Application for Planning Approval

Land Use Planning and Approvals Act 1993

APPLICATION NO.

DA2024/015

LOCATION OF AFFECTED AREA

1 REDSIDE DRIVE, BRIGHTON

DESCRIPTION OF DEVELOPMENT PROPOSAL

DWELLING & OUTBUILDING

A COPY OF THE DEVELOPMENT APPLICATION MAY BE VIEWED AT www.brighton.tas.gov.au AND AT THE COUNCIL OFFICES, 1 TIVOLI ROAD, OLD BEACH, BETWEEN 8:15 A.M. AND 4:45 P.M, MONDAY TO FRIDAY OR VIA THE QR CODE BELOW. ANY PERSON MAY MAKE WRITTEN REPRESENTATIONS IN ACCORDANCE WITH S.57(5) OF THE LAND USE PLANNING AND APPROVALS ACT 1993 CONCERNING THIS APPLICATION UNTIL 4:45 P.M. ON **19/03/2024**. ADDRESSED TO THE GENERAL MANAGER AT 1 TIVOLI ROAD, OLD BEACH, 7017 OR BY EMAIL AT development@brighton.tas.gov.au. REPRESENTATIONS SHOULD INCLUDE A DAYTIME TELEPHONE NUMBER TO ALLOW COUNCIL OFFICERS TO DISCUSS, IF NECESSARY, ANY MATTERS RAISED.

JAMES DRYBURGH
General Manager

SCAN ME

Brighton
going places

PINNACLE

1 Redside Dr, Brighton 7030

Owner(s) or Clients	Chris & Brigida Watson
Building Classification	1a
Designer	Jason Nickerson CC6073Y
Total Floor Area (Combined)	171.81m² + 54m² Deck 26.50m²
Alpine Area	N/A
Other Hazards	Low landslip hazard band, Waterway and coastal protection area, Bushfire-prone area

(e.g.. High wind, earthquake, flooding, landslip, dispersive soils, sand dunes, mine subsidence, landfill, snow & ice, or other relevant factors)

Title Reference	180364/1
Zoning	Rural Living
Land Size	10500
Design Wind Speed	TBA
Soil Classification	TBA
Climate Zone	7
Corrosion Environment	Moderate
Bushfire Attack Level (BAL)	TBA

ID	Sheet Name	Issue
A.01	Location Plan	DA - 02
A.02	Site Plan	DA - 02
A.03	Floor Plan	DA - 02
A.04	Elevations	DA - 02
A.05	Elevations	DA - 02
A.06	Detached Garage	DA - 02
A.07	Roof Plan	DA - 02

Legend

- Electrical Connection
- Electrical Turret
- Sewer Connection
- Stormwater Connection
- Telstra Connection
- Telstra Pit
- Water Meter
- Water Stop Valve
- Fire Hydrant
- Solar Bollard Light
- Spotlight with sensor

Survey Notes from Surveyor

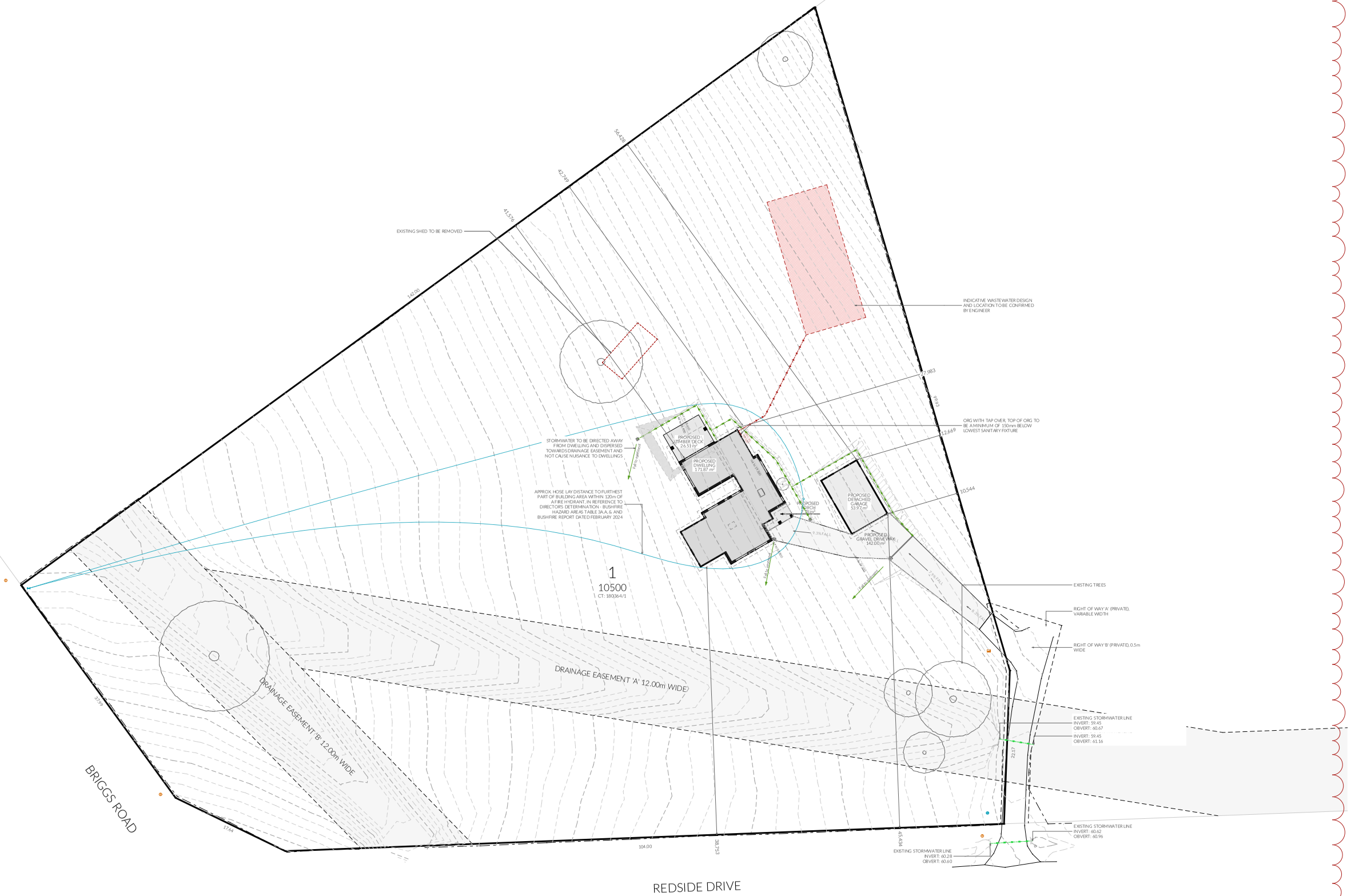
This plan and associated digital model is prepared for Pinnacle Drafting & Design from a combination of field survey and existing records for the purpose of designing new constructions on the land and should not be used for any other purpose.

The title boundaries as shown on this plan were not marked at the time of the survey and have been determined by plan dimensions only and not by field survey. No measurements or offsets are to be derived between the features on this plan and the boundary layer. The relationship between the features in this model and the boundary layers cannot be used for any set out purposes or to confirm the position of the title boundaries on site.

Services shown have been located where visible by field survey. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

This note forms an integral part of the Plan/Data. Any reproduction of this plan/model without this note attached will render the information shown invalid.

Revision 01/02/24



Site Areas

Site Area	10500
Building Footprint	225 m²
Total Site Coverage	2.15%

NOT FOR CONSTRUCTION

PINNACLE	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au Licence: CC6073Y	Location Plan Revision: DA - 02 Approved by: CP	Scale: 1:625 @ A3 Pg. No: A.01	Proposal: New Dwelling Client: Chris & Brigida Watson Address: 1 Redside Dr, Brighton 7030	Date: 28/11/2023 Drawn by: RZ Job No: 055-2023 Engineer: TBA Building Surveyor: TBA	Issue Date Description DA-02 13.02.2024 RFI Amendments		BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

Legend

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- Sewer Connection
- Stormwater Connection
- Telstra Connection
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- Water Meter
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- Solar Bollard Light
- Spotlight with sensor

Surface Water Drainage

Ground to fall away from building in all directions in compliance with AS2870 & N.C.C 2022 3.3.3.

Surface water must be diverted away from a Class 1 building as follows:

(a)Slab-on-ground - finished ground level adjacent to a building: the external finished surface surrounding the slab must be drained to move surface water away from the building and graded to give a slope of not less than

(i)25mm over the first 1m from the building

(A)in low rainfall intensity areas for surfaces that are reasonably impermeable (such as concrete or claypaving); or

(B)for any reasonably impermeable surface that forms part of an access path or ramp provided for the purposes of Clauses 1.1 (2) or (4)(c) of the ABCB Standard for Livable Housing Design; or

(ii)50 mm over the first 1 m from the building in any other case.

(b)Slab-on-ground - finished slab heights: the height of the slab-on-ground above external finished surfaces mustbe not less than

(i)100 mm above the finished ground level in low rainfall intensity areas or sandy, well-drained areas; or

(ii)50 mm above impermeable (paved or concrete) areas that slope away from the building in accordance with(a); or

(iii)150 mm in any other case.

(c)The ground beneath suspended floors must be graded so that the area beneath the building is above the adjacent external finished ground level and surface water is prevented from ponding under the building.

Subsoil Drainage

is to comply with AS2870, AS3500 & N.C.C 2022 3.3.4.

Where a subsoil drainage system is installed to divert subsurface water away from the area beneath a building, the subsoil drain must-

(a) be graded with a uniform fall of not less than 1:300; and

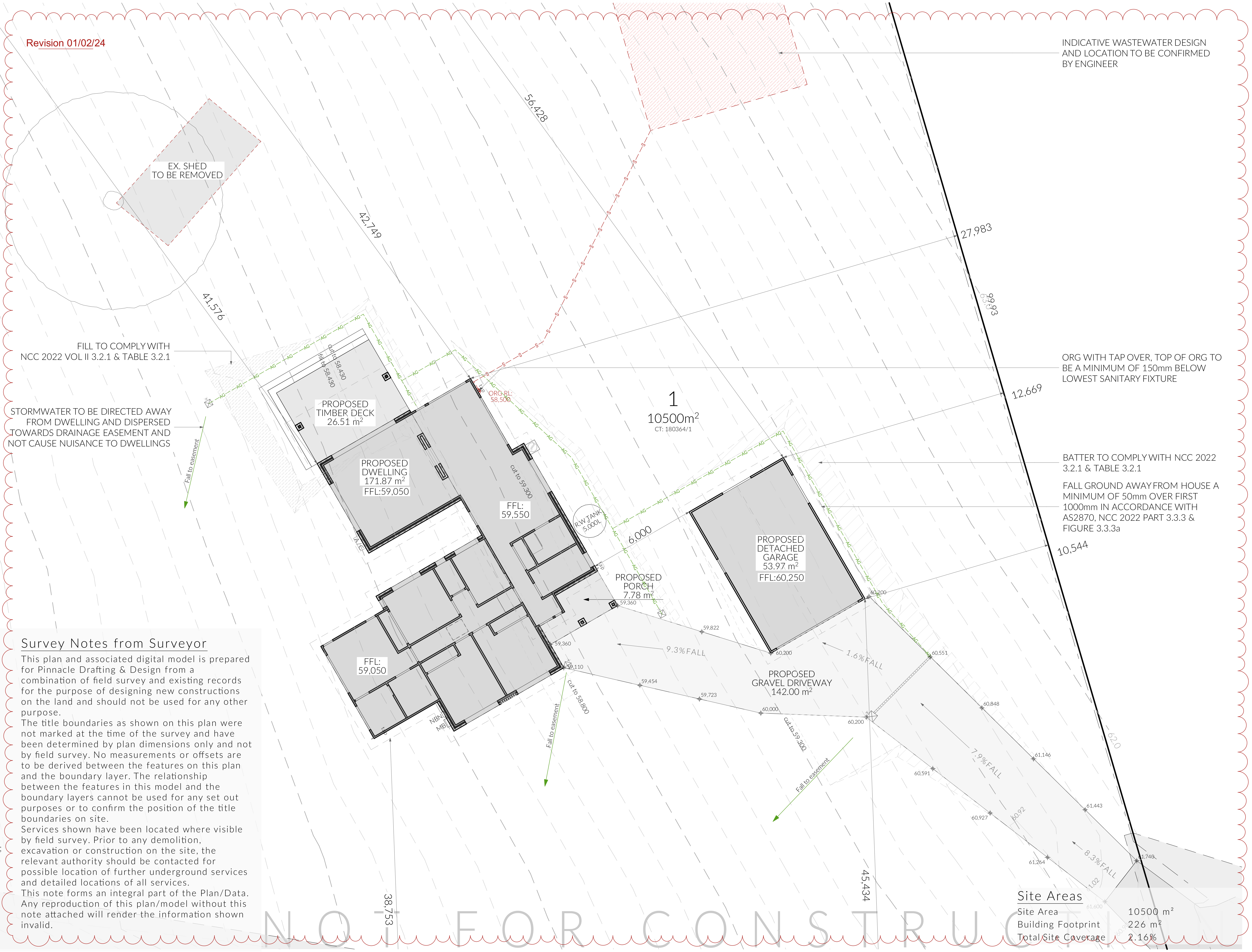
(b) discharge into an external silt pit or sump with-

(i)the level of discharge from the silt pit or sump into an impervious drainage line not less than 50 mm below the invert level of the inlet; and provision for cleaning and maintenance.

Note

All driveway pits and grate drains to be Class B.

Stormwater pits are indicative. Location may vary depending on site conditions.



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Site Areas

Site Area	10500 m²
Building Footprint	226 m²
Total Site Coverage	2.16%

NOT FOR CONSTRUCTION

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Site Plan

Revision: DA - 02
Approved by: CP

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

Proposal: New Dwelling
Client: Chris & Brigida Watson
Address: 1 Redside Dr, Brighton 7030

Date: 28/11/2023
Drawn by: RZ
Job No: 055-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	13.02.2024	RFI Amendments

N

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

Construction of sanitary compartments 10.4.2 of NCC 2022

The door to a fully enclosed 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 10.4.2 of NCC 2022 Vol II, between the closet pan within the *sanitary compartment* and the doorway.

Note: Safe Movement & Egress

Openable windows greater than 4m above the surface below 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. Refer to clauses 11.3.7 and 11.3.8 of NCC 2022 for further information on suitable protective devices.

Note: Paved Areas

All paths and patios to fall away from dwelling.

Note: Stair Construction

All stairs to be constructed in accordance with NCC Vol II 2022 Part 11.2.2:
Riser: Min 115mm - Max 190mm
Going: Min 240mm - Max 355mm
Slope (2R+G): Max 550 - Min 700
For stairways serving non-habitable room used infrequently, refer to table 11.2.2(b).

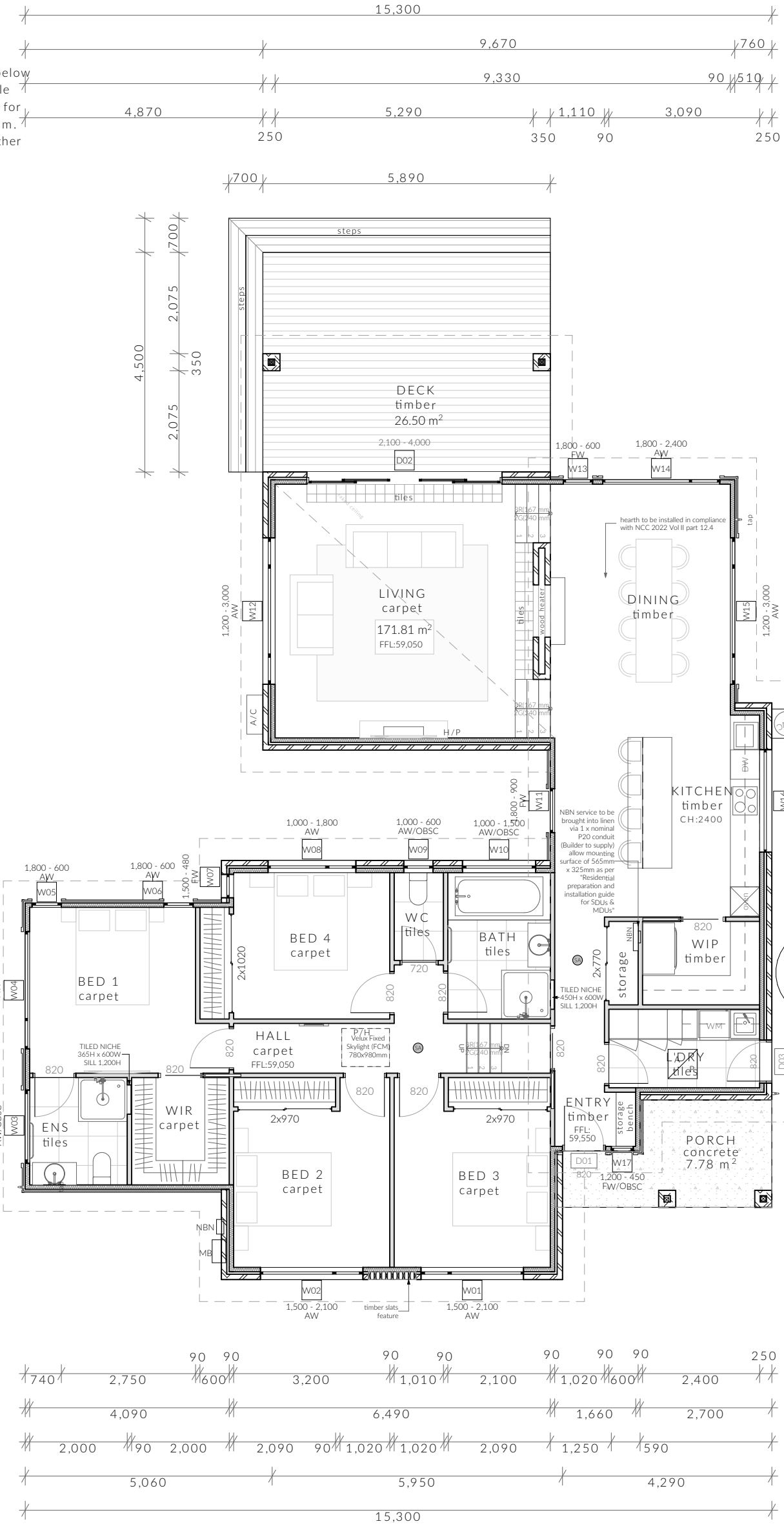
Landings to comply with Clause 11.2.5 and be a minimum of 750mm deep measured 500mm from the inside edge of the landing.

Slip resistance of treads, nosings and ramps to comply with Clause 11.2.4.

Heights of rooms & other spaces 10.3.1 of NCC 2022

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 2022 Vol II. Builder to contact *Pinnacle* before undertaking works.



- Access Panel
- Articulation Joint
- Smoke Alarm

Floor Areas

Detached Garage	54m²
Proposed Dwelling	171.81m²
Deck	26.50m²
Porch	7.78m²

NOT FOR CONSTRUCTION

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Licence Number: CC6073Y

Issue	Date	Description
DA-02	01.02.2024	RFI Amendments

Floor Plan

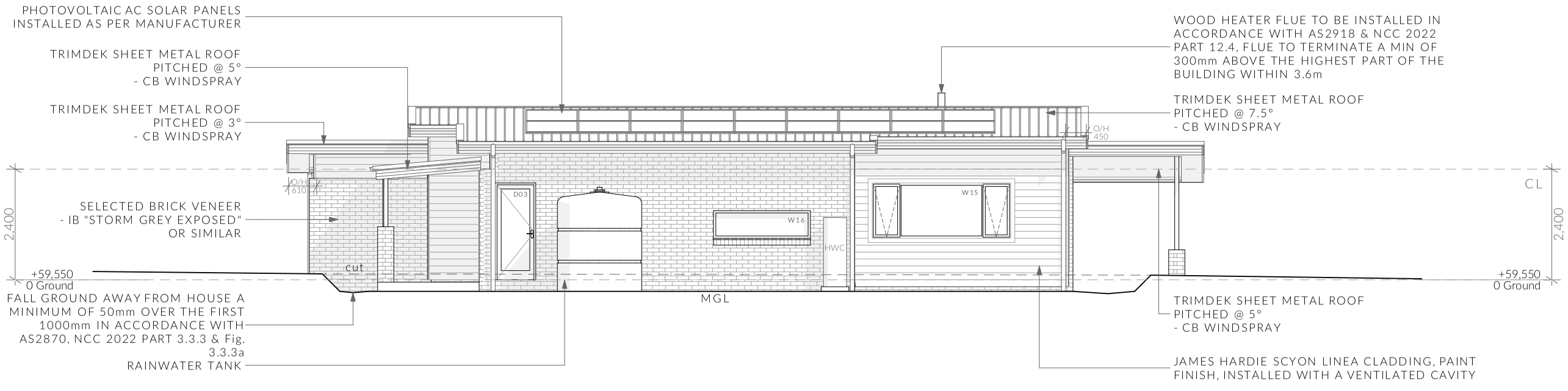
Revision: DA - 02
Approved by: CP

Scale: 1:100 @ A3
Pg. No: A.03

Proposal: New Dwelling
Client: Chris & Brigida Watson
Address: 1 Redside Dr, Brighton 7030

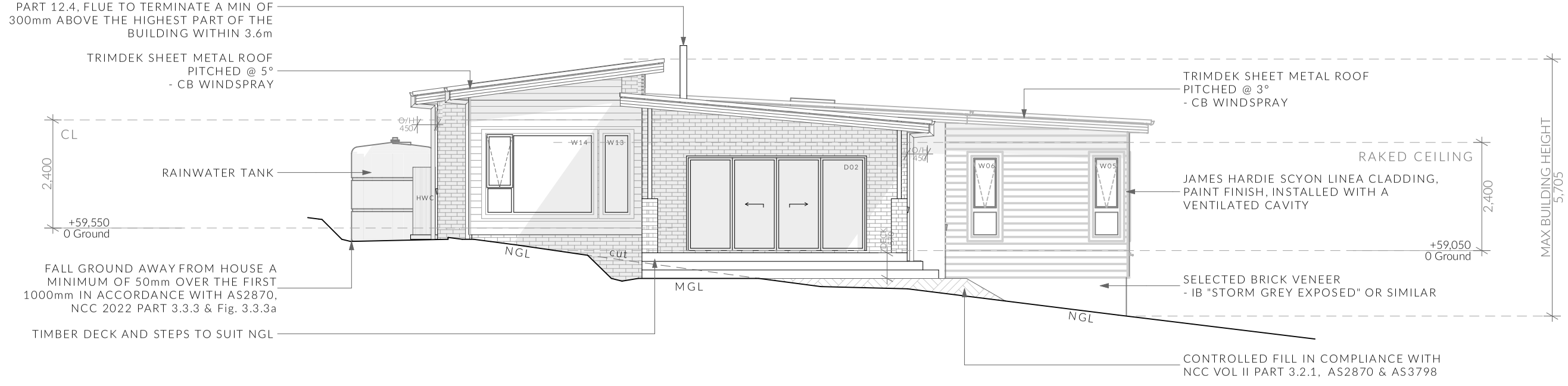
Date: 28/11/2023
Drawn by: RZ
Job No: 055-2023
Engineer: TBA
Building Surveyor: TBA

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA



East Elevation

1:100



North Elevation

1:100

NOTE

Clearances between cladding and ground shall comply with Clause 7.5.7 of the NCC 2022 and shall be a minimum clearance of:
100mm in low rainfall intensity areas or sandy, well-drained areas; or 50mm above impermeable areas that slope away from the building; or 150mm in any other case.

Wall cladding must extend a minimum of 50 mm below the bearer or lowest horizontal part of the suspended floor framing.

U.N.O in builders specifications or located in saline environments or if using a glazed finish brick, brickwork is to be installed in stretcher bond pattern with raked joints.

As per NCC parts 11.3.7 and 11.3.8,
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.

All stairs to be constructed in accordance with NCC 2022 Vol II Part 11.2.2
Riser: Min 115mm - Max 190mm Going: Min 240mm - Max 355mm Slope (2R+G): Max 550 - Min 700

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Elevations

Revision: DA - 02
Approved by: CP

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

Proposal: New Dwelling
Client: Chris & Brigida Watson
Address: 1 Redside Dr, Brighton 7030

Date: 28/11/2023
Drawn by: RZ
Job No: 055-2023
Engineer: TBA
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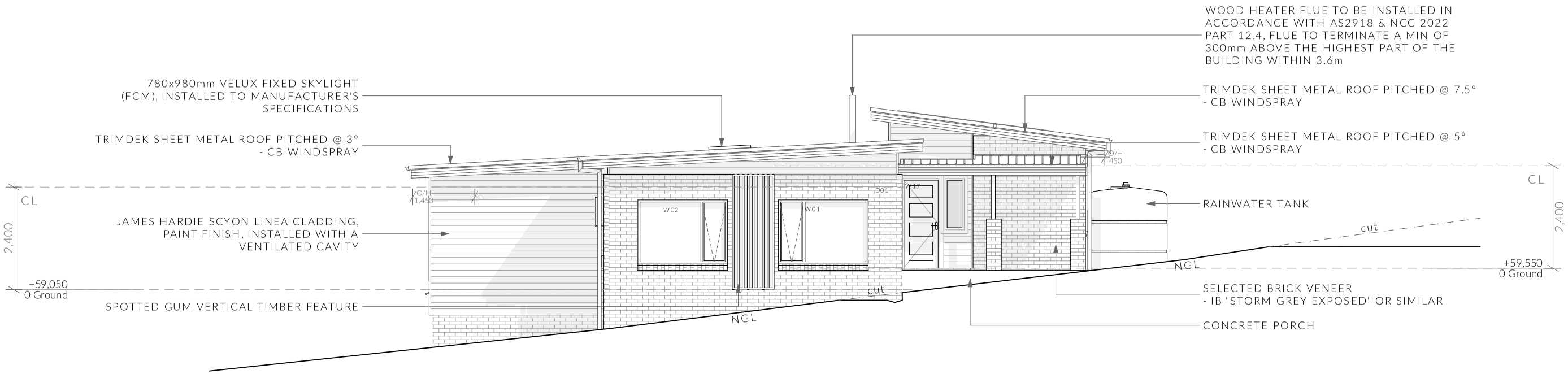
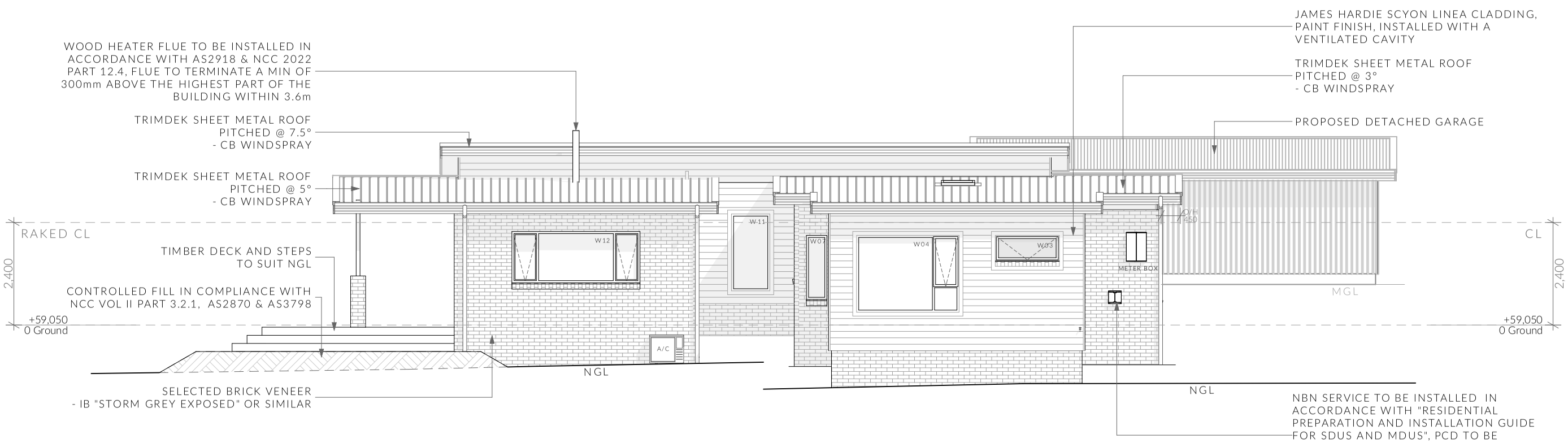
Issue	Date	Description
DA-02	13.02.2024	RFI Amendments

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA



South Elevation 1:100



West Elevation 1:100

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Elevations
Revision: DA - 02
Approved by: CP
Scale: 1:100 @ A3
Pg. No: A.05

Proposal: New Dwelling
Client: Chris & Brigida Watson
Address: 1 Redside Dr, Brighton 7030

Date: 28/11/2023
Drawn by: RZ
Job No: 055-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	13.02.2024	RFI Amendments

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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Floor Areas

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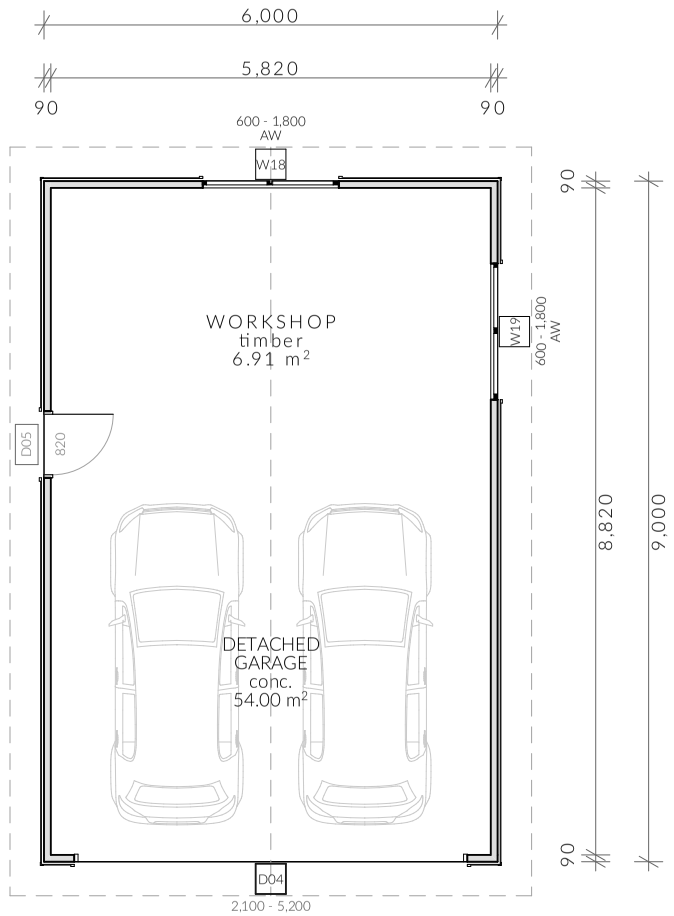
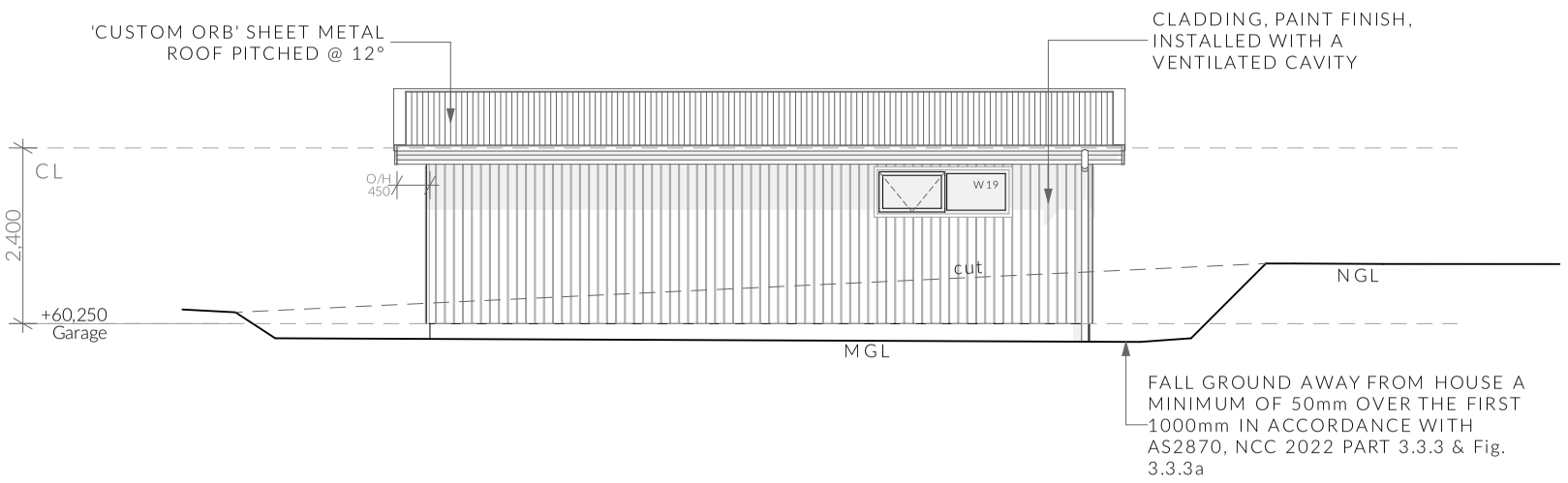
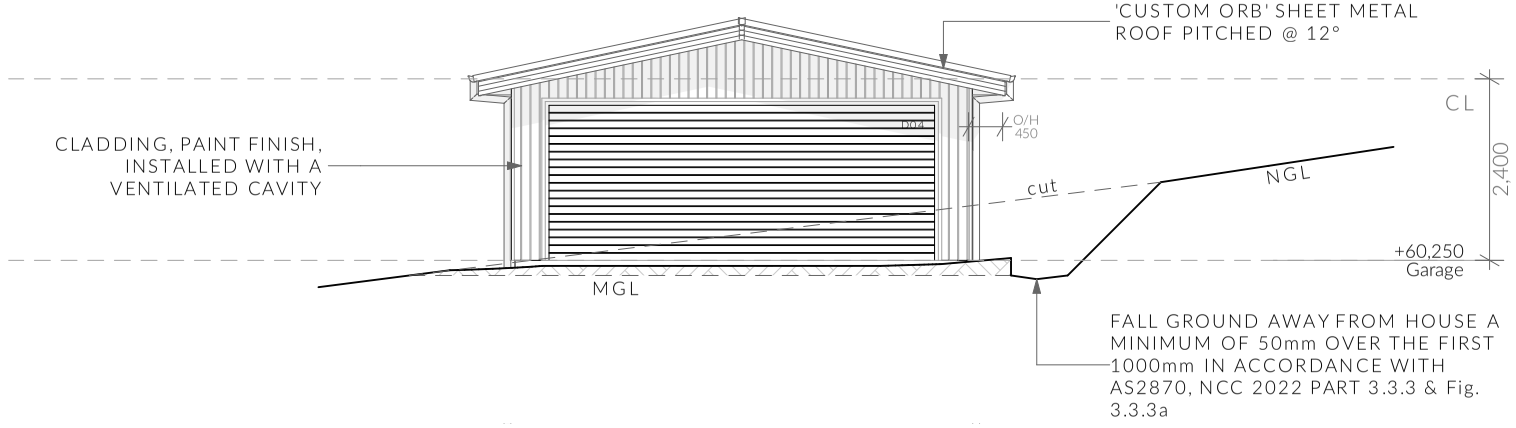
Dwelling Floor Area	171.81m²
Deck	26.50m²



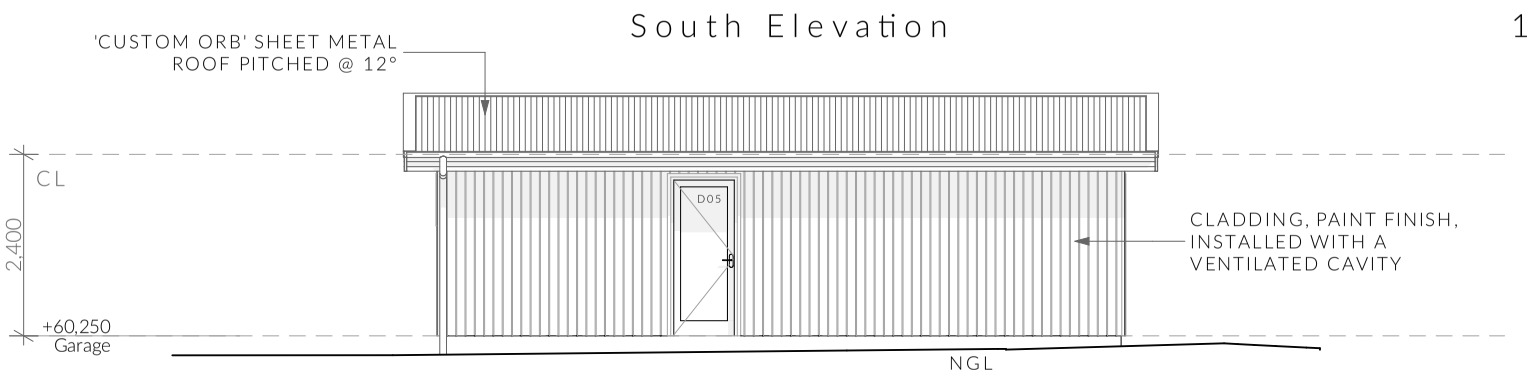
Floor Plan 1:100



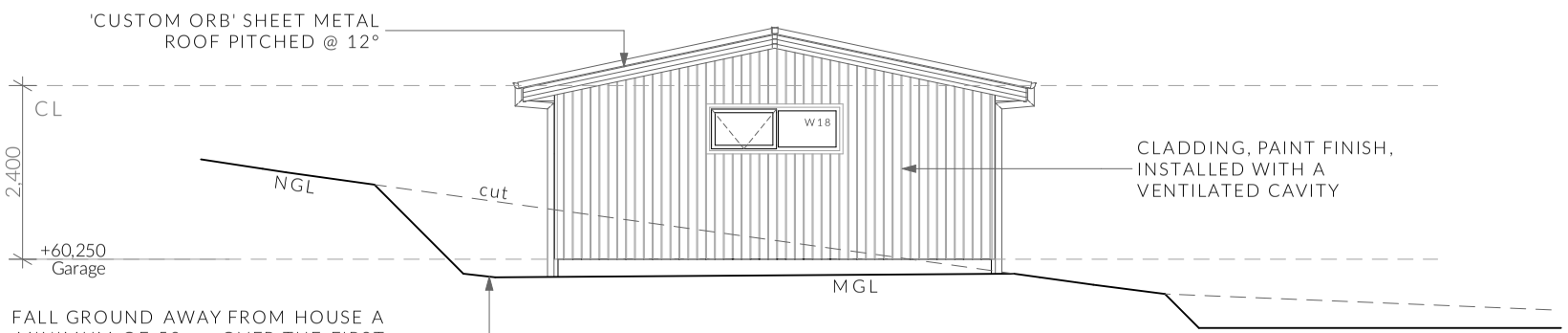
East Elevation 1:100



South Elevation 1:100



West Elevation 1:100



North Elevation 1:100

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Slope (2R+G): Max 550 - Min 700

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Detached Garage

Revision: DA - 02
Approved by: CP

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

Proposal: New Dwelling
Client: Chris & Brigida Watson
Address: 1 Redside Dr, Brighton 7030

Date: 28/11/2023
Drawn by: RZ
Job No: 055-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	13.02.2024	RFI Amendments

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

Ventilation of roof spaces NCC 2022 Part 10.8.3

A roof must have a roof space that-
- (a)is located-
  - (i)immediately above the primary insulation layer; or
  - (ii)immediately above sarking with a vapour permeance of not less than 1.14 µg/N.s, which is immediately above the primary insulation layer; or
  - (iii)immediately above ceiling insulation; and
- (b)has a height of not less than 20 mm; and
- (c)is either-
  - (i)ventilated to outdoor air through evenly distributed openings in accordance with Table 10.8.3; or
  - (ii)located immediately underneath the roof tiles of an unsarked tiled roof.

Stormwater Notes

All gutters, downpipes and rain heads to be designed and installed in compliance with AS3500.3 & NCC 2022 Volume II Part 7.4.

Roofing Cladding

Roof cladding, flashings, cappings, roof sheeting and fixings are to be installed in accordance with NCC 2022 Volume II Part 7.2 for sheet roofing and Part 7.3 for tiled and shingle roofing.

Eaves & Soffit Linings

To comply with NCC 2022 Vol II Part 7.5.5 and where provided, external fibre-cement sheets and linings used as eaves and soffit linings must-
- (a)comply with AS/NZS 2908.2 or ISO 8336; and
- (b)be fixed in accordance with Table 7.5.5 and Figure 7.5.5 using-
  - (i) 2.8 × 30 mm fibre-cement nails; or
  - (ii) No. 8 wafer head screws (for 4.5 mm and 6 mm sheets only); or
  - (iii) No. 8 self embedding head screws (for 6 mm sheets only).

Refer to table 7.5.5 for trimmer and fastener spacings.

REQUIRED NUMBER OF ROOF VENTS:

ROOF PITCH >10° and <15° HIP/GABLE ROOF

REQUIRED VENT AREA
Low Vents = 0.50m² (20.0m x 25,000mm2)
High Vents = 0.05m² (10.0m x 5,000mm2)

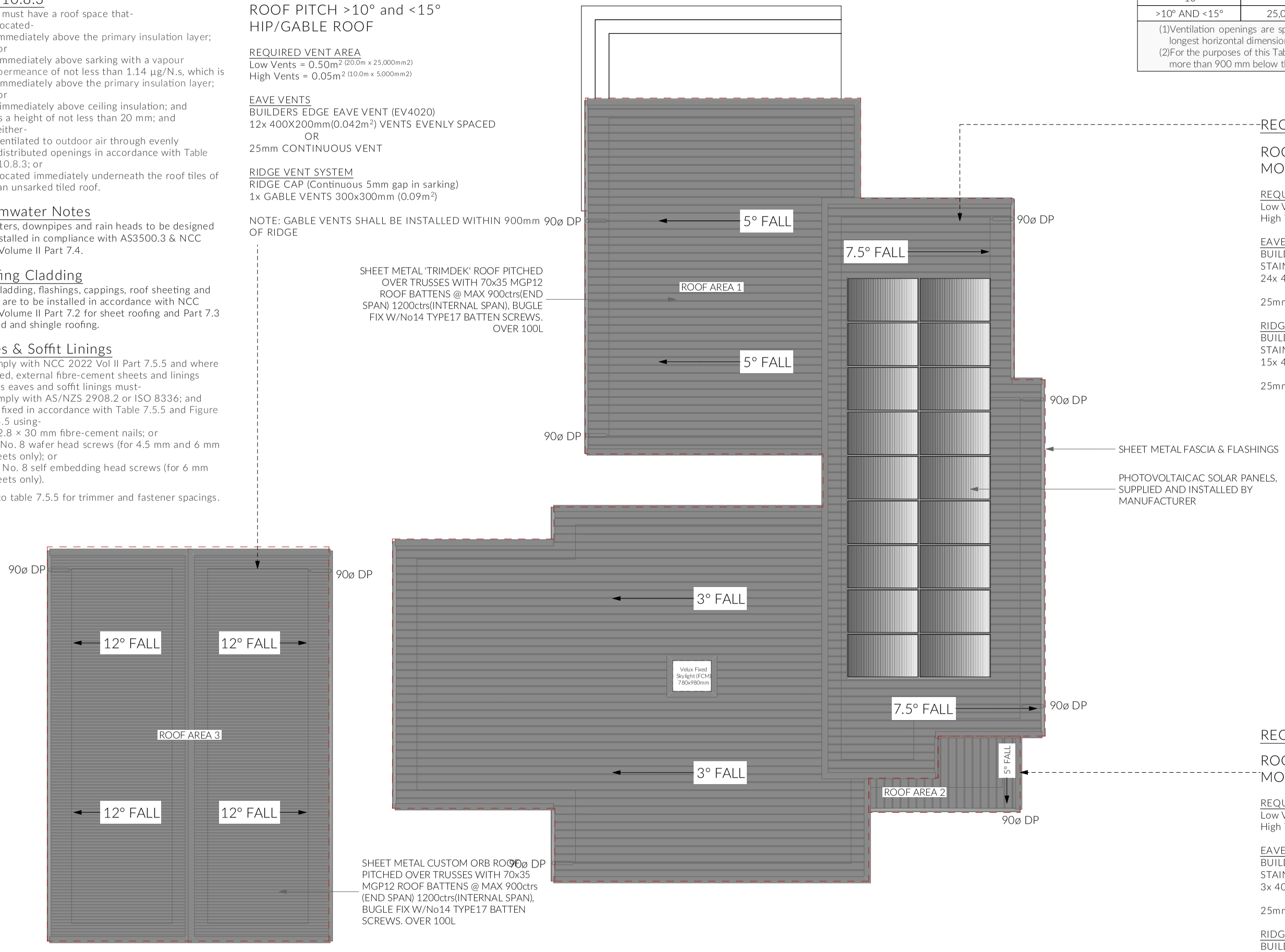
EAVE VENTS
BUILDERS EDGE EAVE VENT (EV4020)
12x 400X200mm(0.042m²) VENTS EVENLY SPACED
OR
25mm CONTINUOUS VENT

RIDGE VENT SYSTEM
RIDGE CAP (Continuous 5mm gap in sarking)
1x GABLE VENTS 300x300mm (0.09m²)

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

ROOF PITCH	VENTILATION OF OPENINGS (TABLE 10.8.3)
<10°	25,000 mm2/m provided at each of two opposing ends
>10° AND <15°	25,000 mm2/m provided at the eaves and 5,000 mm2/m at high level

(1)Ventilation openings are specified as a minimum free open area per metre length of the longest horizontal dimension of the roof.
(2)For the purposes of this Table, high level openings are openings provided at the ridge or not more than 900 mm below the ridge or highest point of the roof space, measured vertically.



REQUIRED NUMBER OF ROOF VENTS:

ROOF PITCH <10° MONOPITCH ROOF

REQUIRED VENT AREA
Low Vents = 0.83m² (33.2m x 25,000mm2)
High Vents = 0.50m² (19.9m x 25,000mm2)

EAVE VENTS
BUILDERS EDGE EAVE VENT (EV4020) FITTED WITH STAINLESS STEEL BUSHFIRE MESH
24x 400X200mm(0.035m²) VENTS EVENLY SPACED
OR
25mm CONTINUOUS VENT

RIDGE VENT SYSTEM
BUILDERS EDGE EAVE VENT (EV4020) FITTED WITH STAINLESS STEEL BUSHFIRE MESH
15x 400X200mm(0.035m²) VENTS EVENLY SPACED
OR
25mm CONTINUOUS VENT

REQUIRED NUMBER OF ROOF VENTS:

ROOF PITCH <10° MONOPITCH ROOF

REQUIRED VENT AREA
Low Vents = 0.10m² (3.84m x 25,000mm2)
High Vents = 0.10m² (3.84m x 25,000mm2)

EAVE VENTS
BUILDERS EDGE EAVE VENT (EV4020) FITTED WITH STAINLESS STEEL BUSHFIRE MESH
3x 400X200mm(0.035m²) VENTS EVENLY SPACED
OR
25mm CONTINUOUS VENT

RIDGE VENT SYSTEM
BUILDERS EDGE EAVE VENT (EV4020) FITTED WITH STAINLESS STEEL BUSHFIRE MESH
3x 400X200mm(0.035m²) VENTS EVENLY SPACED
OR
25mm CONTINUOUS VENT

Roof Plan - Garage 1:100

PINNACLE
PINNACLE DRAFTING & DESIGN
7/3 Abernant Way, Cambridge 7170
03 6248 4218
admin@pinnacledrafting.com.au
www.pinnacledrafting.com.au
Licence: CC6073Y

Roof Plan
Revision: DA - 02
Approved by: CP
Scale: 1:100 @ A3
Pg. No: A.07

Proposal: New Dwelling
Client: Chris & Brigida Watson
Address: 1 Redside Dr, Brighton 7030

Date: 28/11/2023
Drawn by: RZ
Job No: 055-2023
Engineer: TBA
Building Surveyor: TBA

Issue	Date	Description
DA-02	13.02.2024	RFI Amendments

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

GEO-ENVIRONMENTAL ASSESSMENT

1 Redside Drive

Brighton

January 2024

GEO-ENVIRONMENTAL

SOLUTIONS

Investigation Details

Client:	Chris & Brigida Watson
Site Address:	1 Redside Drive, Brighton
Date of Inspection:	04/12/2023
Proposed Works:	New house
Investigation Method:	Geoprobe 540UD - Direct Push
Inspected by:	M. Campbell

Site Details

Certificate of Title (CT):	180364/1
Title Area:	Approx. 1.055ha ha
Applicable Planning Overlays:	Bushfire-prone Areas, Waterway and Coastal Protection Areas
Slope & Aspect:	8° SW facing slope
Vegetation:	Grass Undisturbed

Background Information

Geology Map:	MRT
Geological Unit:	Triassic Sediments
Climate:	Annual rainfall 450mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	AS2870:2011, AS1726:2017, AS4055:2021 & AS1547:2012

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)	BH 3 Depth (m)	USCS	Description
0.00-0.10	0.00-0.20	0.00-0.20	SW	**SAND**: dark grey brown, slightly moist, loose
0.10-0.70	0.20-0.50	0.20-0.60	CI	**CLAY**: yellowish brown, slightly moist, firm to stiff, medium plasticity
0.70-1.00			SC	**CLAYEY SAND**: yellowish brown, dry, very dense, trace gravels, refusal
	0.50-0.60	0.60-0.80	GW	**SANDY**:**GRAVEL** yellowish brown, dry, very dense, refusal

Site Notes

The soils on site have developed from Triassic sandstone and consist of sandy topsoil overlying sandy clay subsoil. The subsoil is slightly dispersive – Emerson Class 2(2).

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:	2.0
Shielding Classification:	PS
Topographic Classification:	T2
Wind Classification:	N3
Design Wind Gust Speed – m/s ($V_{h,u}$):	50

Wastewater Classification & Recommendations

According to AS1547-2012 (on-site waste-water management) the natural soil is classified as **LIGHT CLAY (category 5).** The site is unsuited to the application of primary treated effluent due to the shallow soil depth and the proximity of the downslope drainage line. Secondary treatment of wastewater is required and it is proposed to install a package treatment system (e.g. AWTS such as Econocycle, Envirocycle, Ozzikleen etc) with the treated wastewater applied through subsurface irrigation. A Design Loading Rate (DIR) of 3mm/day is typically assigned to category 5 soils, however the applied DIR at this site has been reduced to 2.4mm/day due to the slope angle onsite.

The proposed four-bedroom dwelling has a calculated maximum wastewater loading of 900L/day. This is based on a mains water supply and a maximum occupancy of 6 people (150L/day/person).

Using the DIR of 2.4mm/day, an irrigation area of at least 375m^2 will be required. This can accommodate as subsurface irrigation under grass. Gypsum will need to be applied throughout the application area at a rate of 1kg/5m^2.

A cut-off drain will be required upslope of the application area and the area excluded from development and traffic. A 100% reserve area will also need to be set aside for any future wastewater requirements. There is sufficient space available onsite to accommodate the required reserve due to the large property size (approx. 1ha). Therefore, a formal reserve area has not been assigned.

The following setback distances are required to comply with the Building Act 2016:

Upslope or level buildings:	3m
Downslope buildings:	4m
Upslope or level boundaries:	1.5m
Downslope boundaries:	9.5m
Downslope surface water:	31m

Compliance with Building Act 2016 Guidelines for On-site Wastewater Management Systems is outlined in the attached table.

During installation GES will need to be notified of any variation to the soil conditions or wastewater loading as outlined in this report.

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 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.

During installation GES will need to be notified of any variation to the soil conditions or wastewater loading as outlined in this report.

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

Director

GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Assessment Report

Site assessment for on-site waste water disposal

Assessment for	Chris and Brigida Watson	Assess. Date	9-Jan-24
		Ref. No.	
Assessed site(s)	1 Redside Drive Brighton	Site(s) inspected	4-Dec-23
Local authority	Brighton	Assessed by	John Paul Cumming

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

Wastewater Characteristics

Wastewater volume (L/day) used for this assessment = 900 (using the 'No. of bedrooms in a dwelling' method)

Septic tank wastewater volume (L/day) = 300

Sullage volume (L/day) = 600

Total nitrogen (kg/year) generated by wastewater = 2.7

Total phosphorus (kg/year) generated by wastewater = 1.6

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

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean rainfall (mm)	37	31	34	27	39	41	34	49	44	52	51	48
Adopted rainfall (R, mm)	37	31	34	27	39	41	34	49	44	52	51	48
Retained rain (Rr, mm)	31	27	29	23	33	35	29	42	37	44	43	40
Max. daily temp. (deg. C)												
Evapotrans (ET, mm)	130	110	91	63	42	29	32	42	63	84	105	126
Evapotr. less rain (mm)	**99**	**83**	**62**	**40**	**9**	**-5**	**3**	**0**	**26**	**40**	**62**	**86**

Annual evapotranspiration less retained rain (mm) = 505

Soil characterisitics

Texture = Light clay Category = 5 Thick. (m) = 0.8

Adopted permeability (m/day) = 0.12 Adopted LTAR (L/sq m/day) = 2 Min depth (m) to water = 5

Proposed disposal and treatment methods

Proportion of wastewater to be retained on site:	All wastewater will be disposed of on the site
The preferred method of on-site primary treatment:	In a package treatment plant
The preferred method of on-site secondary treatment:	In-ground
The preferred type of in-ground secondary treatment:	None
The preferred type of above-ground secondary treatment:	Trickle irrigation
Site modifications or specific designs:	Not needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	42
Width (m) =	8.5
Depth (m) =	0.6
Total disposal area (sq m) required =	380
comprising a Primary Area (sq m) of:	375
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

Comments

A DIR of 2.4mm/day has been assigned for the site, requiring a minimum irrigation area of 375m^2. Therefore the system will have the capacity to cope with predicted climatic and loading events.

GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Site Capability Report

Site assessment for on-site waste water disposal

Assessment for	Chris and Brigida Watson	Assess. Date	9-Jan-24
		Ref. No.	
Assessed site(s)	1 Redside Drive Brighton	Site(s) inspected	4-Dec-23
Local authority	Brighton	Assessed by	John Paul Cumming

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

Alert	Factor	Units	Value	Confid level	Limitation Trench	Limitation Amended	Remarks
	Expected design area	sq m	5,000	V. high	Very low		
	Density of disposal systems	/sq km	10	Mod.	Very low		
	Slope angle	degrees	8	High	Low		
	Slope form	Straight simple		High	Low		
	Surface drainage	Imperfect		High	Moderate		
	Flood potential	Site floods <1:100 yrs		High	Very low		
	Heavy rain events	Infrequent		High	Moderate		
A	Aspect (Southern hemi.)	Faces SE or SW		V. high	High		
	Frequency of strong winds	Common		High	Low		
A	Wastewater volume	L/day	900	High	High		
	SAR of septic tank effluent		1.2	High	Low		
	SAR of sullage		2.1	High	Moderate		
	Soil thickness	m	0.8	V. high	Low		
AA	Depth to bedrock	m	0.8	Mod.	Very high		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		7.0	High	Very low		
	Soil bulk density	gm/cub. cm	1.5	High	Low		
AA	Soil dispersion	Emerson No.	2	V. high	Very high		
	Adopted permeability	m/day	0.12	Mod.	Very low		
A	Long Term Accept. Rate	L/day/sq m	2	High	High		

Comments

The site has the capability to accept secondary treated wastewater. Gypsum will need to be applied to the application area

GES P/L

Land suitability and system sizing for on-site wastewater management

Trench 3.0 (Australian Institute of Environmental Health)

Environmental Sensitivity Report

Site assessment for on-site waste water disposal

Assessment for	Chris and Brigida Watson	Assess. Date	9-Jan-24
		Ref. No.	
Assessed site(s)	1 Redside Drive Brighton	Site(s) inspected	4-Dec-23
Local authority	Brighton	Assessed by	John Paul Cumming

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

Alert	Factor	Units	Value	Confid level	Limitation Trench	Limitation Amended	Remarks
	Cation exchange capacity	mmol/100g	95	High	Low		
A	Phos. adsorp. capacity	kg/cub m	0.5	High	High		
	Annual rainfall excess	mm	-505	High	Very low		
	Min. depth to water table	m	5	High	Very low		
	Annual nutrient load	kg	4.4	High	Very low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	2	High	Very low		
	Risk to adjacent bores	Very low		V. high	Very low		
	Surf. water env. value	Agric non-sensit		V. high	Low		
A	Dist. to nearest surface water	m	75	V. high	High		
	Dist. to nearest other feature	m	120	V. high	Very low		
	Risk of slope instability	Very low		V. high	Very low		
	Distance to landslip	m	200	V. high	Low		

Comments

Secondary treatment of wastewater is required

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 COHESIVE – 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

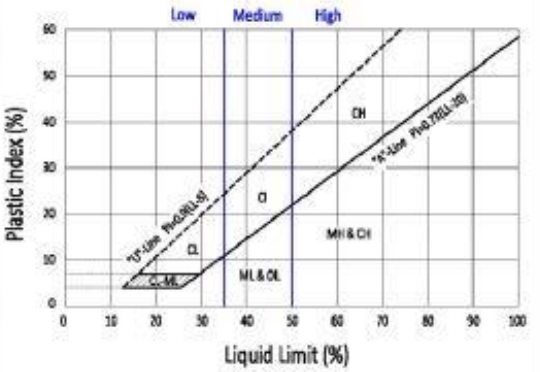
Soils for engineering purposes are the unconsolidated materials above bedrock, they can be residual, alluvial, colluvial or aeolian in origin.

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.
			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	(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.
			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'

Plasticity Chart

For classification of fine grained soils and fine fraction of coarse grained soils.



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.

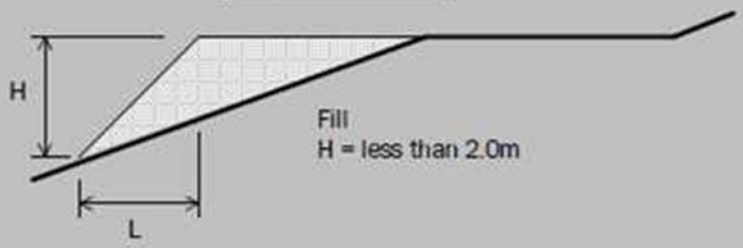
- Dynamic Cone Penetrometer – a 16mm rod with a 20mm diameter cone end is driven with a 9kg hammer dropping 510mm (AS 1289, Test 6.3.2).
- Perth Sand Penetrometer – a 16mm diameter flat-ended rod is driven with a 9kg hammer, dropping 600mm (AS 1289 Test 6.3.3). This test was developed for testing the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

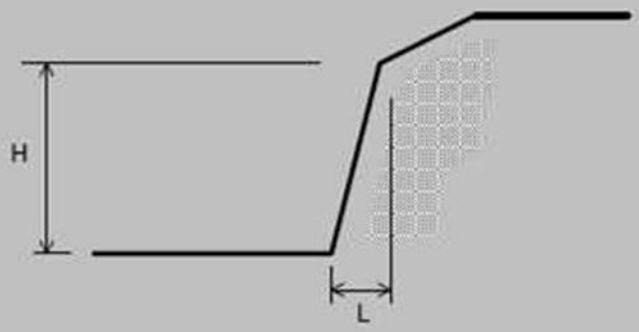
1.5 Batter Angles for Embankments *(Guide Only)*

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.

GES
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SOLUTIONS

AS1547:2012 – Loading Certificate – AWTS Design

This loading certificate sets out the design criteria and the limitations associated with use of the system.

Site Address: 1 Redside Drive, Brighton

System Capacity: 6 persons @ 150L/person/day

Summary of Design Criteria

DIR: 2.4mm/day

Irrigation area: 375m^2

Reserve area location /use: Not assigned – more than 100% available

Water saving features fitted: Standard fixtures

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

Typical loading change consequences: Expected to be minimal due to use of AWTS and large land area

Overloading consequences: Continued overloading may cause hydraulic failure of the irrigation area and require upgrading/extension of the area. Risk considered acceptable due to monitoring through quarterly maintenance reports.

Underloading consequences: Lower than expected flows will have minimal consequences on system operation unless the house has long periods of non occupation. Under such circumstances additional maintenance of the system may be required. Long term under loading of the system may also result in vegetation die off in the irrigation areas and additional watering may be required. Risk considered acceptable due to monitoring through quarterly maintenance reports.

Lack of maintenance / monitoring consequences: Issues of underloading/overloading and condition of the irrigation area require monitoring and maintenance, if not completed system failure may result in unacceptable health and environmental risks. Monitoring and regulation by the permit authority required to ensure compliance.

Other considerations: Owners/occupiers must be made aware of the operational requirements and limitations of the system by the installer/maintenance contractor.

Demonstration of wastewater system compliance to *Building Act 2016 Guidelines for On-site Wastewater Disposal*

Acceptable Solutions	**Performance Criteria**	**Compliance**
A1 Horizontal separation distance from a building to a land application area must comply with one of the following: a) be no less than 6m; or b) be no less than: (i) 3m from an upslope building or level building; (ii) If primary treated effluent to be no less than 4m plus 1m for every degree of average gradient from a downslope building; (iii) If secondary treated effluent and subsurface application, no less than 2m plus 0.25m for every degree of average gradient from a downslope building.	P1 a) The land application area is located so that (i) the risk of wastewater reducing the bearing capacity of a building's foundations is acceptably low.; and (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	Complies with A1 (b) (i) Land application area will be located with a minimum separation distance of 3m from an upslope or level building. Complies with A1 (b) (iii) Land application area will be located with a minimum separation distance of 4m of downslope building
A2 Horizontal separation distance from downslope surface water to a land application area must comply with (a) or (b) (a) be no less than 100m; or (b) be no less than the following: (i) if primary treated effluent 15m plus 7m for every degree of average gradient to downslope surface water; or (ii) if secondary treated effluent and subsurface application, 15m plus 2m for every degree of average gradient to down slope surface water.	P2 Horizontal separation distance from downslope surface water to a land application area must comply with all of the following: a) Setbacks must be consistent with AS/NZS 1547 Appendix R; b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	Complies with A2 (b) (ii) Land application area will be located with a minimum separation distance of 31m of downslope surface water

A3 Horizontal separation distance from a property boundary to a land application area must comply with either of the following: (a) be no less than 40m from a property boundary; or (b) be no less than: (i) 1 .5m from an upslope or level property boundary; and (ii) If primary treated effluent 2m for every degree of average gradient from a downslope property boundary; or (iii) If secondary treated effluent and subsurface application, 1.5m plus 1m for every degree of average gradient from a downslope property boundary.	P3 Horizontal separation distance from a property boundary to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment in accordance with Appendix A of AS/NZS 1547 has been completed that demonstrates that the risk is acceptable.	Complies with A3 (b) (i) Land application area will be located with a minimum separation distance of 1.5m from an upslope or level property boundary Complies with A3 (b) (iii) Land application area will be located with a minimum separation distance of 9.5m of downslope property boundary
A4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must be no less than 50m and not be within the zone of influence of the bore whether up or down gradient.	P4 Horizontal separation distance from a downslope bore, well or similar water supply to a land application area must comply with all of the following: (a) Setback must be consistent with AS/NZS 1547 Appendix R; and (b) A risk assessment completed in accordance with Appendix A of AS/NZS 1547 demonstrates that the risk is acceptable	Complies with A4 No bore or well identified within 50m

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

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: Chris & Brigida Watson *Owner name*
4 Wynnstay Court *Address*
Blackmans Bay 7052 *Suburb/postcode*

Designer details:

Name: John-Paul Cumming
Category: Bld. Srvcs. Dsgnr. - Hydraulic
Business name: Geo-Environmental Solutions
Phone No: 03 6223 1839
Business address: 29 Kirksway Place
Battery Point 7004
Fax No: N/A
Licence No: CC774A
Email address: office@geosolutions.net.au

Details of the proposed work:

Owner/Applicant Chris & Brigida Watson
Designer's project reference No. J9576
Address: 1 Redside Drive
Lot No: 180364/1
Brighton 7030

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

Description of work:
On-site wastewater management system - design

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

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

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

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

Other details:

AWTS with irrigation

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: Feb-24
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: Feb-24
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by:	Date:
Test reports:	Prepared by: Geo-Environmental Solutions	Date: Feb-24

Standards, codes or guidelines relied on in design process:

AS1547:2012 On-site domestic wastewater management.

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

Any other relevant documentation:

Geo-Environmental Assessment - 1 Redside Drive Brighton - Feb-24

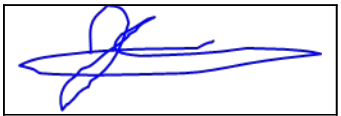
Geo-Environmental Assessment - 1 Redside Drive Brighton - Feb-24

Attribution as designer:

I John-Paul Cumming, am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		02/02/2024
Licence No:	CC774A		

Assessment of Certifiable Works: (TasWater)

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

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

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

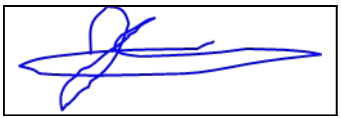
I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

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

Certification:

I ..... John-Paul Cumming..... being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008,* that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.

Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	Name: (print)	*Signed*	*Date*
Designer:	John-Paul Cumming		02/02/2024

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Chris & Brigida Watson *Owner /Agent*

4 Wynnstay Court *Address*

Blackmans Bay 7052 *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: 1 Redside Drive

Lot No:

Brighton 7030

Certificate of title No: 180364/1

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: J9576

Date: 02/02/2024

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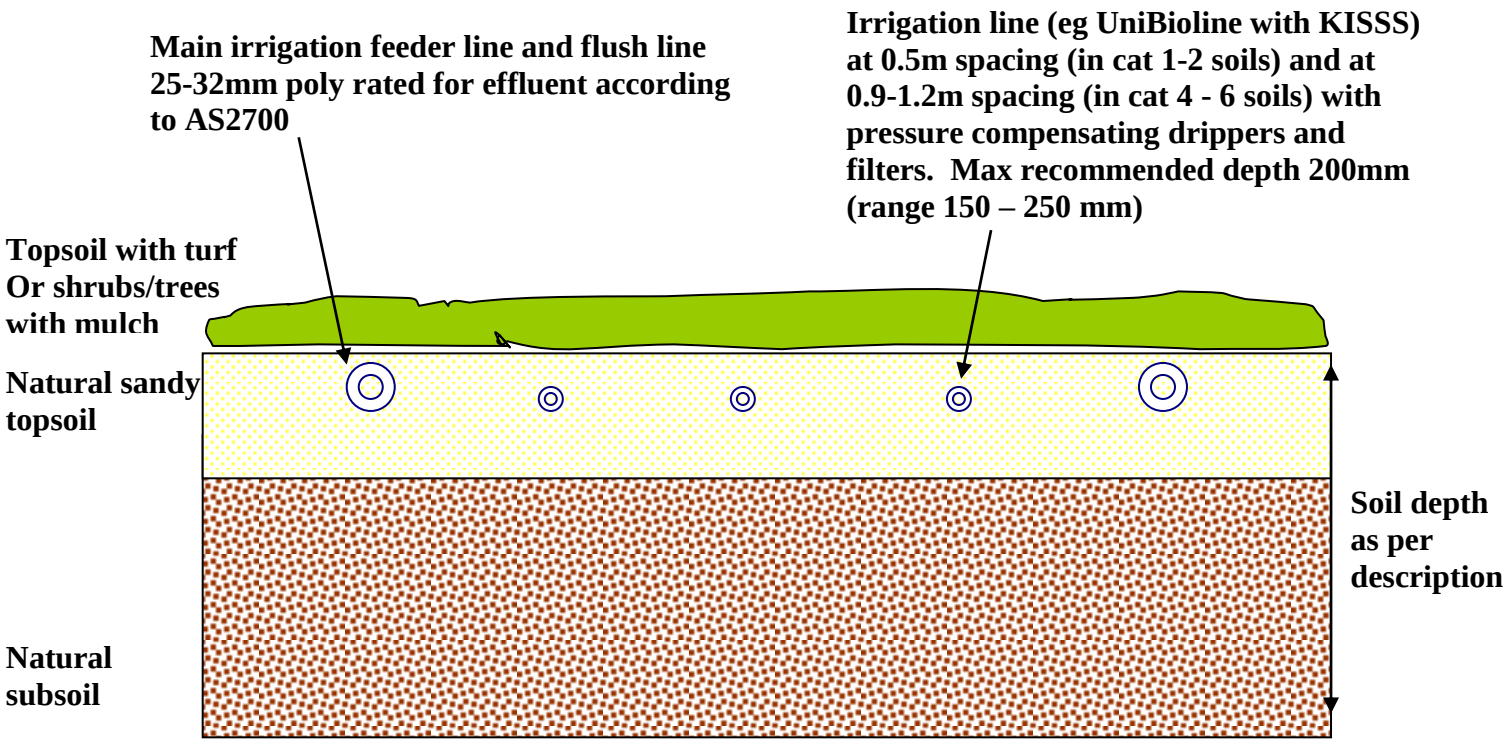
Figure 1 – AWTS

Subsurface irrigation design

To be used in conjunction with site evaluation report for construction of subsurface irrigation areas for use with aerated wastewater treatment systems (AWTS). **On dispersive soils gypsum should be added to tilled natural soil at 1Kg/5m^2**. The irrigation outlet line from the system or holding tank should utilize a 25-32mm main line out stepped down to a 11-16mm lateral drip irrigation lines in each irrigation row. If the final design is for shrubs/trees then a mounded row design is best employed with a nominal mound height of approximately 200mm.

Irrigation Area Cross Section



Note – the topsoil/turf depths are minimum, with a maximum recommended depth of irrigation line below surface of 200mm (range 150-250mm).

- The existing surface of the site should be tilled to a depth of 200mm with a conventional plough, discs or spring tines to break down the turf matt and any large soil clods
- Turf, or grass seed or plants/mulch should be applied to the area as soon as practical after the laying of dripper line and commissioning of the system

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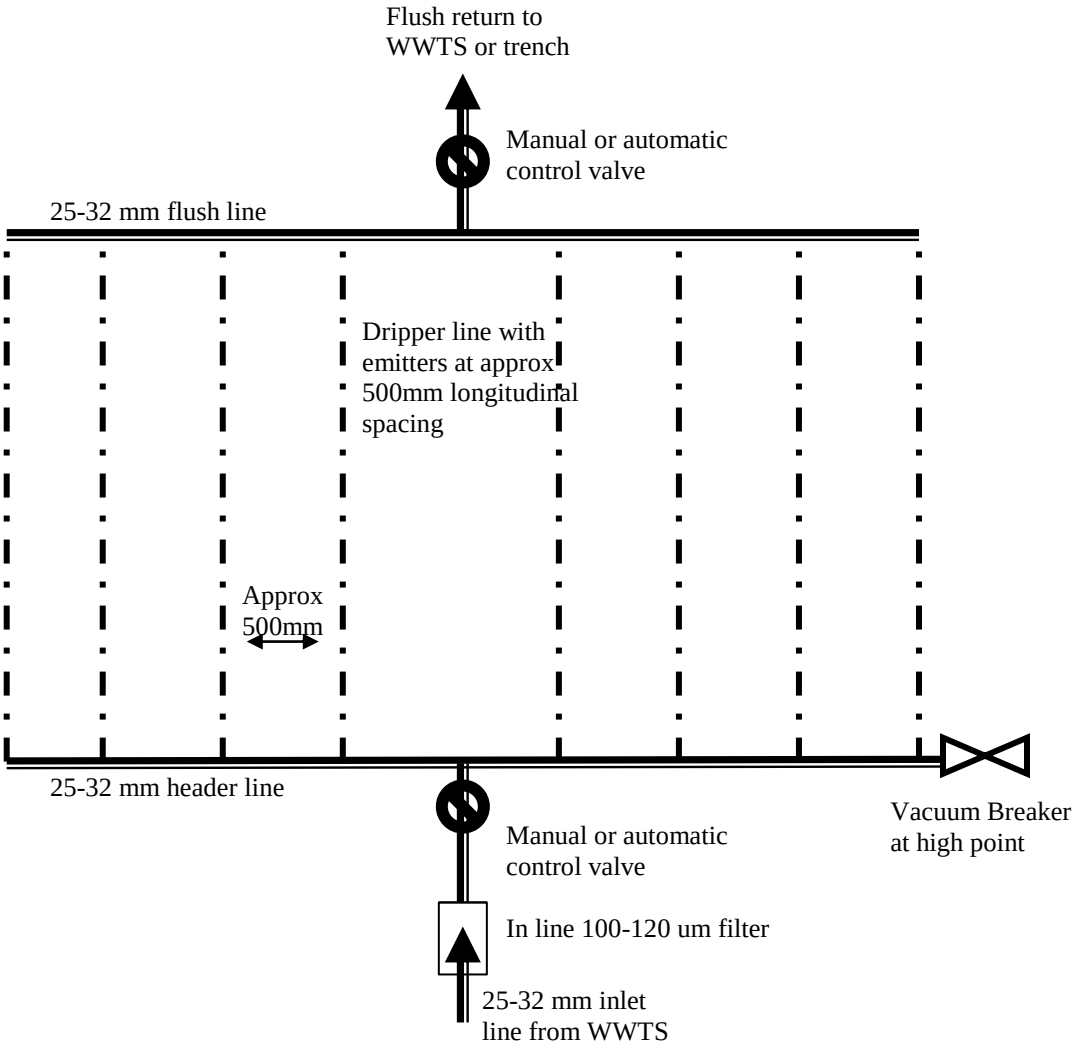
Irrigation Area Plan View



Design specifications:

1. Manufacturer's recommendations for spacing of lateral irrigation lines should be followed (either Techline brand, Geoflow or KISSS) with commonly used with spacing of 0.3m (0.5m KISSS) in highly permeable soils and 0.6m (1.0-1.2m KISSS) in less permeably loams and clays.
2. Dependant upon treatment system a 200µm filter may be installed at the pumping chamber outlet, but a 100-120 µm inline disc filter should be installed prior to discharge into the irrigation area.
3. A vacuum breaker valve must be installed at the highest point of each irrigation zone in a marked and protected valve control box.
4. A flush line must be installed at the lowest point/bottom of the irrigation area with a return valve for flushing back into the treatment chamber of the system (not into the primary chamber as it may affect the performance of the microbial community) or to a dedicated absorption trench.
5. The minimum irrigation pumping capacity should be equivalent to 120kpa (i.e. 12m of head) at the highest point of the irrigation area (a gauge should be placed at the vacuum breaker) – therefore pump size can be matched on site to the irrigation pipe size and design.

Legend

- Electrical Connection
- Electrical Turret
- Sewer Connection
- Stormwater Connection
- Telstra Connection
- Telstra Pit
- Water Meter
- Water Stop Valve
- Fire Hydrant
- Solar Bollard Light
- Spotlight with sensor

Survey Notes from Surveyor

This plan and associated digital model is prepared for Pinnacle Drafting & Design from a combination of field survey and existing records for the purpose of designing new constructions on the land and should not be used for any other purpose.

The title boundaries as shown on this plan were not marked at the time of the survey and have been determined by plan dimensions only and not by field survey. No measurements or offsets are to be derived between the features on this plan and the boundary layer. The relationship between the features in this model and the boundary layers cannot be used for any set out purposes or to confirm the position of the title boundaries on site.

Services shown have been located where visible by field survey. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

This note forms an integral part of the Plan/Data. Any reproduction of this plan/model without this note attached will render the information shown invalid.

Site Areas

Site Area	10500
Building Footprint	225 m²
Total Site Coverage	2.15%

Wastewater system:

AWTS unit located to ensure
min 1:60 fall from all fixtures

Cut-off drain

Subsurface irrigation - 375m²
Gypsum to be incorporated at
rate of 1Kg/5m²

Min 3m from upslope buildings
Min 1.5m from upslope or level boundaries
Min 9.5m from downslope boundary
Min 31m from downslope surface water

Refer to GES report

Dr. John Paul Cumming
Building Services Designer-
Hydraulic
CCC774A

02/02/2024

GES
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29 Kirkaway Place Battery Point
T| 62231839 E| office@geosolutions.net.au

PINNACLE	PINNACLE DRAFTING & DESIGN 7/3 Abernant Way, Cambridge 7170 03 6248 4218 admin@pinnacledrafting.com.au www.pinnacledrafting.com.au Licence: CC 6073Y	**Location Plan** Revision: DA - 01 Approved by: CP	Scale: 1:625 @ A3 Pg. No: A.01	Proposal: New Dwelling Client: Chris & Brigida Watson Address: 1 Redside Dr, Brighton 7030	Date: 28/11/2023 Drawn by: RZ Job No: 055-2023 Engineer: TBA Building Surveyor: TBA	Issue Date Description		BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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29 Kirksway Place, Battery Point
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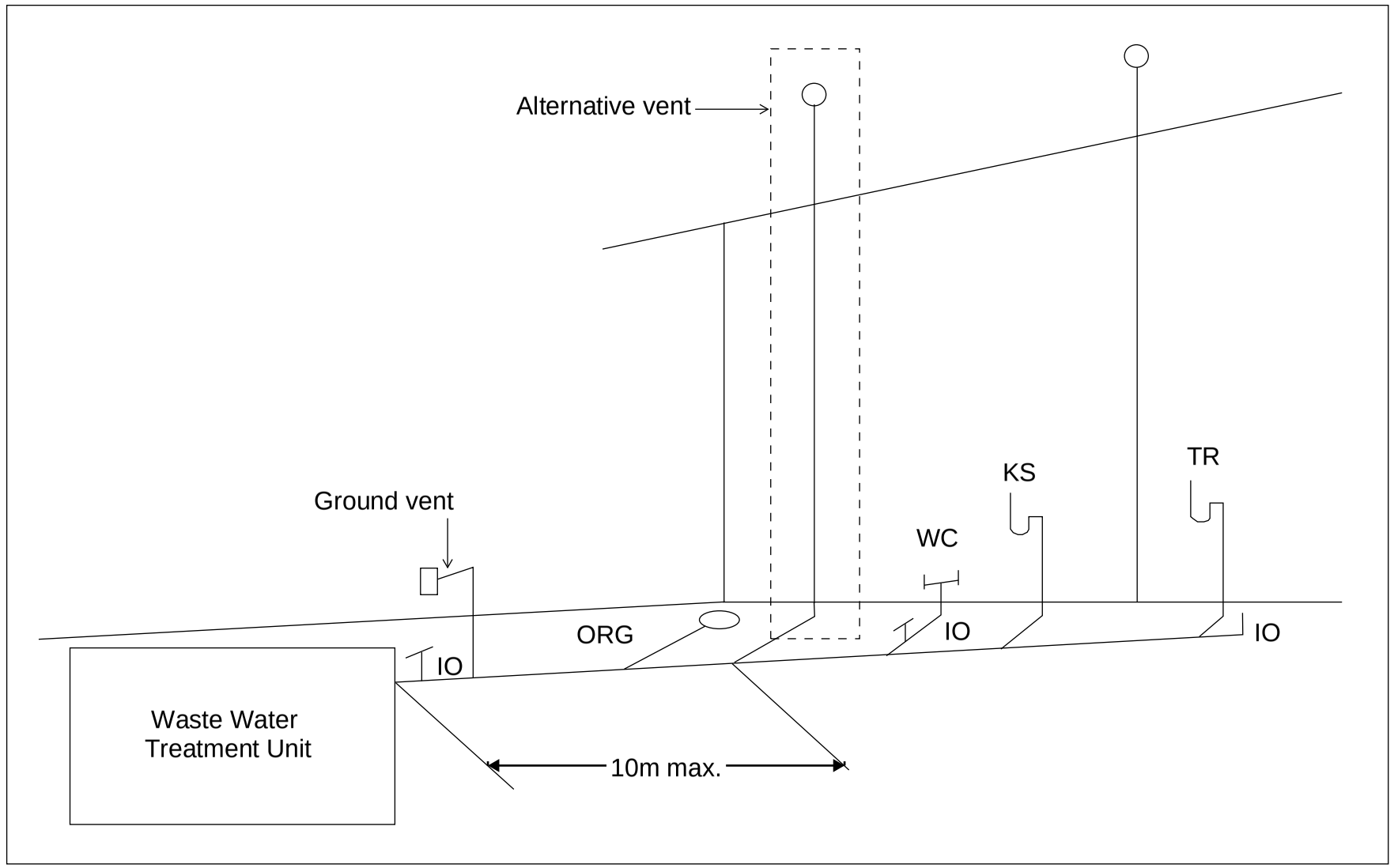


Tas Figure C2D6 Alternative Venting Arrangements

Vents must terminate in accordance with AS/NZS 3500.2

Alternative venting to be used by extending a vent to terminate as if an upstream vent, with the vent connection between the last sanitary fixture or sanitary appliance and the on-site wastewater management system. Use of a ground vent in not recommended

Inspection openings must be located at the inlet to an on-site wastewater management system treatment unit and the point of connection to the land application system and must terminate as close as practicable to the underside of an approved inspection opening cover installed at the finished surface level

Access openings providing access for desludging or maintenance of on-site wastewater management system treatment unites must terminate at or above finished surface level

Do not scale from these drawings. Dimensions to take precedence over scale.				Tas Figure C2D6 Alternative Venting Arrangements		Sheet 1 of 1

FUTURA
PLANNING

Bushfire Hazard Report

Proposed Development: Residential Dwelling & Outbuilding

Address: 1 Redside Drive, Brighton 7030

Applicant: Chris & Brigida Watson

Prepared by: J S Mayne

Bushfire Practitioner BFP-172

Report Date: February 2024

Job Reference: PIN055-2023

www.futuraplanning.com.au - 2/29B Waimea Ave, Sandy Bay 7005

ABN 19 248 759 296

Table of Contents

Limitations of this report

The viability of this report's efficacy hinges on the implementation and sustained upkeep of the prescribed measures and recommendations throughout the development's lifespan. Any alterations in site conditions could potentially lead to variations in the Bushfire Attack Level (BAL) classification, rendering this report null and void. It is important to note that the extent of this report's coverage does not ensure the complete prevention of property or life loss in the event of a bushfire. This is primarily due to the intricate nature of vegetation management, the inherently unpredictable behaviour of fires, and the influence of severe weather conditions. It is crucial to clarify that this report does not offer legal counsel, and no responsibility can be assumed for actions taken by property owners, the local council, or any other parties that might undermine the efficacy of this report.

1.0 Summary

The following is a Bushfire Assessment for an existing lot located 1 Redside Drive, Brighton. The development proposal is for new single Class 1a dwelling and Class 10 outbuilding on a single lot. The clients are Chris & Brigida Watson; the building designer is Pinnacle Drafting and Design.

The development is located in a Bushfire Prone Area. The report is based on a site assessment completed on the 3/2/2024 and additional information obtained from various electronic data bases.

The assessments contained in this report have been undertaken in accordance with the Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas and Director's Determination- Bushfire Hazard Areas, Building Act 2016, Version: 1.1, Date: 8th April 2021.

Based on the Bushfire Attack Level (BAL) Assessment undertaken, the overall development has been assigned a BAL rating of BAL 12.5, which indicates a low to moderate risk of ember attack, radiant heat exposure and direct flame contact during a bushfire event. The assessment takes into account the Forest Fire Danger Index (FDI) of 50, but it should be noted that on days with an Extreme or Catastrophic Fire Danger Rating, the building's-built resistance may be exceeded if directly impacted by bushfire. It is therefore recommended that appropriate measures are taken to enhance the building's bushfire resilience, such as installing ember screens on windows, sealing gaps and openings, and ensuring adequate access for firefighting vehicles.

2.0 Location

Site Address: 1 Redside Drive, Brighton 7030

Title Reference: 180364 / 1

Property ID: 9943383

Applicant: Chris & Brigida Watson

Municipality: Brighton Council

Planning Scheme: Tasmanian Planning Scheme

Zoning: Rural Living

Overlays: Bushfire Prone Areas, Natural Assets Code

Bushfire Attack Level: BAL 12.5

Image 1: Location of Site (Source: LISTMap 2024)

3.0 Site Characteristics

3.1 Topography and aspect

1 Redside Drive can be found off Briggs Road, linking Old Beach to Brighton. Positioned to the south-east of Brighton and south-west of the Meehan Ranges, this property falls under the Rural Living zoning in the Tasmanian Planning Scheme. The site is encompassed by numerous well-established rural residential properties. The lot spans 10,500m2 and features a consistently gradual slope towards the western quadrant, ranging from 0 to 5 degrees (refer to 'Image 3: 100m Vegetation & Effective Slope Radius' for visual reference).

3.2 Vegetation Description

The native vegetation on the lot and its neighbouring areas, as classified in Tasveg 4, is uniformly categorized as Urban Areas (FUR). This classification stems from the presence of established residential dwellings scattered across the broader Redside Drive vicinity (see 'Image 2' for an aerial perspective).

Examining the site photos in Attachment 1 reveals that the vegetation in the bushland surrounding the proposed dwelling primarily falls under the classification of Grassland (G- Grassland AS3959:2018 Table 2.3). Additionally, there are small, isolated patches of mature Eucalyptus (Pulchella & Globulus) encircling the property. These Woodland areas, depicted in the site photos, are generally well-maintained akin to residential zones, yet a minor threat persists for the subject property. While the grassland in the adjacent properties is predominantly managed, the rural nature of these properties suggests the potential for unmanaged grasslands, posing a bushfire threat to the subject property.

It is noteworthy that, in accordance with AS3959:2018 Section 2.2.3.2 (e), roads, internal driveways, and fire breaks have been excluded from consideration due to their non-vegetated status and permanent clearance.

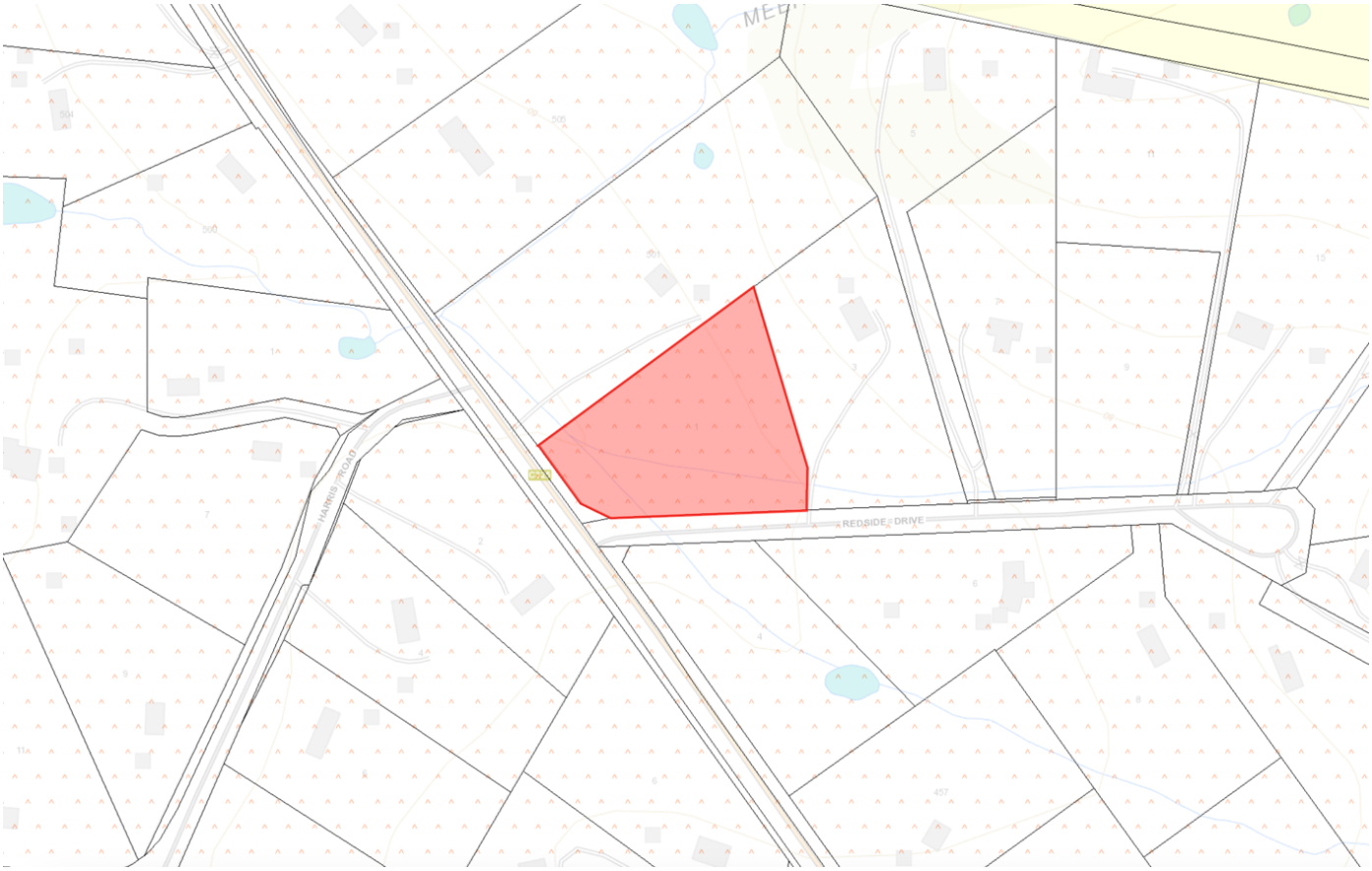


Image 2: TASVEG 4.0 Mapping – 1 Redside Drive, (Source: LISTMap 2024)

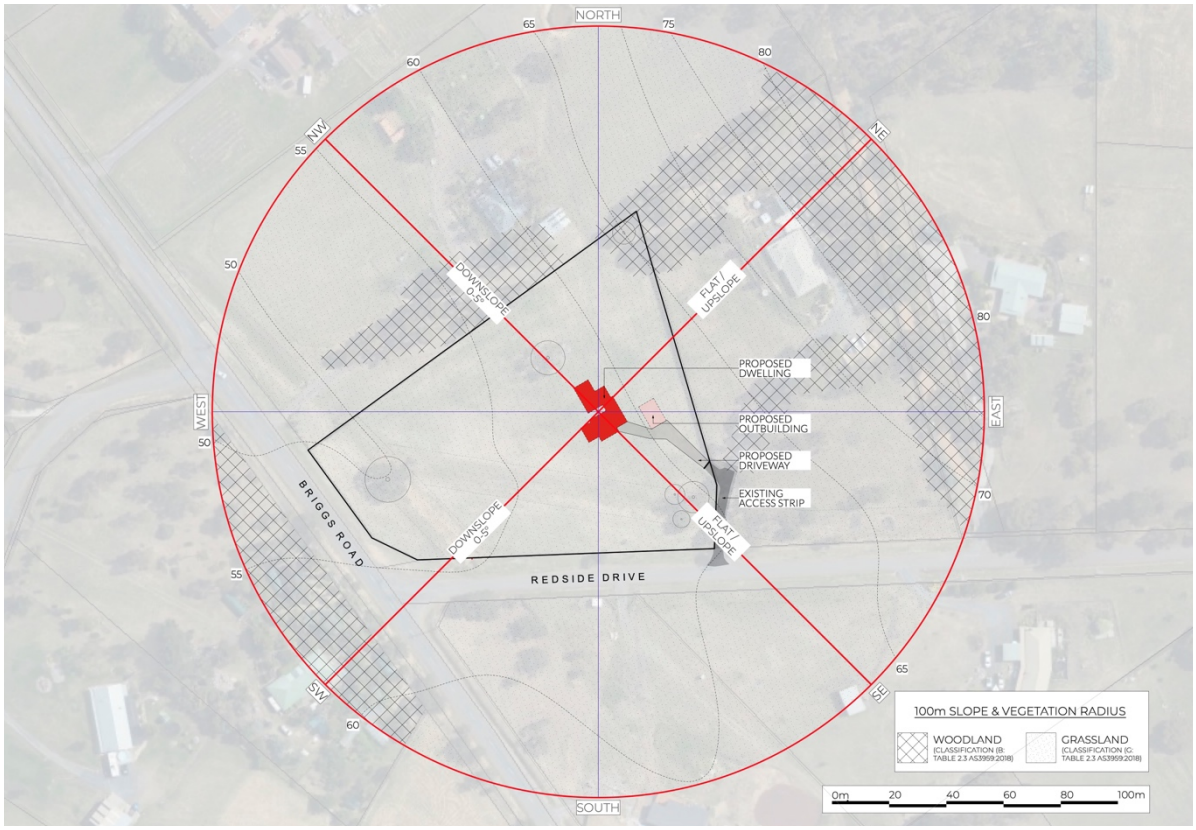


Image 3: 100m Vegetation & Effective Slope Radius – 1 Redside Drive, (Source: LISTMap 2024) Topography, Vegetation, and directions of bushfire threat.

4.0 Proposed Development

It is proposed that a single Class 1a dwelling and Class 10 outbuilding are to be developed at 1 Redside Drive, Brighton. The current use of the lot is vacant, undergoing preliminary design drawings by Pinnacle Drafting & Design for a single Class 1a Dwelling. The proposed development also includes the construction of a private access and vegetation removal (Note: in some cases, vegetation removal requires planning approval prior to clearing).

5.0 Bushfire Attack Level Assessment

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 AS3959-2018. 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.

Table 1. Determination of Bushfire Attack Level (BAL) – FDI 50

Azimuth	Vegetation Classification	Effective Slope	Distance to Bushfire Prone Vegetation	Hazard management area width	Bushfire Attack Level
North-East	Grassland Woodland	Flat / Upslope	0-80m 42-100m	14m	BAL 12.5
South-East	Grassland Woodland Low Threat Vegetation	Flat / Upslope	0-67m, 87-100m 46-69m 67-87m	14m	BAL 12.5
South-West	Grassland Low Threat Vegetation Woodland	Downslope 0-5°	0-65m 65-90m 90-100m	16m	BAL 12.5
North-West	Grassland Woodland	Downslope 0-5°	0-46m, 76-100m 46-76m	16m	BAL 12.5

*Note: Road's, internal driveways, and fire breaks have been excluded under AS3959:2018 Section 2.2.3.2 (e), as they are non-vegetated areas that are permanently cleared.

6.0 Compliance

Requirements for construction within a bushfire prone area are to be in accordance with the *Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas* and *Director's Determination- Bushfire Hazard Areas, Building Act 2016, Version: 1.1, Date: 8th April 2021.*

6.1 Construction requirements

Building work (including additions or alterations to an existing building) in a bushfire-prone area must be designed and constructed in accordance with an Acceptable Construction Manual determined by the Building Code of Australia, being either:

(a) AS3959-2018; or

(b) Standard for Steel Construction in Bushfire Areas published by the National Association of Steel Framed Housing Inc. (NASH).

as appropriate for BAL 12.5 as determined for the site. Compliance of the design must be verified to the relevant codes in the Certificate of Likely Compliance and verified prior to occupancy.

6.2 Property Access

The property access is from Redside Drive via an internal driveway to the proposed development, with an existing gravel crossover. It is proposed that an approximately 35m long gravel driveway is installed in accordance with the Deemed-to-Satisfy requirements. The Deemed-to-Satisfy requirement for access is provided in Table 2 of the Determination (see Table 2) and is to be constructed in accordance with the design and construction standards as set out in Element A. Due to firefighting appliance being able to park on Briggs Road to access the fire hydrant which is located on the western corner peg of the property boundary.

Table 2. (From Table 2, Requirements for Property Access)

Column 1		Column 2
Element		Requirement
A.	Property access length is less than 30 metres; or access is not required for a fire appliance to access a firefighting water point.	There are no specified design and construction requirements.
B.	Property access length is 30 metres or greater; or access is for a fire appliance to a water connection point.	The following design and construction requirements apply to property access: (1) All-weather construction; (2) Load capacity of at least 20 tonnes, including for bridges and culverts; (3) Minimum carriageway width of 4 metres; (4) Minimum vertical clearance of 4 metres; (5) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway; (6) Cross falls of less than 3° (1:20 or 5%); (7) Dips less than 7° (1:8 or 12.5%) entry and exit angle; (8) Curves with a minimum inner radius of 10 metres; (9) Maximum gradient of 15° (1:3.5 or 28%) for sealed roads, and 10° (1:5.5 or 18%) for unsealed roads; and 10) Terminate with a turning area for fire appliances provided by one of the following: (a) A turning circle with a minimum inner radius of 10 metres; (b) A property access encircling the building; or (c) A hammerhead “T” or “Y” turning head 4 metres wide and 8 metres long.
C.	Property access length is 200 m or greater.	The following design and construction requirements apply to property access: (1) The requirement for B above; (2) Passing bays of 2 metres additional carriageway and 20 metres length provided every 200 metres.

D.	Property access length is greater than 30 metres, and access is provided to 3 or more properties.	The following design and construction requirements apply to property access: (a) Complies with Requirements for B above; and (b) Passing bays of 2 metres additional carriageway width and 20 metres length must be provided every 100 metres.

6.3 Reticulated Water Supply for Fire Fighting

Fire-fighting water supply will be from an existing fire hydrant that is installed on the Taswater water main that runs along Briggs Road. The fire hydrant is located on the western corner peg of the property boundary. The furthest extremity of the proposed development is under 120m (measured as a hose lay) from the fire hydrant. The Deemed-to-Satisfy requirement for Reticulated Water supply is provided in Table 3A of the Determination (see Table 3) and is to be constructed in accordance with Element A, B, & C, due to the proximity to a firefighting hydrant being less than 120m and is to be verified prior to occupancy.

Table 3. (From Table 3A, Requirements for Reticulated Water Supply for Firefighting)

Column 1		Column 2
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 120 metres of a fire hydrant; 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.	Design criteria for fire hydrants	The following requirements apply: (a) Fire hydrant system must be designed and constructed in accordance with TasWater Supplement to Water Supply Code of Australia WSA 03 – 2011-3.1 MRWA Edition 2.0; and (b) Fire hydrants are to be installed outside of the minimum access road width, and clear of any passing bay or parking area, to ensure access at all times to reticulated water for fire suppression

C.	Hardstand	A hardstand area for fire appliances must be provided: (a) No more than three metres from the hydrant, measured as a hose lay; (b) No closer than six metres from the building area to be protected; (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.

6.4 Hazard Management Areas

A Bushfire Hazard Management Plan (Attachment 2) has been designed in accordance with the requirements specified in Table 4. *(Requirements for Hazard Management Areas)* have been established to manage risks, as well as implementing the relevant requirements for fighting fires. The Deemed-to-Satisfy requirement for access is provided in Table 4 of the Determination (see Table 4 below) and is to be constructed in accordance with Element B of the Determination and is to be verified prior occupancy.

Table 4. (From Table 4, Requirements for Hazard Management Area)

Column 1		Column 2
Element		Requirement
A.	Hazard management areas for new buildings on lots provided with a BAL at the time of subdivision.	A new building must: (a) be located on the lot so as to be provided with a HMA no smaller than the required separation distances for the BAL determined at the time of subdivision; and (b) have a HMA established in accordance with a certified bushfire hazard management plan.
B.	Hazard management areas for new buildings on lots not provided with a BAL at the time of subdivision.	A new building must: (a) be located on the lot so as to be provided with a HMA no smaller than the separation distances required for BAL 29; and (b) have a HMA established in accordance with a certified bushfire hazard management plan
C.	Hazard management areas or alterations or	An alteration or addition to a building must: (a) be located on the lot so as to be provided with a HMA which:

	additions to buildings.	(i) has the separation distances required for the BAL assessed for the Construction of the existing building; or (ii) in the case of a building without an existing BAL assessment, is no smaller than the separation distances required for BAL 29; and (b) have a HMA established in accordance with a certified bushfire hazard management plan
D.	Hazard management areas for new buildings and additions and alterations to buildings classified as an accommodation building BCA Class 1b, BCA Class 2, or BCA Class 3, other than Communal residence for persons with a disability, a respite centre or a residential aged care facility or similar.	A new building or an addition or alteration including change of use must: (a) be located on the lot so as to be provided with HMAs no smaller than the separation distances required for BAL 12.5; and (b) have a HMA established in accordance with a certified bushfire hazard management plan.
E.	Hazard management areas for new buildings and additions and alterations to existing buildings classified as vulnerable use as defined in the Bushfire=-Prone Areas Code (Planning Directive 5.1)	A new building or an addition or alteration including change of use must: (a) Be: (i) located on the lot so as to be provided with HMAs no smaller than the separation distances required for BAL 12.5; or (ii) provided with a certificate from an accredited person that a bushfire hazard management plan provides, to the degree necessary, separation of the building from the bushfire hazard, appropriate resistance to ignition from bushfire, property access and water supply for firefighting; and (b) Have a HMA established in accordance with a certified bushfire hazard management plan.

F.	Hazard management areas for new buildings or additions and alterations to buildings associated with a hazardous use	A new building or an alteration or addition, including change of use, for a building determined as a hazardous use must: (a) Be located on the lot so as to be provided with a HMA no smaller than the required separation distances for the BAL determined in the certified bushfire hazard management plan; and (b) Have a HMA established in accordance with a certified bushfire hazard management plan.

7.0 Conclusion

BAL RATING: BAL 12.5

Based on the site analysis and assessment of the vegetation, it has been determined that the subject land falls under BAL 12.5 rating. To comply with the requirements, set out in AS3959:2018, a Hazard Management Area (HMA) will be established and maintained as mowed grassland, lawns, gardens, areas of gravel, and a driveway as detailed in the Bushfire Hazard Management Plan (refer to Attachment 2).

Furthermore, the design of the proposed Class 1a dwelling will be required to comply with BAL 12.5 requirements and no special design requirements for firefighting access or water supplies will be necessary to be incorporated into the overall design. The firefighting water supply will be readily available from an existing fire hydrant located along Briggs Road, that is installed in accordance with Directors Determination requirements. The proposed Class 1a Dwelling falls within the 120m hose lay requirements, therefore complies with Element A of Table 3A in Directors Determination V1.1.

It is recommended that all construction and vegetation removal activities on the site are carried out in accordance with the planning approval, with particular attention paid to vegetation removal. With proper adherence to all applicable regulations and standards, to be verified prior to occupancy of the dwelling.

8.0 References

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

Building Amendment (Bushfire-Prone Areas) Regulations 2016
Determination, Director of Building Control – Bushfire Hazard Areas, version 1.1 8th April 2021. Consumer, Building and Occupational Services, Department of Justice, Tasmania.

Tasmanian Planning Scheme 2015, Tasmanian Planning Commission 2015, Tasmanian Planning Commission, Hobart.

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

Attachment 1: Site Photos

Image 4: North-East Azimuth (Photo taken on site 3/2/2024)

Image 5: South-East Azimuth (Photo taken on site 3/2/2024)

Image 6: South-West Azimuth (Photo taken on site 3/2/2024)

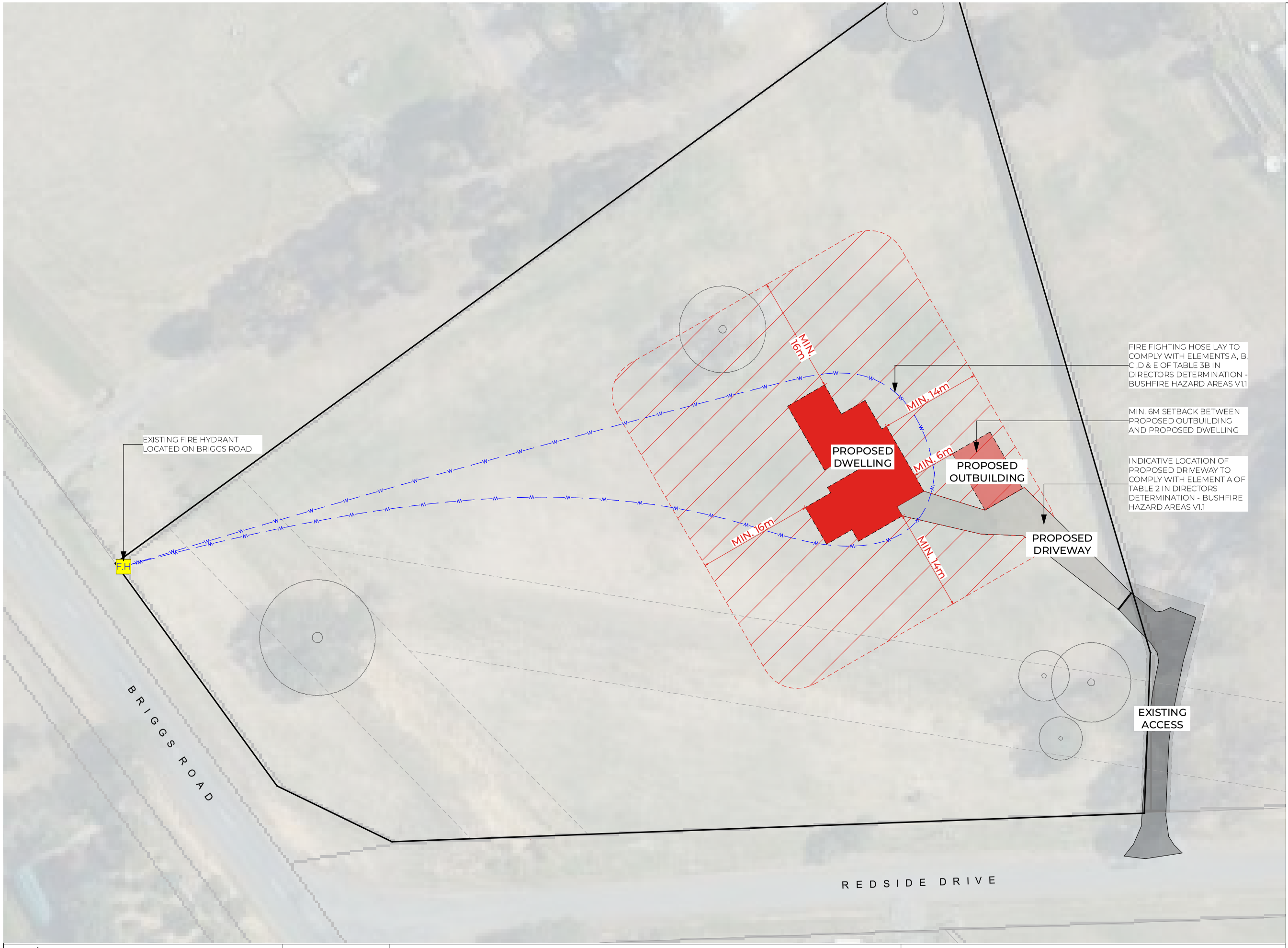
Image 7: North-West Azimuth (Photo taken on site 3/2/2024)

Image 8: Site Access (Photo taken on site 3/2/2024)

Image 9: Neighbouring dwelling (north-west) (Photo taken on site 3/2/2024)

Image 10: Existing fire hydrant plug (Photo taken on site 3/2/2024)

Image 11: Existing hydrant location (Photo taken on site 3/2/2024)



BUSHFIRE HAZARD MANAGEMENT PLAN

1 Redside Drive, Brighton
Title: 180364/1 - Dated February 2024
This plan is to be read in conjuction with 1 Redside Drive, Brighton Bushfire Hazard Report, Prepared by J S Mayne, Dated February 2024 (Job Ref# PIN055-2023)

BUSHFIRE MITIGATION MEASURES BAL 12.5

Refer to specifications as set out in Part 6.0 Compliance in accompanying report 1 Redside Drive, Brighton Bushfire Hazard Report, prepared by J S Mayne, dated February 2024. Compliance to be verified prior to occupancy.

HAZARD MANAGEMENT AREA PRESCRIPTIONS

Hazard reduction and removal
· The Hazard Management Area is to be maintained in minimal fuel condition as mowed grassland with paddock trees, mowed lawns, gardens, areas of gravel, driveway and a hardstand.
· Ground cover vegetation (grasses, herbs and graminoids) to be maintained no higher than 100mm. · Remove fallen branches, bark and leaves and keep ground litter to a maximum of 20mm depth from around trees.
· Prune to create and maintain a separation distance of 2m (vertically) between the ground cover (maintained to <100mm) and the lowest branches of trees in the HMA.
· Clear private access of any trees and branches within 0.5m of carriageway and 4m over carriageway.
· Remove any fire hazards such as woodpiles and garden waste to at least 10m from dwelling.
· Keep roofs and guttering clear of flammable debris.
· Minimise the storage of petroleum fuels and store fuels at least 10m from dwelling in a suitable enclosed shed.

Landscaping
· Use low flammability plants in the garden and refrain from plantings within 1m of the dwelling (see Fire resisting garden plants Tasmanian Fire Service Brochure).
· Include non-flammable areas adjacent to dwelling such as paths

LEGEND

- PROPOSED DWELLING
- PROPOSED OUTBUILDING
- EXISTING TREE'S ON SITE
- -HAZARD MANAGEMENT AREA
- F.H - FIRE HYDRANT
- —W— - HOSE LAY
- EXISTING ACCESS
- PROPOSED DRIVEWAY

PREPARED BY:
J S Mayne - Accreditation No. BFP-172
2/29B Waimea Ave, Sandy Bay
0456 449 823
josh@futuraplanning.com.au
ABN 19 248 759 296

FUTURA PLANNING

N

SCALE
1:500 @ A3

0m 10 20 30 40 50m

REVISION SCHEDULE

DESCRIPTION	ISSUE	DATE

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Chris & Brigida Watson *Owner /Agent*

4 Wynnstay Court *Address*

Blackmans Bay 7052 *Suburb/postcode*

Qualified person details:

Qualified person: Joshua Mayne

Address: 2/29B Waimea Ave Phone No: 0456 449 823

Sandy Bay 7005 Fax No: N/A

Licence No: BFP-172 Email address: josh@futuraplanning.com.au

Qualifications and Insurance details: Accredited to report on bushfire hazards under the Fire Service Act 1979.
Insurance covered by Webber Insurance FPII16194 & FPII16195

(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: 1 Redside Drive Lot No: 1

Brighton TAS 7030 Certificate of title No: 180364

The assessable item related to this certificate: Bushfire hazard management plan and supporting bushfire hazard report for a Residential Dwelling & Outbuilding

(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 items, at any stage, as part of – *(tick one)*

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

OR

○ a building, temporary structure or plumbing installation

In issuing this certificate the following matters are relevant –

Documents:	Bushfire Hazard Report at 1 Redside Drive, Brighton (inc. bushfire hazard management plan), Job Ref: PIN055-2023, Dated: February 2024
Relevant calculations:	AS 3959:2018 - Method 1 BAL assessment
References:	Determination, Director of Building Control Requirements for Building in Bushfire-Prone Areas, version 1.1 8th April 2021. Consumer, Building and Occupational Services, Department of Justice, Tasmania. Building Amendment (Bushfire-Prone Areas) Regulations 2014 Standards Australia 2018, Construction of buildings in bushfire prone areas, Standards Australia, Sydney. Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas

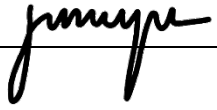
Substance of Certificate: *(what it is that is being certified)*

1. The assessed Bushfire Attack Level (BAL) is BAL 12.5.
2. The proposed building work – if designed and implemented in accordance with the bushfire hazard management plan referred to in this certificate – will comply with the deemed-to-satisfy requirements of the Director's Determination – Requirements for Building in Bushfire-Prone Areas v1.1.

Scope and/or Limitations

1. The scope of this certification is limited to compliance with the requirements of the Director's Determination – Requirements for Building in Bushfire-Prone Areas V1.1.
2. This certification may only be used for compliance purposes for 6 years from the date of certification.
3. The effectiveness of the measures prescribed in the bushfire hazard management plan and supporting report are dependent on their correct implementation and maintenance for the life of the development.
4. There is no guarantee that the building work will survive every bushfire event.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified person:		BFP-172	6/2/2024