DISCRETIONARY APPLICATION

For Public Display

Applicant:
Vietnam Veterans Association Of Australia

Location:
2 Galaxia Avenue, Interlaken

Proposal:
Multi-Purpose Education & Training Facility

DA Number:
DA 2024 / 06

Date Advertised:
15 February 2024

Date Representation Period Closes:
29 February 2024

Responsible Officer:
Louisa Brown (Planning Officer)

Viewing Documents:
The relevant documents may be viewed at Council's website www.centralhighlands.tas.gov.au or at Council's Offices 19 Alexander Street, Bothwell & 6 Tarleton Street, Hamilton during normal office hours.

Representations to:

General Manager
19 Alexander Street
BOTHWELL TAS 7030

Email:
development@centralhighlands.tas.gov.au

central highlands COUNCIL

Development & Environmental Services
19 Alexander Street
BOTHWELL TAS 7030

Phone: (03) 6259 5503
Fax: (03) 6259 5722

www.centralhighlands.tas.gov.au

OFFICE USE ONLY

Application No.: _____

Property ID No.: _____

Date Received: _____

Application for Planning Approval
Use and Development

Use this form to apply for planning approval in accordance with section 57 and 58 of the *Land Use Planning and Approvals Act 1993*

Applicant / Owner Details:

Applicant Name Vietnam Veterans Association of Australai - Tasmania Branch Inc.

Postal Address: 5 Bisdee Street, — Phone No: 0400 140870

South Arm — 7022 — Fax No:

Email address: troey1@bigpond.com

Owner/s Name (if not Applicant): As Above

Postal Address: — Phone No:

Fax No:

Email address:

Description of proposed use and/or development:

Address of new use and development: 2 Galaxia Avenue, Dago Point, Interlaken, Tasmania, 7030

Certificate of Title No: Volume No 166727/1 Lot No: 1

Description of proposed use or development: New Building - Multi-Purpose Education & Training facility for current Australian Defence Personnel & Ex serving veterans to use. To conduct workshops/meetings/short courses & training.

ie: New Dwelling /Additions/ Demolition / /Shed / Farm Building / Carport / Swimming Pool or detail other etc.

Current use of land and buildings: There is currently 1 existing building on the site - a Retreat for veterans and their families to stay. The new building will be approx 31.5m distance between buildings.

Eg. Are there any existing buildings on this title?
If yes, what is the main building used as?

Proposed Material

What are the proposed external wall colours: Pale Eucalypt Steel Cladding

What is the proposed roof colour: Monument

What is the proposed new floor area m^2.: 94.97m2

What is the estimated value of all the new work proposed: $ 390,000.00

Is proposed development to be staged:	*Yes* ☐	*No* ☒	Tick ✓
Is the proposed development located on land previously used as a tip site?	*Yes* ☐	*No* ☒	
Is the place on the Tasmanian Heritage Register?	*Yes* ☐	*No* ☒	
Have you sought advice from Heritage Tasmania?	*Yes* ☐	*No* ☒	
Has a Certificate of Exemption been sought for these works?	*Yes* ☐	*No* ☒	

Signed Declaration

I/we hereby apply for a planning approval to carry out the use or development described in this application and in the accompanying plans and documents, accordingly I declare that:

1. The information given is a true and accurate representation of the proposed development. I understand that the information and materials provided with this development application may be made available to the public. I understand that the Council may make such copies of the information and materials as, in its opinion, are necessary to facilitate a thorough consideration of the Development Application. I have obtained the relevant permission of the copyright owner for the communication and reproduction of the plans accompanying the development application, for the purposes of assessment of that application. I indemnify the Central Highlands Council for any claim or action taken against it in respect of breach of copyright in respect of any of the information or material provided.

2. In relation to this application, I/we agree to allow Council employees or consultants to enter the site in order to assess the application.

3. I am the applicant for the planning permit and I have notified the owner/s of the land in writing of the intention to make this application in accordance with Section 52(1) of the *Land Use Planning Approvals Act 1993* (or the land owner has signed this form in the box below in "Land Owner(s) signature);
Applies where the applicant is not the Owner and the land is not Crown land or owned by a council, and is not land administered by the Crown or a council.

Applicant Signature (if not the Owner)	Applicant Name (*Please print*)	Date
	Terry Roe	06 December 2023

Land Owner(s) Signature	Land Owners *Name (please print)*	Date
	Vietnam veterans - Tasmania Branch	06 December 2023
JESSE WALKER TEAM LEADER (ASSESSMENTS)	The Crown Department of Natural Resources and Environment Tasmania	9/2/24

Information & Checklist sheet

		✓
1.	A completed Application for Planning Approval – Use and Development form. *Please ensure that the information provides an accurate description of the proposal, has the correct address and contact details and is signed and dated by the applicant.*	☐
2.	A current copy of the Certificate of Title for all lots involved in the proposal. *The title details must include, where available, a copy of the search page, title plan, sealed plan or diagram and any schedule of easements (if any), or other restrictions, including covenants, Council notification or conditions of transfer.*	☒
3.	Two (2) copies of the following information -	
	a) An analysis of the site and surrounding area setting out accurate descriptions of the following -	☐
	(i) topography and major site features including an indication of the type and extent of native vegetation present, natural drainage lines, water courses and wetlands, trees greater than 5 metres in height in areas of skyline or landscape importance and identification of any natural hazards including flood prone areas, high fire risk areas and land subject to instability;	
	(ii) soil conditions (depth, description of type, land capability etc);	
	(iii) the location and capacity of any existing services or easements on the site or connected to the site;	
	(iv) existing pedestrian and vehicle access to the site;	
	(v) any existing buildings on the site;	
	(vi) adjoining properties and their uses; and	
	(vii) soil and water management plans.	
	b) A site plan for the proposed use or development drawn, unless otherwise approved, at a scale of not less than 1:200 or 1:1000 for sites in excess of 1 hectare, showing -	☒
	(i) a north point;	
	(ii) the boundaries and dimensions of the site;	
	(iii) Australian Height Datum (AHD) levels;	
	(iv) natural drainage lines, watercourses and wetlands;	
	(v) soil depth and type;	
	(vi) the location and capacity of any existing services or easements on the site or connected to the site;	
	(vii) the location of any existing buildings on the site, indicating those to be retained or demolished, and their relationship to buildings on adjacent sites, streets and access ways;	
	(viii) the use of adjoining properties;	
	(ix) shadow diagrams of the proposed buildings where development has the potential to cause overshadowing;	
	(x) the dimensions, layout and surfacing materials of all access roads, turning areas, parking areas and footpaths within and at the site entrance;	
	(xi) any proposed private or public open space or communal space or facilities;	
	(xii) proposed landscaping, indicating vegetation to be removed or retained and species and mature heights of plantings; and	
	(xiii) methods of minimizing erosion and run-off during and after construction and preventing contamination of storm water discharged from the site.	
	c) Plans and elevations of proposed and existing buildings, drawn at a scale of not less than 1:100, showing internal layout and materials to be used on external walls and roofs and the relationship of the elevations to natural ground level, including any proposed cut or fill.	☐
4.	A written submission supporting the application that demonstrates compliance with the relevant parts of the Act, State Polices and the Central Highlands Interim Planning Scheme 2015, including for industrial and commercial uses, the hours of operation, number of employees, details of any point source discharges or emissions, traffic volumes generated by the use and a Traffic Impact Statement where the development is likely to create more than 100 vehicle movements per day.	☐
5.	Prescribed fees payable to Council. An invoice for the fees payable will be issued once application has been received.	

Information If you provide an email address in this form then the Central Highlands Council ("the Council") will treat the provision of the email address as consent to the Council, pursuant to Section 6 of the Electronic Transactions Act 2000, to using that email address for the purposes of assessing the Application under the Land Use Planning and Approvals Act 1993 ("the Act"). If you provide an email address, the Council will not provide hard copy documentation unless specifically requested. It is your responsibility to provide the Council with the correct email address and to check your email for communications from the Council. If you do not wish for the Council to use your email address as the method of contact and for the giving of information, **please tick** ✓ the box	❑
Heritage Tasmania If the Property is listed on the Tasmanian Heritage Register then the Application will be referred to Heritage Tasmania unless an Exemption Certificate has been provided with this Application. (Phone 1300 850 332 or email enquires@heritage.tas.gov.au)	
TasWater Depending on the works proposed Council may be required to refer the Application to TasWater for assessment (Phone 136992)	

Tasmanian Government

Department of Natural Resources,
and Environment Tasmania

GPO Box 44, Hobart, TAS 7001 Australia
Ph 1300 TAS PARKS / 1300 827 727 Fax 03) 6223 8308
www.parks.tas.gov.au

Enquiries: Rhys Johnson
Phone: 03 6165 4677
Email: rhys.johnson@parks.tas.gov.au
Our ref: 23/8798

9th February 2024

Mr Terrence Roe
5 Bisdee Street
South Arm TAS 7022

Dear Mr Roe,

LODGEMENT OF PLANNING APPLICATION
VIETNAM VETERANS ASSOCIATION OF AUSTRALIA – TASMANIA BRANCH INC
NEW BUILDING – MULTI PURPOSE EDUCATION & TRAINING FACILITY
2 GALAXIA AVENUE, INTERLAKEN

This letter, issued pursuant to section 52(1B) of the *Land Use Planning and Approvals Act 1993* (LUPAA), is to confirm that the Crown consents to the making of the enclosed Planning Permit Application, insofar as the proposed development relates to Crown land managed by the Department of Natural Resources and Environment Tasmania.

Crown consent is only given to the lodgement of this application. Any variation will require further consent from the Crown.

Please also note, it is Departmental policy that all fire buffer areas (Hazard Management Areas and Fuel Modified Areas) are maintained wholly within freehold title boundaries and not on neighbouring Crown or Reserved land. Additionally, it is not the Parks and Wildlife Service's practice for the Crown to enter into agreements under Part 5 of LUPAA in support of developments on private property.

This letter does not constitute, nor imply, any approval to undertake works, or that any other approvals required under the *Crown Lands Act 1976* have been granted. If planning approval is given for the proposed development, the applicant will be required to obtain separate and distinct consent from the Crown before commencing any works on Crown land.

If you need more information regarding the above, please contact the officer nominated at the head of this correspondence.

Yours sincerely,

Jesse Walker
Team Leader (Assessments)

Notice of Termination of Authority and Instrument of Delegation

DELEGATION OF THE DIRECTOR-GENERAL OF LANDS' FUNCTIONS UNDER THE *LAND USE PLANNING AND APPROVALS ACT 1993*

I, JASON JACOBI, being and as the Director-General of Lands appointed under section 7 of the *Crown Lands Act 1976*, acting pursuant to section 23AA(5A) of the *Acts Interpretation Act 1931*, hereby give notice that the authority of the holders of the offices of Deputy Secretary (Parks and Wildlife Service) (position number 700451), General Manager (Park Operations and Business Services) (position number 708581), Director (Operations) (position number 708050), Manager (Property Services) (position number 707556), Unit Manager (Operations) (position number 702124) and Team Leader (Assessments) (position number 334958) to perform the functions conferred on the Director-General of Lands, as delegated on 13 December 2022 by Michael Pervan, then Director-General of Lands, is terminated with immediate effect.

Further, acting pursuant to section 52(1E) of the *Land Use Planning and Approvals Act 1993* ("the Act"), I hereby delegate the functions described (by reference to the relevant provision of the Act and generally) in Schedule 1, to the persons respectively holding the offices of Deputy Secretary (Parks and Wildlife Service) (position number 700451), General Manager (Park Operations and Business Services) (position number 708581), Manager (Property Services) (position number 707556), Unit Manager (Operations) (position number 702124) and Team Leader (Assessments) (position number 334958) in accordance with the functions delegated to me by the Minister for Parks, being and as the Minister administering the *Crown Lands Act 1976,* by instrument dated 9 November 2023.

SCHEDULE 1

Provision	**Description of Functions**
Section 52(1B)	Signing, and providing written permission for, applications for permits in relation to Crown land.

Dated at HOBART this 28th day of November 2023

.....

Jason Jacobi
DIRECTOR-GENERAL OF LANDS

VIETNAM VETERANS ASSOCIATION OF AUSTRALIA
TASMANIA BRANCH INC

EDUCATION AND TRAINING FACILITY

2 Galaxia Avenue, Dago Point Lake Sorrell
Interlaken TAS 7030

PINNACLE

2 Galaxia Avenue, Interlaken TAS 7030

Owner(s) or Clients	VVAA Tasmania Branch
Building Classification	1b
Designer	Jason Nickerson CC6073Y
Total Floor Area	94.97m^2
Alpine Area	N/A
Other Hazards (e.g.. High wind, earthquake, flooding, landslip, dispersive soils, sand dunes, mine subsidence, landfill, snow & ice, or other relevant factors)	Bushfire prone

Title Reference	166727/1
Zoning	Rural Resource
Land Size	2101m^2
Design Wind Speed	N3
Soil Classification	M
Climate Zone	7
Corrosion Environment	Moderate
Bushfire Attack Level (BAL)	12.5

ID	Sheet Name	Issue
A.01	Location Plan	BA - 01
A.02	Site Plan	BA - 01
A.03	Floor Plan	BA - 01
A.04	Elevations	BA - 01
A.05	Elevations	BA - 01
A.06	Roof Plan	BA - 01
A.07	Electrical Plan	BA - 01
A.08	Sections	BA - 01
A.09	Energy Efficiency	BA - 01
A.10	Door & Window Schedule	BA - 01
A.11	Setout Plan	BA - 01
F.01	Bushfire Protection Plan	BA - 01
F.02	Fire Tank Requirements	BA - 01
P.01	Plumbing Plan	BA - 01
P.02	Waterproofing Details	BA - 01
P.03	SWMP	BA - 01
S.01	Footing Plan	BA - 01
S.02	Roof Framing Plan	BA - 01
S.03	Bracing Plan	BA - 01
S.04	Details	BA - 01
G.1	Construction Notes	
G.2	Construction Notes	
G.3	Bracing Notes	
G.4	Bracing Notes	
G.5	Waterproofing & Water Resistance Notes	
G.6	Waterproofing & Water Resistance Notes	
G.7	Waterproofing & Water Resistance Notes	
G.8	Waterproofing & Water Resistance Notes	
G.9	Waterproofing & Water Resistance Notes	
G.10	Safety Notes	
G.11	BAL 19 Notes 01	
G.12	BAL 19 Notes 02	
G.13	BAL 19 Notes 03	

Site Areas

Site Area	2101 m²
Ex. Building Footprint	82.34 m²
Prop. Building Footprint	94.97 m²
Total Site Coverage	8.44%

PINNACLE

PINNACLE DRAFTING & DESIGN
7/3 Abernant Way, Cambridge 7170
03 6248 4218
admin@pinnacledrafting.com.au
www.pinnacledrafting.com.au

Location Plan

Revision: DA-01
Approved by: #Approved by

Scale: 1:500 @ A3
Pg. No: A.01

Proposal: 1b Building
Client: VVAA Tasmania Branch
Address: 2 Galaxia Avenue, Interlaken TAS 7030

Date: 04/12/2023
Drawn by: RZ
Job No: 031-2022
Engineer: Aldanmark
Building Surveyor: Lee Tyers

Issue	Date	Description

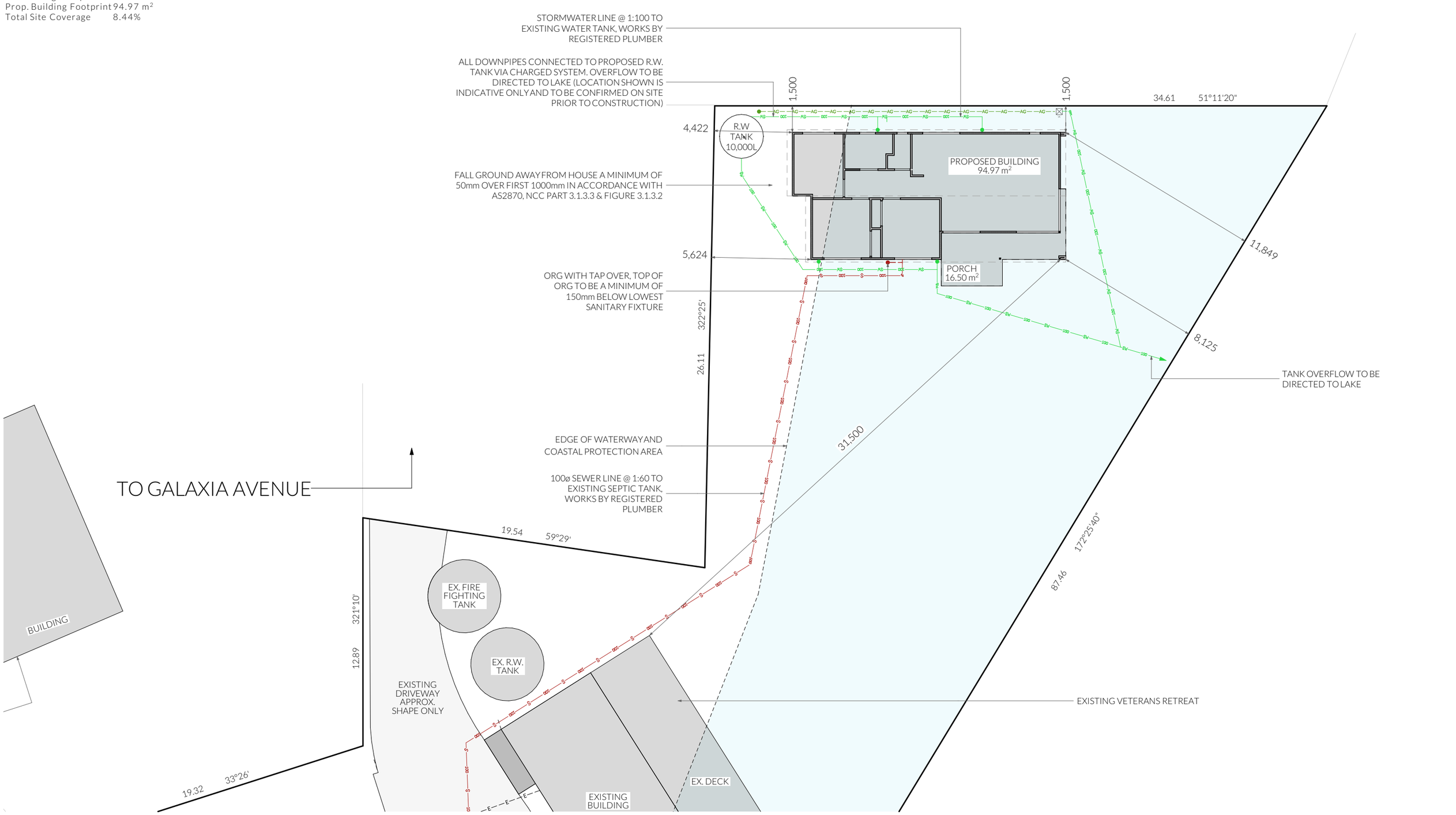
Lydenbuilders
bdaa BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

Note

Ground to fall away from building in all directions
in compliance with AS2870 & N.C.C 3.1.3.3

Site Areas

Site Area	2101 m^2
Ex. Building Footprint	82.34 m^2
Prop. Building Footprint	94.97 m^2
Total Site Coverage	8.44%



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admin@pinnacledrafting.com.au
www.pinnacledrafting.com.au

Site Plan

Revision: DA-01
Approved by: #Approved by

Scale: 1:200 @ A3
Pg. No: A.02

Proposal: 1b Building
Client: VVAA Tasmania Branch
Address: 2 Galaxia Avenue, Interlaken TAS 7030

Date: 04/12/2023
Drawn by: RZ
Job No: 031-2022
Engineer: Aldanmark
Building Surveyor: Lee Tyers

Issue	Date	Description

Access Panel

Articulation Joint

Smoke Alarm In accordance with NCC part 3.7.5

Construction of sanitary compartments 3.8.3.3 of current NCC

The door to a sanitary compartment must -

- open outwards; or
- slide; or
- be readily removable from the outside of the compartment.

unless there is a clear space of at least 1.2 m, measured in accordance with Figure 3.8.3.3 of NCC Vol II, between the closet pan within the *sanitary compartment* and the doorway.

Note: Safe Movement & Egress

Openable windows greater than 4m above ground level are to be fitted with a device to limit opening or a suitable screen so a 125mm sphere cannot pass through. Except for Bedrooms, where the requirement is for heights above 2m.

Note: Paved Areas

All paths and patios to fall away from dwelling.

Note: Stair Construction

All stairs to be constructed in accordance with N.C.C Part 3.9.1:
Riser: Min 115mm - Max 190mm
Going: Min 240mm - Max 355mm
Slope (2R+G): Max 550 - Min 700

Heights of rooms & other spaces 3.8.2.2 of current NCC

Heights of rooms and other spaces must not be less than;
(a)in a *habitable room* excluding a kitchen - 2.4 m; and
(b)in a kitchen - 2.1 m; and
(c)in a corridor, passageway or the like - 2.1 m; and
(d)in a bathroom, shower room, laundry, *sanitary compartment*, airlock, pantry, storeroom, garage, car parking area or the like - 2.1 m; and
(e)in a room or space with a sloping ceiling or projections below the ceiling line within- See NCC directly for these items
(f)in a stairway, ramp, *landing*, or the like - 2.0 m measured vertically above the nosing line of stairway treads or the floor surface of a ramp, *landing* or the like.

If required onsite, the builder may work within the tolerances of the above as specified within the NCC Volume 2. Builder to contact *Pinnacle* before undertaking works.

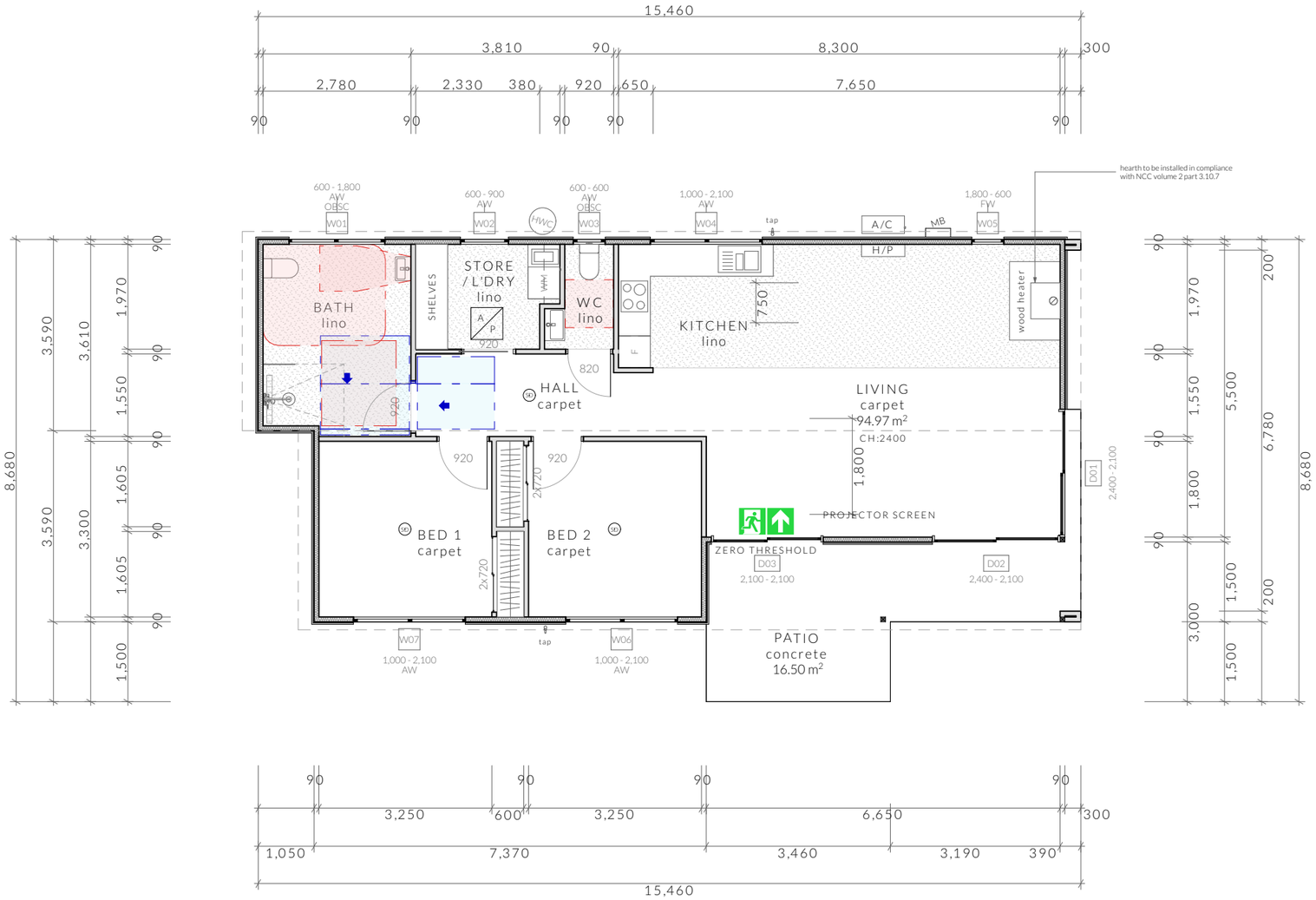
Circulation space

Door circulation space

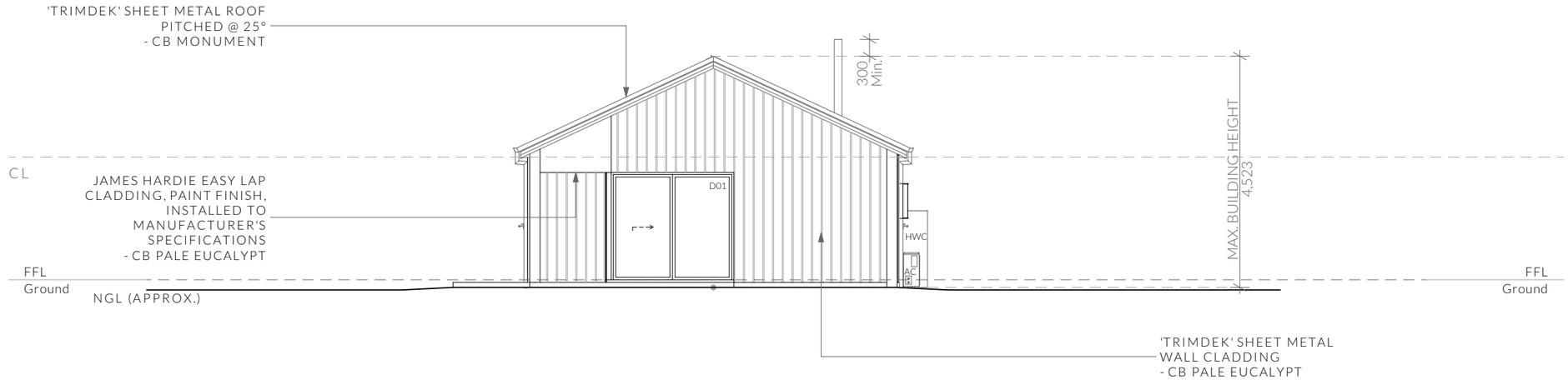
Exit sign In accordance with NCC part 3.7.5

Floor Areas

Total Floor Area	94.97m²
Patio	16.50m²



PINNACLE	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au	Floor Plan Revision: DA-01 Approved by: #Approved by	Scale: 1:100 @A3 Pg. No: A.03	Proposal: 1b Building Client: VVAA Tasmania Branch Address: 2 Galaxia Avenue, Interlaken TAS 7030	Date: 04/12/2023 Drawn by: RZ Job No: 031-2022 Engineer: Aldanmark Building Surveyor: Lee Tyers	Issue Date Description	



North East Elevation

1:100

South East Elevation

1:100

NOTE
Clearances between cladding and ground shall comply with 3.5.4.7 of the current N.C.C and shall be a minimum clearance of:
- 100mm in low rainfall intensity areas or sandy, well-drained areas; or
- 50mm above impervious areas that slope away from the building; or
- 150mm in any other case.

As per N.C.C part 3.9.2,
Openable windows greater than 4m above ground level are to be fitted with a device to limit the opening or a suitable screen so a 125mm sphere cannot pass through, and withstand a force of 250N.
Except for bedrooms, where the requirement is for heights above 2m.

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Elevations

Revision: DA-01
Approved by: #Approved by

Scale: 1:100 @A3
Pg. No: A.04

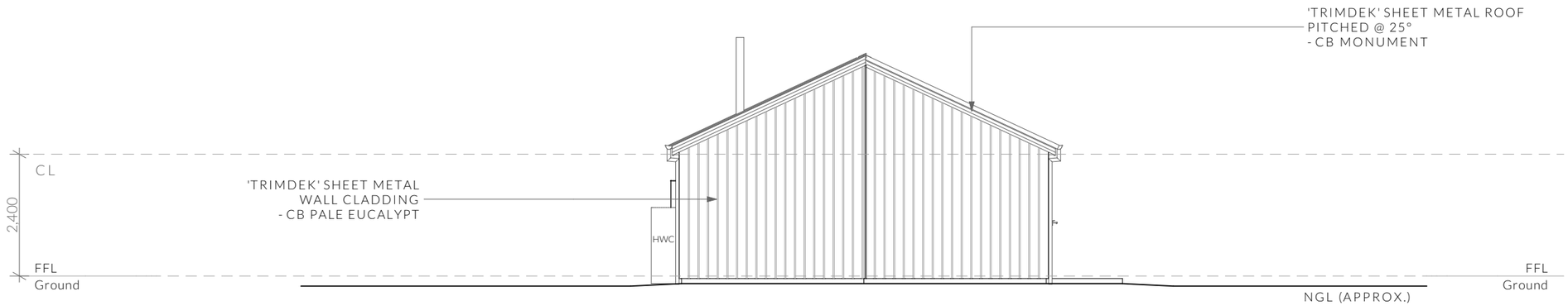
Proposal: 1b Building
Client: VVAA Tasmania Branch
Address: 2 Galaxia Avenue, Interlaken TAS 7030

Date: 04/12/2023
Drawn by: RZ
Job No: 031-2022
Engineer: Aldanmark
Building Surveyor: Lee Tyers

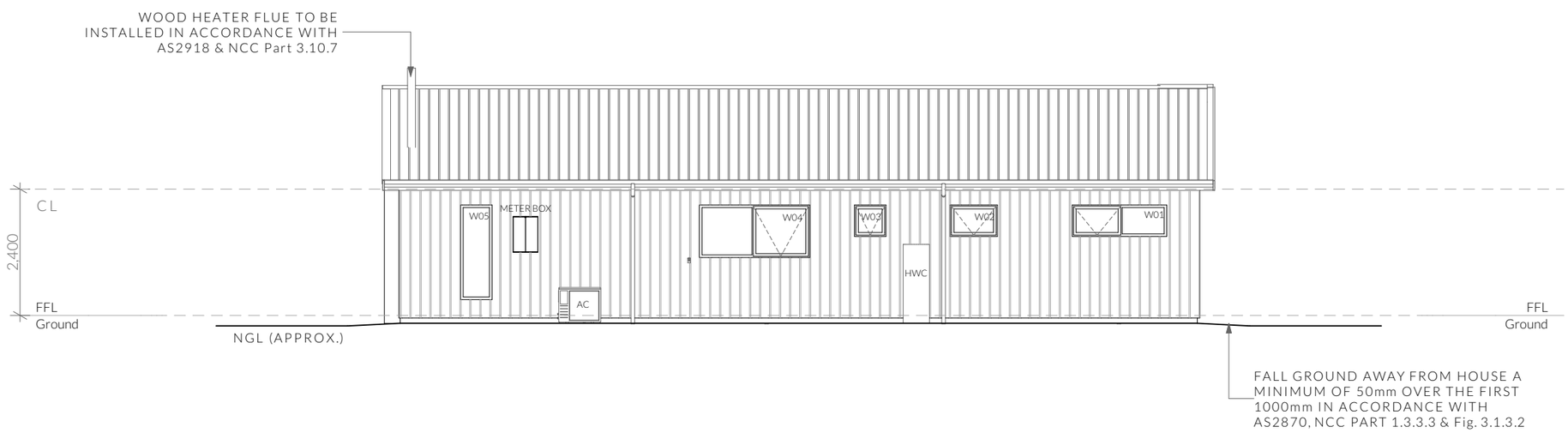
Issue	Date	Description

Lydenbuilders connecting futures

bdaa BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA



South West Elevation 1:100



North West Elevation 1:100

NOTE
Clearances between cladding and ground shall comply with 3.5.4.7 of the current N.C.C and shall be a minimum clearance of:
- 100mm in low rainfall intensity areas or sandy, well-drained areas; or
- 50mm above impervious areas that slope away from the building; or
- 150mm in any other case.

As per N.C.C part 3.9.2,
Openable windows greater than 4m above ground level are to be fitted with a device to limit the opening or a suitable screen so a 125mm sphere cannot pass through, and withstand a force of 250N.
Except for bedrooms, where the requirement is for heights above 2m.

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Elevations

Revision: DA-01
Approved by: #Approved by

Scale: 1:100 @A3
Pg. No: A.05

Proposal: 1b Building
Client: VVAA Tasmania Branch
Address: 2 Galaxia Avenue, Interlaken TAS 7030

Date: 04/12/2023
Drawn by: RZ
Job No: 031-2022
Engineer: Aldanmark
Building Surveyor: Lee Tyers

Issue	Date	Description

Lydenbuilders connecting futures
bdaa BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

Roof Ventilation Notes

Roof space to be ventilated in accordance with BSOL "Guide for Control of Condensation and Mould in Tasmanian Homes" 2019:

- Openings must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitch is more than 16°, or 1/150 of the respective ceiling area if the roof pitch is less than 16°.
- 25% of the total unobstructed area required must be located not more than 900 mm below the ridge or highest point of the roof space, measured vertically, with the remaining required area provided by eave vents.

Stormwater Notes

All gutters, downpipes and rain heads to be designed and installed in compliance with AS3500.3 & N.C.C Volume 2 Part 3.5.3.

REQUIRED NUMBER OF ROOF VENTS:

HIP/GABLE ROOF

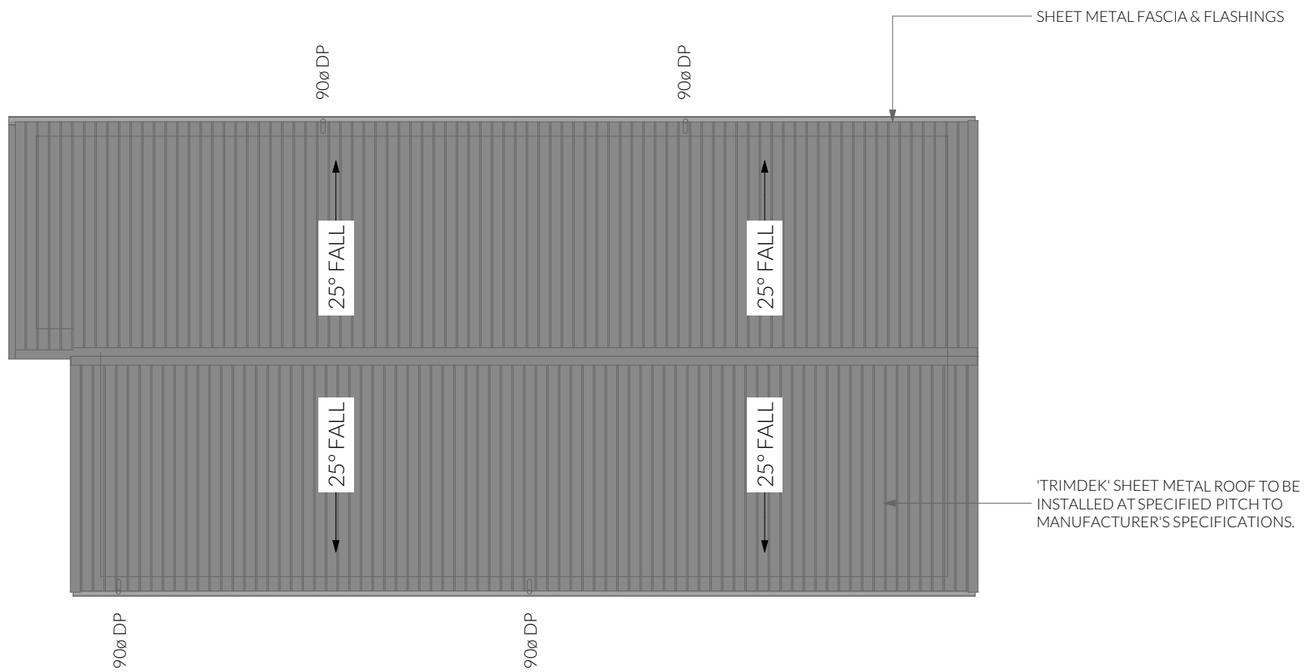
CEILING AREA & PITCH
95m^2 CEILING
ROOF PITCH >16°

REQUIRED VENT AREA
0.31m^2 (CEILING AREA/300)
Low Vents 75% = 0.2325m^2
High Vents 25% = 0.0775m^2

EAVE VENTS
BUILDERS EDGE EAVE VENT (EV4020) FITTED WITH STAINLESS STEEL BUSHFIRE MESH
7x 400X200mm(0.035m^2) VENTS EVENLY SPACED
OR
25mm CONTINUOUS VENT

RIDGE VENT SYSTEM
RIDGE CAP (Continuous 5mm gap in sarking)
2x GABLE VENTS 300x300mm (0.054m^2)

NOTE: GABLE VENTS SHALL BE INSTALLED WITHIN 900mm OF RIDGE



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Roof Plan

Revision: DA-01
Approved by: #Approved by

Scale: 1:100 @ A3
Pg. No: A.06

Proposal: 1b Building
Client: VVAA Tasmania Branch
Address: 2 Galaxia Avenue, Interlaken TAS 7030

Date: 04/12/2023
Drawn by: RZ
Job No: 031-2022
Engineer: Aldanmark
Building Surveyor: Lee Tyers

Issue	Date	Description

GES

GEO-ENVIRONMENTAL

SOLUTIONS

Proposed Residential Development

2 Galaxia Avenue, Interlaken

Bushfire Hazard Report

Applicant: VVAA- Tas

January 2024 J6910v1

GEO- ENVIRONMENTAL SOLUTIONS
29 Kirksway Place, Battery Point, Tasmania. 7004. T|62231839 E|office@geosolutions.net.au www.geosolutions.net.au

Contents

Disclaimer

The measures contained in Australian Standard 3959-2018 cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather conditions.

Reasonable steps have been taken to ensure that the information contained within this report is accurate and reflects the conditions on and around the lot at the time of assessment. The assessment has been based on the information provided by you or your designer.

Authorship

This report was prepared by Mark Van den Berg BSc. (Hons.) FPO (planning) of Geo Environmental Solutions. Base data for mapping: TasMap, Digital and aerial photography: Mark Van den Berg, GoogleEarth.

1.0 Purpose

This bushfire hazard report is intended to provide information in relation to proposed residential development in a bushfire-prone area. It will demonstrate compliance with the *Directors Determination – Bushfire Hazard Areas*, *version 1.1,12th April 2021*. Provide a certificate of others (form 55) as specified by the Director of Building Control for bushfire hazard and give guidance by way of a certified bushfire hazard management plan which shows a means of protection from bushfires in a form approved by the Chief Fire Officer of the Tasmania Fire Service.

2.0 Summary

Site details & compliance

Title reference	166727/1
PID	3328191
Address	2 Galaxia Avenue, Interlaken
Applicant	VVAA- Tas
Municipality	Central Highlands
Planning Scheme	Tasmanian Planning Scheme - Central Highlands
Zoning	Environmental Management
Land size	~0.2Ha
Bushfire Attack Level	BAL-12.5
Certificate of others (form 55)	Complete and attached
Bushfire Hazard Management Plan	Certified & Attached

Construction of a new class 1 building at 2 Galaxia Avenue, Interlaken and requires demonstrated compliance with the *Directors Determination – Bushfire Hazard Areas*, *version 1.1,12th April 2021*, the site is located in a bushfire prone area. The Bushfire attack level has been determined as 'BAL-12.5', provisions for property access and water supplies for firefighting as well as hazard management areas will be required as detailed in this report and on the Bushfire Hazard Management Plan (BHMP), emergency plans may be required for occupancy purposes.

3.0 Introduction

This bushfire hazard report has been completed to form part of supporting documentation for a building permit application for the proposed development. The proposed development site has been identified as being in a bushfire prone area. A site-specific bushfire hazard management plan has been provided for compliance purposes.

4.0 Proposal

The proposal is for the construction of a new class 1 building at 2 Galaxia Avenue, Interlaken (appendix B).

5.0 Bushfire Attack Level (BAL) Assessment

5.1 Methods

The Bushfire attack level has been determined through the application of section 2 of AS3959-2018 'Simplified Procedure'. Vegetation has been classified using a combination of onsite observations and remotely sensed data to be consistent with table 2.3 of AS359-2018. Slope and distances have been determined by infield measurement and/or the use of remotely sensed data (aerial/satellite photography, GIS layers from various sources) analysed with proprietary software systems. Where appropriate vegetation has been classified as low threat.

5.2 Site Description

The proposal is located at 2 Galaxia Avenue, Interlaken, in the municipality of Central Highlands and is zoned Environmental Management under the Tasmanian Planning Scheme – Central Highlands. Access to the lot is from Galaxia Avenue, a council-maintained road. The lot is ~0.2 Ha, is irregular in shape and is located approximately 0.8km south-east of Dago Point (Figure 1).

Adjacent lands surrounding the lot are zoned Low Density Residential, Environmental management and Rural and carry bushfire-prone vegetation. The site is isolated from population centres and occurs within an entirely bushfire-prone landscape. The surrounding area is dominated by forests and woodlands which is broken by patches of grassland vegetation. The site has gentle slopes with a subtle easterly aspect which is unlikely to influence the bushfire attack at the site in this circumstance.

Vegetation surrounding the lot was assessed (Table 1) and described as 'forest and woodland' (as per AS3959-2018). The classified vegetation potentially having the greatest impact on the site occurs to the south of the site (Figure 2). The vegetation classification system as defined in AS 3959-2018 Table 2.3 and Figure 2.4 (A to H) has been used to determine vegetation types within 100 metres of the site (Table 1).

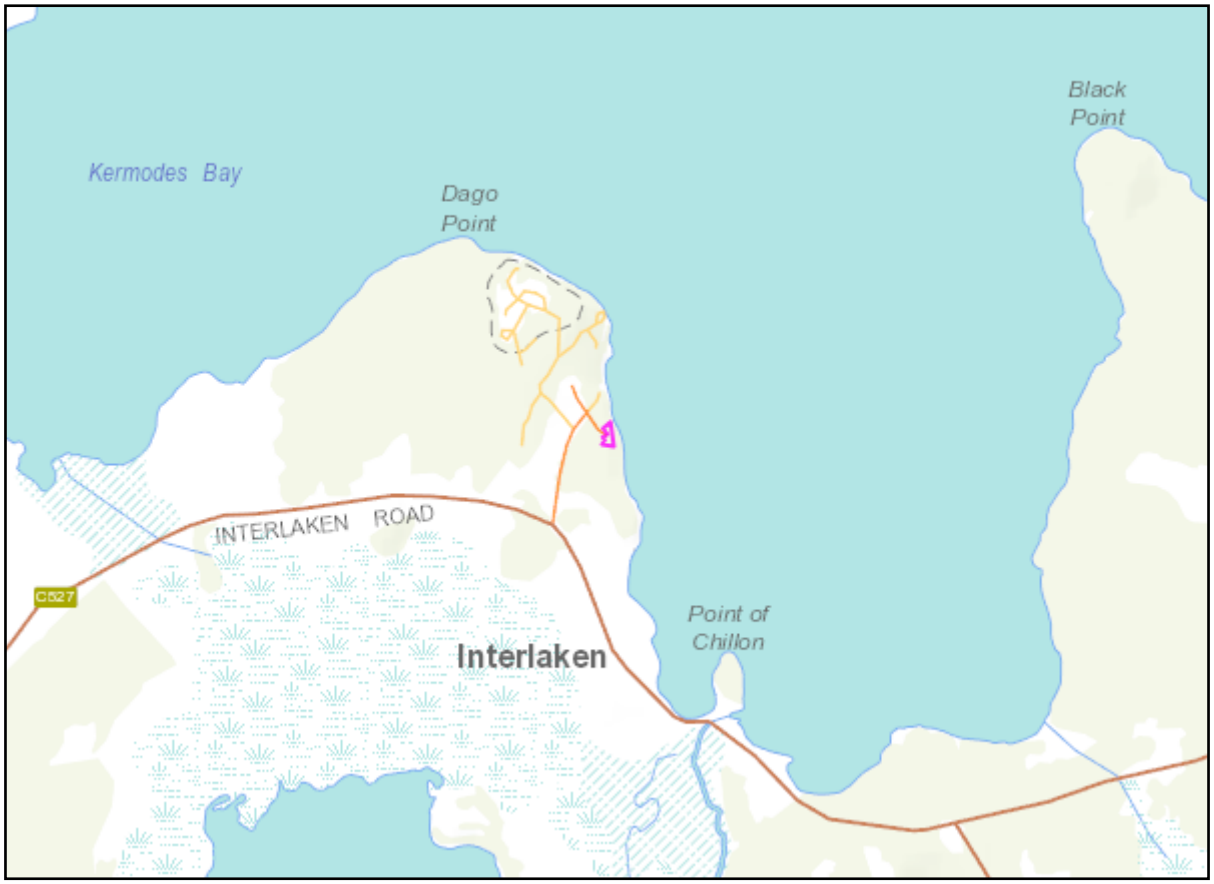


Figure 1. The lot in a topographical context (lot outlined in pink).

Figure 2. Shows the approximate location of the lot (pink line) in the context of the adjacent lands and classified vegetation.

Table 1. Bushfire Attack Level (BAL) Assessment

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire-prone vegetation	Hazard management area width	Bushfire Attack Level
North-east	Exclusion 2.2.3.2 (e, f)^^	flat 0º	0 to 100 metres	Title boundary	**BAL-LOW**
	--	--	--		
	--	--	--		
	--	--	--		
South-east	Exclusion 2.2.3.2 (e, f)^^	flat 0º	0 to 22 metres	Title boundary	**BAL-12.5**
	Woodland^	flat 0º	22 to 100 metres		
	--	--	--		
	--	--	--		
South-west	Exclusion 2.2.3.2 (e, f)^^	flat 0º	0 to 60 metres	Title boundary	**BAL-12.5**
	Woodland^	flat 0º	60 to 100 metres		
	--	--	--		
	--	--	--		
North-west	Exclusion 2.2.3.2 (e, f)^^	flat 0º	0 to 46 metres	Title boundary	**BAL-12.5**
	Woodland^	flat 0º	46 to 100 metres		
	--	--	--		
	--	--	--		

^ Vegetation classification as per AS3959-2018 and Figures 2.4(A) to 2.4 (H).
* Low threat vegetation as per Bushfire Prone Areas Advisory Note (BHAN) No.1-2014, version 3, 8/11/2017.
^^ Exclusions as per AS3959-2018, section 2.2.3.2, (a) to (f).

6.0 Results

The bushfire attack level for the site has been determined as BAL-12.5. While the risk is considered to be low to moderate, there is a risk of ember attack and a likelihood of low levels of radiant heat impacting the site. The construction elements are expected to be exposed to a heat flux not greater than 12.5 kW/m2.

6.1 Property Access

Property access is less than 30 metres in length, in this circumstance there is no further requirements for property access.

6.2 Water supplies for fire fighting

The site is not serviced by a reticulated water supply, therefore a dedicated, static firefighting water supply will be provided in accordance with table 2.

Table 2. Requirements for Static Water Supplies dedicated for Firefighting.

Element		Requirement
A.	Distance between building area to be protected and water supply	The following requirements apply: (a) The building area to be protected must be located within 90 metres of the firefighting water point of a static water supply; and (b) The distance must be measured as a hose lay, between the firefighting water point and the furthest part of the building area
B.	Static Water Supplies	A static water supply: (a) May have a remotely located offtake connected to the static water supply; (b) May be a supply for combined use (firefighting and other uses) but the specified minimum quantity of firefighting water must be available at all times; (c) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including firefighting sprinkler or spray systems; (d) Must be metal, concrete or lagged by non-combustible materials if above ground; and (e) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959:2018, the tank may be constructed of any material provided that the lowest 400 mm of the tank exterior is protected by: (i) metal; (ii) non-combustible material; or (iii) fibre-cement a minimum of 6 mm thickness.
C.	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a firefighting water point for a static water supply must: (a) Have a minimum nominal internal diameter of 50mm; (b) Be fitted with a valve with a minimum nominal internal diameter of 50mm; (c) Be metal or lagged by non-combustible materials if above ground; (d) Where buried, have a minimum depth of 300mm; (e) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to firefighting equipment; (f) Ensure the coupling is accessible and available for connection at all times; (g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length); (h) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and (i) Where a remote offtake is installed, ensure the offtake is in a position that is: (i) Visible; (ii) Accessible to allow connection by firefighting equipment; (iii) At a working height of 450 – 600mm above ground level; and (iv) Protected from possible damage, including damage by vehicles.
D.	Signage for static water connections	The firefighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must: (a) comply with water tank signage requirements within AS 2304:2019; or (b) comply with the Tasmania Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service.
E.	Hardstand A hardstand area for fire appliances must be provided:	(a) No more than three metres from the firefighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like); (b) No closer than six metres from the building area to be protected;

Element		Requirement
		(c) With a minimum width of three metres constructed to the same standard as the carriageway; and (d) Connected to the property access by a carriageway equivalent to the standard of the property access.

6.3 Hazard management area.

A hazard management area will need to be established and maintained for the life of the development and is shown on the BHMP. Guidance for the establishment and maintenance of the hazard management area is given below and on the BHMP.

A hazard management area is the area, between a habitable building or building area and the bushfire prone vegetation, which provides access to a fire front for firefighting, which is maintained in a minimal fuel condition and in which there are no other hazards present which will significantly contribute to the spread of a bushfire. This can be achieved through, but is not limited to the following strategies;

- Remove fallen limbs, sticks, leaf and bark litter;
- Maintaining grass at less than a 100mm height;
- Avoid or minimise the use of flammable mulches (especially against buildings);
- Thin out under-story vegetation to provide horizontal separation between fuels;
- Prune low-hanging tree branches (<2m from the ground) to provide vertical separation between fuel layers;
- Remove and or prune larger trees to maintain horizontal separation between canopies;
- Minimise the storage of flammable materials such as firewood;
- Maintaining vegetation clearance around vehicular access;
- Use low-flammability plant species for landscaping purposes where possible;
- Clear out any accumulated leaf and other debris from roof gutters and other debris accumulation points.

7.0 Compliance

Table 3. Compliance with the Directors Determination Requirements for Building in Bushfire Hazard Areas, version 1, 6th February 2020.

Requirements	Compliance
2.3.1 Design & Construction Requirements	Clause 2.3.1 requires buildings to be constructed in accordance with AS3959-2018 or NASH standard – Steel Framed Construction in Bushfire Areas consistent with the BAL determined for the site and is applicable to Class 1, 2 and 3 buildings or a class 10a building associated with a Class 1, 2 or 3 building. The proposal is for the construction of a new class 1a building, if the proposal is designed and constructed in accordance with the requirements for BAL12.5, it will comply with clause 2.3.1.
2.3.2 Property Access	In this circumstance there is no requirement for minimum design and construction standards for property access as property access is less than 30 metres in length.
2.3.3 Water Supply for Firefighting	Clause 2.3.3 requires that a new building in a bushfire-prone area is provided with a firefighting water supply.

	In this circumstance a static water supply consistent with table 3B has been specified in this report and is required for compliance on the BHMP. The proposal is compliant with clause 2.3.3.
2.3.4 Hazard management areas	Hazard management areas specified which are consistent with table 4 and which achieve the minimum separation dimensions required for the BAL assessed of table 2.6 of AS3959.
3. Bushfire hazard management plan and certificate	A bushfire hazard management plan has been prepared for work for which this division applies and has been certified in accordance with the Chief Officers requirements by an accredited person.
4.5 Emergency Plan	The proposal is for the construction of a class 1 building, if the proposal is for visitor accommodation Emergency plans will be require for building occupancy.

8.0 Guidance

The defendable space (hazard management area) around a building is critical for providing occupants and/or fire fighters with safe access to the building in order that firefighting activities may be undertaken. The larger the defendable space, the safer it will be for those defending the structure. Some desirable characteristics of a hazard management area are:

- The area directly adjacent to the building has a significant amount of flammable material removed such that there is little to no material available to burn around the building;
- Includes non-flammable areas such as paths, driveways, short cropped lawns;
- Establishment of orchards, vegetable gardens, dams or waste water effluent disposal areas on the fire prone side of the building;
- Creating wind breaks and radiation shields such as non-combustible fences and low flammability hedges;
- It is not necessary to remove all vegetation from the defendable space, trees can provide protection from wind borne embers and radiant heat in some circumstances.

9.0 Further Information

For further information on preparing yourself and your property for bushfires visit the Tasmania Fire Service website at www.fire.tas.gov.au or phone 1800 000 699 for information on:

- Preparing a bushfire survival plan
- Preparing yourself and your home for a bushfire
- Guidelines for development in bushfire prone areas in Tasmania
- Fire resisting plants for the urban fringe and rural areas
- Using fire outdoors
- Fire permits
- Total fire bans
- Bushfires burning in Tasmania

10.0 References

Australian Building Codes Board, *National Construction Code, Building Code of Australia,* Australian Building Codes Board, Canberra.

Building Amendment (Bushfire-Prone Areas) Regulations 2016

Directors Determination – Bushfire Hazard Areas, version 1.1, 12th April 2021.

The Bushfire Planning Group 2005, *Guidelines for development in bushfire prone areas of Tasmania – Living with fire in Tasmania,* Tasmania Fire Service, Hobart.

Tasmania Fire Service 2013, *Building for Bushfire – Planning and Building in Bushfire-Prone Areas for Owners and Builders*.

Tasmanian Planning Scheme Central Highlands Tasmanian Planning Commission 2022, Tasmanian Planning Commission, Hobart.

Standards Australia, AS3959-2018 Construction of buildings in bushfire-prone areas. Sydney, NSW., Australia.

11.0 Limitations Statement

This Bushfire Hazard Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and the applicant named in section 2. To the best of GES's knowledge, the information presented herein represents the Client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that described in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible bushfire hazard condition and does not provide a guarantee that no loss of property or life will occur as a result of bushfire. As stated in AS3959-2018 “It should be borne in mind that the measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions”. In addition, no responsibility is taken for any loss which is a result of actions contrary to AS3959-2018 or the Tasmanian Planning Commission Bushfire code.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required. No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third party.

Appendix A – Site Photos

Figure 3. Northern azimuth from the site.

Figure 4. Eastern azimuth from the site.

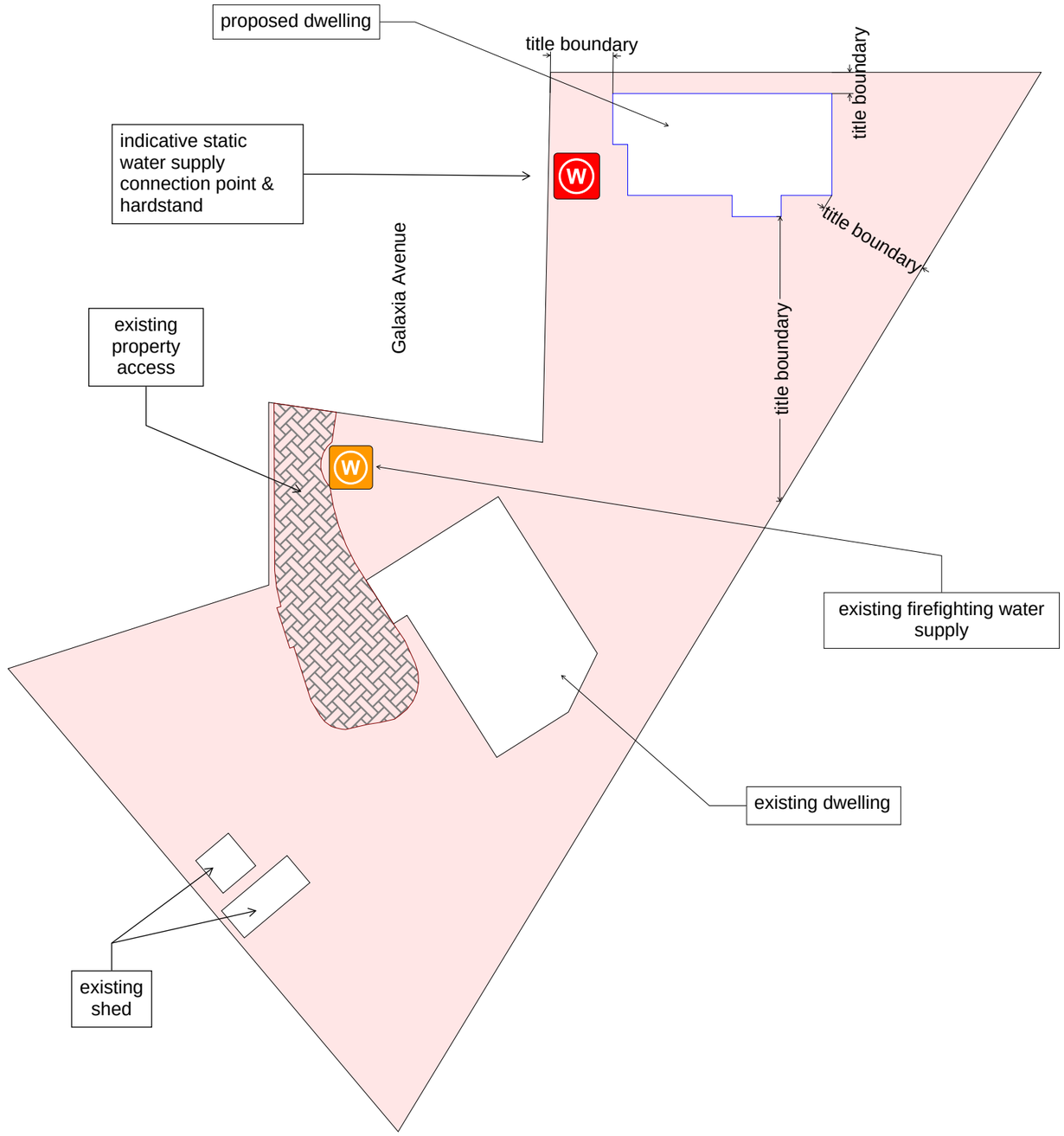
Figure 5. Southern azimuth from the site.

Figure 6. Western azimuth from the site.

Appendix B - Site Plan

BUSHFIRE HAZARD MANAGEMENT PLAN

Bushfire Hazard Management Plan, 2 Galaxia Avenue, Interlaken. January 2024. J6910v1.
Tasmanian Planning Scheme - Central Highlands



Building Area

Static Water Supply Point

Hazard Management Area

Compliance Requirements

Standards for Property Access

Property access is not required for a fire appliance to access a firefighting water point. In this circumstance there are no specific design or construction requirements for property access.

Water Supplies for Firefighting

Dedicated water supplies for firefighting are provided by fire hydrants connected to a reticulated water supply system managed by Tas Water. The hydrants conform with the following specifications;
•The building area to be protected is located within 120 metres of a fire hydrant; and
•The distance has been measured as a hose lay, between the firefighting water connection point and the furthest part of the building area.
In this circumstance there are no further requirements for the provision of firefighting water supplies.

Hazard Management Areas

A hazard management area is required to be established and maintained for the life of the building and is shown on this BHMP. Guidance for the establishment and maintenance of the hazard management area is also provided.

GEO-ENVIRONMENTAL SOLUTIONS
29 Kirksway Place, Battery Point.
T| 62231839 E| office@geosolutions.net.au

Building Specifications to BAL-12.5 of AS3959-2018

Hazard Management Area

A hazard management area is the area, between a habitable building or building area and the bushfire prone vegetation, which provides access to a fire front for firefighting, which is maintained in a minimal fuel condition and in which there are no other hazards present which will significantly contribute to the spread of a bushfire. This can be achieved through, but is not limited to the following actions;

- Remove fallen limbs, sticks, leaf and bark litter;
- Maintain grass at less than a 100mm height;
- Remove pine bark and other flammable mulch (especially from against buildings);
- Thin out under-story vegetation to provide horizontal separation between fuels;
- Prune low-hanging tree branches (<2m from the ground) to provide (vertical separation between fuel layers;
- Prune larger trees to maintain horizontal separation between canopies;
- Minimise the storage of flammable materials such as firewood;
- Maintain vegetation clearance around vehicular access and water supply points;
- Use low-flammability species for landscaping purposes where appropriate;
- Clear out any accumulated leaf and other debris from roof gutters and other accumulation points.

It is not necessary to remove all vegetation from the hazard management area, trees may provide protection from wind borne embers and radiant heat under some circumstances.

Certification No. J6910

Mark Van den Berg
Acc. No. BFP-108
Scope 1, 2, 3A, 3B, 3C.

Do not scale from these drawings. Dimensions to take precedence over scale. Written specifications to take precedence over diagrammatic representations.	VVAT 2 Galaxia Avenue, Interlaken, Tas., 7030	C.T.: 166727/1 PID: 3328191	Date: 30/01/2023	Bushfire Hazard Management Plan 2 Galaxia Avenue, Interlaken. January 2024. J6910v1. Bushfire Management Report 2 Galaxia Avenue, Interlaken. January 2024. J6910v1.	Drawing Number: A01	Sheet 1 of 1 Prepared by: MvdB

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form 55

To: VVAA-TAS *Owner /Agent*

5 Bisdee St *Address*

South Arm 7022 *Suburb/postcode*

Qualified person details:

Qualified person: Mark Van den Berg

Address: 29 Kirksway Place

Battery Point TAS 7004

Phone No: 03 6223 1839

Fax No:

Licence No: BFP-108

Email address: mvandenberg@geosolutions.net.au

Qualifications and Insurance details: Accredited to report on bushfire hazards under Part IVA of the Fire Service Act.
BFP-108 scope 1, 2, 3a, 3b, 3c.
Sterling Insurance PI policy No. 17080170

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

Speciality area of expertise: Analysis of bushfire hazards in bushfire prone areas

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

Details of work:

Address: 2 Galaxia Avenue

Interlaken 7030

Lot No:

Certificate of title No: 166727/1

The assessable item related to this certificate: New building work in a bushfire prone area.

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

Certificate details:

Certificate type: Bushfire Hazard

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

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

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

or

a building, temporary structure or plumbing installation: [ ]

In issuing this certificate the following matters are relevant –

Documents:	The attached Bushfire Hazard Report and Bushfire Hazard Management Plan for the address detailed above in 'details of work'
Relevant calculations:	Reference the above report.
References:	AS3959-2018 Construction of Buildings in Bushfire-prone Areas. Directors Determination for: Bushfire Hazard Areas v1.1 or Requirements for Building in Bushfire-prone Areas (transitional) v2.2

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

Bushfire Attack Level Assessment in accordance with AS3959-2018 and determination of other mitigation measures as required by the relevant Directors Determination as cited in the Bushfire Hazard Report.

Scope and/or Limitations

Scope: This report was commissioned to identify the Bushfire Attack Level for the existing property. Limitations: The inspection has been undertaken and report provided on the understanding that;-1. The report only deals with the potential bushfire risk all other statutory assessments are outside the scope of this report. 2. The report only identifies the size, volume and status of vegetation at the time the site inspection was undertaken. 3. Impacts of future development and vegetation growth have not been considered.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		J6910	30/01/2024

AS2870:2011 SITE ASSESSMENT

2 Galaxia Avenue

Interlaken

Updated January 2024

GEO-ENVIRONMENTAL

SOLUTIONS

Investigation Details

Client:	VVAA-TAS
Site Address:	2 Galaxia Avenue, Interlaken
Date of Inspection:	09/05/2022
Proposed Works:	New house
Investigation Method:	Geoprobe 540UD - Direct Push
Inspected by:	M. Campbell

Site Details

Certificate of Title (CT):	166727/1
Title Area:	Approx. 2112 m²
Applicable Planning Overlays:	Waterway and Coastal Protection Areas
Slope & Aspect:	Flat aspect
Vegetation:	Grass & Weeds Disturbed

Background Information

Geology Map:	MRT 1:250000
Geological Unit:	Jurassic
Climate:	Annual rainfall 680mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	AS2870:2011, AS1726:2017 & AS4055:2021

Investigation

A number of bore holes were completed to identify the distribution and variation of the soil materials at the site, bore hole locations are indicated on the site plan. See soil profile conditions presented below. Tests were conducted across the site to obtain bearing capacities of the material at the time of this investigation.

Soil Profile Summary

BH 1 Depth (m)	BH 2 Depth (m)	USCS	Description
0.00-0.10	0.00-0.10	GW	FILL – **Sandy GRAVEL**: grey, moist, loose.
0.10-0.20	0.10-0.20	GW	**Sandy GRAVEL**: yellow-brown, moist, loose, BH2 refusal on assumed rock.
0.20-0.50		CH	**CLAY**: high plasticity, orange-brown-grey, slightly moist, soft to firm, BH1 refusal on assumed rock.

Site Notes

Soils on site feature sandy gravel fill overlying sandy gravel to clay forming over weathering Jurassic dolerite.

Site Classification

The site has been assessed and classified in accordance with AS2870:2011 *"Residential Slabs and Footings".*

The site has been classified as:

Class M

Y_s range: **20-40mm**

Notes: The subsoils are likely to exhibit moderate ground surface movement from soil moisture fluctuations.

Wind Loading Classification

According to *"AS4055:2021 - Wind Loads for Housing"* the house site is classified below:

Wind Classification: N3

Region:	A
Terrain Category:	1.0
Shielding Classification:	NS
Topographic Classification:	T0
Wind Classification:	N3
Design Wind Gust Speed – m/s ($V_{h,u}$):	50

Wastewater Management

The proposed new building will not add to the site occupancy and can therefore be connected to the existing septic tank and absorption trench system. Due to the flat nature of the site and the distance from the new building to the septic tank a packaged pump station will be required to deliver effluent to the septic tank. It is recommended that a Netco NPE 800L pump station be installed with a grinder pump to deliver effluent to the septic tank via a min 40mm pressure line.

Construction Notes & Recommendations

The site has been classified as **Class M** - Moderately reactive clay or silt site, which may experience moderate ground movement from moisture changes.

It is recommended the foundations be placed on the underlying bedrock to minimise the potential for significant foundation movement. All earthworks on site must comply with AS3798:2012, and I further recommend that consideration be given to drainage and sediment control on site during and after construction. Care should also be taken to ensure there is adequate drainage in the construction area to avoid the potential for weak bearing and foundation settlement associated with excessive soil moisture.

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

Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD

Director

Explanatory Notes

1 Scope of Works

The methods of description and classification of soils used in this report are based largely on Australian Standard 1726 – Geotechnical Site Investigations (AS1726:2017), with reference to Australian Standard 1289 – Methods for testing soils for engineering purposes (AS1289), for eventual Site Classification according to Australian Standard 2870 (AS2870:2011) – Residential Slabs and Footings and Australian Standard 1547 (AS1547:2012) On-site domestic wastewater management.

1.1 Site Classification AS2870:2011

Site classification with reference to the above Australian Standards are based on site reactivity.

Class	Foundation Conditions	Characteristic Surface Movement
A	Most sand and rock sites with little or no ground movement from moisture changes.	**0mm**
S	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes.	**0 – 20mm**
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes.	**20 – 40mm**
H-1	Highly reactive clay sites, which may experience high ground movement from moisture changes.	**40 – 60mm**
H-2	Highly reactive clay sites, which may experience very high ground movement from moisture changes.	**60 – 75mm**
E	Extremely reactive sites, which may experience extreme ground movement from moisture changes.	**>75mm**

*Note: Soils where foundation performance may be significantly affected by factors other than reactive soil movement are classified as **Class P**.*

A site is classified as **Class P** when:

- The bearing capacity of the soil profile in the foundation zone is generally less than 100kpa
- If excessive foundation settlement may occur due to loading on the foundation.
- The site contains uncontrolled fill greater than 0.8m in depth for sandy sites and 0.4m in depth for other soil materials.
- The site is subject to mine subsistence, landslip, collapse activity or coastal erosion.
- The site is underlain by highly dispersive soils with significant potential for erosion
- If the site is subject to abnormal moisture conditions which can affect foundation performance

1.2 Soil Characterisation

This information explains the terms of phrase used within the soil description area of the report.

It includes terminology for cohesive and non-cohesive soils and includes information on how the Unified Soil Classification Scheme (USCS) codes are determined.

NON COHSIVE – SAND & GRAVEL		
Consistency Description	**Field Test**	**Dynamic Cone Penetrometer blows/100 mm**
Very loose (VL)	Easily penetrated with 13 mm reinforcing rod pushed by hand.	0 - 1
Loose (L)	Easily penetrated with 13 mm reinforcing rod pushed by hand. Can be excavated with a spade; 50 mm wooden peg can be easily driven.	1 - 3
Medium dense (MD)	Penetrated 300 mm with 13 mm reinforcing rod driven with 2 kg hammer, - hard shovelling.	3 - 8
Dense (D)	Penetrated 300 mm with 13 mm reinforcing rod driven with 2 kg hammer, requires pick for excavation: 50 mm wooden peg hard to drive.	8 - 15
Very dense (VD)	Penetrated only 25 - 50 mm with 13 mm reinforcing rod driven with 2 kg hammer.	>15

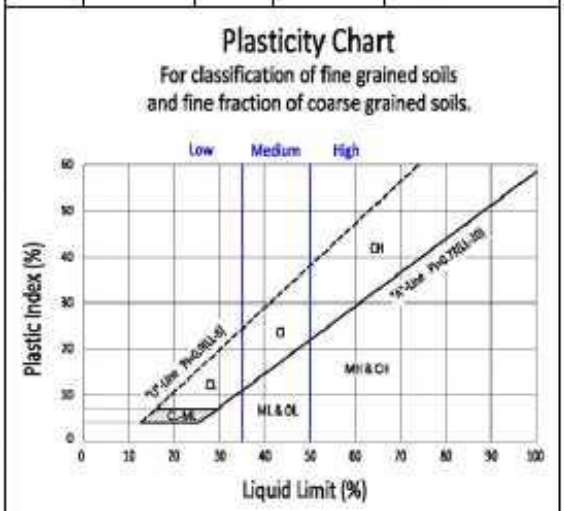
COHESIVE - SILT & CLAY		
Consistency Description	**Field Test**	**Indicative undrained shear strength kPa**
Very soft	Easily penetrated >40 mm by thumb. Exudes between thumb and fingers when squeezed in hand.	<12
Soft	Easily penetrated 10 mm by thumb. Moulded by light finger pressure	>12 and <25
Firm	Impression by thumb with moderate effort. Moulded by strong finger pressure	>25 and <50
Stiff	Slight impression by thumb cannot be moulded with finger.	>50 and <100
Very Stiff	Very tough. Readily indented by thumbnail.	>100 and <200
Hard	Brittle. Indented with difficulty by thumbnail.	>200

1.3 USCS Material Descriptions

Soils for engineering purposes are the unconsolidated materials above bedrock, they can be residual, alluvial, colluvial or aeolian in origin.

Major Divisions		Particle size mm	USCS Group Symbol	Typical Names	Laboratory Classification				
					% < 0.075 mm (2)	Plasticity of fine fraction	$C_u = \frac{D_{60}}{D_{10}}$	$C_c = \frac{(D_{30})^2}{(D_{10})(D_{60})}$	NOTES
COARSE GRAINED SOILS (more than half of material less than 63 mm is larger than 0.075 mm)	BOULDERS	200							
	COBBLES	63							
	GRAVELS (more than half of coarse fraction is larger than 2.36 mm)	coarse 20 medium 6 fine 2.36	GW	Well graded gravels and gravel-sand mixtures, little or no fines	0-5	—	>4	Between 1 and 3	(1) Identify fines by the method given for fine-grained soils. (2) Borderline classifications occur when the percentage of fines (fraction smaller than 0.075 mm size) is greater than 5% and less than 12%. Borderline classifications require the use of SP-SM, GW-GC.
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines, uniform gravels	0-5	—	Fails to comply with above		
			GM	Silty gravels, gravel-sand-silt mixtures (1)	12-50	Below 'A' line or PI<4	—	—	
			GC	Clayey gravels, gravel-sand-clay mixtures (1)	12-50	Above 'A' line and PI>7	—	—	
	SANDS (more than half of coarse fraction is smaller than 2.36 mm)	coarse 0.6 medium 0.2 fine 0.075	SW	Well graded sands and gravelly sands, little or no fines	0-5	—	>6	Between 1 and 3	
			SP	Poorly graded sands and gravelly sands, little or no fines	0-5	—	Fails to comply with above		
			SM	Silty sands, sand silt mixtures (1)	12-50	Below 'A' line or PI<4	—	—	
			SC	Clayey sands, sand-clay mixtures (1)	12-50	Above 'A' line and PI>7	—	—	
FINE GRAINED SOILS (more than half of material less than 63 mm is smaller than 0.075 mm	SILTS & CLAYS (Liquid Limit ≤50%)		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity					
			CL CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays					
			OL	Organic silts and clays of low plasticity					
	SILTS & CLAYS (Liquid Limit >50%)		MH	Inorganic silts, mic- aceous or diato-maceous fine sands or silts, elastic silts					
			CH	Inorganic clays of high plasticity, fat clays					
			OH	Organic silts and clays of high plasticity					
	HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils					

Use the gradation curve of material passing 63 mm for classification of fractions according to the criteria given in 'Major Divisions'



Grain size analysis is performed by two processes depending on particle size. Sand silt and clay particles are assessed using a standardised hydrometer test, and coarse sand and larger is assessed through sieving by USCS certified sieves. For more detail see the following section.

Soil Classification	Particle Size
Clay	Less than 0.002mm
Silt	0.002 – 0.06mm
Fine/Medium Sand	0.06 – 2.0mm
Coarse Sand	2.0mm – 4.75mm
Gravel	4.75mm – 60.00mm

1.4 Bearing Capacities and DCP testing.

DCP and PSP weighted penetrometer tests – Dynamic Cone Penetrometer (DCP) and Perth Sand Penetrometer (PSP) tests are carried out by driving a rod into the ground with a falling weight hammer and measuring the blows for successive 100mm increments of penetration. Normally, there is a depth limitation of 1.2m but this may be extended in certain conditions by the use of extension rods. The methods for the two tests are quite similar.

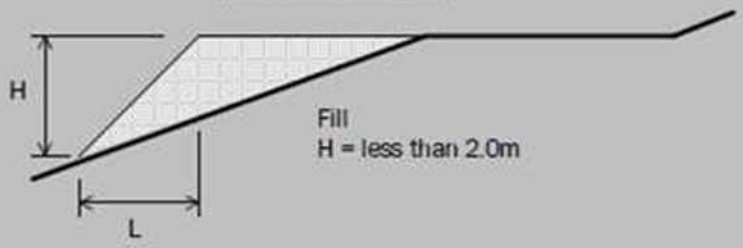
- Dynamic Cone Penetrometer – a 16mm rod with a 20mm diameter cone end is driven with a 9kg hammer dropping 510mm (AS 1289, Test 6.3.2).
- Perth Sand Penetrometer – a 16mm diameter flat-ended rod is driven with a 9kg hammer, dropping 600mm (AS 1289 Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.

Site Anomalies – During construction GES will need to be notified of any major variation to the foundation conditions as predicted in this report.

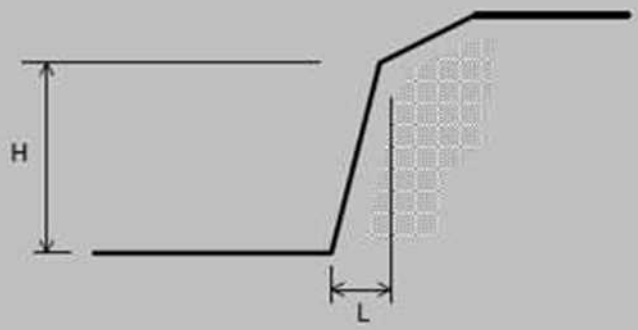
1.5 Batter Angles for Embankments *(Guide Only)*

Note : Retaining walls or other form of soil retaining methods must be adopted where the slope ratio is greater than that indicated in the table below :-

FILL EMBANKMENTS



CUT EMBANKMENTS



MATERIAL TYPE (refer soils report)		EMBANKMENT SLOPES (Height : Length)	
		Compacted Fill	Cutting
Stable Rock (A*)		2 : 3	6 : 1
Sand (A*)		1 : 2	2 : 3
Silt (P*)		1 : 4	1 : 4
Clay	Firm Clay	1 : 2	1 : 1
	Soft Clay	Not Suitable	2 : 3
Soft Soils (P*)		Not Suitable	Not Suitable

Glossary of Terms

Bearing Capacity – Maximum bearing pressure that can be sustained by the foundation from the proposed footing system under service loads which should avoid failure or excessive settlement.

Clay – (Mineral particles less than 0.002mm in diameter). Fine grained cohesive soil with plastic properties when wet. Also includes sandy clays, silty clays, and gravelly clays.

Dynamic Cone Penetrometer (DCP) – Field equipment used to determine underlying soil strength and therefore bearing capacity (kPa) by measuring the penetration of the device into the soil after each hammer blow.

Dispersive soil – A soil that has the ability to pass rapidly into suspension in water.

Footing – Construction which transfers the load from the building to the foundation.

Foundation – Ground which supports the building

Landslip – Foundation condition on a sloping site where downhill foundation movement or failure is a design consideration.

Qualified Engineer – A professional engineer with academic qualifications in geotechnical or structural engineering who also has extensive experience in the design of the footing systems for houses or similar structures.

Reactive Site – Site consisting of clay soil which swells on wetting and shrinks on drying by an amount that can damage buildings on light strip footings or unstiffened slabs. Includes sites classified as S, M, H-1, H-2 & E in accordance with AS2870-2011.

Sand – (Mineral particles greater than 0.02mm in diameter). Granular non-cohesive, non-plastic soil that may contain fines including silt or clay up to 15%.

Services – Means all underground services to the site including but not limited to power, telephone, sewerage, water & storm water.

Silt – (Mineral particles 0.002 – 0.02mm in diameter). Fine grained non-cohesive soil, non-plastic when wet. Often confers a silky smoothness of field texture, regularly includes clay and sand to form clayey silts, sandy silts and gravelly silts.

Site – The site title, as denoted by address, lot number, or Certificate of Title (CT) number, or Property Identification Number (PID).

Surface Movement (Ys) – Design movement (mm) at the surface of a reactive site caused by moisture changes.

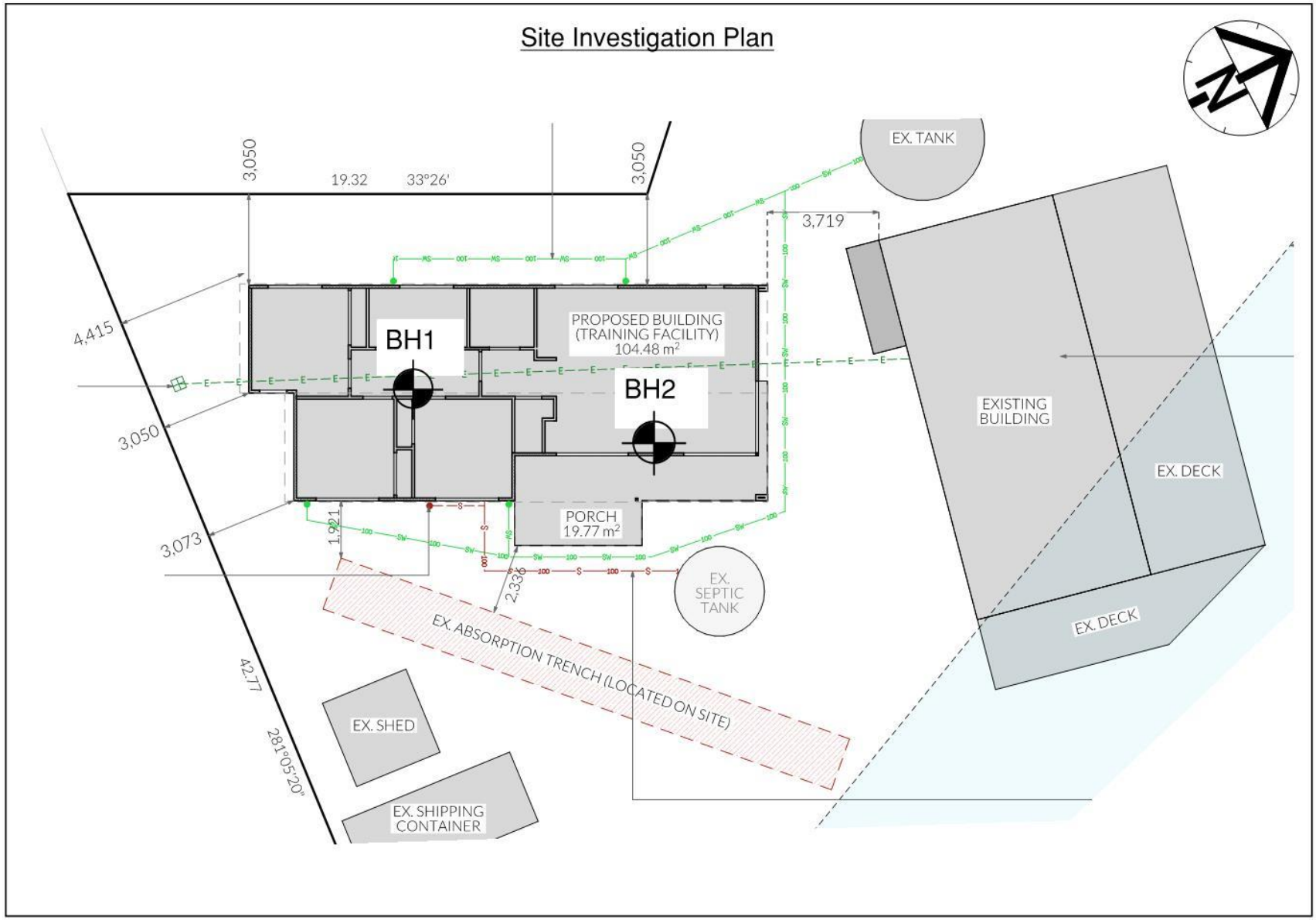
Disclaimer

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

The scope of this study does not allow for the review of every possible geotechnical parameter or the soil conditions over the whole area of the site. Soil and rock samples collected from the investigation area are assumed to be representative of the areas from where they were collected and not indicative of the entire site. The conclusions discussed within this report are based on observations and/or testing at these investigation points.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.

No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third a party.

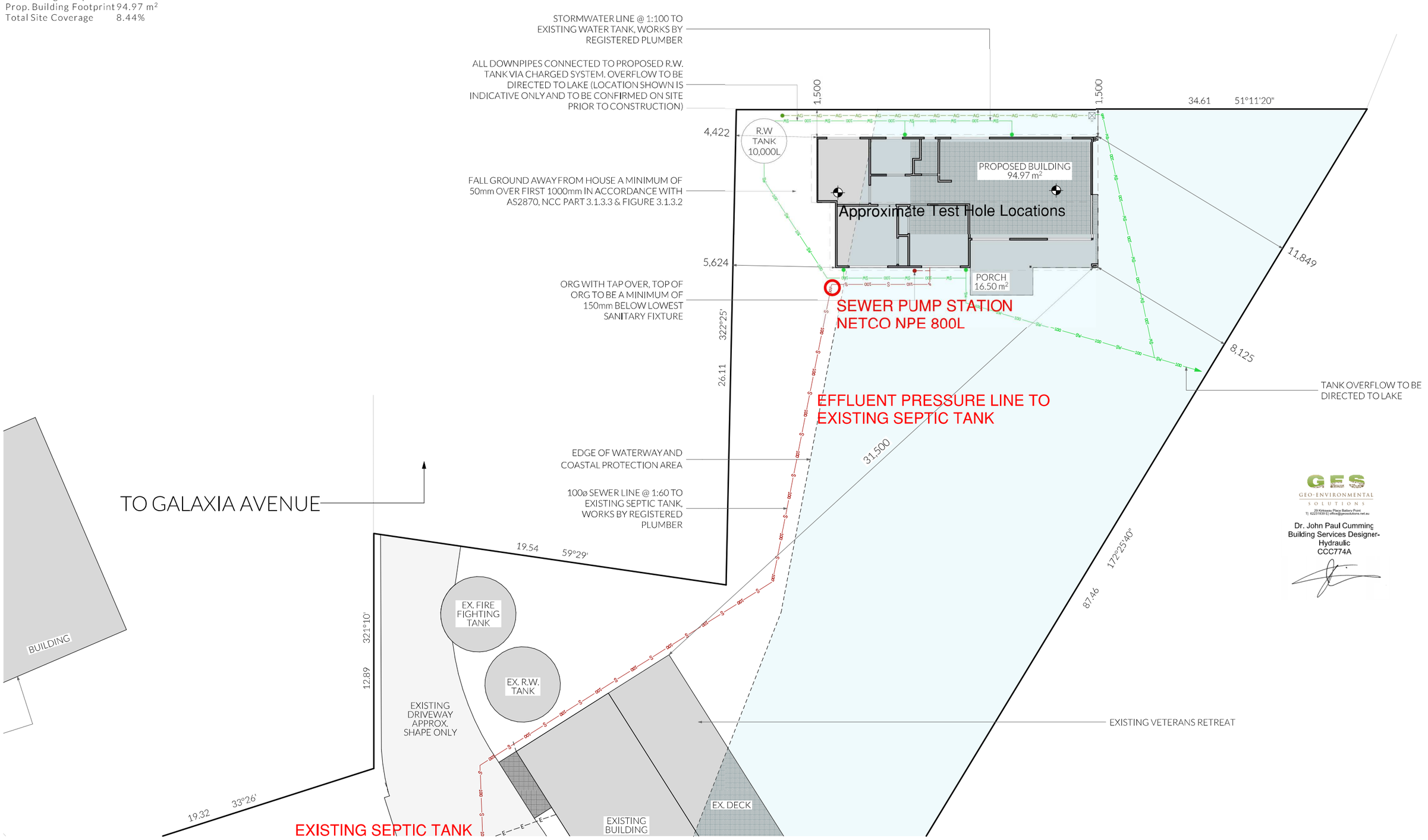

Site Investigation Plan
3,050
19.32
33°26'
3,050
EX. TANK
3,719
4,415
BH1
PROPOSED BUILDING
(TRAINING FACILITY)
104.48 m²
BH2
EXISTING
BUILDING
EX. DECK
3,050
3,073
1,921
PORCH
19.77 m²
2,330
EX.
SEPTIC
TANK
EX. ABSORPTION TRENCH (LOCATED ON SITE)
EX. DECK
42.77
281°05'20"
EX. SHED
EX. SHIPPING
CONTAINER

Note

Ground to fall away from building in all directions
in compliance with AS2870 & N.C.C 3.1.3.3

Site Areas

Site Area	2101 m²
Ex. Building Footprint	82.34 m²
Prop. Building Footprint	94.97 m²
Total Site Coverage	8.44%



GES GEO-ENVIRONMENTAL SOLUTIONS
29 Kirkness Place Battery Point
T| 62231839 E| office@geosolutions.net.au

Dr. John Paul Cumming
Building Services Designer-Hydraulic
CCC774A

PINNACLE

PINNACLE DRAFTING & DESIGN
7/3 Abernant Way, Cambridge 7170
03 6248 4218
admin@pinnacledrafting.com.au
www.pinnacledrafting.com.au

Site Plan

Revision:
Approved by: #Approved by

Scale: 1:200 @A3
Pg. No: A.02

Proposal: 1b Building
Client: VVAA Tasmania Branch
Address: 2 Galaxia Avenue, Interlaken TAS 7030

Date: 04/12/2023
Drawn by: RZ
Job No: 031-2022
Engineer: Aldanmark
Building Surveyor: Lee Tyers

Issue	Date	Description

Lydenbuilders connecting futures
bdaa BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

NETCO

Packaged Polyethylene Pump Stations

Engineered

Tough

Easy

Working with you.

PACKAGED PUMPING STATIONS

The Netco range of Polyethylene Packaged Pumping Stations are a convenient, high quality and reliable solution for any liquid pumping application. With a specific focus on reducing work onsite and installation timeframes, each pump station is supplied as a complete, factory assembled package with pumps, pipework and electrical controls, purpose-selected to meet specific site requirements.

ADVANTAGES

Lightweight, yet tough.
Manufactured from roto-moulded, medium-density polyethylene.

One-piece construction.
No on-site sealing or jointing.

Smooth inner surfaces.
Inhibits bacterial growth, very easy to clean.

Safer for workmen.
No confined space entry.

Engineered
To AS/NZS 1546.1:2008.

Packaged Solution
For quick & easy site installation

SEWAGE

RAINWATER

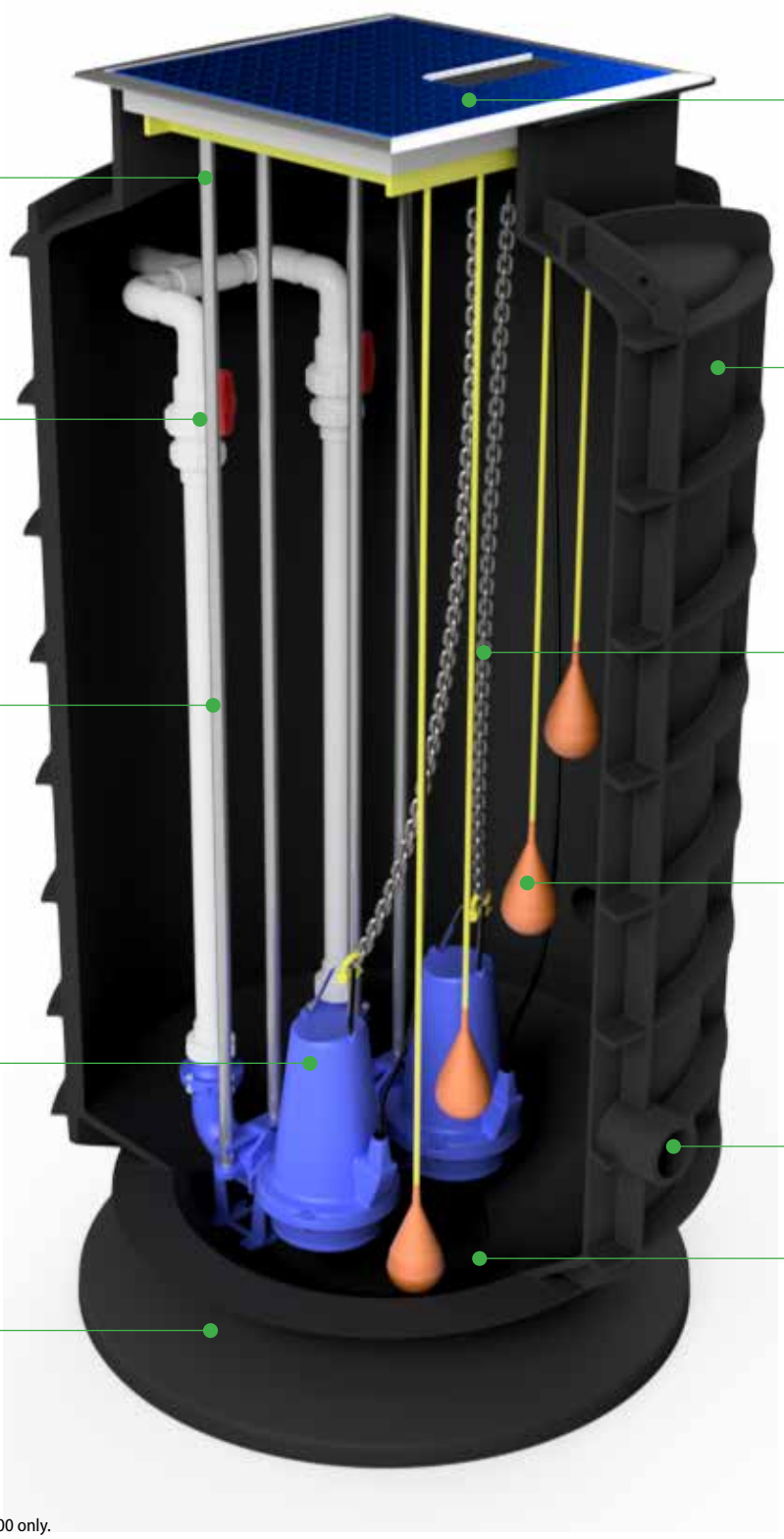
TRADE WASTE

WASTEWATER

STORMWATER

GREYWATER

FEATURES



Optional guide rail system for quick removal and reinstallation of pumps.

Isolation valves and non-return valves installed on each discharge line.

PVC or polyethylene pipework for a long maintenance free life.

Single or dual heavy-duty submersible pumps, purpose selected for your application.

Heavy-duty base ring section engineered to protect against floatation. **No concrete ballast required***.

Lockable Class A aluminium access cover. Trafficable options available.

Roto-moulded polyethylene tank to AS/NZS 1546.1:2008. Includes webbed ribbing design for maximum strength and anti-floatation properties*.

Pump lifting chains. Galvanised or stainless steel options available.

Float switch and level probe options available for reliable pump control.

Moulded inlet stubs for simple site connection.

Mould formed sump with steep benching to minimise sludge build-up.

*Models NPE-800, NPE-1200 & NPE-1600 only.

SPECIFICATIONS

Netco Polyethylene Packaged Pump Stations are available in standard sizes from 100L up to 6000L capacity. Custom-size Pump Stations are also available, and we offer complimentary site visits to measure up and ensure our clients get exactly what they need.

Model	External Diameter	Nominal Depth	Nominal Volume
NPE-100	590mm	700mm	100L
NPE-250	730mm	900mm	250L
NPE-800	1200mm	1300mm	800L
NPE-1200	1200mm	1720mm	1200L
NPE-1600	1200mm	2160mm	1600L
NPE-2000	1300mm	2050mm	2000L
NPE-2400	1300mm	2450mm	2400L
NPE-3000	1600mm	2030mm	3000L
NPE-4000	1600mm	2430mm	4000L
NPE-5000	1600mm	3230mm	5000L
NPE-6000	1600mm	3630mm	6000L

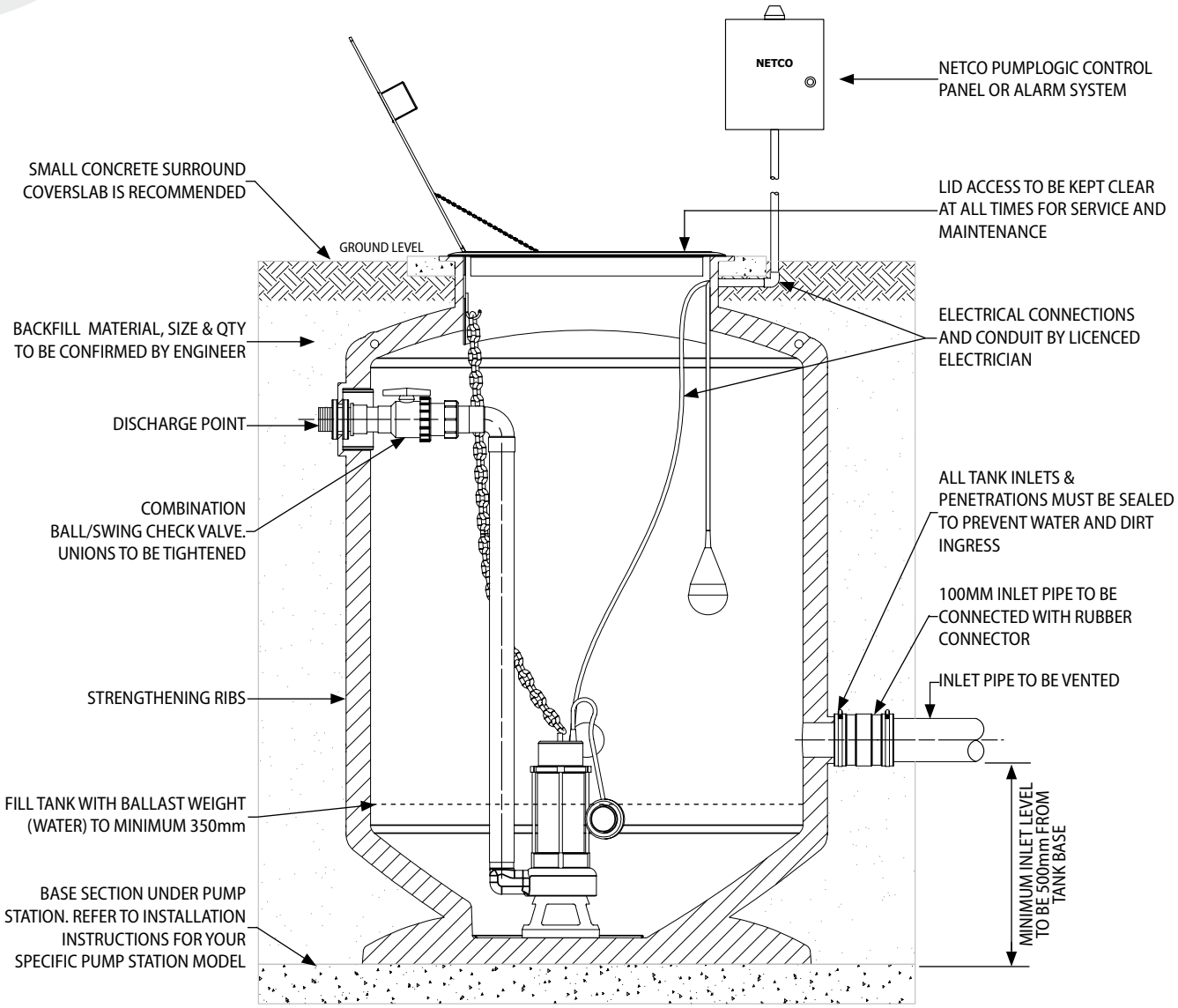
CONTROL SYSTEMS

Netco offers a wide range of pump station control systems, from simple float switch control through to sophisticated remote monitoring and operation. We work with you to provide the exact control system to meet your specific site requirements.

ACCESS COVERS

Netco offers a wide range of access covers to suit various oading requirements. Options include aluminium, GATIC, grated, concrete infill and decorative-edge covers. We work with you to provide an access cover solutions to meet your specific site requirements.

TYPICAL INSTALLATION DRAWING



INSTALLATION NOTES

1. Excavate the installation site to a depth 100mm greater than the overall pump chamber height.
2. Fill the base section under the pump station. Refer to installation instructions for your specific pump station model.
3. Place the pump chamber and fill with 300mm - 400mm water.
4. Confirm with site engineer regarding backfill requirements.
5. Electrician to install conduit(s) for the pump(s) through wall using plain to screwed adaptors. Seal cables on inside of conduits. Ensure adequate power supply.
6. Set high level alarm float switch 100mm above pump start float switch.
7. Vent penetrations and inlet penetrations to be made on site and sealed through inlet stub or via rubber connection through the chamber wall using a multi-seal or similar. Vent to be as close as possible to the top of the chamber. All penetrations to be perpendicular to the chamber wall.
8. When commissioning, set overloads to amperage shown on pump nameplate.
9. Pump chamber is to be regularly cleaned with a handheld hose, and pump and alarm operation checked. In sewage or high grease applications, the chamber should be degreased on a regular basis by waste removal contractor. Pump(s) should be removed for service on a 12 monthly cycle (approximately).
10. This diagram is typical only. Refer to installation instructions specific to your pump station model. Full installation guidelines are available for download at www.netcopumps.com.au.

NETCO

Hobart

100 Sunderland St
Derwent Park TAS 7009

Ph: 1300 301 664

Burnie

16-18 Wellington St
South Burnie TAS 7320

Ph: 1300 301 664

PO Box 800
Moonah TAS 7009

www.netcopumps.com.au

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: VVAA-TAS *Owner /Agent*

5 Bisdee St *Address*

South Arm 7022 *Suburb/postcode*

Qualified person details:

Qualified person: John-Paul Cumming

Address: 29 Kirksway Place

Battery Point 7004

Phone No: 03 6223 1839

Fax No:

Licence No: AO999

Email address: jcumming@geosolutions.net.au

Qualifications and Insurance details: Certified Professional Soil Scientist (CPSS stage 2)

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

Speciality area of expertise: AS2870-2011 Foundation Classification

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

Details of work:

Address: 2 Galaxia Avenue

Lot No:

Interlaken 7030

Certificate of title No: 166727/1

The assessable item related to this certificate: Classification of foundation Conditions according to AS2870-2011

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

Certificate details:

Certificate type: Foundation Classification

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

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

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

or

a building, temporary structure or plumbing installation: ☐

In issuing this certificate the following matters are relevant –

Documents:	The attached soil report for the address detailed above in 'details of work'
Relevant calculations:	Reference the above report.
References:	AS2870:2011 residential slabs and footings AS1726:2017 Geotechnical site investigations CSIRO Building technology file – 18.

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

Site Classification consistent with AS2870-2011.

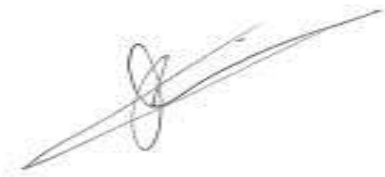
Scope and/or Limitations

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

I, John-Paul Cumming certify the matters described in this certificate.

Qualified person:

Signed:



Certificate No: J6910

Date: 25/01/2024