northwest.



Photo 2: Borehole BH9 location (foreground) and driveway entrance to site (background), looking west.





Photo 3: Existing dwelling and borehole BH5 location (water monitoring well), looking northeast.



Photo 4: Dry-stacked dolerite boulder retaining wall adjacent to existing dwelling, looking north.





Photo 5: Existing shed and borehole BH8 (water monitoring well), looking east.



Photo 6: Borehole BH4 and Dynamic Cone Penetrometer Test DCP1 location, looking northwest.





Photo 7: Borehole BH1 location, looking southwest.



Photo 8: Foreshore and River Tamar to the east of the site, looking east. Note dolerite boulder groynes extending out from the site.





Photo 9: Dry-stacked dolerite boulder wall on eastern boundary of site to protect site from erosion.



Photo 10: Moderately to Highly Weathered dolerite bedrock (Rock Sample location, RS3), and remnants of timber jetty/pier on foreshore to the east of the site, looking southwest. Note spherical or “onion-skin” weathering in the dolerite.





Photo 11: Contact between outcropping dolerite and sandstone bedrock on foreshore, looking north-northeast.



Photo 12: Highly Weathered sandstone bedrock (Rock Sample location, RS4) outcropping on foreshore to the east of the site.

## **Appendix C**

### **Point Load Strength Index Test Results**

Client: My Build Collective

Location: 420 Deviot Road, Deviot

Project No: TG24257/3

Date: 21/11/2024

Tested by: Nev.V



Borehole ID	Sample Depth From (m BGL)	Sample Depth To (m BGL)	Test Date	Rock Description	Rock Weathering	Sample Moisture Content	Axial, Block & Irregular lump Testing								Notes:	Strength Classification (AS1726:2017)
							W	D	D <sub>e</sub> <sup>2</sup>	GP	P	I <sub>s</sub>	F	I <sub>s,50</sub>		
							[mm]	[mm]	[mm <sup>2</sup> ]	[kN]	[kN]	[MPa]	[-]	[MPa]		
RS1, 1 of 2	0	0	21/11/24	Dolerite	HW	Natural	49.4	37.1	2333.52	0.12		0.05	0.98	0.05	Irregular Lump test	VLS
RS1, 2 of 2	0	0	21/11/24	Dolerite	HW	Natural	61.5	38.0	2975.56	0.16		0.05	1.04	0.06	Irregular Lump test	VLS
RS2, 1 of 2	0	0	21/11/24	Dolerite	HW	Natural	61.5	33.4	2615.36	0.08		0.03	1.01	0.03	Irregular Lump test	VLS
RS2, 2 of 2	0	0	21/11/24	Dolerite	HW	Natural	67.6	42.8	3683.84	0.12		0.03	1.09	0.04	Irregular Lump test	VLS
RS3, 1 of 4	0	0	21/11/24	Dolerite	MW	Natural	67.9	41.0	3544.57	0.45		0.13	1.08	0.14	Irregular Lump test	LS
RS3, 2 of 4	0	0	21/11/24	Dolerite	MW	Natural	77.0	42.9	4205.89	0.41		0.09	1.12	0.11	Irregular Lump test	LS
RS3, 3 of 4	0	0	21/11/24	Dolerite	SW	Natural	47.1	36.3	2176.90	3.15		1.45	0.97	1.40	SW kernel within MW rock mass, Irregular Lump test	HS
RS3, 4 of 4	0	0	21/11/24	Dolerite	MW	Natural	51.0	36.4	2363.64	0.51		0.21	0.99	0.21	Irregular Lump test	LS
RS4, 1 of 3	0	0	21/11/24	Sandstone	HW	Natural	79.0	46.3	4657.13	0.35		0.08	1.15	0.09	Irregular Lump test	VLS
RS4, 2 of 3	0	0	21/11/24	Sandstone	HW	Natural	75.0	50.7	4841.49	0.25		0.05	1.16	0.06	Irregular Lump test	VLS
RS4, 3 of 3	0	0	21/11/24	Sandstone	HW	Natural	74.7	58.7	5583.02	0.46		0.09	1.20	0.09	Irregular Lump test	VLS

<b>Notes:</b> 1 - L/D >1.0; 0.3<D/W<1.0 2 - 0.3W<D<W 3 - Quote I <sub>s,50</sub> to two decimal places	<b>Rock Weathering:</b> DW = Distinctly Weathered SW = Slightly Weathered FR = Fresh	<b>Moisture Content:</b> N = Natural D = Dry S = Saturated	L = Sample Length (mm) D = Platen Separation (mm) W = Width of Specimen (mm) GP = Gauge Pressure (kN) F = Size correction factor (-)	<b>For Diametral Test:</b> F = (D/50) <sup>0.45</sup> I <sub>s</sub> = (GP/D <sup>2</sup> ) X 1000 I <sub>s,50</sub> = I <sub>s</sub> X F	<b>For Axial/Irregular Lump Test:</b> D <sub>e</sub> <sup>2</sup> = (4/π) X (W x D) F = (D <sub>e</sub> /50) <sup>0.45</sup> I <sub>s</sub> = (GP/D <sub>e</sub> <sup>2</sup> ) X 1000 I <sub>s,50</sub> = I <sub>s</sub> X F	<b>Strength Classification:</b> VLS = Very Low Strength LS = Low Strength MS = Medium Strength HS = High Strength VHS = Very High Strength EHS = Extremely High Strength
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# CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To:  Owner /Agent  
 Address  
  Suburb/postcode

## Qualified person details:

Qualified person:   
Address:  Phone No:   
  Fax No:   
Licence No:  Email address:

Qualifications and Insurance details:  (description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

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

## Details of work:

Address:  Lot No:   
  Certificate of title No:   
The assessable item related to this certificate:  (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:  (description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

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

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

or

a building, temporary structure or plumbing installation: ☐

In issuing this certificate the following matters are relevant –

Documents:

Tasman Geotechnics report TG24257/3 – 01report, dated 14 July 2025  
Tasman Geotechnics report TG24257/3 – 02report, dated 14 July 2025

Relevant  
calculations:

Ys calculation as per AS2870 – 2011

References:

AS2870 – 2011  
In accordance with the Director's Determination - Coastal Hazard Areas

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

Site classification to AS2870 – 2011  
Coastal Erosion Assessment

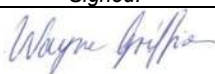
*Scope and/or Limitations*

Refer to Section 5 of report TG24257/3 – 01report

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

Qualified person:

*Signed:*



*Certificate No:*

TG24257/3 – 03Form 55

*Date:*

14/07/2025