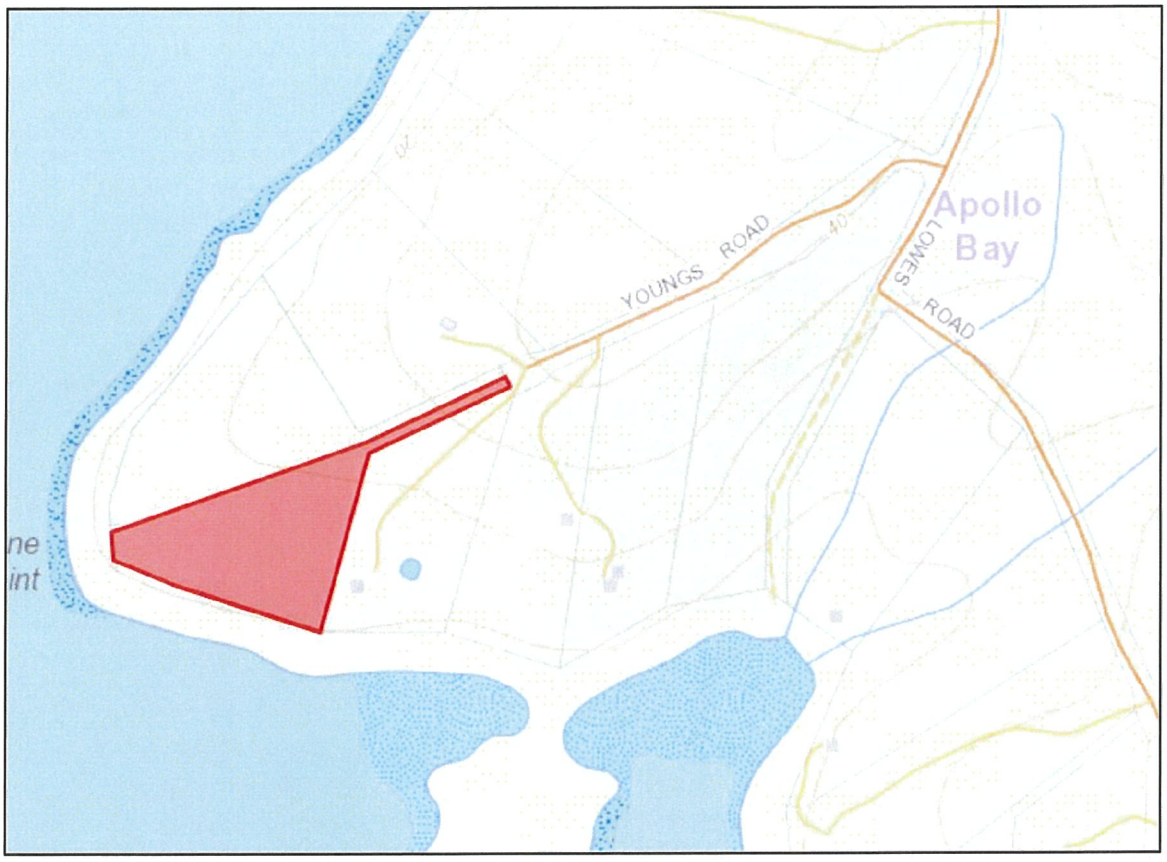
BUSH FIRE RISK ASSESSMENT REPORT

NEW CLASS 1B VISITOR ACCOMMODATION

47 YOUNGS ROAD – APOLLO BAY – BRUNY ISLAND

03RD MARCH 2023



Disclaimer: The information in this report is ensuring compliance with the Kingborough Interim Planning Scheme 2015 and consistent with, the Director's Determination 16th March 2020 – Requirements for Building in Bushfire-Prone Areas (transitional), *Building Act 2000* & Building *Regulations 2014* that remain in force by virtue of clause 3(2) of Schedule 6 of the *Building Regulations 2016*. The information stated within this report is also based on the instructions of *AS 3959 – 2018* – Construction of buildings in bush fire-prone areas. The purpose of this code is to ensure that use and development is appropriately designed, located, serviced, and constructed, to reduce the risk to human life and property, and the cost to the community, caused by bushfires.

"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".

GPM P/L has taken all reasonable steps to ensure that the information and data collected in the preparation of this assessment is accurate and reflects the conditions on and adjoining the site and allotment on the date of assessment. GPM P/L do not warrant or represent that the information contained within this assessment report is free from errors or omissions and accepts no responsibility for any loss, damage, cost or expense (direct or indirect) incurred as result of a person taking action in respect to any representation, statement or advice referred to in this report. This report is only to be used for the purpose of which it was commissioned.

Document Version: 01 – 03rd March 2023

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The development entails the construction of a new Class 1B Visitor Accommodation. A Class 10A Studio Building is also proposed, however due to the BCA Class, it is not required to be assessed for bushfire as it is not a habitable building and >6m from the proposed Class 1B. The site is located in Apollo Bay, a coastal area on the north western side of Bruny Island. The site is entirely surrounded by woodland. Youngs Road, adjoins the north eastern boundary of the subject allotment. A coastal reserve exists adjoining the western and southern boundary. Other similar sized private property allotments adjoin to the north and east, consisting of existing residential development and unmanaged woodland areas.

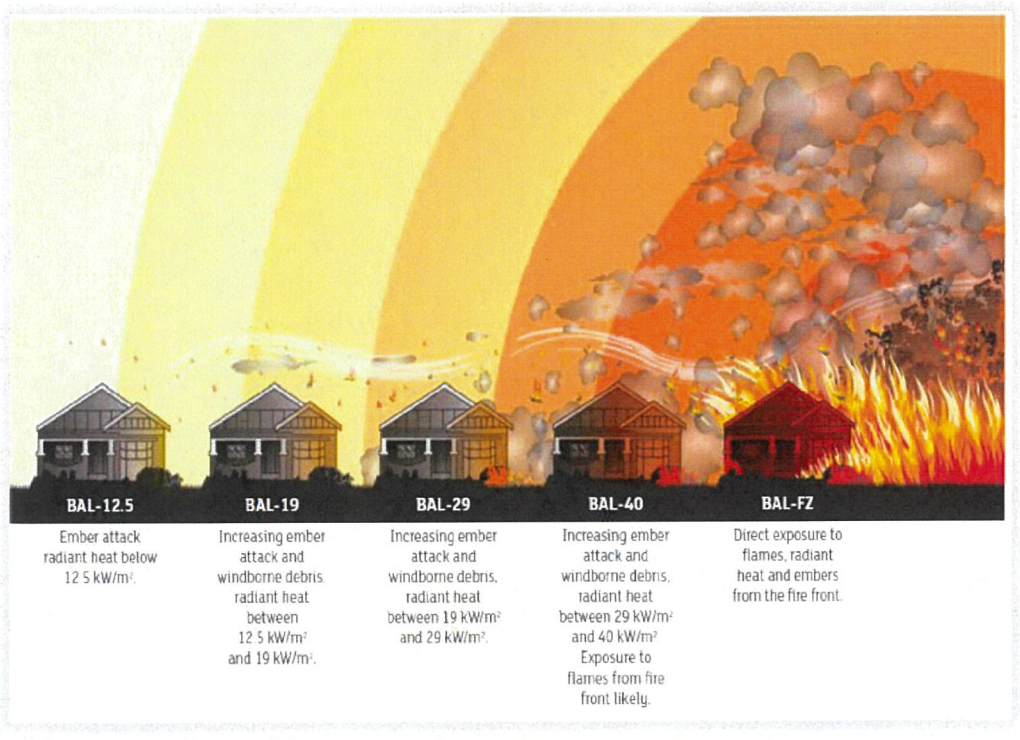
Assessment of the allotment has concluded that there is a risk of bushfire associated with the development due to the location of the bushfire prone woodland community >1ha that exists within 100m of the development proposal to the southwest. The area is also covered by the bushfire prone overlay.

The proposed development is located within an area of Environmental Living Zoning. The lot size is 2.318ha. Private driveway access is specified off Youngs Road that is ±400m in length.

Using ASA3959 – 2018 Simplified procedure (Method 1), the Bushfire Attack Level of the site will be classified as BAL 12.5 for the western, northern and eastern facades. BAL – 12.5 is described as being exposed to "Ember attack and radiant heat below 12.5 kW/m²".

Using ASA3959 – 2018 Simplified procedure (Method 1), the Bushfire Attack Level of the site will be classified as BAL 29 for the southern façade only. BAL – 29 is described as being exposed to "Increasing Ember attack, windborne debris and radiant heat between 19 kW/m² and 29 kW/m²".

The Bushfire Attack Level (BAL) Report and Bushfire Hazard Management Plan (BHMP) has been prepared for submission with a Building Permit Application under the Director's Determination 16th March 2020 – Requirements for Building in Bushfire-Prone Areas (transitional), *Building Act 2000 & Building Regulations 2014* that remain in force by virtue of clause 3(2) of Schedule 6 of the *Building Regulations 2016.*



Clients: DT Accommodation

Development Type / BCA Classification: New Class 1B Visitor Accommodation

Class 1B Floor Plan: As per attachment

Area Schedule: ±134m² (of which ±30m² is courtyard)

Construction Materials:

- Will be required to achieve BAL 29 rating standard (see further comments in this report).
- As per elevation drawings.

Date of Site Inspection: May 2022

Inspected by: Justin Cashion – Ground Proof Mapping P/L

This proposal will ensure that "use and development is appropriately designed, located, serviced and constructed, to reduce the risk to human life and property, and the cost to the community, caused by bushfires".

This Bushfire Risk assessment report will define the sites Bushfire Attack Level classification and determine its compliance with the requirements of the National Construction Code (NCC) and AS3959-2018 Construction of Buildings in Bushfire Prone Areas.

This report will satisfy associated Council Building Requirements.

Proposal: New Class 1B Visitor Accommodation

Applicants Name: DT Accommodation

Location: 47 Youngs Road – apollo Bay

Property ID: 7297492

Title Reference: 27778/6

Lot Size: 2.318ha

Zoning: Environmental Living

Scheme Overlay(s):

Bushfire Prone areas (120.FRE)

Biodiversity Protection Area (120.BPA)

Council: Kingborough

Defendable Space – Maintain the vegetation in a "low fuel" state within the required distance set out in this report (as shown on the Bushfire Hazard Management Plan) to satisfy ongoing compliance. This must be continually managed in perpetuity.

Access – Proposed access is off Youngs Road (Council maintained street/road) via ±360m of private driveway/hardstand area. Further requirements are needed to satisfy access and egress as outlined further in this report.

Water Supply – No existing firefighting water supply. Further requirements to satisfy water supply as outlined further in this report.

Construction – Construct and maintain the proposed accommodation building to a minimum specification complying with BAL – 29 in accordance with AS3959 2018, Sections 3 and 7.

Surrounding Area - The site is entirely surrounded by woodland. Youngs Road, adjoins the north eastern boundary of the subject allotment. A coastal reserve exists adjoining the western and southern boundary. Other similar sized private property allotments adjoin to the north and east, consisting of existing residential development and unmanaged woodland areas.

Predominant Fire Direction – The predominant fire direction during the summer period is from the North and North West. The vegetation that triggers the assessment provides a realistic fire threat under predominant fire weather conditions. Please note that as the development site is on an island, the area is subject to local influences, such as sea breezes, thus fire from any direction is possible.

Vegetation

Classifiable bushfire prone vegetation within 100m of the site of development is *Eucalyptus amygdalina - Eucalyptus globulus* dry forest and woodland (DGL). Further vegetation clearing and or modification or maintenance is required for this development to comply with hazard management area specifications and the ongoing maintenance of this hazard management area should continue in perpetuity. The maintenance management requirements are specified further in this report.

Slope / Aspect

The slope class across the development site is within the 0 - 5° range, whilst the surrounding areas within 100m of the development are within the 5 - 10° range. The aspect is predominantly southerly. The altitude for the proposed accommodation building is at ±12m.

Distances to Vegetation

Appropriate distances to assessable flammable vegetation from the all façades, allows for the construction standards for the accommodation building to be classified within those required for a BAL rating of 12.5 on the western, northern and eastern facades and is a BAL rating of BAL 29 on the southern facade. The entire building will be constructed to a minimum of BAL 29 standard (please see further comments later in this report). Associated proposed hazard management areas as per the BHMP, are to be maintained in perpetuity. A purple line delineated on the attached BHMP map shows the extent of the assessment area (e.g. all vegetation with 100m of each façade of the proposed accommodation building).

Assessment and HMA

The proposed development is located in a coastal vegetated interface and the risk of bushfire attack is considered to be a realistic threat. Using AS3959-2018 Simplified Procedure (Method 1) the Bushfire Attack Level of the site will be classified as BAL – 12.5 for the western, northern and eastern facades and BAL 29 for the southern façade. The construction standards for the entire Class 1B building will be to BAL 29 standard.

Bushfire Attack Level (BAL) – Steps 1 to 5 Summary Results

For calculations based on Tasmania's FDI of 50, please refer to Table 1 below:

	North	East	South	West
Vegetation to 100m	Woodland	Woodland	Woodland	Woodland
Vegetation Classification	B	B	B	B
Slope	Level/Upslope	Level/Upslope	Downslope 5 - 10°	Downslope 5 - 10°
Current BAL	BAL FZ	BAL FZ	BAL FZ	BAL FZ
Proposed BAL	BAL 12.5	BAL 12.5	BAL 29*	BAL 12.5
HMA for BAL 12.5	22m+	22m+	N/A	32m+
HMA for BAL 29	N/A	N/A	15m+ PP Boundary	N/A

*** Performance Solution to achieve BAL 29 solution and associated HMA on southern façade only.**

HMA Requirements

As per Director's Determination – Requirements for Building in Bushfire-Prone Areas (Transitional), Table 4.4 Requirements for Hazard Management Area:

Element 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.

Requirement: A new building or an alteration or addition 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 an HMA established in accordance with a certified bushfire hazard management plan.

Please note that the requirements highlighted above have been utilised for this project. In support of requirement (ii) above, the following points are made, and, strengthened bushfire mitigation options provided, for the southern façade, which does not meet the separation distance required for BAL 12.5.

1. The development is tourist accommodation whereby the user experience and associated aesthetics are imperative to the development.
2. BAL 12.5 separation distances applied to 3 out of 4 facades, with the southern façade having BAL 29 separation distances.
3. On the southern façade where BAL 12.5 separation distances cannot be achieved, the HMA will be managed to the private property boundary (distance of ±15m). Further mitigating factors in support of this include but are not limited to:
   a) This façade faces south, against the predominant fire weather direction.
   b) The fire run from this southerly direction is for a total distance of ±35m, which will only result in a low intensity fire.
   c) The chances of a fire starting on the foreshore/crown reserve is unlikely.
4. The construction of the Class 1B Accommodation building will be constructed to BAL 29 standard.
5. The firefighting water supply will be increased to a minimum of 20,000 litres.
6. The private access/egress road will be designed to encircle the Class 1B Accommodation building.

Hazard Management Area (HMA) Guidelines

HMA – means the area, between a habitable building or building area and bushfire-prone vegetation, which provides access to a fire front for firefighting, which is maintained in a minimal fuel condition and in which there are no other hazards present which will significantly contribute to the spread of a bushfire.

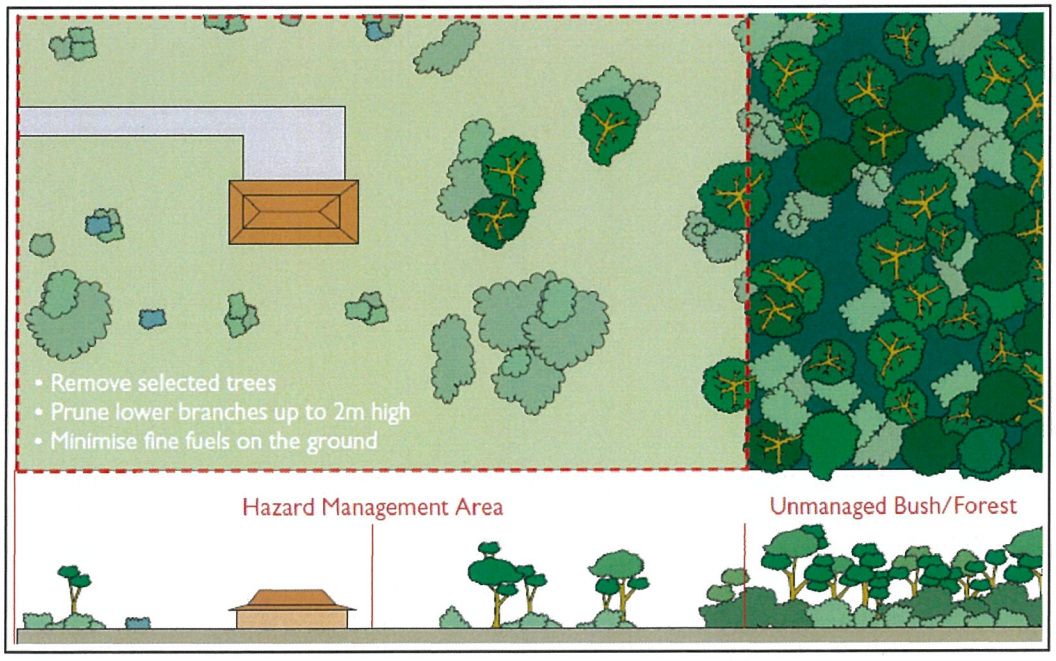
Please note that the implementation of the HMA must comply prior to occupancy certification.

The HMA requirements listed in Table 1 are the minimum distances required to achieve a compliance rating of BAL – 12.5 on the western, northern and eastern facades and BAL – 29 on the southern facade. The HMA (defendable space area), should have significant fuel reduction carried out to ensure compliance with low threat vegetation classification. This single zone hazard management area must be managed and kept in a minimum fuel condition at all times "where fine fuels are minimised to the extent that the passage of fire will be restricted, e.g. short green lawns, paths, driveways etc.". All grassed areas within this zone need to be short cropped and kept to a nominal height of 100mm.

The four design principles for this area are to:

(1) Create space
(2) Remove flammable objects or materials
(3) Separate fuel
(4) Selection, location and maintenance of trees

The diagram below explains this requirement.



Other recommendations Include:

- Trees and large shrubs should be pruned to remove branches within 2m of the ground.
- Use only mown lawn, bare ground (driveways, paths etc.) or non-flammable native succulent ground cover plants immediately adjacent to buildings (within 2m).
- Total understorey canopy cover should be less than 20%.
- Total eucalypt overstorey to be <5%.
- Separate tree crowns by a minimum of 4m.
- Shrubs should be isolated or in small clumps; avoid continuous canopies.
- New trees should not be planted closer to buildings than their expected full height.

- Avoid planting or retaining trees and shrubs with rough fibrous bark, or which retain shed bark in long strips (ribbon bark) (e.g. any of the stringy bark group of eucalypts).
- Avoid planting or retaining trees and shrubs that retain dead material in their canopies (e.g. most conifers, and most *Melaleuca* and *Leptospermum* species).
- Avoid planting or retaining shrubs under trees.
- Canopies of trees and shrubs should not touch walls or overhang buildings.
- Avoid planting or retaining trees and shrubs that deposit large quantities of litter in a short period, particularly in spring and summer.
- Combustible mulches should not be used, except in very limited quantities around the base of shrubs; use non-combustible mulches, such as pebble, scoria or gravel, or mown grass.
- Shrubs should not be allowed to grow to within 2m of windows with annealed (standard) glass, or within 1m of windows with heat toughened glass or walls with timber cladding.
- Locate any combustible materials, such as woodpiles, flammable fuel stores etc., outside the Hazard Management Area.

Figure 1: This photo illustrates a maintained hazard management zone in the foreground with unmanaged vegetetation in the background.

Some thought should be given to other landscaping alternatives using such plants as described in the "Fire Resisting Garden Plants" booklet produced by the Tasmania Fire Service (TFS) available on the website @ www.fire.tas.gov.au

Access/Egress

The primary principles for specifications in regards to access and egress, is to provide safe access to properties for residents, and to allow emergency service vehicles access to assist with firefighting and protection of buildings. This also enables emergency personnel to evacuate residents when required and provide access to the water supply for firefighting purposes. Proposed access to the Class 1B building and bushfire water supply is via ±350m private driveway off Youngs road (Council maintained street/road).

As per Director's Determination – Requirements for Building in Bushfire-Prone Area, Table 4.2 Requirements for Property Access:

Element B: Property access length is 30m or greater; or access is for a fire appliance to a firefighting water point.

Requirement: 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 inner 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.

And

Element C: Property access length is 200 metres or greater.

Requirement: The following design and construction requirements apply to property access:

a) The requirements for B above; and
b) Passing bays of 2 metres additional carriageway width and 20 metres length provided every 200 metres.

Thus, there is a requirement for 1 passing bay to be constructed. The exact location is shown on the attached BHMP.

Please note that the implementation of the Access/Egress must comply prior to occupancy certification.

Water Supply

A new building constructed in a bushfire-prone area, must be provided with a water supply dedicated for firefighting purposes.

Reticulated Water Supply for Firefighting: **Not applicable.**

Static Water Supply for Firefighting: **Applicable as per below.**

As per Director's Determination – Requirements for Building in Bushfire-Prone Area, Table 4.3B Requirements for Static Water Supply for Firefighting:

Element A: Distance between building area to be protected and water supply

Requirement: The following requirements apply:

(a) The building area to be protected must be located within 90 metres of the water connection point of a static water supply; and

(b) The distance must be measured as a hose lay, between the water connection point and the furthest part of the building area.

Element B: Static Water Supplies

Requirement: A static water supply:

(a) May have a remotely located offtake connected to the static water supply;

(b) May be a supply for combined use (firefighting and other uses) but the specified minimum quantity of firefighting water must be available at all times;

(c) Must be a minimum of 10,000 litres per building area to be protected. This volume of water must not be used for any other purpose including firefighting sprinkler or spray systems;

(d) Must be metal, concrete or lagged by non-combustible materials if above ground; and

(e) If a tank can be located so it is shielded in all directions in compliance with Section 3.5 of AS 3959-2009, 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.

Element C: Fittings, pipework and accessories (including stands and tank supports)

Requirement: Fittings and pipework associated with a water connection point for a static water supply must:

(a) Have a minimum nominal internal diameter of 50mm;

(b) Be fitted with a valve with a minimum nominal internal diameter of 50mm;

(c) Be metal or lagged by non-combustible materials if above ground;

(d) Where buried, have a minimum depth of 300mm (compliant with AS/NZS 3500.1-2003 Clause 5.23);

(e) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to firefighting equipment;

(f) Ensure the coupling is accessible and available for connection at all times;

(g) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length);

(h) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and

(i) Where a remote offtake is installed, ensure the offtake is in a position that is:

(i) Visible;
(ii) Accessible to allow connection by firefighting equipment;
(iii) At a working height of 450 – 600mm above ground level; and
(iv) Protected from possible damage, including damage by vehicles.

Element D: Signage for static water connections

Requirement: 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 comply with the Tasmanian Fire Service Water Supply Signage Guideline published by the Tasmania Fire Service.

This document is attached as an appendix to this report.

Element E: Hardstand

Requirement: A hardstand area for fire appliances must be provided:

(a) No more than three metres from the water connection 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) 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.

Please note that the location for a new static water supply is shown on the attached BHMP map. This minimum quantity of water has been increased from 10,000 to 20,000 litres for this proposed development and the location of this water supply is shown on the attached BHMP.

Please note that the implementation of the Static Water Supply must comply prior to occupancy certification.

Emergency Plan

As per Director's Determination – Requirements for Building in Bushfire-Prone Area, Section 4.5 Requirements for Emergency Planning:

(1) An emergency plan must be provided for:

(a) New buildings and additions and alterations to buildings classified as an accommodation building (Class 1b, Class 2, or Class 3) other than a group home for persons with a disability, a respite centre, a residential aged care facility, or a similar accommodation use; or

(b) A new building, extension or addition to a building, or change of use classified as a vulnerable use, constructed in a bushfire-prone area;

(2) An emergency plan must comply with Table 4.5, Requirements for Emergency Planning:

Element A: Emergency Plans:

Requirement: An emergency plan must be developed for the site which is:

(a) Compliant with the TFS Bushfire Emergency Planning Guidelines; and

(b) Approved by TFS or a person accredited by the TFS.

Emergency Strategy:

As the development has not progressed as far to complete an Emergency Plan an emergency management strategy, endorsed by the TFS or accredited person, has been provided for mitigation measures to achieve and maintain a level of tolerable risk that is specifically developed to address the characteristics, nature and scale of the use considering:

(a) the nature of the bushfire-prone vegetation including the type, fuel load, structure and flammability;
(b) the ability of occupants of the vulnerable use to:
(i) protect themselves and defend property from bushfire attack;
(ii) evacuate in an emergency; and
(iii) understand and respond to instructions in the event of a bushfire; and

Occupancy characteristics (e.g., number of occupants, age profile, disability, mobility and health considerations, communication constraints):

- Typical number of occupants = 2
- Age Profile = over 18 and predominantly between 25 and 35
- Non disability building only
- Full mobility
- No communication constraints (good mobile phone coverage)

Emergency management structure and capability (e.g., characteristics and capacity of the Emergency Control Organisation (ECO), response and intervention teams):

- The structure is yet to be full determined, however staff will be suitably trained and able to carry out the capacity of emergency control, response and intervention.

The building(s) and/or site vulnerability (e.g., construction, design, access, firefighting water supply, proximity to hazard, landscaping):

- See designer comments below in regards to design and construction:

GPM GROUND PROOF MAPPING

GPM GROUND PROOF MAPPING

Justin Cashion <justin@groundproofmapping.com.au>

47 Youngs Road - Proposed Visitor Accommodation BAL Construction Statement

1 message

Kate Phillips <kate@room11.com.au> Thu, May 26, 2022 at 11:58 AM
To: Justin Cashion <justin@groundproofmapping.com.au>
Cc: Dane Taylor <dane@dtcorporation.com.au>, Thomas Bailey <thomas@room11.com.au>

Hi Justin,

I have prepared the below statement regarding the construction of the Building at 47 Youngs Road, Apollo Bay. Please let me know if you would like it altered in any way to align with your report.

47 Youngs Road, Apollo Bay

Proposed Visitor Accommodation.

Room 11 have developed a proposal for our Client, Dane Taylor for a one bedroom structure on his site at 47 Youngs Road, Apollo Bay, Bruny Island.

The proposed structure is to be constructed to a minimum BAL rating of 29 in accordance with AS3959. This is to be achieved in the following way:

Floor: The Floor is to be constructed as a concrete slab on ground, with the cantilever portion of the floor to be constructed using suspended concrete slab.

Walls: The walls are to be constructed using Insulated Concrete Sandwich Panel. The panel joints will be sealed with Fire Retardant Mastic. The glazed portions of the wall are to be face fixed glazing, non operable, double glazed, with toughened glass min 6mm to the external skin of glazing. The glazing frames are to be to bespoke Room 11 detail, constructed using aluminium angles. We worked with CSIRO in Mogo at their fire testing centre, and this glazing system has been tested to withstand BAL FZ. Doors are to be glazed, toughened glass min 6mm, with fire resisting seals and metal frames. The door frames will be tight fitting to the frame, with no gaps greater than 3mm. Where glazing is less than 40mm from the ground the glass is to be protected with metal screens, max aperture 2mm.

Roof: The roof is to be concrete construction. Coloured glass light wells will have steel supporting structure, with the glass and frame constructed the same as the fixed windows. Any junctions to be sealed with fire retardant mastic. Awning roof is to be constructed from Steel.

Courtyard: The courtyard is to have a concrete floor surface.

Kind Regards,
Kate Phillips

Room 11 Architects
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Website / www.room11.com.au

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- Access to proposed Class 1B Accommodation building as per Access/Egress section of this report (as marked on attached BHMP).
- Firefighting Water Supply as per Water Supply section of this report. Please note that the minimum quantity available for firefighting purposes has been increased to 20,000 litres (as marked on attached BHMP).
- Hazard Management Area specifications as per this report.

Tasmania Fire Service
ENDORSED FOR PLANNING PURPOSES AS PER PLANNING DIRECTIVE 5.1, 1.5.1 A2, OR 1.5.2 A2 ON BEHALF OF THE CHIEF OFFICER TASMANIA FIRE SERVICE
HILTON, BJSHIRE PLANNING AND POLICY
4/10/2022

Complementary bushfire protection strategies, proposed or existing (e.g., alert systems, suppression systems, training, hazard management):

- Typical internal fire infrastructure such as smoke alarms will be installed.
- Staff will be suitably trained and able to carry out the capacity of emergency control, response and intervention.
- HMA as per this report (as marked on attached BHMP).

Possible bushfire scenarios (e.g., nature of the hazard, fire weather, landscape fire risk, fire path, on-site ignition potential):

- The bushfire prone vegetation is Eucalyptus globulus dry forest and woodland (DGL). Structure of the vegetation is generally an overstorey of ±30m trees with a poa understorey with scattered low shrubs and Lomandra (matt rushes). Flammability is considered as high for this vegetation type, however is mitigated against through a fully maintained HMA and BAL 29 construction combined with other mitigation measures.
- The predominant fire direction for this location is from the northwest. Please note that as the development site is on an island, the area is subject to local influences, such as sea breezes, thus fire from any direction is possible.
- Landscape fire risk potential is realistic as the headland that the development is on, is predominantly covered in woodland vegetation, interspersed with existing residential dwellings.
- As previously discussed, fire path would be expected to come from the northwest under predominant fire weather conditions.
- Onsite ignition potential is minimal due to the nature of the building and its occupants.

Primary and contingency bushfire safety options, proposed or existing (e.g., evacuation and shelter options analysis):

- A Bushfire Emergency Action Plan has been drafted. The primary action is for evacuation procedures to be implemented with a secondary action of evacuation to the foreshore of Kinghorne Point (<35m).
- Given the close proximity of the bushfire prone vegetation, if it was on fire, visual signs and/or smell of smoke would be the first detection of fire. Thus, closing of all doors and windows would occur first along with other preparation guidelines, followed by preparations to leave if required. This process is fully outlined in the Bushfire Emergency Plan.

Firefighter access, firefighting services, and firefighter protection:

- Access to proposed Class 1B Accommodation building from Youngs Road is ±360m, constructed to standards as per the Access/Egress section of this report (as marked on attached BHMP).
- Firefighting Water Supply as per Water Supply section of this report. Please note that the minimum quantity available for firefighting purposes has been increased to 20,000 litres (as marked on attached BHMP).
- Compliance with the Directors Determinations for this development will ensure firefighter protection.

Likelihood and consequence if hazardous materials or explosives are impacted by fire:

- No hazardous materials will be stored on site.

In summary, the bushfire risk to the site and the ability to respond to any bushfire risk is proportionate with this strategy and the Bushfire Emergency Plan that has been drafted supporting this strategy.

Construction

The buildings and elements shall be designed, constructed, and maintained in accordance with Construction Sections 3 and 7 of AS 3959-2018 *Construction of Buildings in Bushfire Prone Areas* for BAL – 29.

BAL–29	BAL–40	BAL–FZ (FLAME ZONE)
Enclosure by external wall or by steel, bronze or aluminum mesh. Non-combustible or naturally fire resistant timber supports where the subfloor is unenclosed	If enclosured by external wall refer below 'External Walls' section Iatable or non-combustible subfloor supports or tested for bushfire resistance to AS 1530.8.1	Subfloor supports – enclosure by external wall or non-combustible with an FRL of 30/-/- or be tested for bushfire resistance to AS 1530.8.2
Concrete slab on ground or enclosure by external wall, metal mesh as above or flooring less than 400 mm above ground level to be non-combustible, naturally fire resistant timber or protected on the underside with sarking or mineral wool insulation	Concrete slab on ground or enclosure by external wall or protection of underside with a non-combustible material such as fibre cement sheet or be non-combustible or be tested for bushfire resistance to AS 1530.8.1	Concrete slab on ground or enclosure by external wall or an FRL of 30/30/30 or protection of underside with 30 minute incipient spread of fire system or be tested for bushfire resistance to AS 1530.8.2
Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete), timber framed, steel framed walls sarked on the outside and clad with 6 mm fibre cement sheeting or steel sheeting or bushfire resistant timber	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) or timber framed or steel framed walls sarked on the outside and clad with 9 mm fibre cement sheeting or steel sheeting or be tested for bushfire resistance to AS 1530.8.1	Non-combustible material (masonry, brick veneer, mud brick, aerated concrete, concrete) with minimum thickness of 90 mm or an FRL of -/30/30 when tested from outside or be tested for bushfire resistance to AS 1530.8.2
5 mm toughened glass with openable portion screened and frame of metal or metal reinforced PVC-U, or bushfire resisting timber and portion within 400 mm of ground, deck etc screened	6 mm toughened glass. Fixed and Openable portion screened with steel or bronze mesh	Protected by bushfire shutter or FRL of -/30/- and openable portion screened with steel or bronze mesh or be tested for bushfire resistance to AS 1530.8.2
Screened with steel, bronze or aluminium mesh or non-combustible, or 35 mm solid timber for 400 mm above threshold. Metal or bushfire resisting timber framed tight-fitting with weather strips at base	Non-combustible or 35 mm solid timber, screened with steel or bronze mesh, metal framed, tight-fitting with weather strips at base	Protected by bushfire shutter or tight-fitting with weather strips at base and an FRL of -/30/-
Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked	Non-combustible covering. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. Roof to be fully sarked and no roof mounted evaporative coolers	Roof with FRL of 30/30/30 or tested for bushfire resistance to AS 1530.8.2. Roof/wall junction sealed. Openings fitted with non-combustible ember guards. No roof mounted evaporative coolers
Enclosed sub-floor space or non-combustible or bushfire resistant timber supports. Decking to be non-combustible or bushfire-resisting timber	Enclosed sub-floor space or non-combustible supports. Decking to be non-combustible	Enclosed sub-floor space or non-combustible supports. Decking to have no gaps and be non-combustible

Natural and Cultural Values

Please note that *Eucalyptus amygdalina - Eucalyptus globulus* dry forest and woodland (DGL) is a threatened vegetation community and approval is required for the clearing/modification of this vegetation. This clearing/modification should be undertaken in a sensitive manner. There has also been a sighting noted for the Eastern Quoll (*Dasyurus viverrinus*) on the property. No further natural or cultural values were identified on site or through desktop assessments which would prevent the clearing and or maintenance of vegetation communities within the Hazard Management Area for achieving BAL – 12.5 classification (western, northern and eastern facades) and to the private property boundary on the southern facade. The following resources were checked as part of the desktop assessment;

- Natural Values Atlas – DPIPWE 2021
- TasVeg 4.0 – Tasmanian Government / DPIPWE 2020
- The List – DPIPWE 2021

Other Environmental or Planning Issues

No environmental or planning issues were identified on site or through desktop assessments, including review of the Northern Kingborough Interim Planning Scheme 2015 and scheme overlays.

This assessment covers the minimum requirements for the construction of a new Class 1B accommodation building. It is important to note that the assessment covers only the requirements from a bushfire perspective and not any other building regulations.

The development site is located in a forested interface within 100m of a potentially flammable woodland vegetation community. The risk of bushfire attack needed to be considered as the site is classified as being in a Bushfire Prone Area and may be susceptible to bushfires in the future.

Building construction standards of a BAL – 29 rating have been specified, with BAL 12.5 hazard management area distances specified for the western, northern and eastern facades and BAL 29 hazard management area distance specified for the southern façade. The management and ongoing maintenance of this hazard management area in a low fuel state, in perpetuity, as prescribed in this plan is of upmost priority in regards to bushfire risk. Private access and egress requirements have been specified as has static firefighting water requirements. When the development is built following the construction guidelines of AS3959 – 2018 and other recommendations outlined in this report, it will ensure compliance with the *Building Act 2016* & *Building Regulations 2016.*

Please note that an Emergency Plan Strategy has been prepared and endorsed by TFS, and a subsequent Bushfire Emergency Plan will be completed and certified prior to occupancy, as required by Section 4.5 of the Director's Determination 16th March 2020 – Requirements for Building in Bushfire-Prone Areas (transitional).

This report should be considered in conjunction with all other planning documents for this proposed development in case of conflict. It is the client's responsibility to provide this report to all relevant parties that are involved with the planning, development or construction of this proposed extension. Any changes in relation to these functions that may alter the proposed BAL rating, need to be addressed with GPM P/L as there may be a necessity for a new assessment to be undertaken.

Other valuable resources in regards to bushfires and planning and preparation are available on the Tasmania Fire Service (TFS) website @ www.fire.tas.gov.au

This Bushfire Risk Assessment Report was prepared by:

Justin Cashion – Ground Proof Mapping P/L.

Signature: Justin Cashion Date: 03/03/2023

This Bushfire Risk Assessment Report is certified by:

Justin Cashion – Ground Proof Mapping P/L.

Signature: Justin Cashion Date: 03/03/2023

Accredited Person under part 4A of the Fire Service Act 1979: Accreditation No: **BFP-112**

Certificate: **GPM 22 - 029**

Term	Definition
accredited person	Means as defined in the act
BAL	A means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per square metre, which is the basis for establishing the requirements for construction to improve protection of building elements from attack by a bushfire (AS 3959-2018).
BAL ratings	Used as the basis for establishing the requirements for construction to improve protection of a (proposed) building from bushfire attack. There are 6 BAL ratings; low, 12.5, 19, 29, 40 and FZ.
bushfire hazard management plan	Means as defined in the Act
bushfire-prone area	Means: land that is within the boundary of a bushfire-prone area shown on an overlay on a planning scheme map; and where there is no overlay on a planning scheme map, or where the land is outside the boundary of a bushfire-prone area shown on an overlay on such a map, land that is within 100m of an area of bushfire-prone vegetation equal to or greater than 1 hectare.
bushfire-prone vegetation	Means contiguous vegetation including grasses and shrubs but not including maintained lawns, parks and gardens, nature strips, plant nurseries, golf courses, vineyards, orchards or vegetation on land that is used for horticultural purposes.
contiguous	Means separated by less than 20m.
defendable space	An area of land around a building where vegetation is modified and managed to reduce the effects of flame contact and radiant heat associated with a bushfire.
hazard management zone / area	Means the zone / area, between a habitable building or building area and bushfire-prone vegetation, which provides access to a fire front for firefighting, which is maintained in a minimal fuel condition and in which there are no other hazards present which will significantly contribute to the spread of a bushfire.
Part 5 agreement	Means as defined in the Act.
TFS	Means the Tasmanian Fire Service.
slope	The slope under the classified vegetation in relation to the (proposed) building.
static water supply	Means water stored in a tank, swimming pool, dam, or lake that is available for firefighting purposes at all times.
vegetation	The vegetation that presents a bushfire hazard within 100 metres of the development and is classified in accordance with Clause 2.2.3 of AS 3959-2018.

- Standards Australia Limited. (2011). AS *3959 – 2018 – Construction of buildings in bush fire-prone areas.*
- Kingborough Interim Planning Scheme 2015.
- Australian Building Codes Board. (2019). *National Construction Code* - ABCB.
- *Building Act 2000 & Building Regulations 2014* that remain in force by virtue of clause 3(2) of Schedule 6 of the *Building Regulations 2016.*
- Director's Determination 16th March 2020 – Requirements for Building in Bushfire-Prone Areas (transitional).
- UTS:CLG / TFS. Development and Building in Bushfire Prone Areas course resources.
- Room 11 Architect Project No. 2202, Project Name: CHROMA TUNNEL + STUDIO, 01/03/2023.

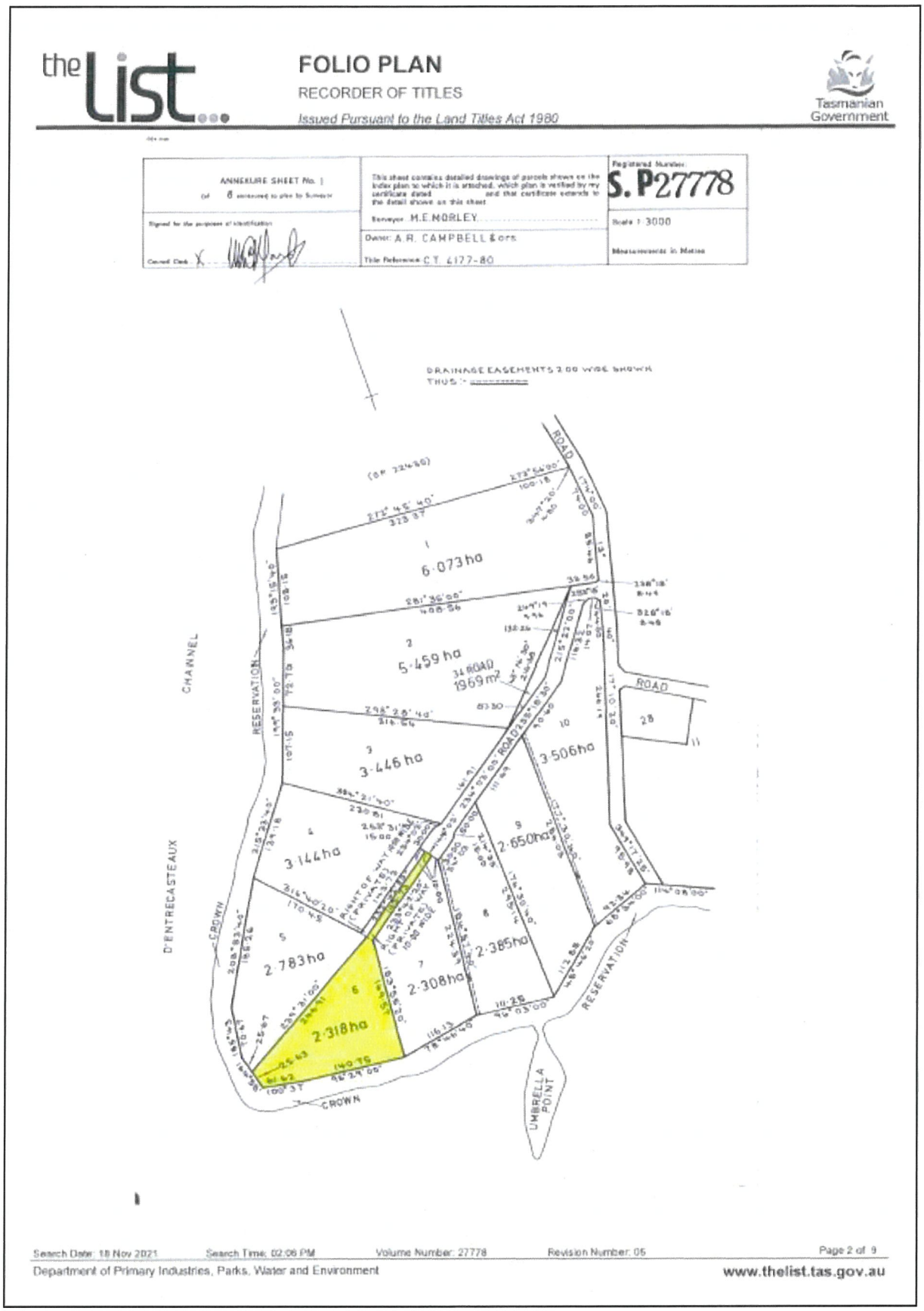


Figure 1: Title Plan.

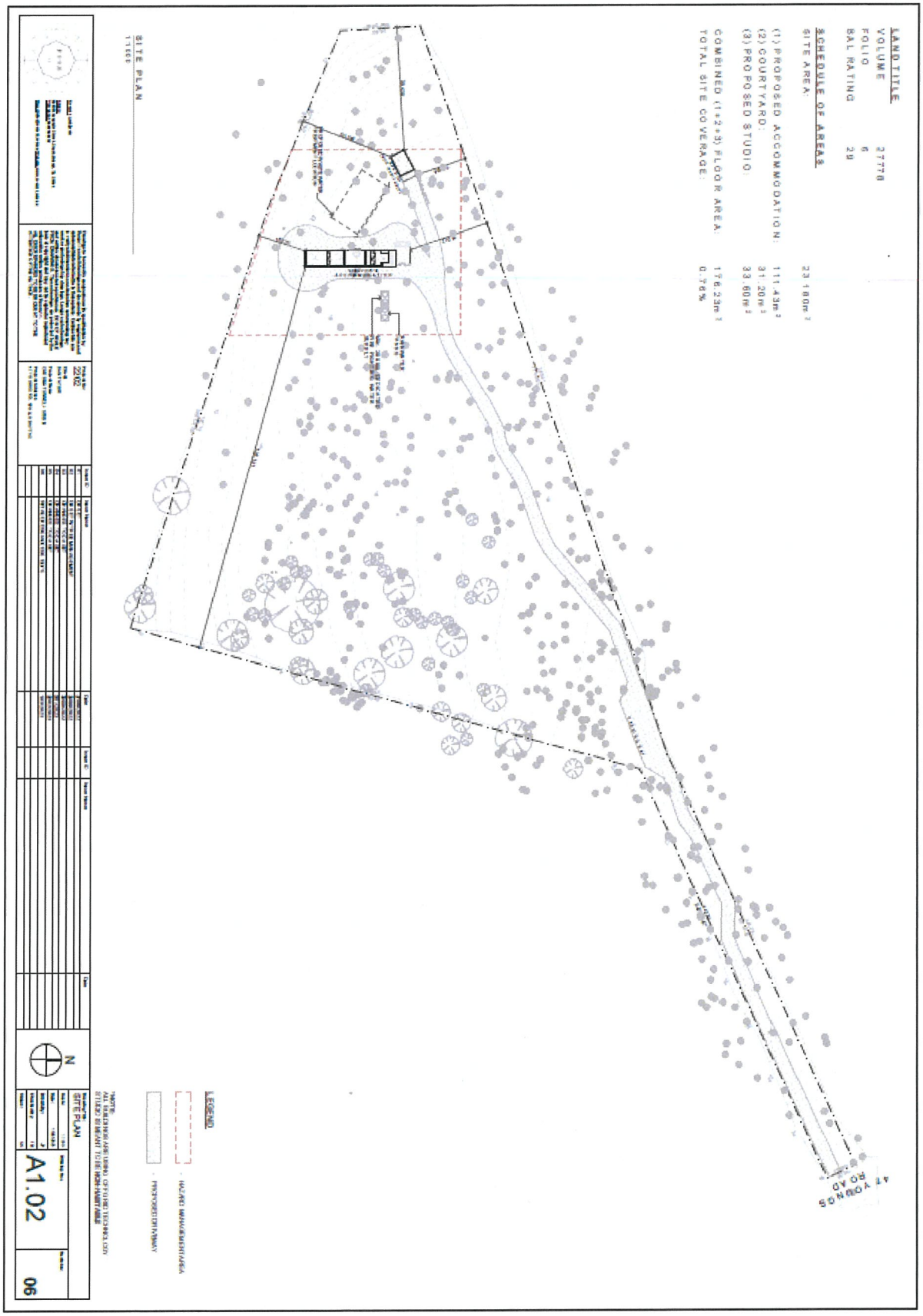
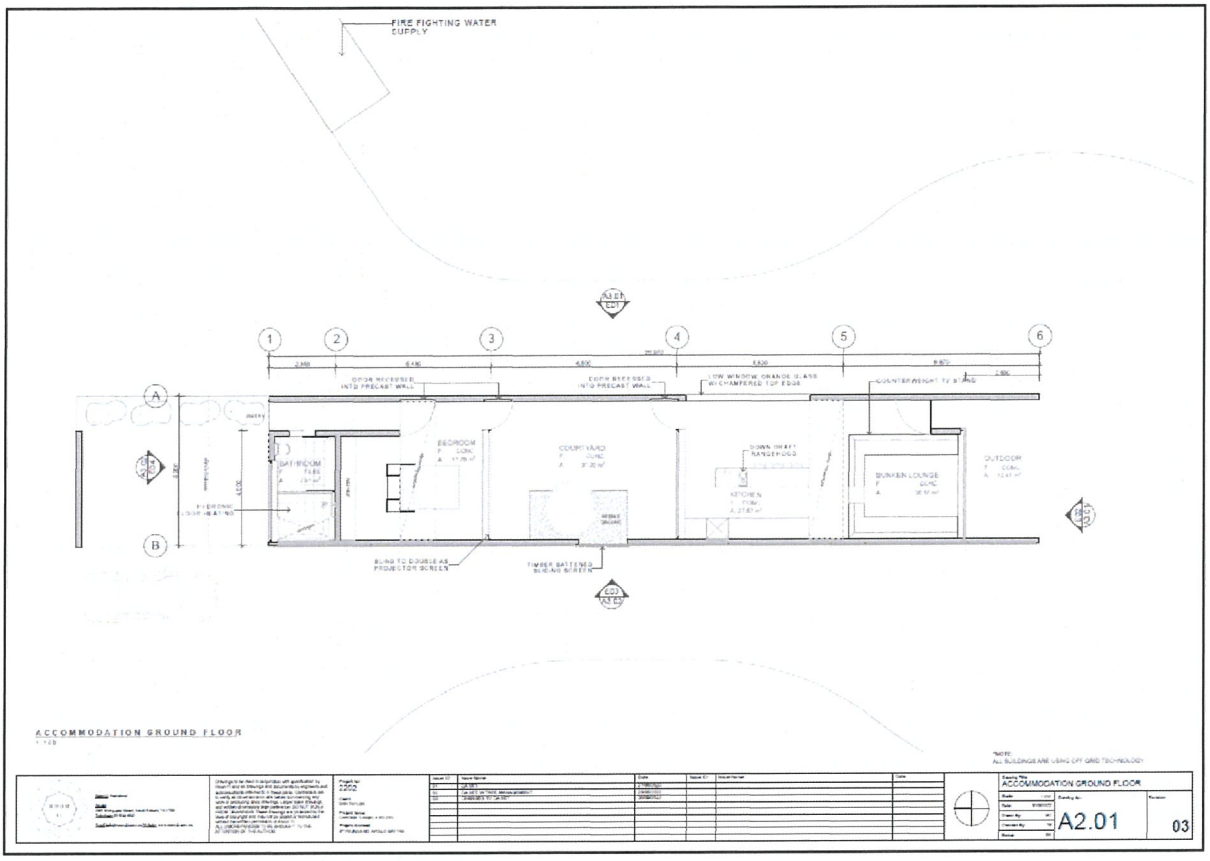
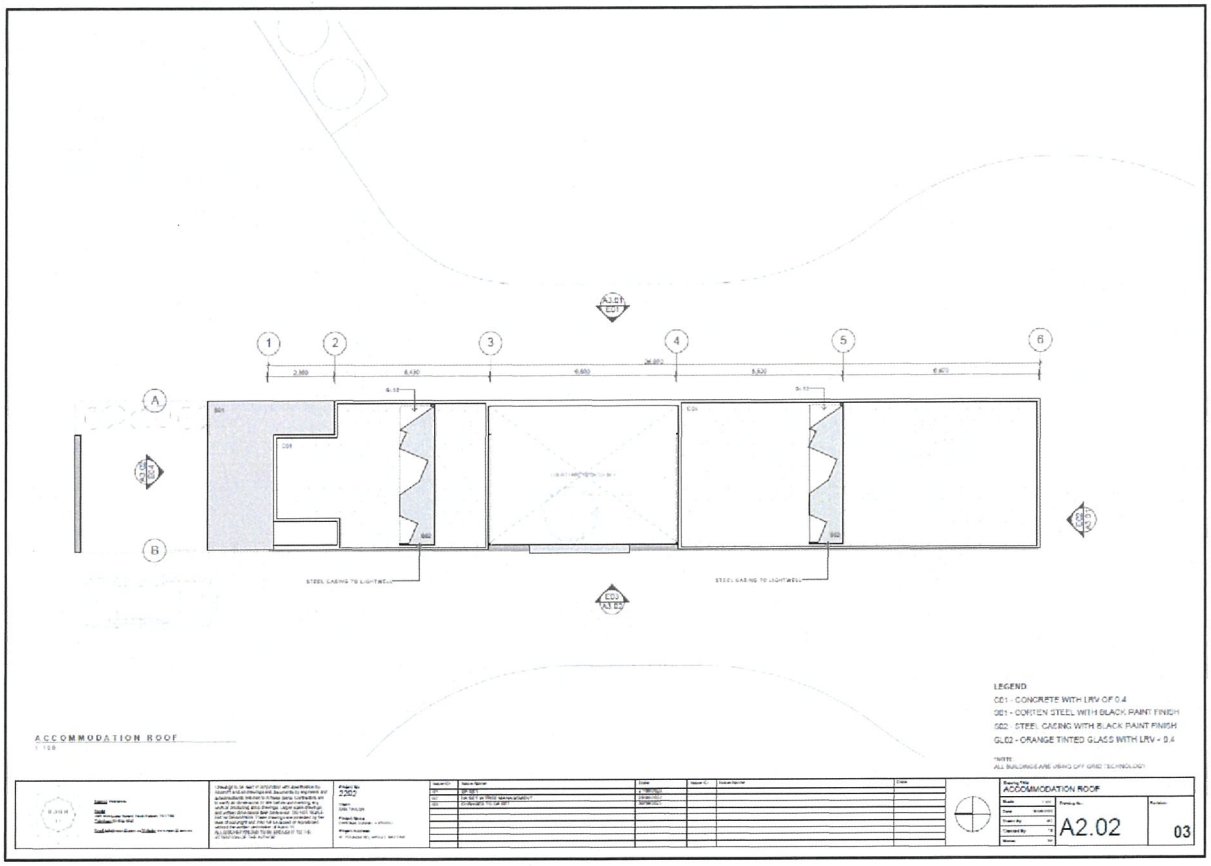
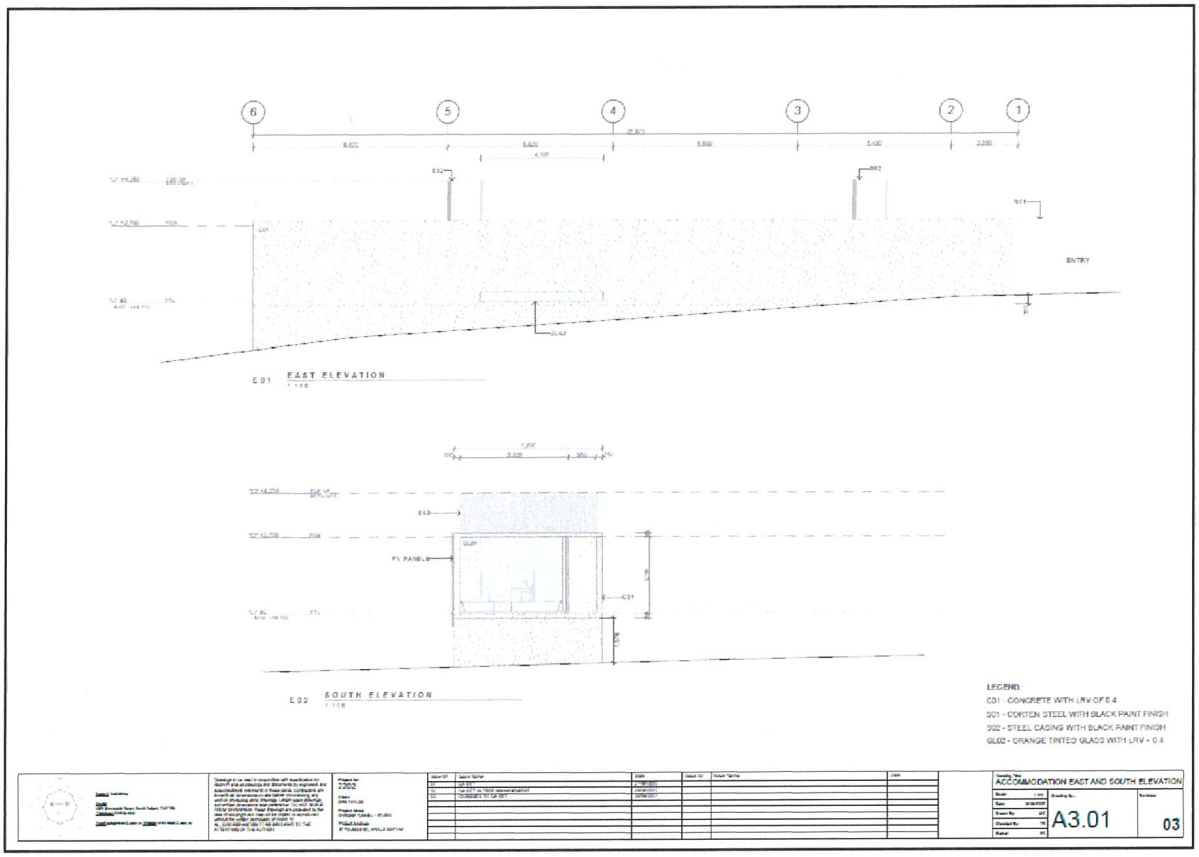


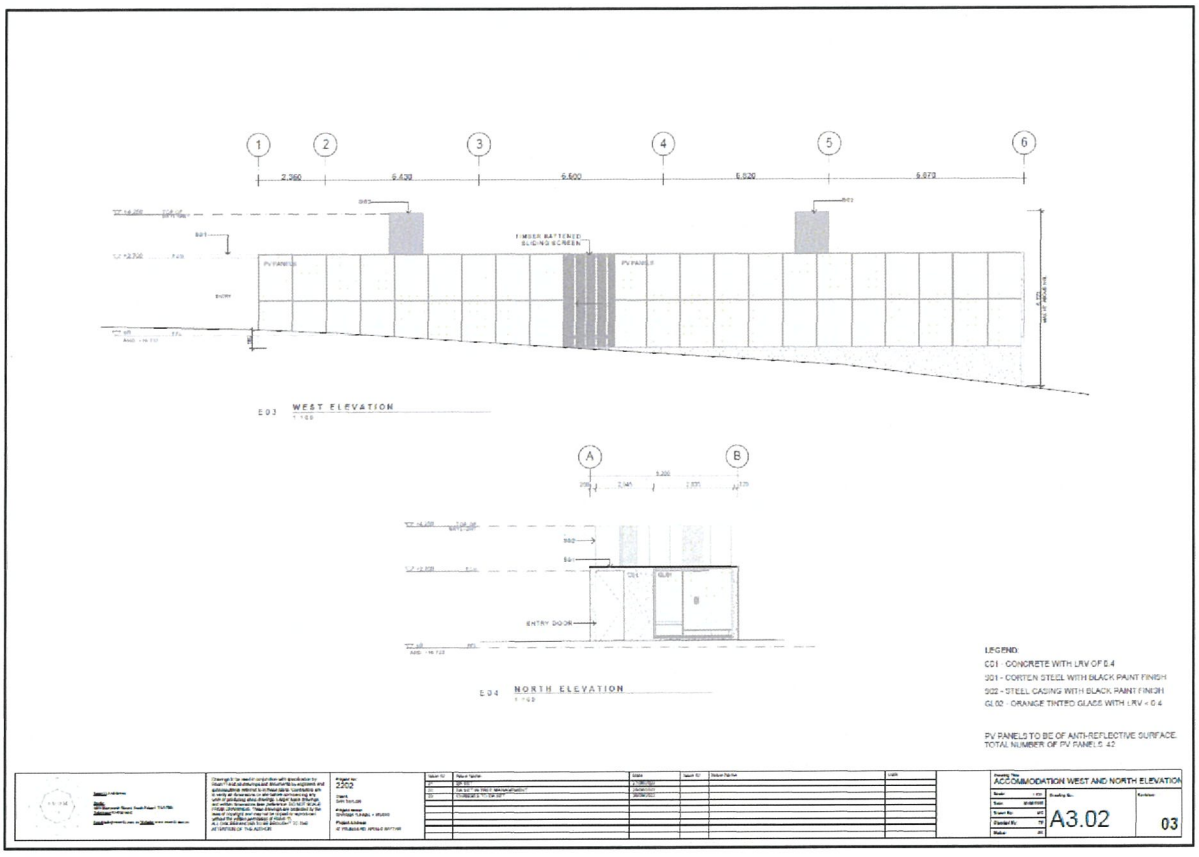
Figure 2: Site Plan.





Figures 3a & 3b: Floor Plans.





Figures 4a & 4b: Elevation Plans.

Figure 5: Aerial View of allotment.

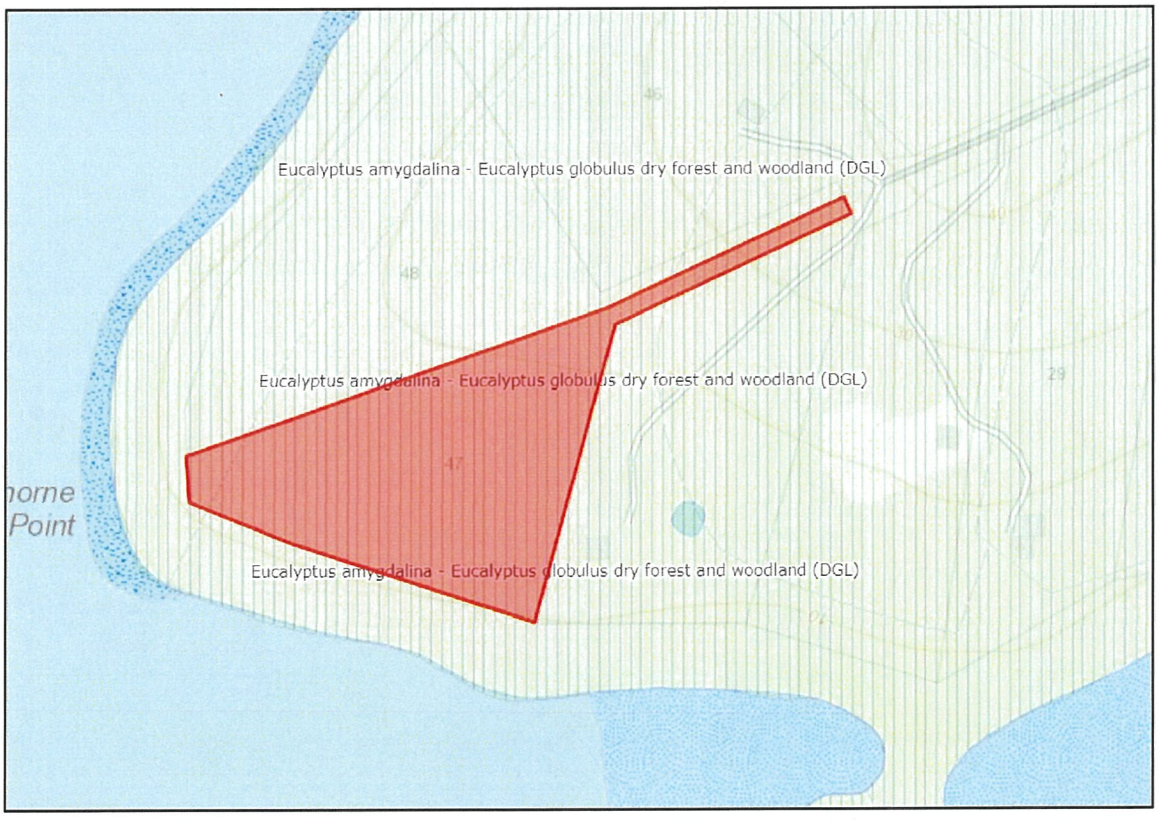


Figure 6: TasVeg 4.0 Map.

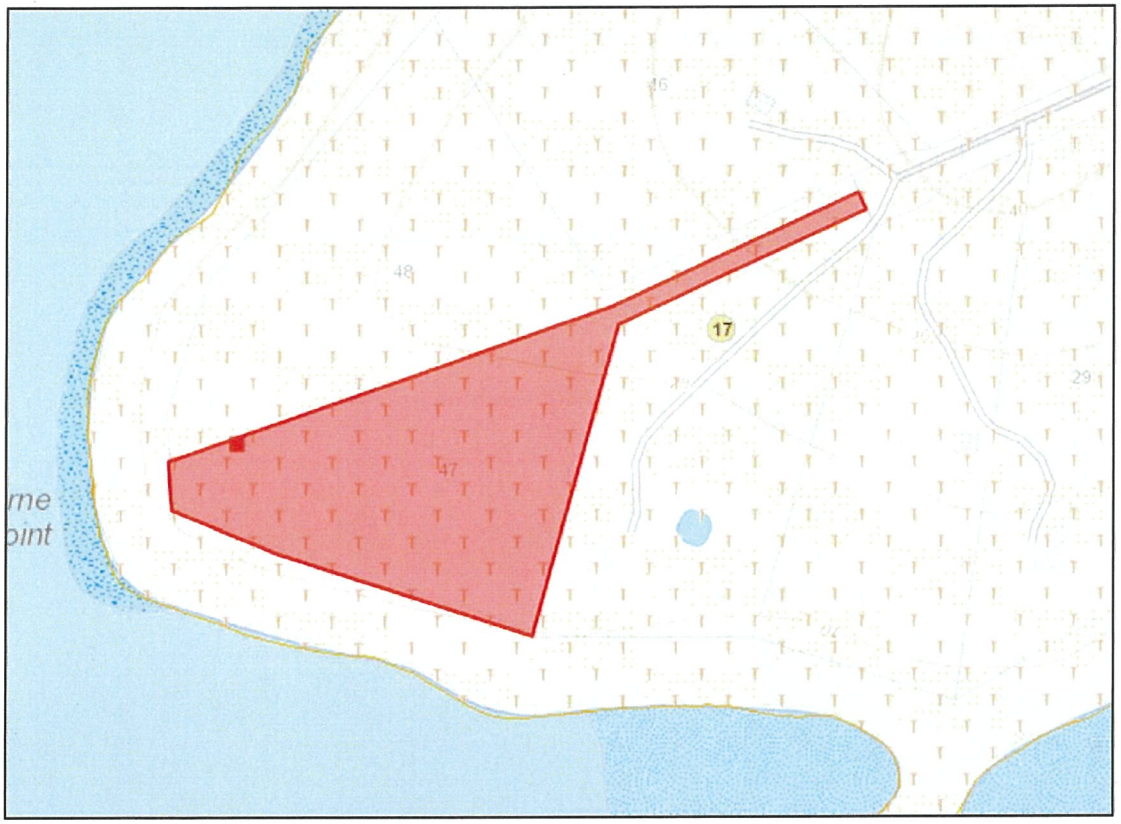


Figure 7: Natural & Cultural Values Map.

Figure 8: Photo of development site.

Figure 9: Photo to the north.

Figure 10: Photo to the east.

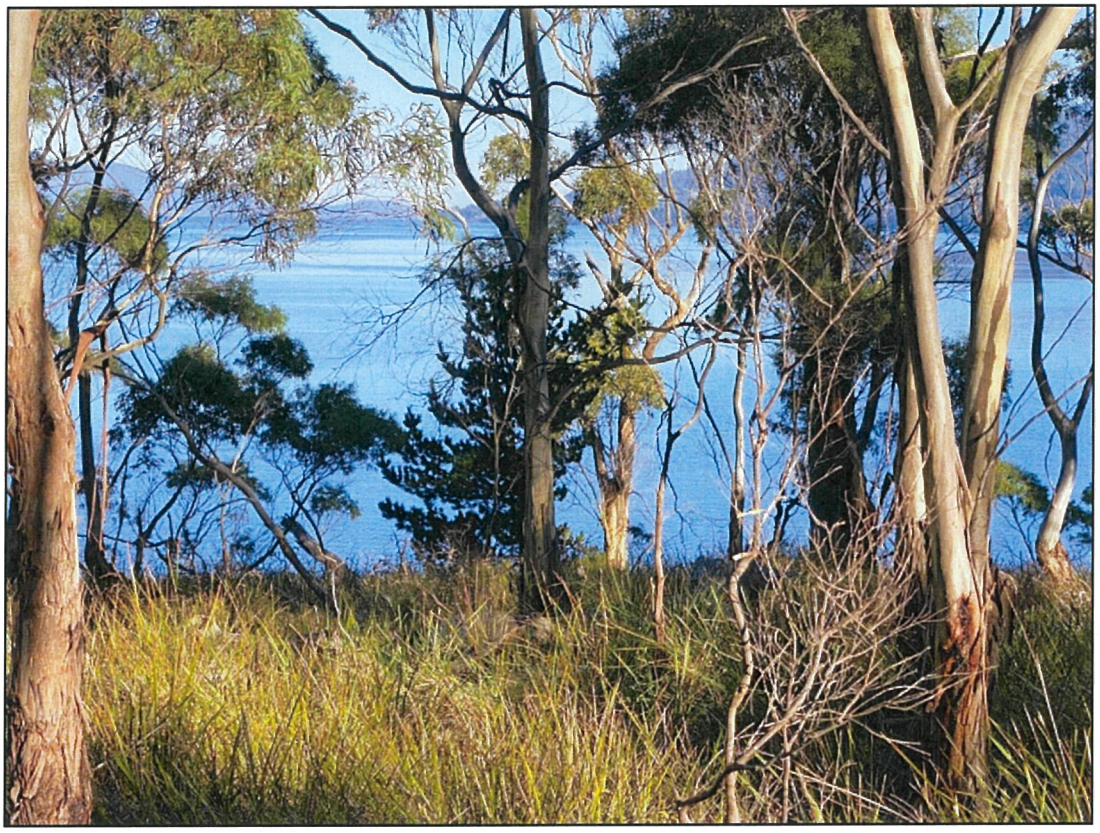
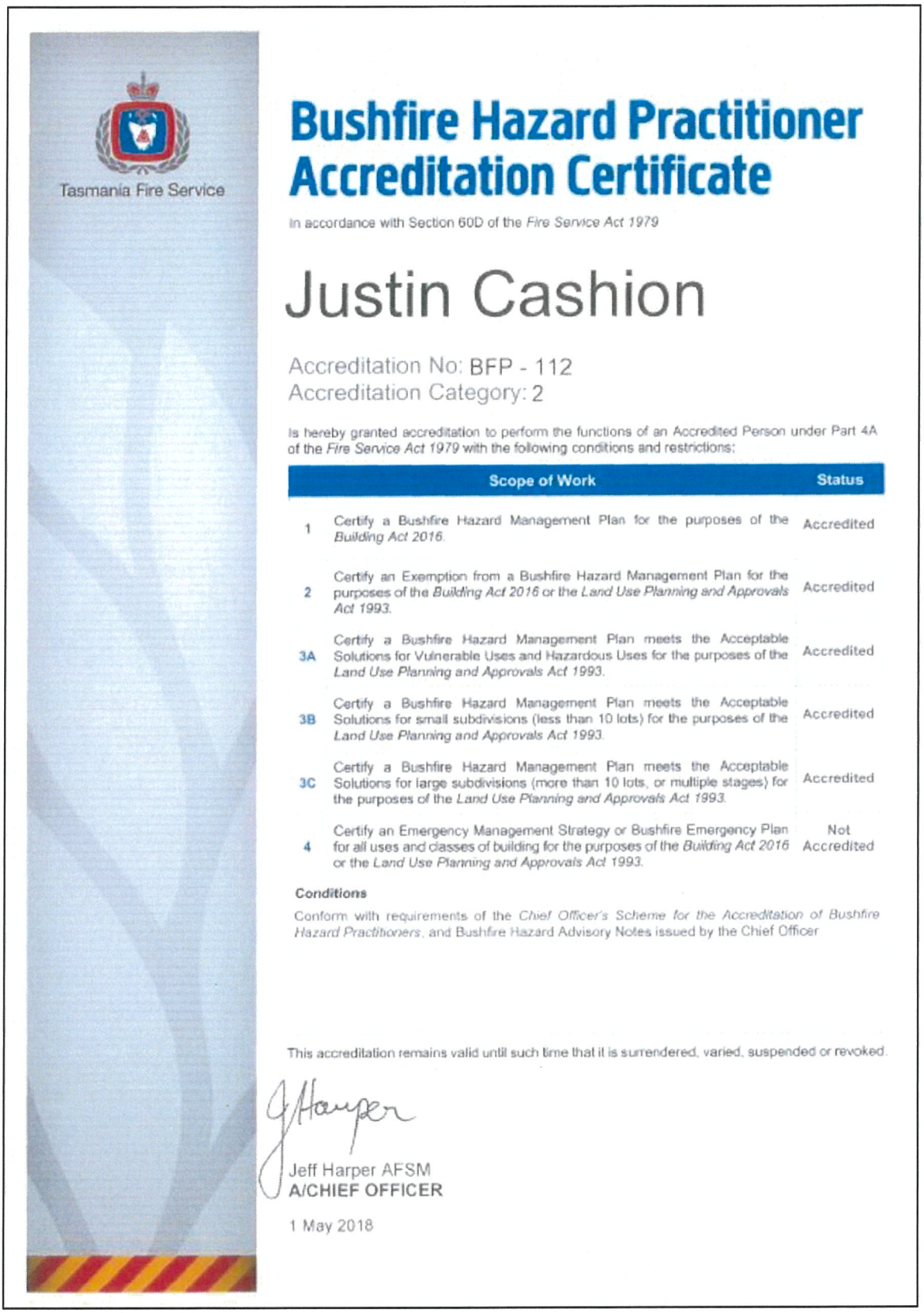


Figure 11: Photo to the south.

Figure 12: Photo to the west.



Tasmania Fire Service

Bushfire Hazard Practitioner Accreditation Certificate

In accordance with Section 60D of the *Fire Service Act 1979*

Justin Cashion

Accreditation No: BFP - 112
Accreditation Category: 2

Is hereby granted accreditation to perform the functions of an Accredited Person under Part 4A of the *Fire Service Act 1979* with the following conditions and restrictions:

	Scope of Work	Status
1	Certify a Bushfire Hazard Management Plan for the purposes of the *Building Act 2016*.	Accredited
2	Certify an Exemption from a Bushfire Hazard Management Plan for the purposes of the *Building Act 2016* or the *Land Use Planning and Approvals Act 1993*.	Accredited
3A	Certify a Bushfire Hazard Management Plan meets the Acceptable Solutions for Vulnerable Uses and Hazardous Uses for the purposes of the *Land Use Planning and Approvals Act 1993*.	Accredited
3B	Certify a Bushfire Hazard Management Plan meets the Acceptable Solutions for small subdivisions (less than 10 lots) for the purposes of the *Land Use Planning and Approvals Act 1993*.	Accredited
3C	Certify a Bushfire Hazard Management Plan meets the Acceptable Solutions for large subdivisions (more than 10 lots, or multiple stages) for the purposes of the *Land Use Planning and Approvals Act 1993*.	Accredited
4	Certify an Emergency Management Strategy or Bushfire Emergency Plan for all uses and classes of building for the purposes of the *Building Act 2016* or the *Land Use Planning and Approvals Act 1993*.	Not Accredited

Conditions

Conform with requirements of the *Chief Officer's Scheme for the Accreditation of Bushfire Hazard Practitioners*, and Bushfire Hazard Advisory Notes issued by the Chief Officer

This accreditation remains valid until such time that it is surrendered, varied, suspended or revoked.

Jeff Harper AFSM
A/CHIEF OFFICER

1 May 2018

Figure 13: Accreditation Documentation.

Marsh

Michael Sims
Client Relationship Manager

Marsh Pty Ltd
ABN 31 081 358 303
65 York Street,
Launceston TAS 7250
Michael.Sims@marsh.com

Justin Cashion
Ground Proof Mapping Pty Ltd
81 Elizabeth Street TAS 7250

13 May 2022

Dear Justin,

Confirmation of Cover
Ground Proof Mapping Pty Ltd

This letter is to certify that the below mentioned policies are current.

INSURANCE CLASS	INSURER	POLICY NO	COVERAGE	POLICY PERIOD
Public & Products Liability	CGU Insurance - GC	AGLIAB-0000-0005-3975	$20,000,000 any one claim $5,000,000 bushfire sub-limit	2/05/2022 - 1/04/2023
Cyber Liability	Lloyd's of London through Dual Australia Pty Ltd	AU0002613-000	$500,000 any one claim $500,000 in the aggregate	1/04/2022 - 1/04/2023
Professional Indemnity	Lloyd's of London through CFC Underwriting Ltd	2754108	$1,000,000 any one claim $2,000,000 in the aggregate	10/05/2022 - 10/05/2023
Motor Vehicle	Allianz Australia Insurance Ltd	138SV00520VSD	Toyota LANDCRUISER – J47MR - Comprehensive Audi Q5 – I40UJ - Comprehensive	1/04/2022 - 1/04/2023
Workers' Compensation	Allianz Australia Insurance Ltd	LWL0016602	Covering all Employees	1/04/2022 - 1/04/2023

*Inclusive of FSL/ESL, Statutory Charges and Fees.

Occupations including but not limited to:

- Bushfire Management & Mitigation Planning
- Bushfire Attack Level (BAL), Bushfire Hazard Management Plans (BHMP's), Bushfire Emergency Plans, Bushfire Evacuation & Action Plans
- Planning, Supervision and Operational undertaking of Low & High Intensity Burn Programs
- Unplanned Bushfire Suppression under direction/supervision of one of Tasmania's 3 Fire Agency bodies; Tasmanian Fire Service (TFS), Sustainable Timber Tasmania (STT) and Parks and Wildlife Service/DPIPWE (PWS). Sole Fire Management Services Provider for PWS.
- Providing Nationally Accredited Fire Training under qualification for specific fire management modules
- Vegetation assessments & plans
- Ecological assessments & plans
- Post Fire Regeneration and Rehabilitation Plans

Figure 14: Copy of Insurance.