Application for Planning Approval

Land Use Planning and Approvals Act 1993

APPLICATION NO.

DA2024/174

LOCATION OF AFFECTED AREA

300 CHURCH ROAD, DROMEDARY

DESCRIPTION OF DEVELOPMENT PROPOSAL

SINGLE DWELLING

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 **15/09/2025**. ADDRESSED TO THE CHIEF EXECUTIVE OFFICER 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.

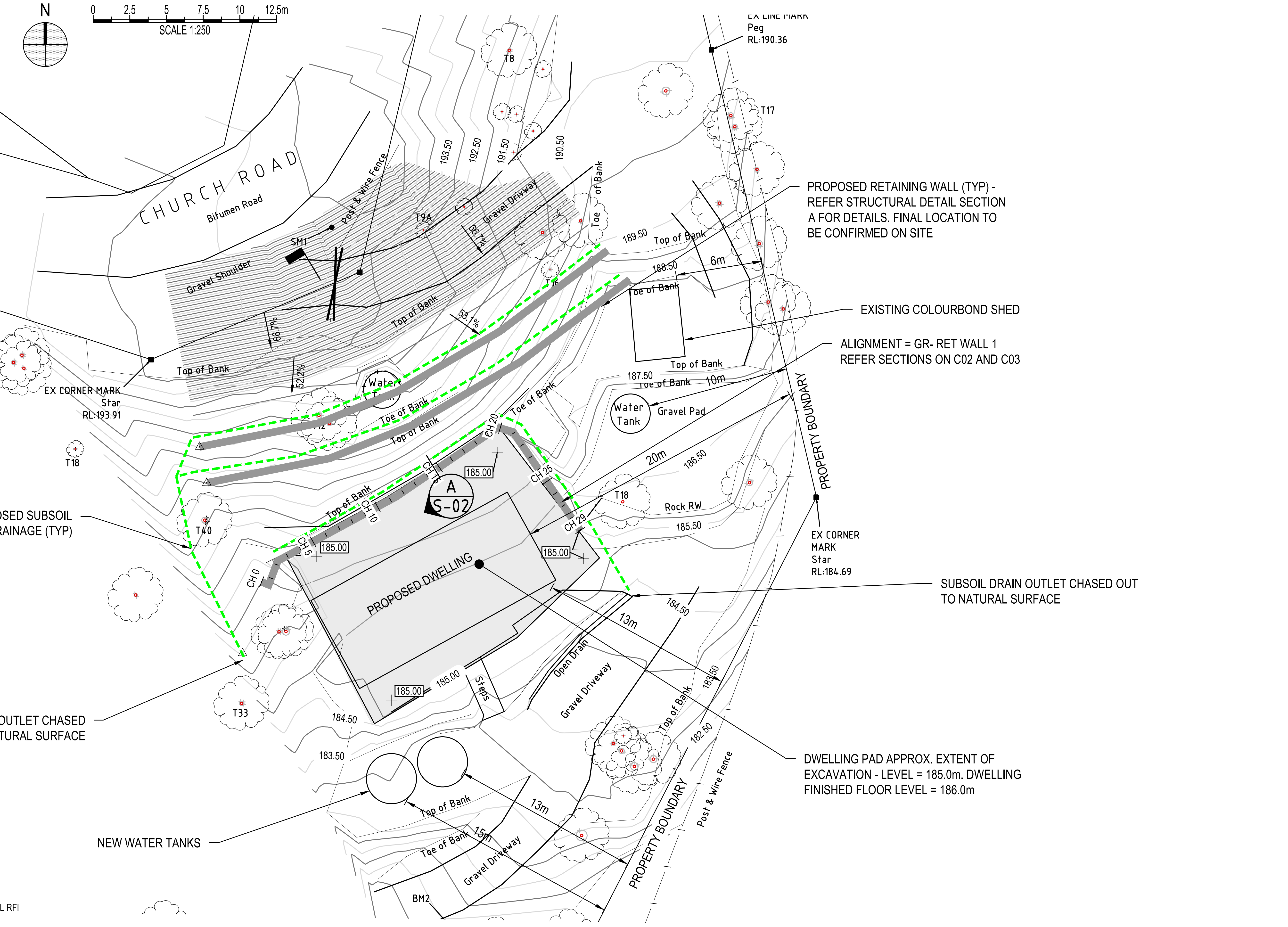
GILLIAN BROWNE
Acting Chief Executive Officer

SCAN ME

Brighton
going places

SAFETY IN DESIGN REPORT PER WHS REGULATIONS

The following risks which are unique to this design have been identified:	NIL
This report does not relieve contractors from their responsibilities under the Act to identify, report, mitigate and manage all aspects of risk and safety.	



REV	DATE	REMARK
P2	27/08/2025	UPDATED AS PER COUNCIL RFI
P1	20-8-2025	PRELIMINARY

Accepted CJM (Discipline Head)	Date
Accepted RAJC (Team Leader)	Date
Approved CJM (Principal)	Date

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	PLOT DATE	27/08/2025

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Ground Floor, 73 Paterson Street, Launceston (03) 6334 5548
www.jmg.net.au infohbt@jmg.net.au infoltn@jmg.net.au

PROJECT
300 CHURCH ROAD
DROMEDARY

TITLE
SITE PLAN

PROJECT NO. 250258
DWG NO. C01
REVISION P2
PLOT DETAILS 300CHURCHRDBASE.DWG

SAFETY IN DESIGN REPORT PER WHS REGULATIONS

The following risks which are unique to this design have been identified:	NIL
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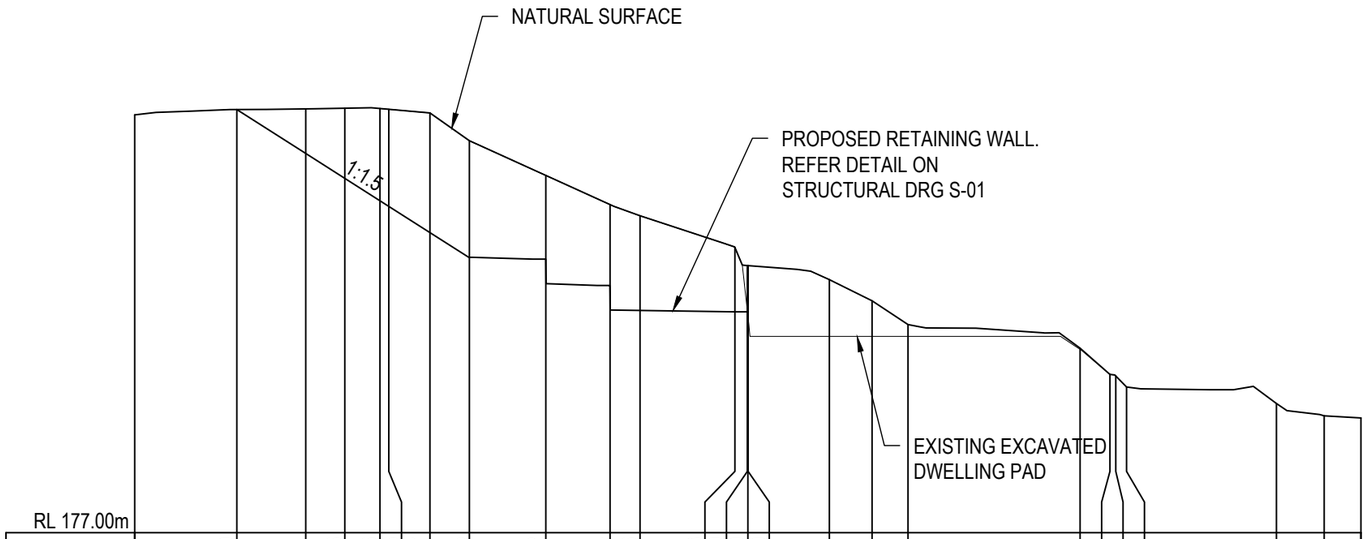

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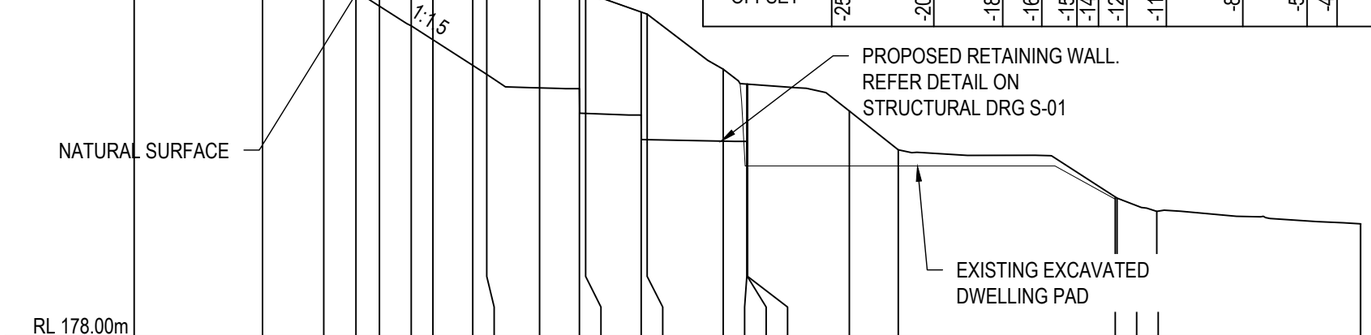
CH 5.00 m
GR-RET WALL 1



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DESIGN		194.55	192.96	192.12	191.51	190.71	190.14	189.10	188.73	188.18	188.15	187.14	186.92	186.07	186.01	186.00	185.00	185.00							
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CH 10.00 m
GR-RET WALL 1

REV	DATE	REMARK
P1	20-8-2025	PRELIMINARY

Accepted CJM (Discipline Head)	Date	
Accepted RAJC (Team Leader)	Date	
Approved CJM (Principal)	Date	

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PROJECT
300 CHURCH ROAD
DROMEDARY

TITLE
CROSS SECTIONS
SHEET 1 OF 2

PROJECT NO. 250258
DWG NO. C02
REVISION P1
PLOT DETAILS 300CHURCHRDBASE.DWG

SAFETY IN DESIGN REPORT PER WHS REGULATIONS

The following risks which are unique to this design have been identified:	NIL
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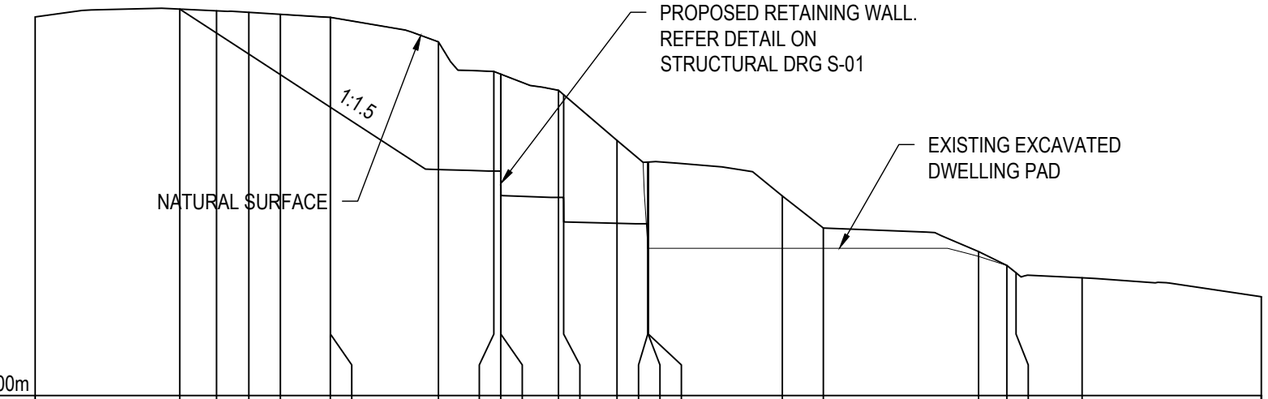

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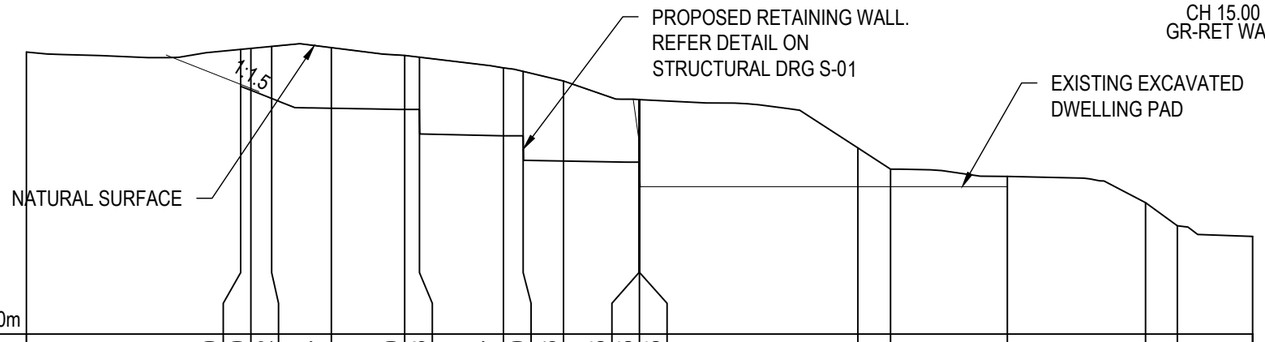

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GR-RET WALL 1

REV	DATE	REMARK
P1	20-8-2025	PRELIMINARY

Accepted CJM (Discipline Head)	Date
Accepted RAJC (Team Leader)	Date
Approved CJM (Principal)	Date

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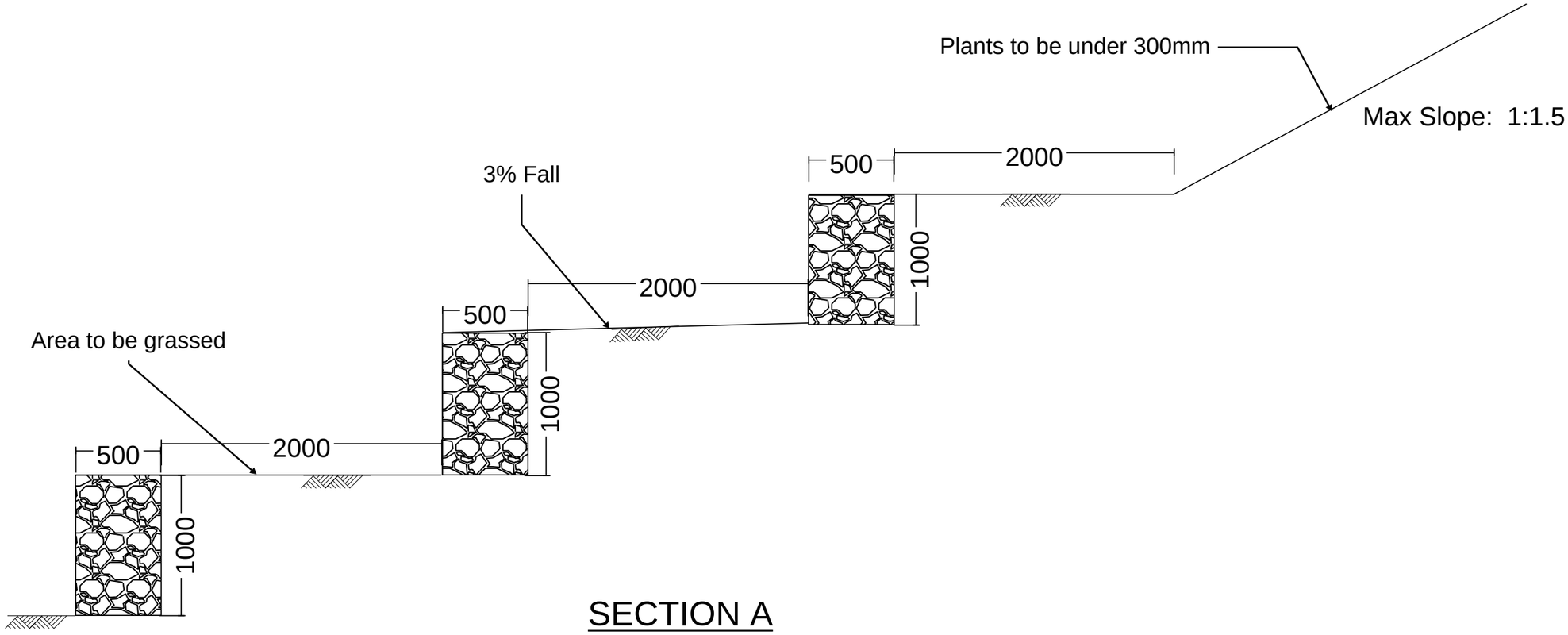
PROJECT
300 CHURCH ROAD
DROMEDARY

TITLE
CROSS SECTIONS
SHEET 2 OF 2

PROJECT NO. 250258
DWG NO. C03
REVISION P1
PLOT DETAILS 300CHURCHRDBASE.DWG



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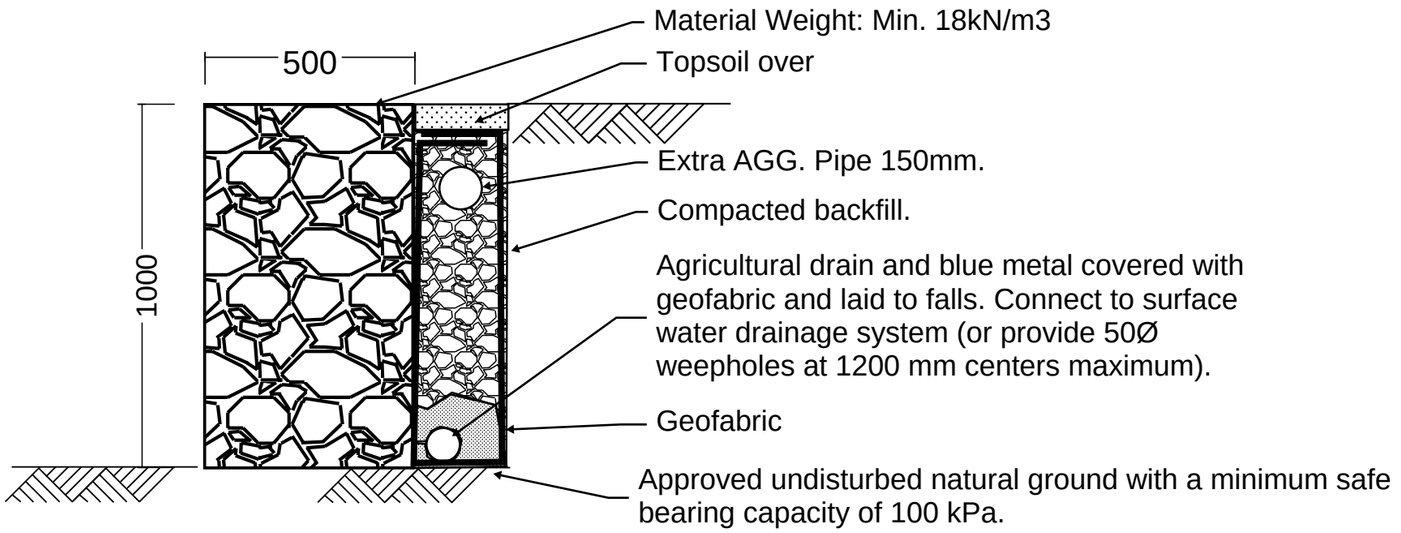

TYPICAL GABION WALL DETAILS

Gabion Wall Arrangement Note:
The number of gabion walls may vary between two and three, depending on construction site requirements. A minimum of 2 m of 3 degree surface is required between the front face of the top gabion wall and the point where the natural ground slope begins.

REV	DATE	REMARK
P1	19-8-2025	PRELIMINARY

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Accepted RAJC (Team Leader)	Date	
Approved CJM (Principal)	Date	

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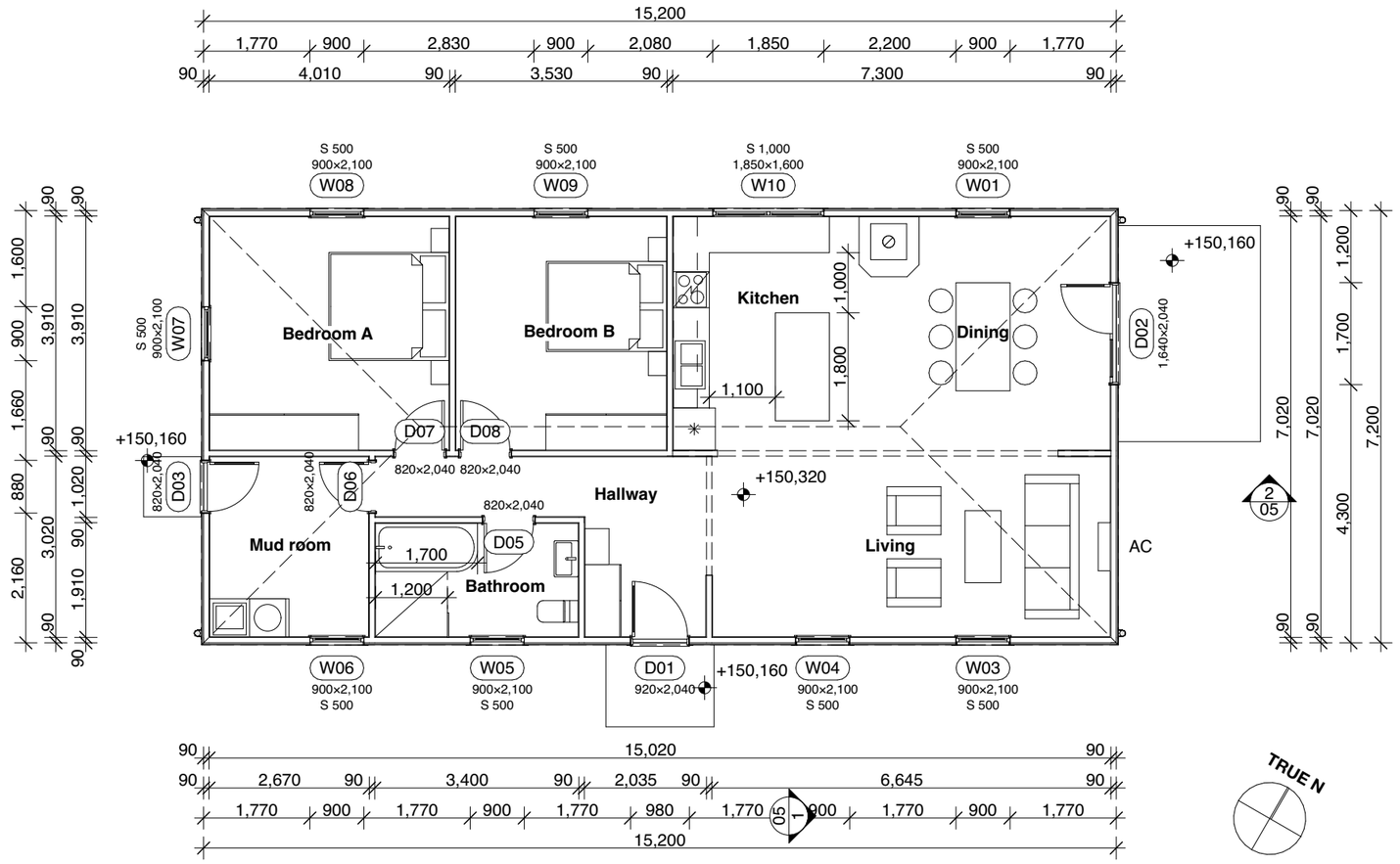
PROJECT
300 CHURCH ROAD
DROMEDARY

TITLE
RETAINING WALL

PROJECT NO. 250258
DWG NO. S01
REVISION P1
PLOT DETAILS



1 **Ground Floor**
1:100

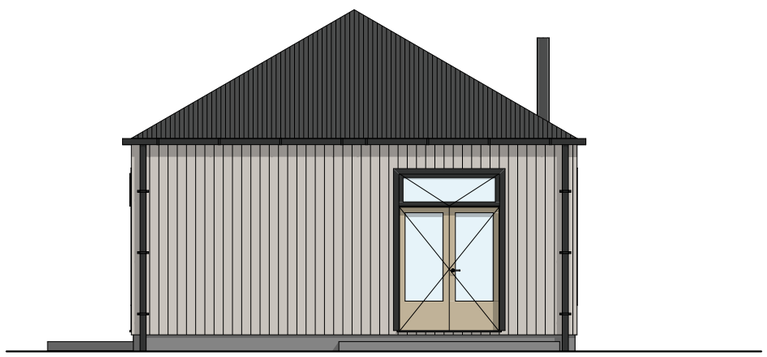
LAYOUT ID	LAYOUT	Floor Plan
03	SCALE @A3	1:100
	ISSUE ID	01
	ISSUE	Construction
	ISSUED	31/5/2024
	PRINTED	18/9/2024

DATE	REV ID	CHANGE/S
31/5/2024	01	Kitchen, Entrance relocate and double doors to single, Framed floor, Plumbing

PROJECT ID	7865
PROJECT	New Class 1a dwelling
SITE	114003/2
ADDRESS	300 Church Rd, Dromedary
CLIENT	Mark Harwood

ARCHITECT
J Lev BDes(Arch) MArch
Registratered Architect 1269
CBOS 648911667
www.lev.au/contact

1 **South**
1:100



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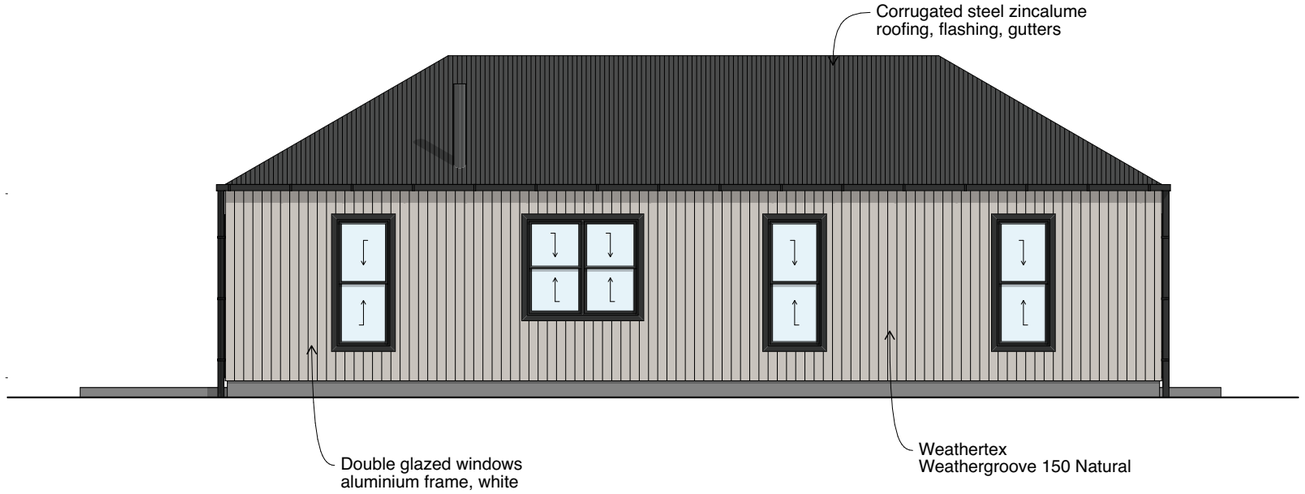

3 **North**
1:100

4 **West**
1:100

LAYOUT ID
04

LAYOUT	**Elevations**
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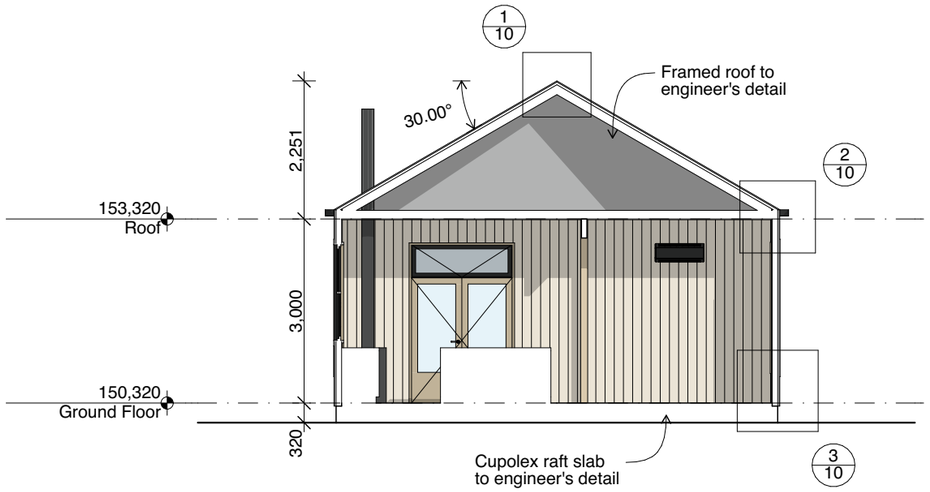
ISSUE ID	01
ISSUE	Construction
ISSUED	31/5/2024
PRINTED	18/9/2024

DATE	REV ID	CHANGE/S
31/5/2024	02	Cut and fill correction, Kitchen, Entrance relocate and double doors to single, Framed floor

PROJECT ID	7865
PROJECT	New Class 1a dwelling
SITE	114003/2
ADDRESS	300 Church Rd, Dromedary
CLIENT	Mark Harwood

ARCHITECT
J Lev BDes(Arch) MArch
Registratered Architect 1269
CBOS 648911667
www.lev.au/contact

IMPORTANT NOTES
All work must comply with the NCC and all relevant standards, laws, codes, specifications and development consent conditions. All structural work must be to engineer's detail. All dimensions are in mm to structure without finishes unless otherwise stated. Do not scale drawings; work to express dimensions only. Drawings are not for construction purposes until issued and certified for construction. Prior to construction, check all dimensions and levels on site, confirm compliance with building surveyor/certifier and notify any discrepancies.



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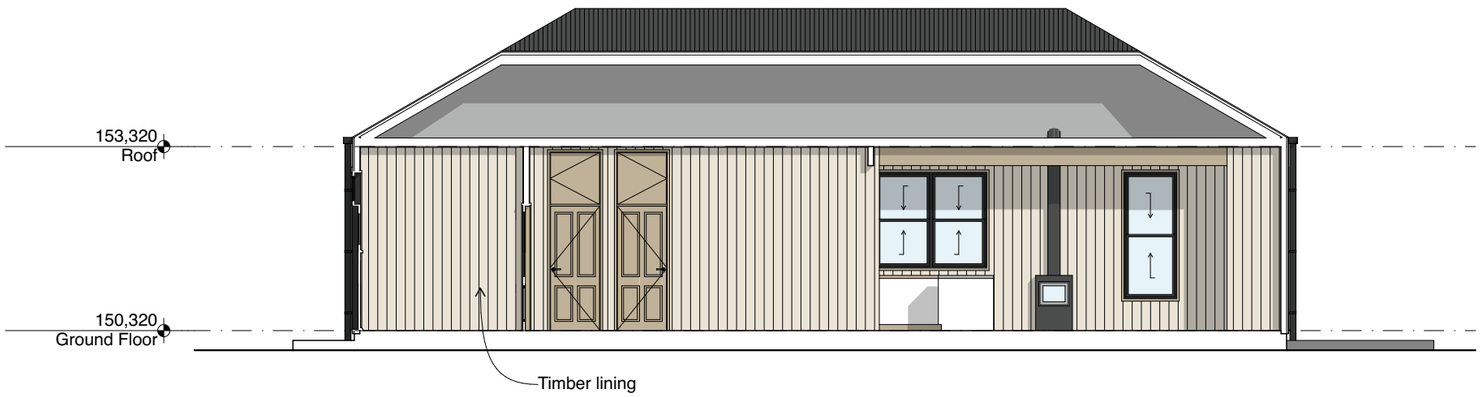

2 **Section B**
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ISSUE	Construction
ISSUED	31/5/2024
PRINTED	18/9/2024

DATE	REV ID	CHANGE/S
31/5/2024	01	Kitchen, Entrance relocate and double doors to single, Framed floor

PROJECT ID	7865
PROJECT	New Class 1a dwelling
SITE	114003/2
ADDRESS	300 Church Rd, Dromedary
CLIENT	Mark Harwood

ARCHITECT
J Lev BDes(Arch) MArch
Registratered Architect 1269
CBOS 648911667
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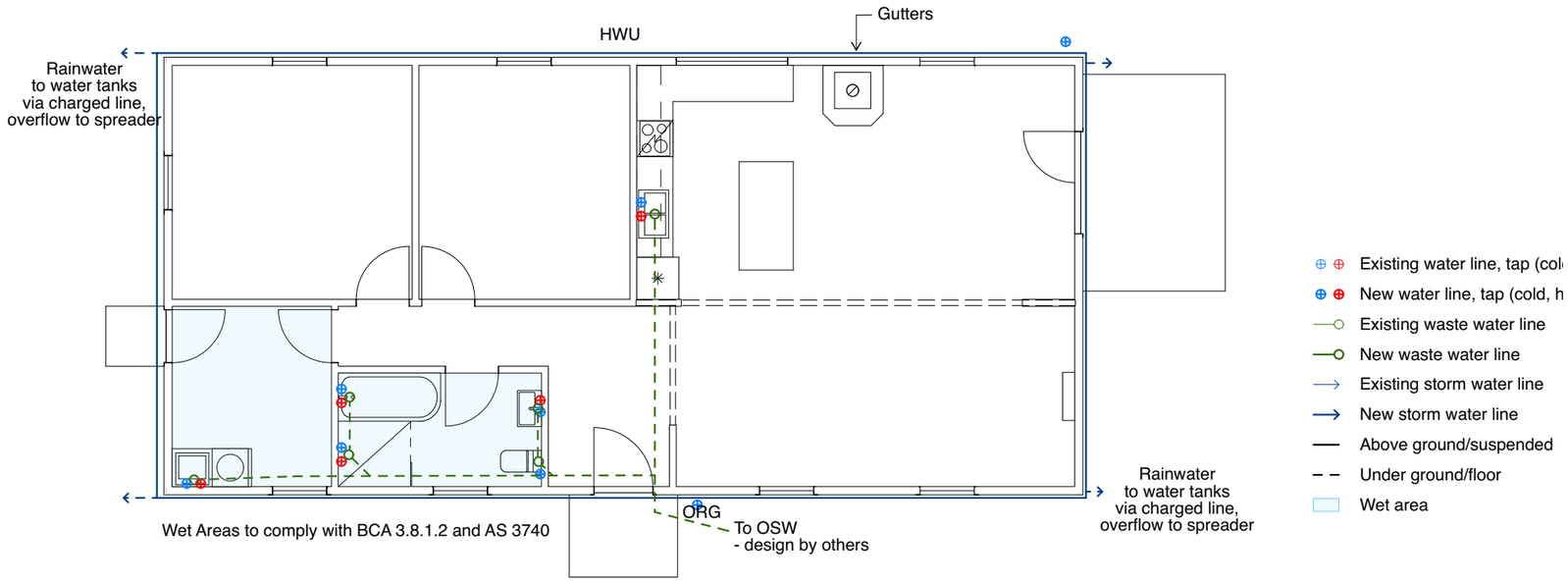

1 **Plumbing**
1:100

LAYOUT ID	LAYOUT	SCALE @A3	ISSUE ID	ISSUE	ISSUED	PRINTED
06	**Plumbing Plan**	1:100	01	Construction	31/5/2024	18/9/2024

DATE	REV ID	CHANGE/S
31/5/2024	01	Kitchen, Entrance relocate and double doors to single, Framed floor, Plumbing

PROJECT ID	7865
PROJECT	New Class 1a dwelling
SITE	114003/2
ADDRESS	300 Church Rd, Dromedary
CLIENT	Mark Harwood

ARCHITECT
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BUSHFIRE HAZARD ASSESSMENT REPORT

PROPOSED DWELLING
300 CHURCH ROAD,
DROMEDARY

Dated April 2023

Report by Samuel Walters BFP-130

Report Code: N23-1

Bushfire Tasmania

TABLE OF CONTENTS

APPENDICES

Bushfire Tasmania
sam@bushfiretasmania.com.au

1. Report Summary

This report provides a Bushfire Hazard Management Plan (BHMP) and Bushfire Attack Level (BAL) assessment for a proposed class 1a dwelling and class 10a shed at 300 Church Road, Dromedary (C.T 114003/2).

Our findings conclude that the potential bushfire hazard for the proposal is tolerable providing the recommendations and findings of this report are followed and implemented in accordance with Australian Standard 3959 2018 (incorporating Amendments 1 & 2) and the Director's Determination – Bushfire Hazard Areas Version 1.1 2021 (Director's Determination).
Table 4(B) within the Director's Determination states a minimum BAL-29 solution must be achieved.
Bushfire prone A. Forest, B. Woodland and G. Grassland vegetation poses the greatest threat to the development.

A BAL-19 compliant solution can be achieved on all aspects of the proposed dwelling and deck. This is based on the implementation of a hazard management area (HMA) that encompasses the building with specifications of:

- a minimum 26m separation distance on the western and south western aspects,
- separation distances to the property boundary on the north western, north eastern, eastern and south eastern aspects,
- a minimum 43m separation distance on the northern aspect,
- a minimum 27m separation distance on the southern aspect.

The proposal will require a static water supply to comply with table 3B of the Director's Determination.

Site access to a firefighting water supply point is <10m and is deemed to comply with table 2(A) of Director's Determination.

Class 10a shed is >6m from proposed dwelling and not required to comply with bushfire construction measures.

Bushfire Tasmania
sam@bushfiretasmania.com.au

2. Introduction

2.1. The Proposal

The proposal involves constructing a new class 1a dwelling and class 10a shed at 300 Church Road, Dromedary (C.T 114003/2).

2.2. Scope of Report

Bushfire Tasmania was engaged by Mark Harwood to undertake a Bushfire Hazard Management Plan (BHMP) and BAL assessment to determine vegetation management requirements, water supply requirements, site access requirements and construction requirements to comply with Australian Standard 3959 – Construction of Buildings in Bushfire Prone Areas 2018 (incorporating Amendments 1 & 2) and the Director's Determination – Bushfire Hazard Areas Version 1.1 2021.

The proposal is assessed in accordance with Table 2(A), Table 3B, and Table 4(B) of the Director's and a Fire Danger Index (FDI) of 50. The area assessed includes a radius of 150m from the proposal.

2.3. Property Information

Address: 300 Church Road, Dromedary

Zoning: Landscape Conservation

Municipality: Brighton

Planning Scheme: Tasmanian Planning Scheme Brighton

2.4. Planning Overlays

Based on the Brighton Local Provisions Schedule:

- Bushfire Prone Areas
- Natural Assets Code - Waterway and Coastal Protection Area
- Natural Assets Code - Priority Vegetation Area
- Landslide Hazard Code - Low

Bushfire Tasmania
sam@bushfiretasmania.com.au

3. Site Conditions and Observations

3.1. Site Description

The subject property is located on the eastern and southern side of Church Road, on the foot hills between Mount Dromedary and Deans Hill. Dean Brook flows through the site, south west of the proposed dwelling. The allotment is a larger 'lifestyle' property some 9354m^2 in size. Natural site slopes are highly variable and range between approximately 4-6° around the creek area west and south west of the proposal to 8-15° further up-slope to the east surrounding the dwelling site. The site has an overall southerly to south westerly aspect.

Current site conditions consist of grassland either side of Dean Brook with a canopy of large Willows, changing quickly to dry land species dominated by Eucalyptus woodland and forest over the middle upper sloped sections.

There is an existing cabin and 2 sheds on the property that are accessed directly off Church Road via a gravel driveway. This driveway extends also from Church Road to the north, and they join at the existing cabin site.

Figure 1: contoured listmap. www.thelist.tas.gov.au Property outline in blue, proposed dwelling in orange and black. Note: blue property outline is approximate.

Bushfire Tasmania
sam@bushfiretasmania.com.au

3.2. Surrounding Area

The subject site is located in a landscape conservation zoned area which encompasses all properties surrounding, out to approximately 1.5kms to the west and north as well as >3kms to the south and east.

Typically, properties within this zone are large in size and have similar vegetation compositions and uses – in this case – significant areas of remnant Eucalyptus dominant vegetation as well as cleared grassland sections for grazing livestock as well as smaller managed pockets surrounding dwellings and outbuildings.

Properties to the west and south west on the opposite side of Church Road as well as adjoining property to the east have large cleared paddock areas.

There are significant stands of Eucalyptus forest on all aspects that link to forest in others zonings further out.

Figure 2 below gives the TasVeg4.0 listmap of the area and bushfire prone vegetation within 100m of the proposal.

Figure 2: contoured TasVeg4.0 listmap. www.thelist.tas.gov.au Property outline in blue, proposed building in orange and black.

Bushfire Tasmania
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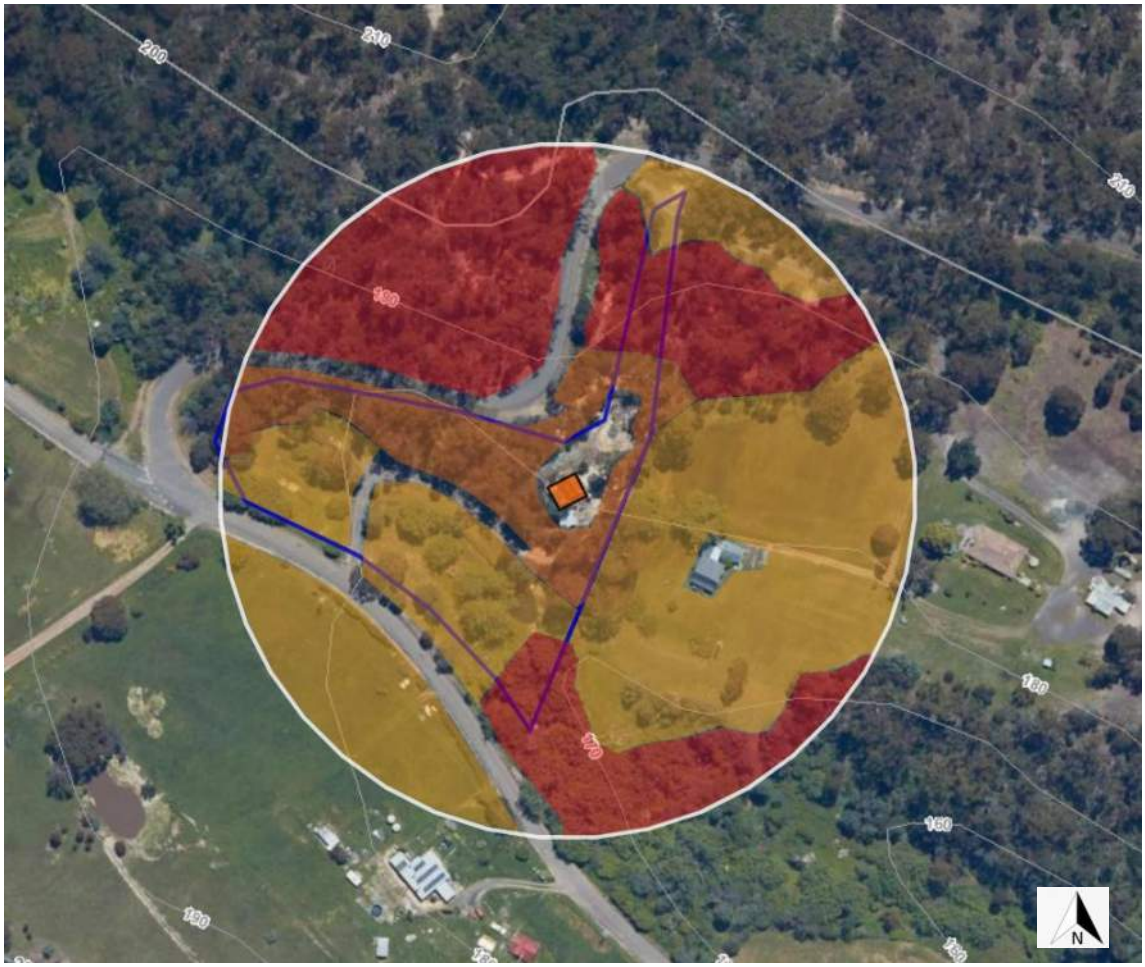

Figure 3: contoured aerial listmap. www.thelist.tas.gov.au Property outline in blue, proposed dwelling in orange and black. Red shading shows forest bushfire prone vegetation within 100m of the proposal, orange shading woodland and yellow shading grassland (note yellow shading on property to the south west is supposed to be orange to represent woodland).

3.3. Additional Information

Construction not expected to be staged.

Recent bushfire activity several fire events. These directly impacted the property and were large and destructive fires. Fire events include:

- The 2003 Broadmarsh-Bluff Road fire deliberately lit that covered a wide range of ground.
- The 1967 fires which destroyed large areas of the south east.
- A smaller 1982 Dromedary fire of unknown cause to the east that did not impact the site.

See Figure 4 below for these events on a listmap.

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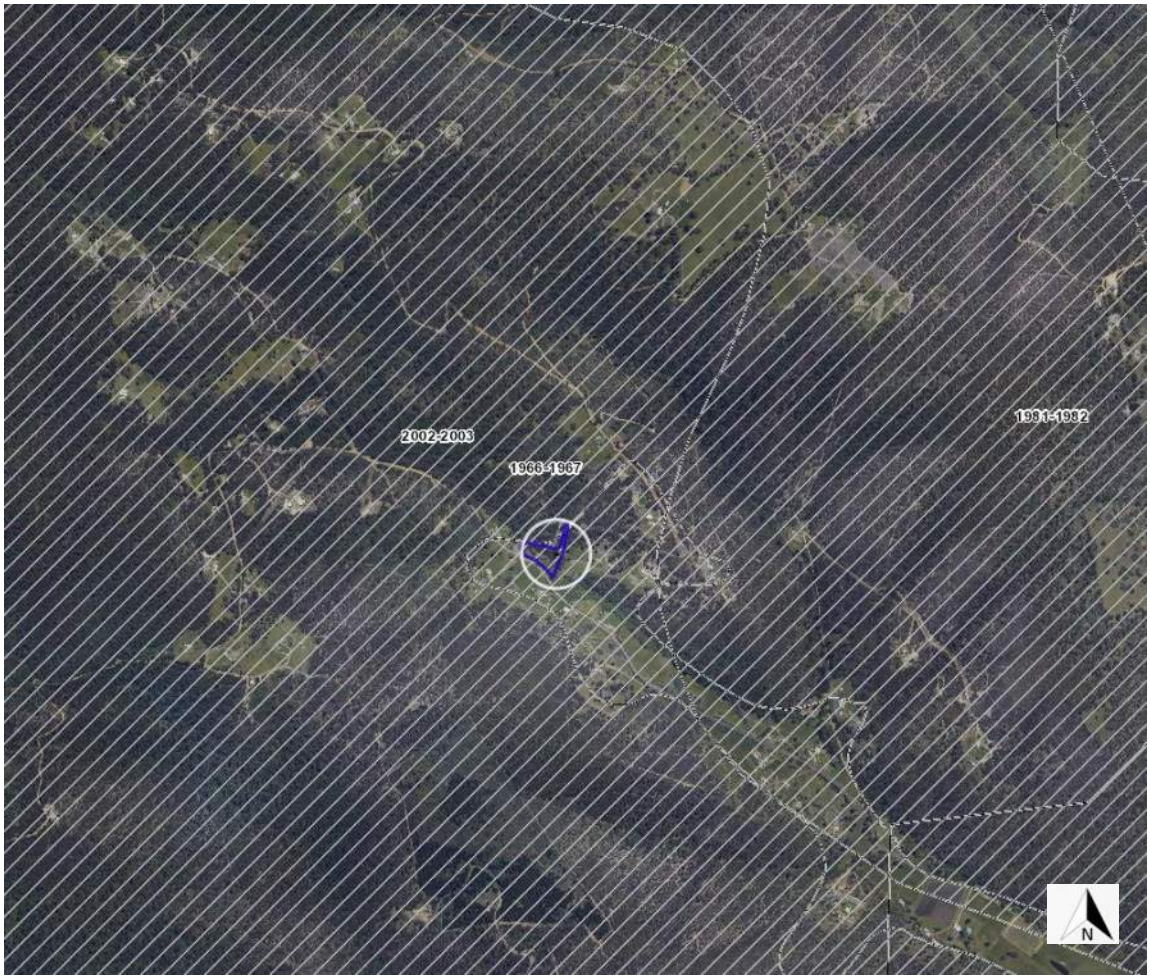

Figure 4: Fire History listmap. www.thelist.tas.gov.au Subject property outline in blue, fire events denoted by hashed areas with dates inserted.

A tree assessment was undertaken in 2022 to determine which mature trees should be retained within the HMA. This report identified 22 trees. The HMA must be in a low fuel state to be compliant and therefore selection of trees to be removed is important.

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3.5 Retention recommendations

22 trees are viable for retention due to having a high SRIV and meeting the requirements of the BHMP:

Trees numbered 1, 4, 6, 8, 9 (2 out of the stand will remain), 12, 16, 17, 18, 19, 22, 24, 26, 27, 29, 33, 36, 38, 40, 41 and 44 (fig 3 & appendix E).

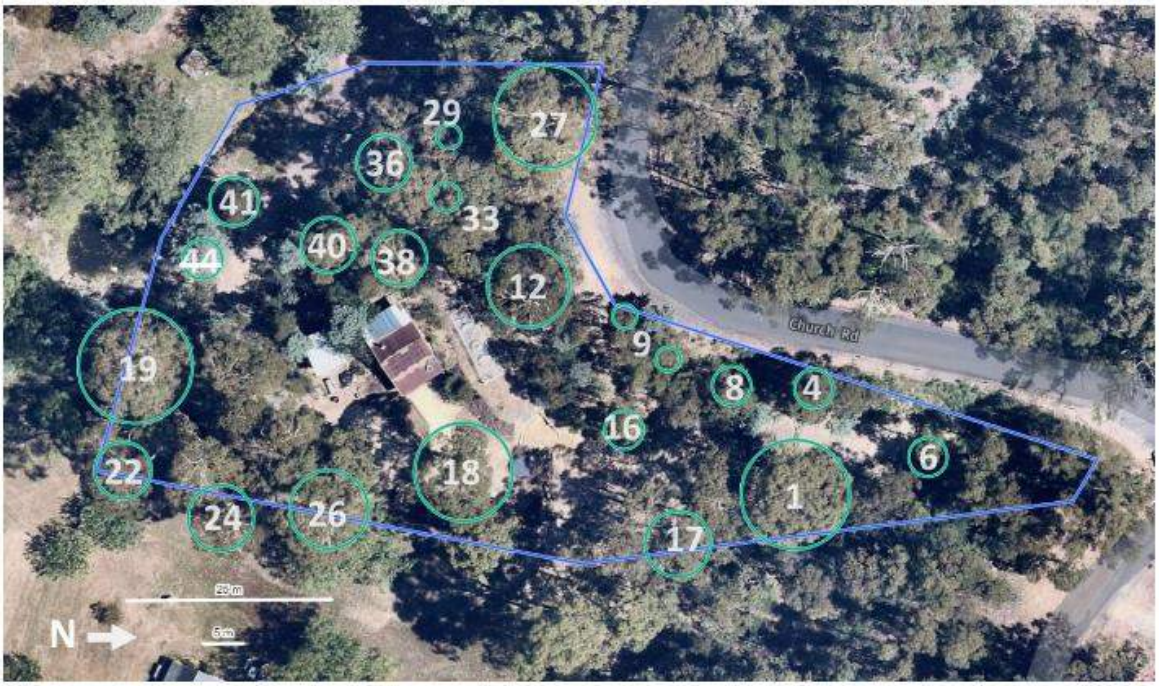

Figure 3 – Blue lines indicate the HMA, green circles indicate canopy size of trees to be retained and white numbers indicate individual tree numbers (Nearmap 2022).

Figure 5: As per Figure 3 on page 6 in the Preliminary Arboriculture Assessment by Tasmanian Arboriculture Consultants for 300 Church Road, Dromedary dated 14/05/2022 Version 1.0.

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4. Bushfire Attack Level Assessment

4.1. Vegetation

According to TasVeg4.0 the proposal is situated within vegetation classified as (FAG) agricultural, (FWU) weed infestation and (DPU) Eucalyptus *pulchella* forest and woodland.
(FAG) covers the middle and lower regions whilst (FWU) is localised to the creek bed. (DPU) starts on the upper slopes to the north east and extend well beyond to other properties for several hundred meters.
(FWU) likely relates to cracking willows that line Dean Brook and extend further to the south and south east (creek direction).
(FAG) land consists of grassland/paddocks and managed grass with scattered assorted shrubs and trees. This is the case both on the property and adjoining lots to the east, west and south west.
There are a few other Eucalyptus dominant forests and woodlands surrounding on all aspects >150m from the site.

Fire Behaviour

Fire behaviour suggests that major threats to the dwelling may include:

- A down- and across-slope head/flanking fire from the north west to north east through forest and woodland. This fire direction would be fanned by warm to hot north westerly to northerly winds;
- An across-/down-slope fire from the west south west and south, fanned by westerly to southerly winds, burning through woodland vegetation;
- An across-/down-slope fire from the east or south east, fanned by north easterly to south easterly winds, burning over grassland.

All scenarios would likely result in significant ember attack/spot fires ahead of any fire front, with the possibility/likelihood of these being unpredictable pending wind conditions.

The following tables give the predominant bushfire prone vegetation types for ground cover, middle growth and canopy for the surrounding area within 150m:

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Table 1: Predominant bushfire-prone woodland vegetation on western and south western aspects.

Vegetation Height	Species
Canopy	Eucalyptus *obliqua* (Stringybark) Eucalyptus *viminalis* subsp *viminalis* (White Gum) Eucalyptus *pulchella* (White Peppermint) Salix *fragilis* (Crack Willow)
Middle Growth	Dodonaea *viscosa* (Broadleaf Hopbush) Bedfordia *salicina* (Blanket Bush) Exocarpos *cupressiformis* (Native Cherry) Acacia *dealbata* (Silver Wattle) Acacia *mearnsii* (Black Wattle)
Ground Cover	Assorted native and introduced pasture species Pteridium *esculentum* (Bracken) Assorted native shrubs (30-100cm)

Table 2: Predominant bushfire-prone forest vegetation on north western, northern and north eastern aspects.

Vegetation Height	Species
Canopy	Eucalyptus *obliqua* (Stringybark) Eucalyptus *viminalis* subsp *viminalis* (White Gum) Eucalyptus *pulchella* (White Peppermint)
Middle Growth	Dodonaea *viscosa* (Broadleaf Hopbush) Bedfordia *salicina* (Blanket Bush) Exocarpos *cupressiformis* (Native Cherry) Acacia *dealbata* (Silver Wattle) Acacia *mearnsii* (Black Wattle)
Ground Cover	Assorted native and introduced pasture species Pteridium *esculentum* (Bracken) Assorted native shrubs (30-100cm)

Table 3: Predominant bushfire-prone grassland vegetation on eastern and south eastern aspects.

Vegetation Height	Species
Canopy	N/A
Middle Growth	Assorted scattered shrubs and trees
Ground Cover	Assorted native and introduced pasture species

Vegetation on the western and south western aspects is assessed as B. Woodland, vegetation on the eastern and south eastern aspects is assessed as G. Grassland,

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vegetation on the north western, northern and north eastern aspects is assessed as A. Forest.
See photographs in appendix A for an indication of the surrounding vegetation.

4.2. Slope

Majority of land below woodland and forest bushfire-prone vegetation ranges between approximately 4-15° and is up- and across-slope from the proposal with a south to south westerly aspect.

Majority of land below grassland bushfire-prone vegetation ranges between approximately 4-12° and is across-slope from the proposal with a south to south westerly aspect.

4.3. Separation Distances

Refer to Table 4 indicating the minimum defendable space distances required from the nearest bushfire prone vegetation of greatest threat in order to achieve a minimum BAL-19.

Table 4: Defendable Space Table

	North West North North East	East South East	South	South West West
Vegetation Type	A. Forest	G. Grassland	A. Forest	B. Woodland
Surrounding land relative to site	Up-slope / Across/flat	Up-slope / Across/flat	Down-slope 0-5°	Up-slope / Across/flat
Minimum Defendable Space Required to achieve BAL-19	≥23m	≥10m	≥27m	≥15m
Achieved Separation with HMA	≥26m	≥11m	≥27m	26m

All separation distances are in accordance with Table 2.6 in AS3959 2018.

HMA specifications required are:

- a minimum 26m separation distance on the western and south western aspects,
- separation distances to the property boundary on the north western, north eastern, eastern and south eastern aspects,
- a minimum 43m separation distance on the northern aspect,
- a minimum 27m separation distance on the southern aspect.

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Note: the separation distance on the northern aspect has been increased to 43m to provide a safety buffer for firefighters and occupants accessing the northern driveway. Refer to the BHMP in Appendix C.

With the implementation of the HMA, site and vegetation circumstances will allow compliance for a BAL-19 compliant building solution for all aspects of the proposed dwelling and deck.

The proposed HMA can achieve compliance with grass being regularly mown to a nominal 100mm or less height as per AS3959 2018 clause 2.2.3.2(f).
Some existing eucalypts within HMA may be retained with growth up to 2m in height to be trimmed and managed. Refer to the Preliminary Arboriculture Assessment by Tasmanian Arboriculture Consultants for 300 Church Road, Dromedary dated 14/5/2022 version 1.0 for trees eligible to remain. Retained trees should be spaced and maintained in line with the below guide as well as the TFS Building for Bushfire Booklet June 2022.

General Vegetation Management Information:

New vegetation may be planted within the HMA but must satisfy low threat conditions in accordance with AS3959 2018 clause 2.2.3.2(d)(e)(f).
Vegetation <1m in height may be planted not closer than 2m from dwelling and deck.
Shrubs up to 2m in height can be planted either individually or in single rows but must be spaced with a minimum 6m between foliage and should not be within 6m of the dwelling and deck.
Large plants 4m or more in height can be planted and should have low and mid-level growth up to 2m in height to be trimmed and maintained over time. Spacing between crowns is to be a minimum of 20m.
New vegetation 2m or more in height should not be planted within 10m of the dwelling and deck.
All vegetation 1-4m in height should be spaced from large vegetation (>4m) at least 10m from tree crown (measured vertically).
Plant debris should be regularly cleared/removed and firewood be stored appropriately either undercover and protected from possible ember attack or stacked more than 6m from the dwelling.
Future plantings must take into account the requirement to maintain the hazard management area as low threat.
Site should not impede firefighter access to bushfire prone vegetation.

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4.4. BAL

Based on all the assessed variables, BAL ratings can be seen in Table 5. These are in accordance with Table 2.6 of AS3959 2018. Table 3.1 of AS3959, 2018 (incorporating Amendments 1 & 2) describes BAL-19:

Table 5: BAL Ratings

Bushfire Attack Level (BAL)	Heat flux exposure thresholds for classified vegetation within 100m of site	Predicted bushfire attack and levels of exposure	Construction Sections
BAL-19 Dwelling and deck All aspects	>12.5 kW/m^2 ≤19 kW/m^2	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux	3 & 6

5. Construction Requirements

The proposed dwelling and deck must comply with construction standards as detailed by AS3959, 2018 sections 3 and 6, specifically Clauses 6.2 to 6.8 for BAL-19.

6. Access and Water

6.1. Site Access

Site access to a static firefighting water supply point is <10m and is deemed to comply with table 2(A) of Director's Determination.

See below for Table 2(A) in the Director's Determination:

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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 required for a fire appliance to access a firefighting water point.	The following design and construction requirements apply to property access: (a) all-weather construction; (b) load capacity of at least 20 tonnes, including for bridges and culverts; (c) minimum carriageway width of 4 metres; (d) minimum vertical clearance of 4 metres; (e) minimum horizontal clearance of 0.5 metres from the edge of the carriageway; (f) cross falls of less than 3 degrees (1:20 or 5%); (g) dips less than 7 degrees (1:8 or 12.5%) entry and exit angle; (h) curves with a minimum inner radius of 10 metres; (i) maximum gradient of 15 degrees (1:3.5 or 28%) for sealed roads, and 10 degrees (1:5.5 or 18%) for unsealed roads; and (j) terminate with a turning area for fire appliances provided by one of the following: (i) a turning circle with a minimum outer radius of 10 metres; (ii) a property access encircling the building; or (iii) a hammerhead "T" or "Y" turning head 4 metres wide and 8 metres long.
C.	Property access length is 200 metres or greater.	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 provided every 200 metres.

6.2. Water Supply

The proposal will require a static water supply to comply with table 3B of the Director's Determination. This involves installing a static water supply (tank) of a minimum 10,000L within 3m of a hardstand constructed of the same material and standard as the driveway. The hardstand must be within 3m of the driveway/access, be at least 3m wide and located a minimum 6m from the dwelling.
The tank must be fitted with a DIN or NEN standard forged Storz 65mm coupling with suction washer for connection to firefighting equipment and be within 90m of the entire proposal as a hose lay. Water supply point signage must be installed and clearly visible to inform firefighters.
If it can be shown that the tank can comply with section 3.5 of AS3959 2018 (shielded from bushfire prone vegetation on all aspects), the tank can be made of any material provided the 400mm above ground is covered with a non-combustible material. In this case a fully non-combustible tank should be installed, for eg, metal.
There is a compacted gravel hardstand existing between Church Road and the proposed fire tank location. This is at least 3m wide by at least 8m long. An indicative tank location as well as hardstand location is shown on the BHMP (see Appendix C).

Refer to Table 3B below for water supply requirements:

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Table 3B - Requirements for Static 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 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) maybe 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, 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) if buried, have a minimum depth of 300mm;

Column 1		Column 2
Element		**Requirement**
		(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 220mm length); and (h) ensure underground tanks have either an opening at the top of not less than 250mm 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 450mm – 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; or (b) comply with the TFS Water Supply Signage Guideline.
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; (c) 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.

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7. Regulations

Regulations governing construction in bushfire prone areas encompass all documents relating to planning, design and implementation. These documents include:

- Tasmania Building Act 2016
- Tasmania Building Regulations 2014
- Tasmania Building Regulations 2016
- Director's Determination – Bushfire Hazard Areas Version 1.1 2021
- Planning Directive No.5.1 Bushfire-Prone Areas Code – September 1 2017
- BCA (as part of the National Construction Code) – 2019 Suite Amendment 1
- AS3959 (2018) (incorporating Amendments 1 & 2) – Construction of buildings in bushfire prone areas
- The ABCB Performance Standard for Private Bushfire Shelters Part 1

8. Report Limitations and General Information

This report aims to provide sound advice, best practice strategies and measures in accordance with AS3959 2018 (incorporating Amendments 1 & 2), Planning Directive No 5.1 Bushfire-Prone Areas Code – September 1 2017 and the Director's Determination – Bushfire Hazard Areas Version 1.1 2021.

We rely on information provided to us by clients and agents on behalf of clients. The assessment provided in this report relates only to the subject proposal/land/property, which has been identified in this report.

It is outside the scope of our accreditation to provide performance solutions. Bushfire Tasmania can provide performance solutions only with the advice and approval of the Tasmania Fire Service.

The purpose of recommendations contained in this report are to deliver clarity of circumstances relating to potential bushfire hazard(s). in addition, they are designed to assist in developing mitigation measures and on-going management of the site and surrounding area to provide a tolerable level of risk in accordance with all relevant standards. Any proposed future building(s) or changes in vegetation that may impact this site from a bushfire hazard perspective have not been considered in this report. No responsibility is taken for any loss as a result of actions taken which may be contrary to AS3959 2018 or the Directors Determinations. All findings and conclusions in this report are based on these.

Of particular note and importance from AS3959:
This standard is primarily concerned with improving the ability of buildings in designated bushfire-prone areas to better withstand attack from bushfire thus giving a measure or protection to the building occupants (until the fire front passes) as well to the building itself.

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Improving the design and construction of buildings to minimize damage from the effects of bushfire is but one of several measures available to property owners and occupiers to address damage during bushfire. Property owners should be aware that this Standard is part of a process that aims to lessen the risk of damage to buildings occurring in the event of the onslaught of bushfire. Other measures of mitigating damage from bushfire fall within the areas of planning, subdivision, siting, building design, landscaping and maintenance.

Furthermore, compliance with AS3959 does not guarantee that no loss will occur to life or property as a result of bushfire, as stated in AS3959:
It should be borne in mind that the measures contained in this Standard cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire, and extreme weather conditions.

The survivability of buildings is also dependent on a combination of measures such as landscaping, water supplies, access, building design and maintenance. Care should also be exercised when siting and designing for these measures when constructing a building under this Standard.

Monitoring current TFS advice is imperative and landowners should be aware in Catastrophic Fire Danger Rating conditions, even very well-prepared buildings may not be safe. Residents in bushland areas should not plan to defend any building, regardless of any preparations they have made.

It is the intention that based on the implementation of sound bushfire prevention measures in conjunction with on-going maintenance and keeping informed of possible fire threats that loss of property and/or life may be reduced.

If your property is within a bushfire prone area or if likely to be impacted by bushfire in some way, it is highly recommended that property owners/managers develop and implement a bushfire survival plan. This should address all aspects of bushfire safety and bushfire prevention measures applicable to the property. In addition, an evacuation plan should be developed and rehearsed to ensure occupants can realistically enforce it should the need arise. Please read the attached TFS Bushfire Emergency Planning Guidelines V3.0 2021 as a reference to better plan evacuation procedures as part of any bushfire survival plan and listen to ABC local radio for updates in the event of a fire in your area.

This assessment is valid for 6 years from the date of issue.

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9. Recommendations

- In accordance with Table 2.6 in AS3959 2018:
  From the proposed dwelling and deck, a hazard management area (HMA) is required to the specifications of:

  - a minimum 26m separation distance on the western and south western aspects,
  - separation distances to the property boundary on the north western, north eastern, eastern and south eastern aspects,
  - a minimum 43m separation distance on the northern aspect,
  - a minimum 27m separation distance on the southern aspect.

  The proposed HMA can achieve compliance with grass being regularly mown to a nominal 100mm or less height as per AS3959 2018 clause 2.2.3.2(f).
  Some existing eucalypts within HMA may be retained with growth up to 2m in height to be trimmed and managed. Refer to the Preliminary Arboriculture Assessment by Tasmanian Arboriculture Consultants for 300 Church Road, Dromedary dated 14/5/2022 version 1.0 for trees eligible to remain. Retained trees should be spaced and maintained in line with guidelines in this report/BHMP as well as the TFS Building for Bushfire Booklet June 2022. Refer to section 4.3 for more detail and advice on HMA compliance.

- With the implementation of the HMA, site and vegetation circumstances will allow compliance for a BAL-19 building solution for all aspects of the proposed dwelling and deck.
  The proposed dwelling and deck must comply with construction standards as detailed by AS3959, 2018 sections 3 and 6, specifically Clauses 6.2 to 6.8 for BAL-19.

- Site access to a static firefighting water supply point is <10m and is deemed to comply with table 2(A) of Director's Determination.

- The proposal will require a static water supply to comply with table 3B of the Director's Determination. This involves installing a static water supply (tank) of a minimum 10,000L within 3m of a hardstand constructed of the same material and standard as the driveway. The hardstand must be within 3m of the driveway/access, be at least 3m wide and located a minimum 6m from the dwelling. The tank must be fitted with a DIN or NEN standard forged Storz 65mm coupling with suction washer for connection to firefighting equipment and be within 90m of the entire proposal as a hose lay. Water supply point signage must be installed and clearly visible to inform firefighters.

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If it can be shown that the tank can comply with section 3.5 of AS3959 2018 (shielded from bushfire prone vegetation on all aspects), the tank can be made of any material provided the 400mm above ground is covered with a non-combustible material. In this case a fully non-combustible tank should be installed, for eg, metal.
There is a compacted gravel hardstand existing between Church Road and the proposed fire tank location. This is at least 3m wide by at least 8m long. An indicative tank location as well as hardstand location is shown on the BHMP (see Appendix C).

- Class 10a shed is >6m from proposed dwelling and not required to comply with bushfire construction measures.

10. Conclusion

Forest, woodland and grassland bushfire prone vegetation surrounds the proposal. In order to achieve a BAL-19 compliant building solution for all aspects of the proposed dwelling and deck, minimum setbacks as outlined in this report must be implemented and maintained appropriately in accordance with Table 2.6 and Clause 2.2.3.2(d)(e)(f) in AS3959 2018.
Water supply must comply with table 3B of the Director's Determination. Site access deemed to comply with table 2(A) of Director's Determination.

All construction must adhere to sections 3 and 6 of AS3959 2018.

The site has been assessed in accordance with Australian Standard 3959 – *Construction of Buildings in Bushfire Prone Areas 2018* (incorporating Amendments 1 & 2) and the Director's Determination – Bushfire Hazard Areas Version 1.1 2021.

Samuel Walters B.Agr Sc.; BFP-130

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11. References

- AS3959-2018 Construction of buildings in bushfire prone areas, Standards Australia, Sydney (incorporating Amendments 1 & 2).
- Wiltshire.R and Jordan,G. *Treeflip*, School of Plant Science, University of Tasmania, 2009.
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- Tasmania Building Act 2016.
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- From Forest to Fjaeldmark, *Descriptions of Tasmania's Vegetation*. Department of Primary Industries, Water and Environment, 2005.
- Tasmanian Planning Scheme Brighton.
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- TasVeg4.0 Tasmanian Vegetation Monitoring and Mapping Program, Biodiversity Conservation Branch, DPIPWE, 2013.
- Bushfire Planning Group, *Guidelines for Development in Bushfire Prone Areas of Tasmania*, Tasmania Fire Service, Hobart, 2017.
- www.fire.tas.gov.au
- TFS *Bushfire Emergency Planning Guidelines* Version 3.0, November 2021. Tasmania Fire Service.
- TFS *Building for Bushfire booklet*, Tasmania Fire Service, June 2020.
- TFS *Water Supply Signage Guideline* Version 1.0, Tasmania Fire Service, February 2017.
- TFS Firefighting Water Supplies booklet, Tasmania Fire Service.
- *Preliminary Arboriculture Assessment* by Tasmanian Arboriculture Consultants for 300 Church Road, Dromedary dated 14/5/2022 version 1.0.

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Appendix A – Site Photographs

Photograph 1 – Looking north east toward western entrance off Church Road.

Photograph 2 – Looking south east from approximately 35m in from western entrance seen in photo 1. Dean Brook on the middle to right.

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Photograph 3 – Looking north west along Church Road in front of western entrance.

Photograph 4 – Looking south east along Church Road from outside western entrance. Crack willows upper right are the start of forest vegetation to the south of the proposal.

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Photograph 5 – Looking south west toward grassland on western side of Church Road.

Photograph 6 – Looking north west into woodland vegetation to the west of proposal.

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Photograph 7 – Looking east toward trees and vegetation within HMA on top side of western side driveway.

Photograph 8 – Looking south east along western side driveway toward dam on property. Forest to right and driveway continues up to the left to dwelling site.

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Photograph 9 – Looking east south east from eastern boundary toward neighbouring 324 Church Road and grassland. This grass is mostly kept in a managed state.

Photograph 10 – Looking east north east toward 324 Church Road where grassland meets forest, north east of the proposal.

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Photograph 11 – Looking west south west toward dwelling site (middle to right). Shed pictured is to be demolished.

Photograph 12 – Looking north toward forest from north eastern side of proposal.

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Photograph 13 – Looking north west from north eastern side of proposal.

Photograph 14 – Looking south east from north western side of proposal.

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Photograph 15 – Looking south west from north of proposal to where northern driveway meets dwelling site. Northern driveway continues up to right to Church Road.

Photograph 16 – Looking north west toward up-slope forest from northern entrance.

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Photograph 17 – Looking west along Church Road from northern entrance. Hardstand in fore to mid photo. Trees on left to be removed as part of HMA.

Photograph 18 – Looking east along Church Road toward northern entrance to site on right.

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Appendix B – Architectural/Designer Plans

See Attached

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Appendix C – Bushfire Hazard Management Plan

See attached

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GEO-ENVIRONMENTAL ASSESSMENT

300 Church Rd

Dromedary

November 2022

GEO-ENVIRONMENTAL

SOLUTIONS

Investigation Details

Client:	Mark Harwood
Site Address:	300 Church Rd, Dromedary
Date of Inspection:	18/11/2022
Proposed Works:	New house
Investigation Method:	Cutting
Inspected by:	A. Plummer

Site Details

Certificate of Title (CT):	114003/2
Title Area:	Approx. 7762 m²
Applicable Planning Overlays:	Waterway and coastal protection area, Bushfire-prone areas, Low Landslip Hazard Band
Slope & Aspect:	18° S facing slope
Vegetation:	Bush Disturbed

Background Information

Geology Map:	MRT 1:250000
Geological Unit:	Permian
Climate:	Annual rainfall 600mm
Water Connection:	Tank
Sewer Connection:	Unserviced-On-site required
Testing and Classification:	*AS2870:2011, AS1726:2017 & 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

Log 1 Depth (m)	Log 2 Depth (m)	BH 1 Depth (m)	HRZ	Description
0.00-0.40			A2	**Gravely SILT (MH)**: Low plasticity, grey, dry, very stiff.
	0.00-1.2		Fill	**Silty GRAVEL (FILL):** Orange/Yellow, dry medium dense.
0.40-2.00	1.20-2.5	0.00-2.00	C	**Silty GRAVEL (GW):** Orange/Yellow, dry very dense, note: Highly fractured. No refusal.

Site Notes

Soils on site are developing from Permian Mudstone. The soils consist of silty topsoils overlying weathering gravel deposits. The subsoils are likely to exhibit slight ground surface movement due to high gravel content. Permeability is likely to be lower than expected for a gravel because of the mixture of smaller particle sizes.

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 S

Y_s range: **0-20mm**

Notes: The site has been classified as Class S, which is a slightly reactive site and is expected to exhibit slight ground surface movement due to moisture variations. Design and construction should be made in accordance with this classification.

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 has been conservatively classified as a **Clay loam (category 4)**. The site is unsuited to the installation of a traditional septic tank and trenches due to the steep slope onsite. Secondary treatment of effluent will be required, and it is proposed to install a package treatment system (e.g. Econocycle, Envirocycle, Ozzikleen etc) with treated effluent disposed in a modified absorption bed. A conservative Design Loading Rate (DLR) of 15L/m^2/day has been assigned for this site. This is to mitigate the risks associated with the steep slope.

The proposed two-bedroom dwelling has a calculated maximum wastewater output of 480L/day. This is based on a tank water supply and a maximum occupancy of 4 people (120L/day/person).

With secondary treatment this will require an absorption area of at least 32m^2. This can be accommodated in a modified absorption bed. For all calculations please refer to the Trench summary reports.

A cut-off drain will be required upslope of the absorption area and the area excluded from traffic or any future building works. A 100% reserve area should be set aside for future wastewater requirements.

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

Upslope or level buildings:	3m
Downslope buildings:	6.5m
Upslope or level boundaries:	1.5m
Downslope boundaries:	19.5m
Downslope surface water:	51m

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

During construction 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 S** - which is a slightly reactive site and is expected to exhibit slight ground surface movement due to moisture variations. Design and construction should be made in accordance with this classification.

It is recommended the foundations be placed on the underlying weathered gravel 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.

During construction 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	Mark Harwood	Assess. Date	3-Nov-22
		Ref. No.	
Assessed site(s)	300 Church Road Dromedary	Site(s) inspected	18-Oct-22
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 = 480 (using the 'No. of bedrooms in a dwelling' method)
Septic tank wastewater volume (L/day) = 160
Sullage volume (L/day) = 320
Total nitrogen (kg/year) generated by wastewater = 1.8
Total phosphorus (kg/year) generated by wastewater = 0.9

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)	45	44	44	53	42	41	55	53	66	62	55	52
Adopted rainfall (R, mm)	45	44	44	53	42	41	55	53	66	62	55	52
Retained rain (Rr, mm)	32	31	31	37	29	29	39	37	46	43	39	36
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**	**79**	**60**	**26**	**13**	**1**	**-7**	**5**	**17**	**41**	**67**	**90**

Annual evapotranspiration less retained rain (mm) = 489

Soil characterisitics

Texture = Sandy Loam Category = 4 Thick. (m) = 3
Adopted permeability (m/day) = 0.78 Adopted LTAR (L/sq m/day) = 15 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:	Evapotranspiration bed(s)
The preferred type of above-ground secondary treatment:	None
Site modifications or specific designs:	Not needed

Suggested dimensions for on-site secondary treatment system

Total length (m) =	8
Width (m) =	4
Depth (m) =	0.6
Total disposal area (sq m) required =	32
comprising a Primary Area (sq m) of:	32
and a Secondary (backup) Area (sq m) of:	

Sufficient area is available on site

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

The calculated DLR for the category 4 soil present on site is15mm/day, which a two-bedroom dwelling will require a irrigation area of 32m2. Therefore the system should 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	Mark Harwood	Assess. Date	3-Nov-22
		Ref. No.	
Assessed site(s)	300 Church Road Dromedary	Site(s) inspected	18-Oct-22
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	10,000	V. high	Very low		
	Density of disposal systems	/sq km	10	Mod.	Very low		
AA	Slope angle	degrees	18	High	Very high		
	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		
	Wastewater volume	L/day	480	High	Low		
	SAR of septic tank effluent		1.0	High	Low		
	SAR of sullage		1.6	High	Low		
	Soil thickness	m	3.0	V. high	Very low		
	Depth to bedrock	m	3.0	V. high	Very low		
	Surface rock outcrop	%	0	V. high	Very low		
	Cobbles in soil	%	0	V. high	Very low		
	Soil pH		5.5	High	Low		
	Soil bulk density	gm/cub. cm	1.4	High	Very low		
	Soil dispersion	Emerson No.	7	V. high	Very low		
	Adopted permeability	m/day	0.78	Mod.	Moderate		
	Long Term Accept. Rate	L/day/sq m	15	High	Very low	Moderate	

To enter comments, click on the line below 'Comments' . (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

Secondary treated effluent. and a conservative DLR have been selected to mitigate against the steep slope.

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	Mark Harwood	Assess. Date	3-Nov-22
		Ref. No.	
Assessed site(s)	300 Church Road Dromedary	Site(s) inspected	18-Oct-22
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		
	Phos. adsorp. capacity	kg/cub m	0.7	High	Moderate		
	Annual rainfall excess	mm	-489	High	Very low		
	Min. depth to water table	m	5	High	Very low		
	Annual nutrient load	kg	2.6	High	Very low		
	G'water environ. value	Agric non-sensit		V. high	Low		
	Min. separation dist. required	m	3	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	55	V. high	High		
	Dist. to nearest other feature	m	130	V. high	Very low		
	Risk of slope instability	Very low		V. high	Very low		
AA	Distance to landslip	m	2	V. high	Very high		

To enter comments, click on the line below 'Comments'. (This yellow-shaded box and the buttons on this page will not be printed.)

Comments

A cnservative DIR has been used in the wastewater design. The land application area is within a **low** landslide hazard zone .

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

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 6.5m 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 located 51m from 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 19.5m 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 A5 (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

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: 300 Church Road Dromedary

System Capacity: 4 persons @ 120L/person/day

Summary of Design Criteria

DLR: 15mm/day.

Irrigation area: 32m^2

Reserve area location /use: Assigned

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 absorption 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 absorption area 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.

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form **35**

To: Mark Harwood *Owner name*
300 Church Rd *Address*
Dromedary 7030 *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 Mark Harwood
Designer's project reference No. J7900
Address: 300 Church Rd
Lot No: 114003/2
Dromedary 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 modified absorption bed

Design documents provided:

The following documents are provided with this Certificate –

Document description:

Drawing numbers:	Prepared by: Geo-Environmental Solutions	Date: Nov-22
Schedules:	Prepared by:	Date:
Specifications:	Prepared by: Geo-Environmental Solutions	Date: Nov-22
Computations:	Prepared by:	Date:
Performance solution proposals:	Prepared by: Geo-Environmental Solutions	Date: Nov-22
Test reports:	Prepared by: Geo-Environmental Solutions	Date: Nov-22

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 - 300 CHURCH RD DROMEDARY TAS 7030 - Nov-22

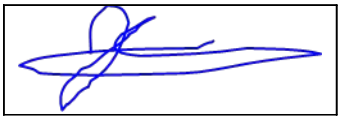
Geo-Environmental Assessment - 300 CHURCH RD DROMEDARY TAS 7030 - Nov-22

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		04/11/2022
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.

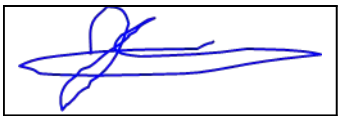
I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- [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		04/11/2022

CERTIFICATE OF QUALIFIED PERSON – ASSESSABLE ITEM

Section 321

Form **55**

To: Mark Harwood *Owner /Agent*

300 Church Rd *Address*

Dromedary 7030 *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: 300 Church Rd

Lot No:

Dromedary 7030

Certificate of title No: 114003/2

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.

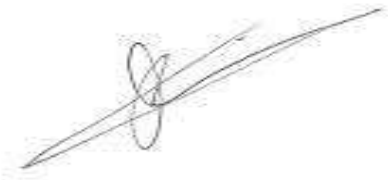
Scope and/or Limitations

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.

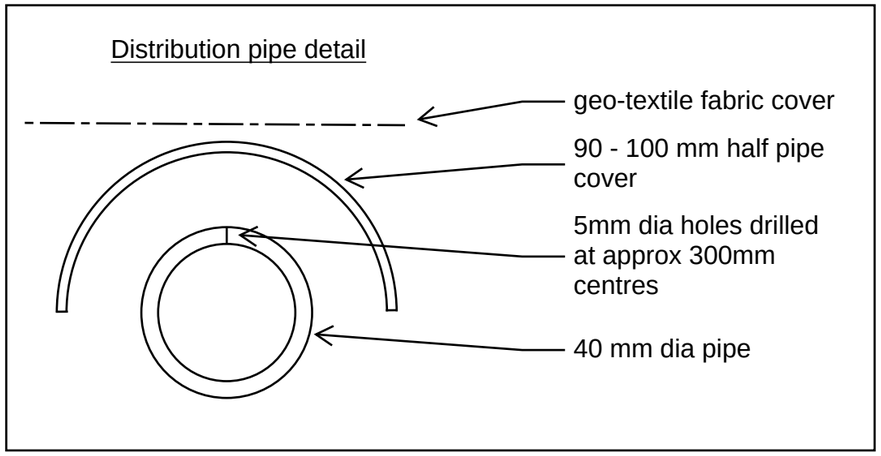
Qualified person:

Signed:



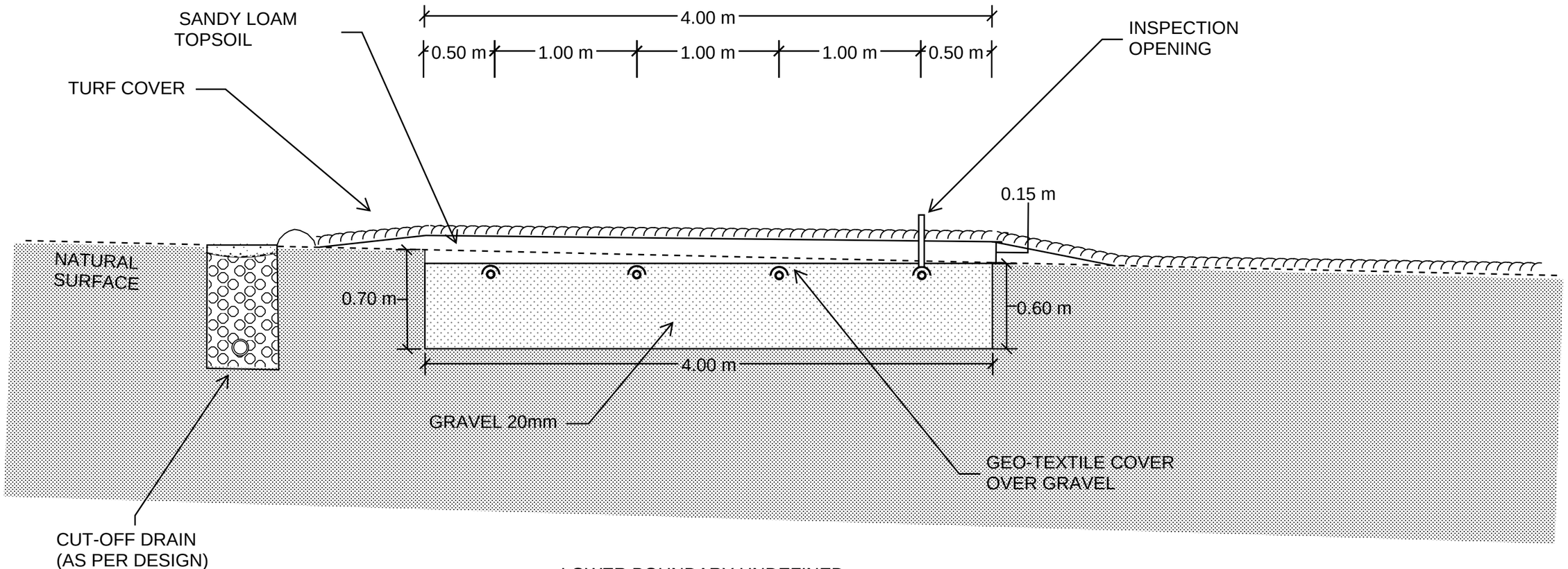
Certificate No: J7900

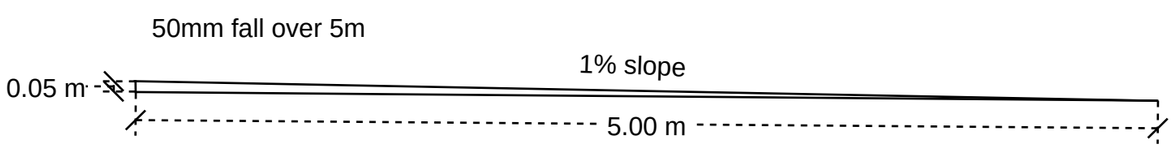
Date: 04/11/2022



NOTE: BASE OF BED TO BE RIPPED AND SMEARING AVOIDED DURING INSTALLATION

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





Do not scale from these drawings. Dimensions to take precedence over scale.	Absorption Bed 1 Cross-Section		Feb 2020	On-site Wastewater Cross-Section	Sheet 1 of 2

Design notes:

1.Absorption bed dimensions of up to 25m long by 0.60m deep by 4m wide.

2. Base of bed to be excavated level min 700mm into natural soils and smearing and compaction avoided.

3. Bed to be filled with 20mm clean washed gravel and drilled 40mm distribution pipes packed into upper 100mm of bed.

4. 40mm distribution pipes drilled with sufficient 5mm holes in the top of the pipe (approx spacing 300mm) to distribute the effluent and half circle 90-100mm UPVC pipe, un-perforated, laid over each 40mm perforated lateral to direct water jet downwards.

5. One 5 mm hole at centre of invert of each pipe to allow for drainage between pump cycles.

6. Geotextile or filter cloth to be placed over the distribution pipes to prevent clogging of the pipes and aggregate - the sides of the bed should also be lined.

7. Final finished surface with sandy loam to be a minimum of 150 mm above aggregate with turf cover or mulched with appropriate vegetation (eg native grasses and small shrubs at 1 plant per 1 m2)

8. The turf or vegetation is an essential component of the system and must be maintained with regular mowing and or trimming as appropriate

9. The distribution pipe grid must be absolutely level to allow even distribution of effluent around the absorption area – it is recommended that the level be verified by running water into the system before backfilling and commissioning the trench

10.All works on site to comply with AS3500 and Tasmanian Plumbing code.

GES
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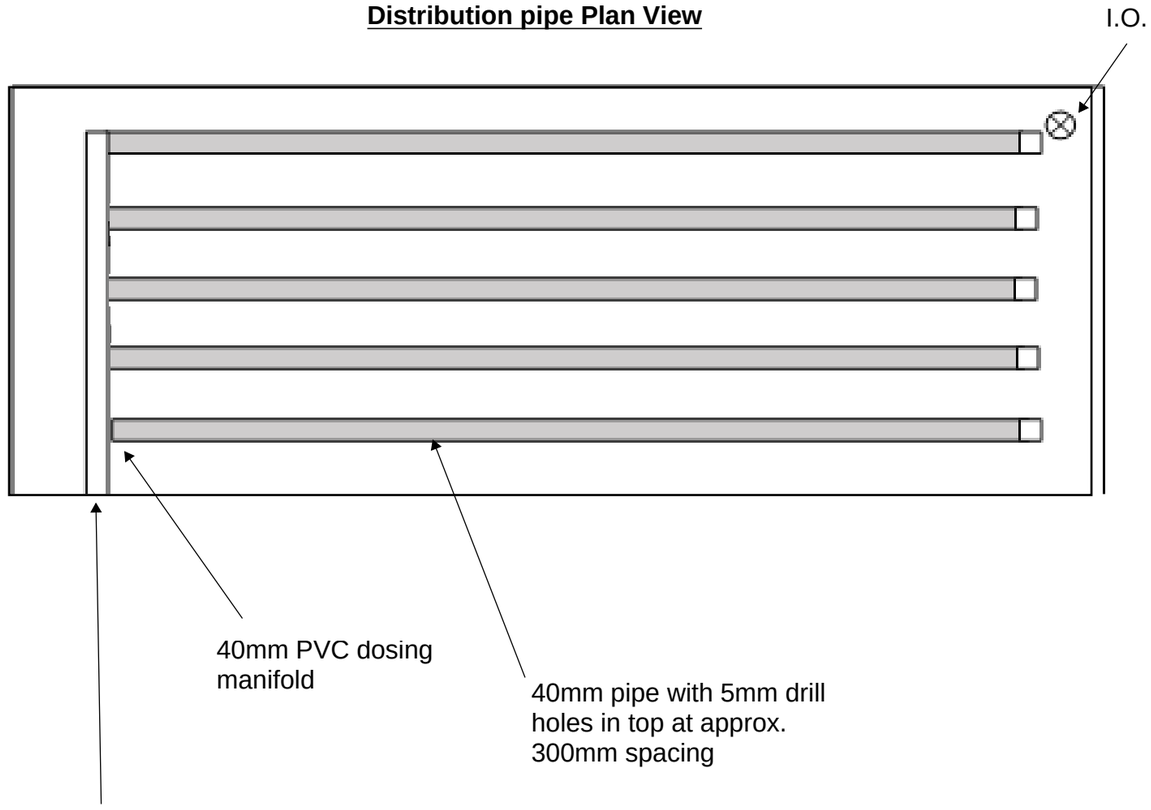
T| 62231839 E| office@geosolutions.net.au

Distribution pipe Plan View



The pump must be capable of delivering the total flow rate required for all laterals whilst providing a 1.5m residual head (ie squirt height) at the highest orifice (with no more than 15% variation in squirt height across the whole bed).

For beds with individual laterals, no more than 15m long, it is acceptable to adopt a flow rate of 4-5L/min/lineal metre. Total dynamic head (including friction loss) will need to be determined on a site-specific basis.

Individual flush points must be installed for each lateral. This may be a screw cap fitting on a 90 degree elbow level with the bed surface or a pressure controlled flush valve inside an irrigation control box.

100% Reserve Area

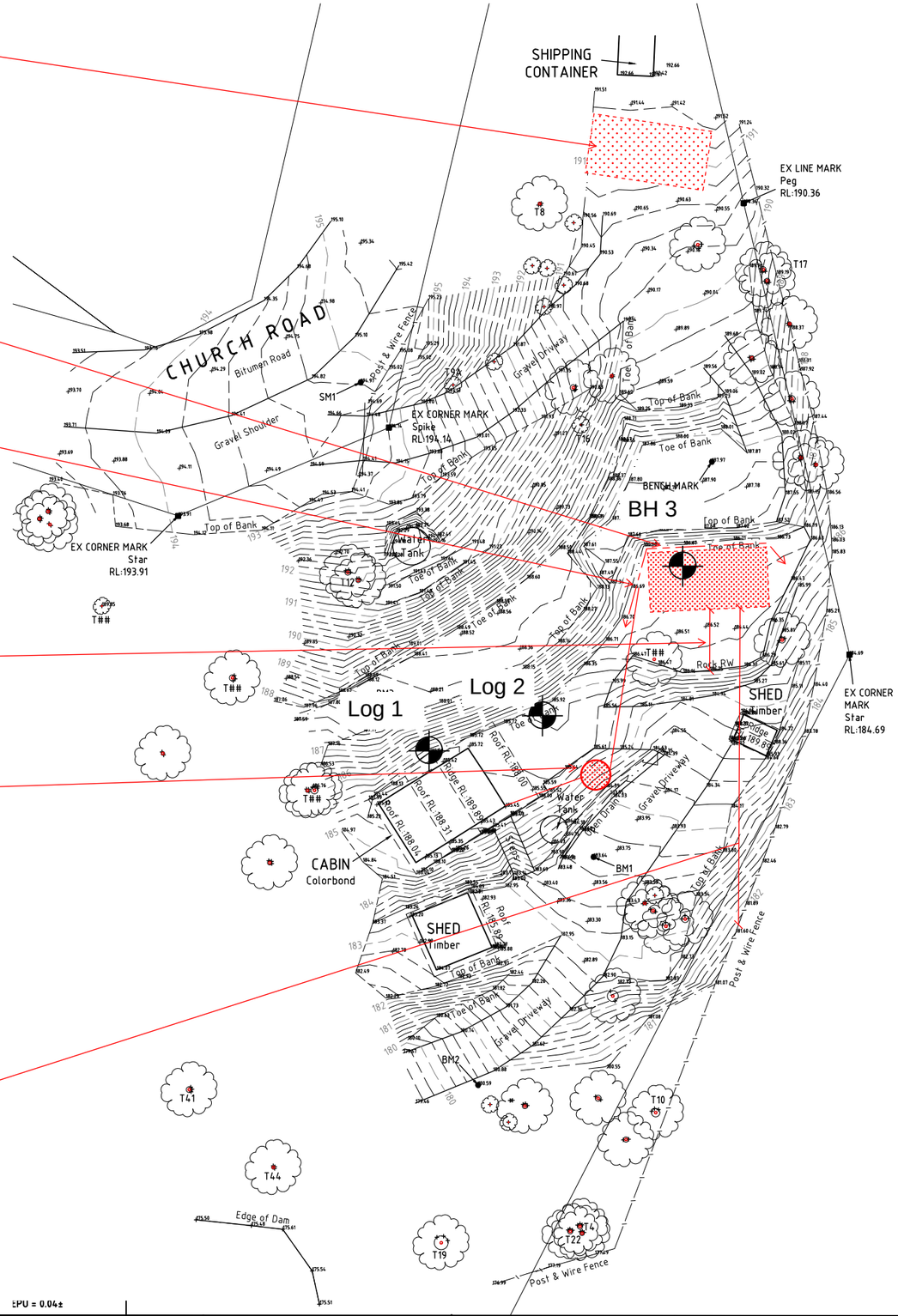
Modified Absorption Bed area 32m^2

CUT-OFF DRAIN

4.1m SEPARATION
(3m required)

AWTS unit min 1:60 fall from
all fixtures

21.8m SEPARATION
(19.5m required)



Wastewater system:

AWTS unit vented according to
NCC vol 3 Tas H101.2
min 1:60 fall from all fixtures

Cut-off drain

Modified Absorption bed - 32m^2

Min 3m from upslope buildings
Min 6.5m from downslope buildings
Min 1.5m from upslope or level boundaries
Min 19.5m from downslope boundary
Min 51m from downslope surface water

Refer to GES report

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Dr. John Paul Cumming
Building Services Designer-
Hydraulic
CCC774A

3/11/2022

Do not scale from these drawings. Dimensions to take precedence over scale.	Mark Harwood 300 Church Road Dromedary	C.T.: 114003/2 PID:	Date: 3/11/2022	On-Site Wastewater Management Plan	Drawing Number:	Sheet 1 of 1 Drawn by: LR

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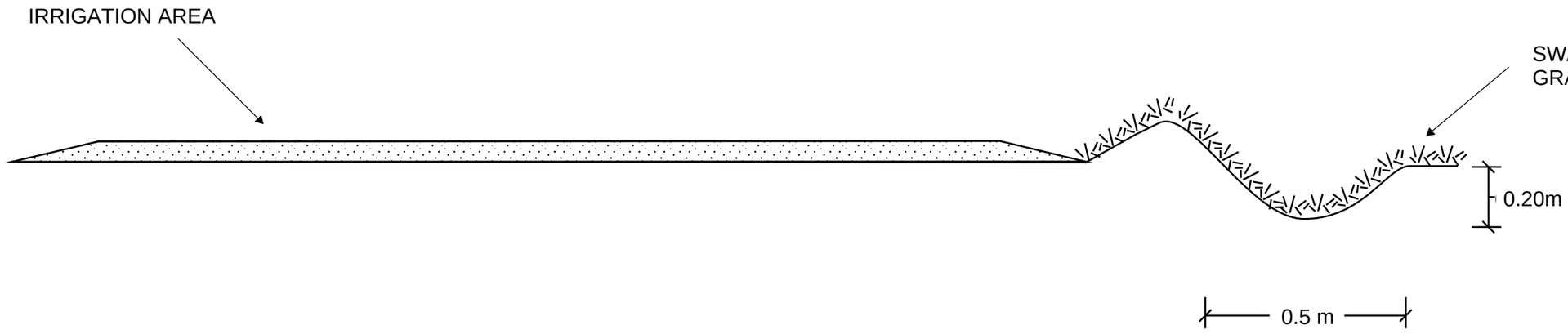
TYPICAL GRASSED SWALE DRAIN CROSS-SECTION

SWALE DRAIN TO BE MIN 0.5M WIDE BY MIN 0.20M DEEP

GRASS COVER TO BE MAINTAINED TO SLOW WATER FLOW AND MINIMSE EROSION



Do not scale from these drawings. Dimensions to take precedence over scale.	Geo-Environmental Solutions		Date: Nov 2021	Grassed swale drain typical cross-section	Sheet 1 of 1 Drawn by SR

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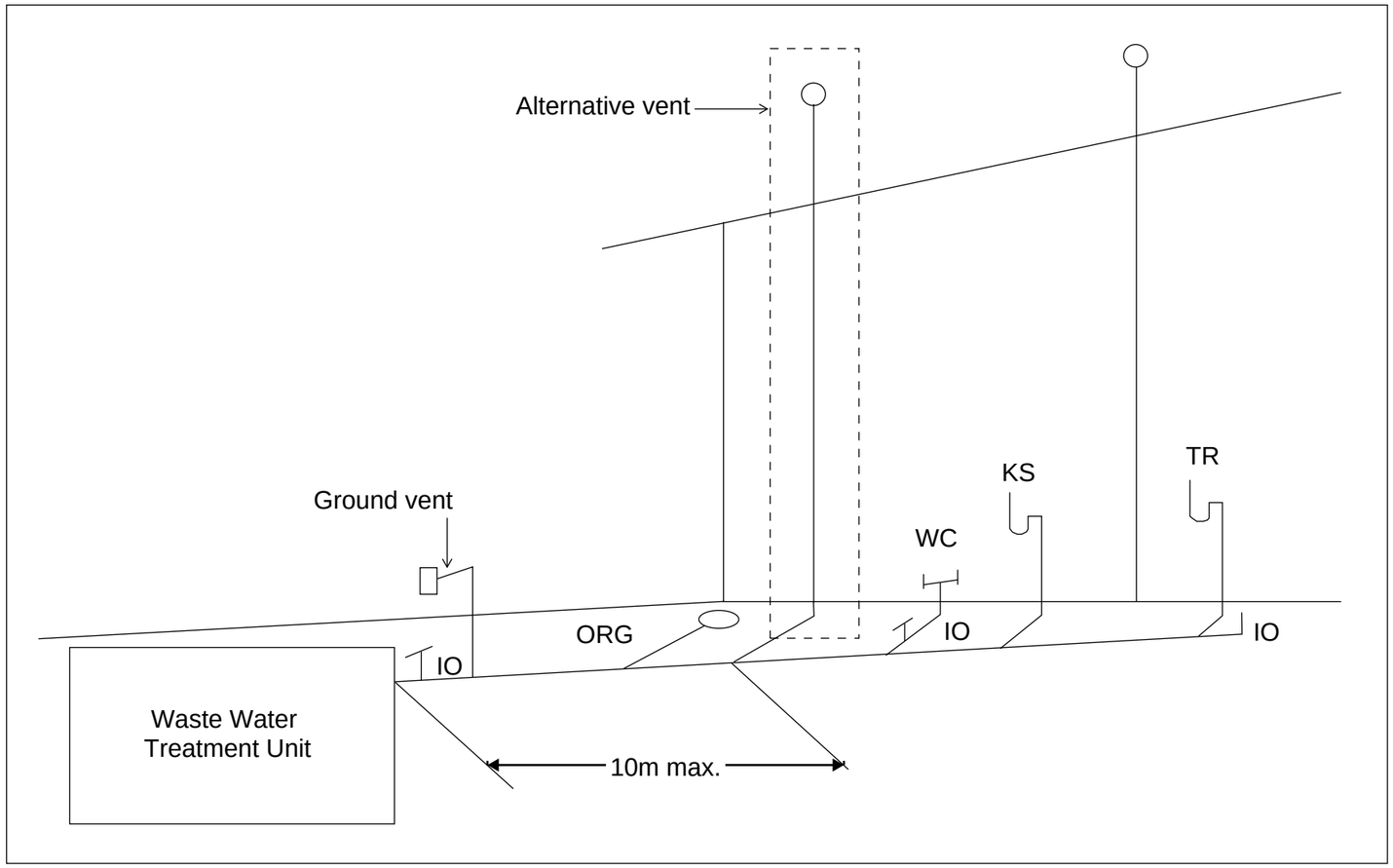


Tas Figure H101.2 Alternative Venting Arrangements

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

Alternative vent is the preferred arrangement where possible.

Do not scale from these drawings. Dimensions to take precedence over scale.				Tas Figure H101.2 Alternative Venting Arrangements		Sheet 1 of 1

GEO-Environmental Solutions

29 Kirksway Place, Battery Point

Tasmania 7004

Phone: 03 62231839

17 October 2024

Natural Values Assessment – Waterway and Coastal Protection Area

Project area – 300 Church Rd Dromedary

PID: 1809610

C/T: 114003/2

The following report is intended to demonstrate compliance with Code C7.0 (Waterways and Coastal Protection Area) of the Tasmania Planning Scheme – Brighton Council.

The proposal is for a new dwelling on the above address as shown on the attached site plan. The proposed site is in close proximity to the minor stream of Dean Brook and therefore triggers Code C7.0 of the Tasmania Planning Scheme – Brighton which requires compliance with the standards outlined at C7.6.1 for Buildings and Works.

Table 1. Extract of Tasmania planning scheme C7.6.1 Buildings and Works

P1.1 Buildings and works within a waterway and coastal protection area must avoid or minimise adverse impacts on natural assets, having regard to:	
Performance Criteria	Comment / Compliance
(a) impacts caused by erosion, siltation, sedimentation and runoff;	The proposed development should only be approved with an appropriate, site specific soil and water management plan to reduce the risk of environmental harm and erosion. The site should regularly maintain and progressively stabilised through vegetation and landscaping to reduce the potential for erosion.
(b) impacts on riparian or littoral vegetation;	No riparian or littoral vegetation is present on the site
(c) maintaining natural streambank and streambed condition, where it exists;	No works proposed in stream.
(d) impacts on in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;	The in-stream natural habitat will not be disturbed under the current proposal.

(e) the need to avoid significantly impeding natural flow and drainage;	The drainage depression is well defined, the building area is located to avoid impeding drainage and natural flow.
(f) the need to maintain fish passage, where known to exist;	Not applicable
(g) the need to avoid land filling of wetlands;	No wetlands are located at the project area.
(h) the need to group new facilities with existing facilities, where reasonably practical;	The project area is an occupied block with an existing shed. The proposed works are going to be group with the existing facilities.
(i) minimising cut and fill;	There is only a minimal proposed cut/fill for the site required the proposed dwelling or stabilised the existing earthworks.
(j) building design that responds to the particular size, shape, contours or slope of the land;	The proposed works are practically located along contours of the slope and existing embarkment. This placement allows for efficient site development, minimizing the need for unnecessary excavations, while ensuring convenient access from Church Road
(k) minimising impacts on coastal processes, including sand movement and wave action;	Not applicable
(l) minimising the need for future works for the protection of natural assets, infrastructure and property;	No further works required other than regular maintenance.
(m) the environmental best practice guidelines in the Wetlands and Waterways Works Manual; and	All works should be undertaken in compliance with the 'Wetlands and Waterways Works Manual' (DPIWE, 2003).
(n) the guidelines in the Tasmanian Coastal Works Manual.	All proposed works should be following the guidelines of the Tasmania Coastal Works Manual.

A2.

Acceptable Solutions	Comment / Compliance
Building and works within a Future Coastal Refugia Area must be within a building area on a plan of subdivision approved under this planning scheme.	No development will occur within a Future Coastal Refugia Area

A3.

Acceptable Solutions	Comment / Compliance
Development within a waterway and coastal protection area or a future coastal refugia area must not involve a new stormwater point discharge into a watercourse, wetland or lake.	No new stormwater discharge points are proposed to watercourse. The proposed dwelling will be connected to an existing water tank on site.

A4.

Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area	
Acceptable Solutions	Comment / Compliance
Dredging or reclamation must not occur within a waterway and coastal protection area or a future coastal refugia area.	There is no proposed dredging or reclamation on the site.

A5.

Coastal protection works or watercourse erosion or inundation protection works must not occur within a waterway and coastal protection area or a future coastal refugia area.	
Acceptable Solutions	Comment / Compliance
Coastal protection works or watercourse erosion or inundation protection works must not occur within a waterway and coastal protection area or a future coastal refugia area.	No coastal protection works, or waterway erosion or inundation protection works are proposed within the Waterway and Coastal Protection Area or a future coastal refugia area. If such activities are to be undertaken, then they must be designed by a suitably qualified person to minimise adverse impacts on natural coastal processes.

The attachment in Appendix 2 shows the proposed works and the WCP overlay of the project area. The assessment has been completed based on the site plan (refer to Appendix 3). The Integrated Conservation Value for the waterway has been identified as LOW (NVA report run on the 07/11/2024). Table 1 associated figures and plan demonstrate compliance with the performance criteria of section C7.6.1 of Tasmanian Planning Scheme – Brighton Council.

In considering the objectives of the Code 7 it is anticipated that there will be no unnecessary or unacceptable impacts on natural values as a result of the proposed dwelling and that any future development that is facilitated by the proposed dwelling is unlikely to lead to unnecessary or unacceptable impacts on natural values.

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

Environmental and Engineering Soil Scientist

Appendix 1. Natural Value Report

Natural Values Atlas Report

Authoritative, comprehensive information on Tasmania's natural values.

Reference: 114003/2
Requested For: 300 Church Road Dromedary
Report Type: Summary Report
Timestamp: 09:30:21 PM Monday 07 October 2024

Threatened Flora: buffers Min: 500m Max: 5000m
Threatened Fauna: buffers Min: 500m Max: 5000m
Raptors: buffers Min: 500m Max: 5000m
Tasmanian Weed Management Act Weeds: buffers Min: 500m Max: 5000m
Priority Weeds: buffers Min: 500m Max: 5000m
Geoconservation: buffer 1000m
Acid Sulfate Soils: buffer 1000m
TASVEG: buffer 1000m
Threatened Communities: buffer 1000m
Fire History: buffer 1000m
Tasmanian Reserve Estate: buffer 1000m
Biosecurity Risks: buffer 1000m

The centroid for this query GDA94: **512031.0, 5270294.0** falls within:

Property: 1809610

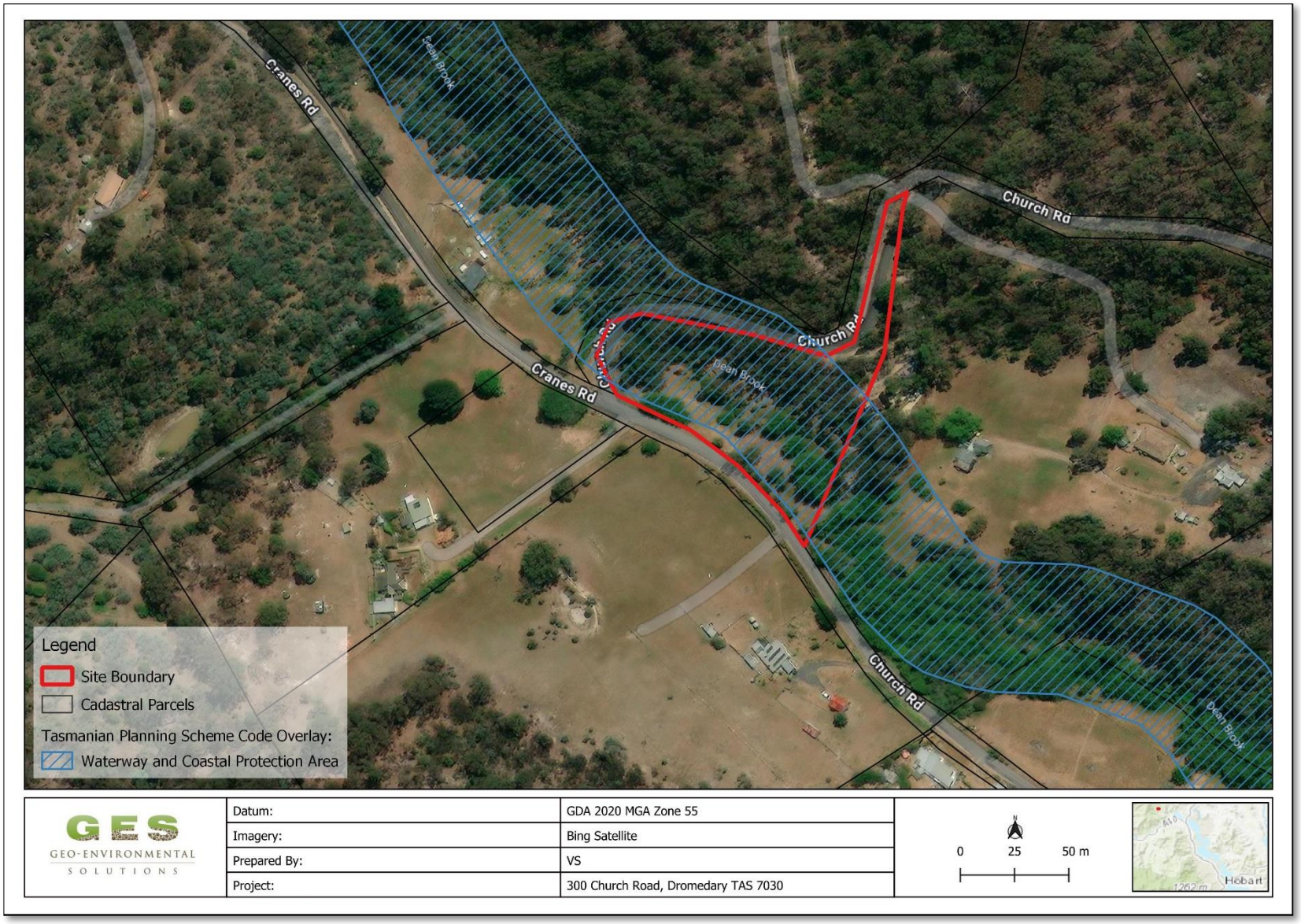
***** No threatened flora found within 500 metres *****

Department of Natural Resources and Environment Tasmania
Page 1 of 36

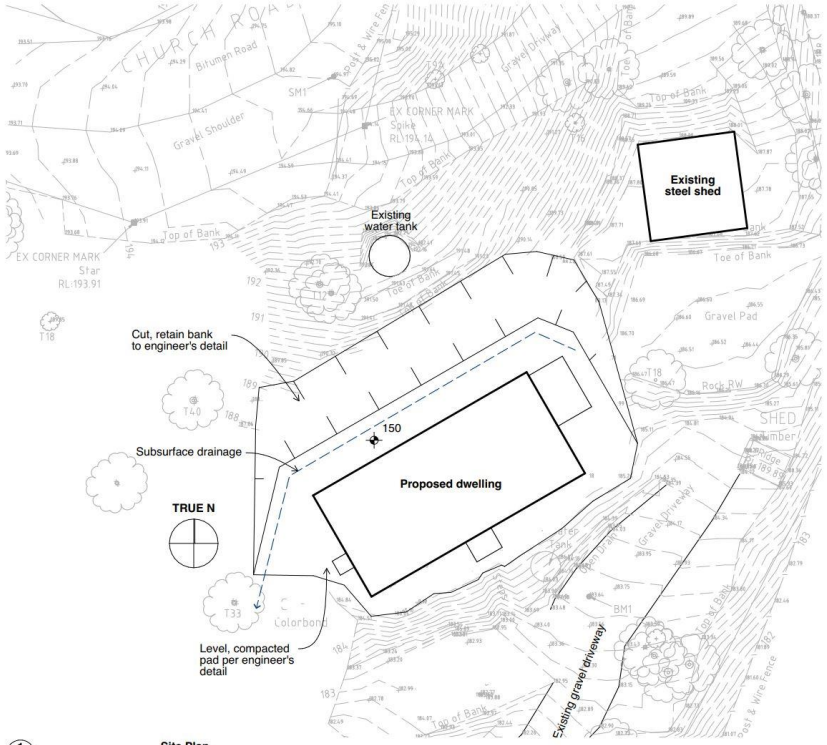
Tasmanian Government

Front cover of NVA report (full report available on request).

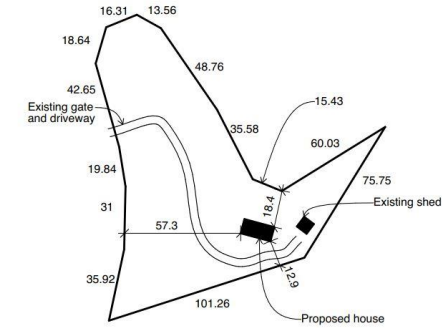
Appendix 2. Tasmanian Planning Scheme Overlays



Appendix 3. Site Plan



1 **Site Plan** 1:250



2 **Location Plan** 1:2000

LAYOUT ID	LAYOUT	Site Plan
02	SCALE @A3	1:250, 1:2000
	ISSUE ID	01
	ISSUE	Construction
	ISSUED	31/5/2024
	PRINTED	31/5/2024

DATE	REV ID	CHANGE/S
31/5/2024	03	Bushfire provisions, Watercourse sediment protection, outbuilding annotation, Cut and fill correction

PROJECT ID	7865
PROJECT	New Class 1a dwelling
SITE	114003/2
ADDRESS	300 Church Rd, Dromedary
CLIENT	Mark Harwood

ARCHITECT
J Lev BDes(Arch) MArch
Registratered Architect 1269
CBOS 648911667
www.lev.au/contact