203 Woodbridge Hill Road, Woodbridge, Tas., 7162

Bushfire Report.

Version-Final Report.

Date: 22/01/2024

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Disclaimer

The assessment contained in this report has been undertaken in accordance with the provisions of *Planning Directive 5.1 Bushfire-Prone Areas Code (s.12A of the Land Use Planning and Approvals Act 1993), Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas* and *Director's Determination- Requirements for Building in Bushfire-Prone Areas, Building Act 2016, Version: 2.2, Date: 6 February 2020.* I have taken all reasonable measures to ensure that the information presented in this assessment is accurate and reflects the conditions on and around the designated site and allotment at the date of the report.

The assessment within 150m of the site is based on the properties of the vegetation on the day of the field inspection and does not provide for changes in the classification of the vegetation due to unanticipated growth or vegetation planting. It should be noted that, over time, long-term changes in the climate experienced at the site (and therefore the fire regime experienced) could result in a change to the type (classification) of the vegetation that has been recorded at the time of this assessment. If such changes occur then the results of the current assessment will not be relevant.

CONTENTS

Executive Summary

Proposal

The subject land is known as *203 Woodbridge Hill Road. Woodbridge* and is 1.522 ha in area.

The development proposed is for the construction of a new dwelling with attached garage (Class 1A).

BAL Assessment

The site is assessed against the requirements of *Planning Directive 5.1 Bushfire-Prone Areas Code, Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas* and *Director's Determination- Requirements for Building in Bushfire-Prone Areas, Building Act 2016, Version: 2.2, Date: 6 February 2020.*

The site has been assessed as BAL 12.5.

Conclusions

The Bushfire hazard Management Plan (Attachment 3) is certified as meeting all the relevant Acceptable Solutions of the Bushfire-Prone Areas Code.

Certification of the Bushfire Hazard Management Plan is subject to compliance with the conditions set out in part 6 of this report.

1. Introduction

1.1 Development overview

The following is a Bushfire Attack Level (BAL) Assessment for a pre-existing lot located at 203 Woodbridge Hill Road, Woodbridge, Tasmania, 7162. The development proposal is for the construction of a new dwelling with attached garage (Class 1A). The clients are Laura Minami and Zlatko Paksek.

The development is located on land that is within in a Bushfire Prone Areas Planning Scheme Overlay.

The assessment presented in this report was undertaken by Philip Cullen. The report is based on a site assessment completed on the 17/01/2024 and additional information obtained from various electronic data bases.

Philip Cullen is accredited under Part 4A of the *Fire Service Act 1979* (*Accreditation No BFP-152)* He is accredited to perform the functions of an Accredited Person under Section 60B of the Act. He is accredited to perform the following:

- 1. Certify a Bushfire Hazard Management Plan for the purposes of the *Building Act 2016*.
- 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*.

1.2 The report

The assessments contained in this report have been undertaken in accordance with the Provisions of the *Planning Directive 5.1 Bushfire-Prone Areas Code* and the bushfire attack level assessment as defined in *Australian Standard 3959:2018 Construction of buildings in bushfire-prone areas.* All reasonable measures have been taken to ensure that the information presented in this assessment is accurate and reflects the conditions on and around the designated site and allotment at the date of the report.

The Bushfire Attack Level (BAL) Assessment undertaken uses a Forest Fire Danger Index (FDI) of 50. On days where the forecast Fire Danger Rating is Severe, Extreme, or Catastrophic the FDI is predicted to exceed 50.

The assessment, concentrated on areas within 150m of the site, is based on the properties of the vegetation on the day of the field inspection and does not provide for changes in the classification of the vegetation due to unanticipated growth or vegetation planting. It should be noted that, over time, long-term changes in the climate experienced at the site (and therefore possibly the fire regime experienced) could result in a change to the type (classification) of the vegetation that the site supports. If such changes occur then the results of the current assessment will not be relevant.

2. Property Details and Planning

2.1 Address: 203 Woodbridge Hill Road, Woodbridge, Tasmania, 7162.

2.2 Municipality: Kingborough.

2.3 Title reference: 149070/1, PID: 2757840.

2.4 Lot Area: 1.522 ha.

2.5 Planning: The subject land is within the Kingborough Interim Planning Scheme 2015. The subject land is zoned Rural Resource.

3. Development Description

The development proposed: the construction of a new dwelling with an attached garage (Class 1A).

4. Site Analysis

4.1 Topography and aspect

The subject land and surroundings is a easterly facing ridge line with aspects from north to south east. Slopes within 150 m of the proposed dwelling range from 4-19°. Effective slopes under areas of unmanaged forest and grassland that influence the site fall in this range (Figure 1).

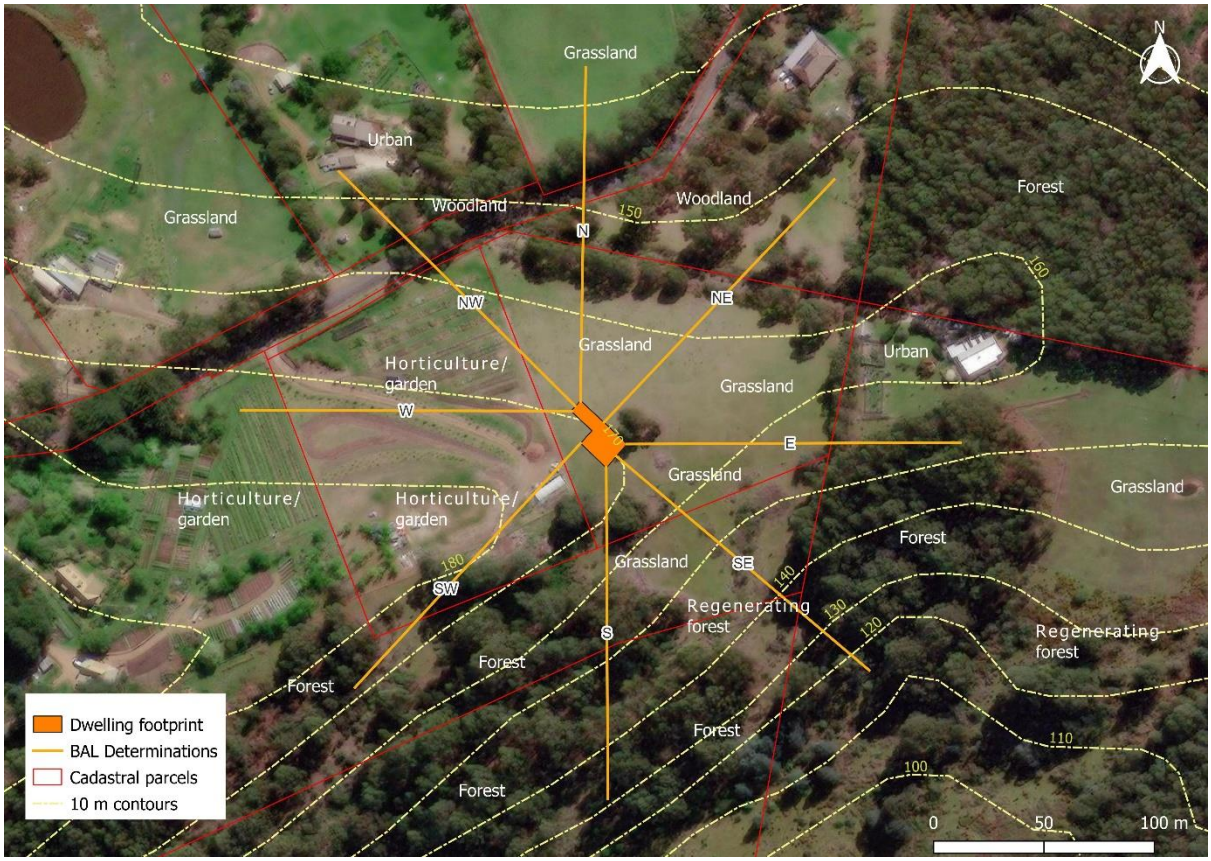
4.2 Vegetation Description

The native vegetation on and in the vicinity of the proposed development is identified in Tasveg 4 as *Eucalyptus obliqua* Dry Forest (DOB), *Eucalyptus pulchella forest* (DPU), *Eucalyptus obliqua* wet forest (WGL), regenerating cleared land (FRG) and agricultural land (FAG) (Figure 1).

4.3 Natural Values and Cultural Heritage Assessments

A Natural Values Assessment and a Cultural Heritage Assessment are not required.

Figure 1. 203 Woodbridge Hill Road, Aerial imagery, Topography, Vegetation and directions of BAL assessment.



4.4 Bushfire attack level (BAL) assessment

4.4.1 Type of Development or works assessed: a new dwelling with attached garage (Class 1A).

4.4.2 BAL Assessment

The proposed development at 203 Woodbridge Hill Road, Woodbridge is immediately surrounded by grassland and forest (Figure 1). The forest is the major determinant of the BAL rating.

Table 1. BAL Assessment. Relevant Fire Danger Index (FDI) 50[1]

Direction and distance to classified vegetation		**Slope under classified vegetation**	**BAL rating**
North	HMA 0-19 m Grassland 19-45 m Woodland 45-105 m Grassland 105-150 m	Down slope 12°	12.5
North east	HMA 0-19 m Grassland 19-69 m Woodland 69=150 m	Down slope 5°	12.5
East	HMA 0-19 m Grassland 19-90 Forest 90-150 m	Down slope 3°	12.5
South east	HMA 0-25 m Grassland 25-55 m Forest 55-150 m	Down slope 18°	12.5
South	HMA 0-34 m Grassland 34-52 m Forest 52-150 m	Down slope 17°	12.5
South west	HMA 0-11 m Horticulture 11-60 m Grassland 60-70 m Forest 70-103 m Grassland 103-150 m	Down slope 6°	Low
West	HMA 0-12 m Horticulture 12-150 m	Upslope	Low
North west	HMA 0-19 m Grassland 19-38 m Horticulture 38-89 m Woodland 89-96 m	Down slope 7°	12.5

[1] Note: This assessment is based on an FDI of 50. On days when the fire danger is classified as Severe, Extreme, or Catastrophic the FDI is forecast to exceed 50.

	Road 96-106 m Woodland 106-150 m		
Conclusion BAL 12.5			

4.5 Site Assessed Bushfire Attack Level

The subject land is assessed as BAL 12.5. This is achieved by establishing a Hazard Management Area (HMA) agricultural land/introduced pasture that is to be maintained as mowed grassland with paddock trees, lawns, gardens, areas of gravel, driveways and a hardstand. The HMA extends to the lot boundary in south, southwest and west directions (Attachment 3). It will not be necessary to clear or modify any native vegetation or remove any trees.

5. Assessment for development of a new dwelling

The assessment for the development of a new dwelling and attached garage is in accordance with the requirements of *Australian Standard 3959:2018 Construction of Buildings in Bushfire Prone Areas,* and *Director's Determination- Requirements for Building in Bushfire-Prone Areas, Building Act 2016, Version: 2.2, Date: 6 February 2020.*

5.1 Development standards for the proposed dwelling

5.1.1 Construction requirements

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

(a) AS3959-2018; or
(b) *Standard for Steel Construction in Bushfire Areas* published by the National Association of Steel Framed Housing Inc. (NASH).

as appropriate for BAL 12.5 as determined for the site.

A schedule of building requirements under AS3959-2018 for the proposed development is included as Attachment 2.

5.1.2 Property Access

The property access is from Woodbridge Hill Road to the proposed development and static water supply for fire-fighting. This access is about 134 m in length. Fire-fighting water supply is from a remote water connection point which is more than 6 m from the dwelling and located adjacent to the hardstand (see attachment 3). Access will be constructed to the standard set out in Table 2. It will be necessary to install one passing bay on the access.

Table 2. (From Table 4.2, Requirements for Building in Bushfire-Prone Areas[2])

Column 1		**Column 2**
Element		**Requirement**
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: (1) All-weather construction; (2) Load capacity of at least 20 tonnes, including for bridges and culverts; (3) Minimum carriageway width of 4 metres; (4) Minimum vertical clearance of 4 metres; (5) Minimum horizontal clearance of 0.5 metres from the edge of the carriageway; (6) Cross falls of less than 3° (1:20 or 5%); (7) Dips less than 7° (1:8 or 12.5%) entry and exit angle; (8) Curves with a minimum inner radius of 10 metres; (9) Maximum gradient of 15° (1:3.5 or 28%) for sealed roads, and 10° (1:5.5 or 18%) for unsealed roads; and 10) Terminate with a turning area for fire appliances provided by one of the following: (a) A turning circle with a minimum inner radius of 10 metres; (b) A property access encircling the building; or (c) A hammerhead “T” or “Y” turning head 4 metres wide and 8 metres long.
C.	Property access length is 200 m or greater.	The following design and construction requirements apply to property access: (1) The requirement for B above; (2) Passing bays of 2 metres additional carriageway and 20 metres length provided every 200 metres.

[2] Determination: Requirements for Building in Bushfire-Prone Areas, Version: 2.2, Date: 6 February 2020.

5.1.3 Static Water Supply for Fire Fighting

Fire-fighting water supply will be from a metal 10 000 litre tank dedicated for this purpose. The location of this tank is shown in the Bushfire Hazard Management Plan (Attachment 3) and will be installed in accordance with the requirements specified in Table 3. The water connection point will be located adjacent to the hardstand and installed in accordance with the requirements specified in Table 3.

Table 3. (From Table 4.3B, Requirements for Building in Bushfire-Prone Areas[3])

Column 1		**Column 2**
Element		**Requirement**
A.	Distance between building area to be protected and water supply	The following requirements apply: (1) The building area to be protected must be located within 90 metres of the water connection point of a static water supply; and (2) The distance must be measured as a hose lay, between the water connection point and the furthest part of the building area.
B.	Static Water Supplies	A static water supply: (1) May have a remotely located offtake connected to the static water supply; (2) May be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times; (3) 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 fire fighting sprinkler or spray systems; (4) Must be metal, concrete or lagged by non-combustible materials if above ground; and (5) 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: (a) metal; (b) non-combustible material; or (c) fibre-cement a minimum of 6 mm thickness.

[3] Determination: Requirements for Building in Bushfire-Prone Areas, Version: 2.2, Date: 6 February 2020.

C.	Fittings, pipework and accessories (including stands and tank supports)	Fittings and pipework associated with a water connection point for a static water supply must: (1) Have a minimum nominal internal diameter of 50mm; (2) Be fitted with a valve with a minimum nominal internal diameter of 50mm; (3) Be metal or lagged by non-combustible materials if above ground; (4) Where buried, have a minimum depth of 300mm (compliant with *AS/NZS 3500.1-2003 Clause 5.23);* (5) Provide a DIN or NEN standard forged Storz 65 mm coupling fitted with a suction washer for connection to fire fighting equipment; (6) Ensure the coupling is accessible and available for connection at all times; (7) Ensure the coupling is fitted with a blank cap and securing chain (minimum 220 mm length); (8) Ensure underground tanks have either an opening at the top of not less than 250 mm diameter or a coupling compliant with this Table; and (i) Where a remote offtake is installed, ensure the offtake is in a position that is: (i) Visible; (ii) Accessible to allow connection by firefighting equipment; (iii) At a working height of 450 – 600mm above ground level; and (iv) Protected from possible damage, including damage by vehicles.
D.	Signage for static water connections	(1)The water connection 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: Water tank signage requirements within AS 2304-2011 *Water storage tanks for fire protection systems; or* (2)The following requirements: (a) Be marked with the letter "W" contained within a circle with the letter in upper case of not less than 100 mm in height; (b) Be in fade-resistant material with white reflective lettering and circle on a red background; (c) Be located within one metre of the water connection point in a situation which will not impede access or operation; and (d) Be no less than 400 mm above the ground.
E.	Hardstand	A hardstand area for fire appliances must be provided: (1) 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); (2) No closer than six metres from the building area to be protected; (3) With a minimum width of three metres constructed to the same standard as the carriageway; and (4) Connected to the property access by a carriageway equivalent to the standard of the property access.

5.1.4 Provision of a Hazard Management Area

The HMA will be managed in minimal fuel condition as mowed grassland with paddock trees, lawns, gardens, areas of gravel, driveways and a hardstand. The HMA extends to the lot boundary in south, southwest and west directions. The HMA will provide a BAL of 12.5 for the dwelling and attached garage. This HMA will be established in accordance with a certified Bushfire Hazard Management Plan (Attachment 3).

6. Conclusion

6.1 Summary

The subject land is a pre-existing lot with an area 1.522 ha, located at 203 Woodbridge Hill Road, Woodbridge, Tasmania, 7162. The proposed development is for a new dwelling with an attached garage (Class 1A).

The area is zoned Rural Resource.

The site and proposed development has been assessed against the requirements of *Australian Standard 3959:2018 Construction of Buildings in Bushfire Prone Areas, Planning Directive No 5.1 Bushfire Prone-Areas Code* and *Determination: Requirements for Building in Bushfire-Prone Areas, Version: 2.2, Date: 6 February 2020.*

The BAL rating for the proposed dwelling has been assessed as BAL 12.5.

The Bushfire Hazard Management Plan (Attachment 3) is certified as meeting all the relevant acceptable solutions of the Bushfire-Prone Areas Code.

6.2 Conditions

Certification of the Bushfire Hazard Management Plan is subject to compliance with the following conditions below. It is recommended that Planning and Building Permit Authorities include the following conditions on permits issued.

All parts of the Hazard Management Area (see attachment 3) to be maintained as low threat vegetation as mowed grassland with paddock trees, lawns, gardens, areas of gravel, driveways and a hardstand. The HMA extends to the lot boundary in south, southwest and west directions.

Private access to be maintained to the standard specified in Table 4.2, *Requirements for Building in Bushfire-Prone Areas*[4]

[4] Determination: Requirements for Building in Bushfire-Prone Areas, Version: 2.2, Date: 6 February 2020.

Attachment 1. Site photographs.

Plate 1. Looking north.

Plate 2. Looking east.

Plate 3. Looking south.

Plate 4. Looking west.

Attachment 2.

Schedule of building requirements under AS3959-2018[5] for the proposed development detailed in *Proposed New Dwelling. Laura Minami and Zlatko Paksek, 203 Woodbridge Hill Road, Woodbridge. Drawing Nos A-01 to A-05, Integral Design and Drafting Services, 27/02/2023.*

Bushfire Attack Level: BAL 12.5

Summary of construction requirements for BAL 12.5
A building assessed as being BAL 12.5 shall comply with sections 3 and clauses 5.2 to 5.8 of AS 3959 (2018)-Amendment No.3 (The Standard).

SUBFLOOR SUPPORTS
No special requirements.

CONCRETE SLABS ON GROUND
No special requirements.

ELEVATED FLOORS
Enclosed sub-floor spaces
There are no construction requirements for elevated floors including bearers, joist, and flooring, where the sub-floor space is enclosed with-

(a) A wall that complies with Clause 7.4 of the Standard; except that sarking is not required where specified in Clause 7.4.1 (c); or
(b) A mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion resistant steel, bronze, or aluminium; or
(c) A combination of Items (a) and (b) above.

Unenclosed sub-floor spaces
Where the sub-floor is unenclosed, the bearers, joists and flooring < 400 mm above the finished ground level shall be one of the following;

(a) Materials that comply with the following:
    (1) Bearers and joists shall be a) non-combustible; or b) bushfire-resisting timber (see Appendix F); or a combination of a) and b).
    (2) Flooring shall be a) non-combustible, or b) bushfire-resisting timber (see Appendix F); or c) timber (other than bushfire-resisting timber), particle board or plywood flooring where the underside is sarked or lined with mineral wool insulation, or d) a combination of a), b), or c) above.

A system complying with AS 1530.8.1
EXTERNAL WALLS
1) Walls
The exposed components of an external wall that are less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall shall be:
(a) Non-combustible material.

[5] *Australian Standard 3959-2018 Construction of Buildings in Bushfire Prone Areas*

Note: examples include, but are not limited to the following (with a minimum of 90 mm in thickness) such as cavity brick, masonry veneer walls with an outer leaf of clay, concrete, calcium silicate or natural stone, precast or in situ walls of concrete or aerated concrete or earth walling including mud brick; or
(b) Timber logs of a species with a density of 680 kg/m3 or greater at a 12 percent moisture content; of a minimum nominal overall thickness of 90 mm and a minimum thickness of 70 mm (see Clause 3.11 of the Standard); and gauge planed; or
(c) Cladding that is fixed externally to a timber-framed or steel-framed wall and is-
(i) Non-combustible material; or
(ii) Fibre-cement a minimum of 6 mm in thickness; or
(iii) Bushfire-resisting timber (refer to the table at the end of this document); or
(iv) A timber species as specified in Appendix E of the Standard; or
(v) a combination of any of Items (i), (ii), (iii) or (iv) above; or
(d) A combination of any of Items (a), (b) or (c) above.
2) Joints
All joints in the external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed to prevent gaps greater than 3 mm.
3) Vents and weepholes
Vents and weepholes in external walls shall be screened with a mesh with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium, except where the vents and weepholes have an aperture less than 3 mm.

EXTERNAL WINDOWS and DOORS
1) Windows
Window assemblies shall comply with one of the following:
(a) They shall be completely protected by a bushfire shutter that complies with Clause 5.5.1 of the Standard.
(b) They shall be completely protected externally by screens that comply with Clause 5.5.1A of the Standard; or
(c) They shall comply with the following:
(i) For window assemblies less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the window frame, window frames and window joinery shall be made from:
(A) Bushfire-resisting timber (see Appendix F of the Standard); or
(B) A timber species as specified in Paragraph E2, Appendix E of the Standard; or
(C) Metal; or
(D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the frame and sash shall satisfy the design load, performance and structural strength of the member.
(ii) Externally fitted hardware that supports the sash in its functions of opening and closing shall be metal.
(iii) Where glazing is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings, having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the window frame, the glazing shall be toughened glass minimum 5 mm in thickness, or glass blocks with no restriction on glazing methods.
NOTE: Where double-glazed units are used, the above requirements apply to the external face of the window assembly only.
(iv) Where glazing is other than that specified in (iii) above, annealed glass may be used.
(v) The openable portions of windows shall be screened internally or externally with screens that comply with Clause 5.5.1A of the Standard.

(vi) Glazed elements that are designed to take internal screens shall use toughened glass minimum 5 mm and the openable portion shall be screened with screens that comply with Note 2 below.
2) Screens
Screening of the openable portions of all windows is required in all BALs to prevent the entry of embers to the building when the window is open. Screening of the openable and fixed portions of some windows is required in some BALs to reduce the effects of radiant heat on some types of glass. If the screening is required to reduce the effects of radiant heat on the glass, the screening has to be external so that the glass in the openable portion of the window will be protected when it is shut.
If the screening is required only to prevent the entry of embers, the screening may be fitted externally or internally.
2) Doors
Side hung external doors including French doors, panel fold, and bi-fold doors, shall comply with one of the following:
(a) Doors and door frames shall be protected by bushfire shutters that comply with Clause 5.5.1 of the Standard, or
(b) Doors and door frames shall be protected externally by screens that comply with Clause 5.5.1A of the Standard, or
(c) Doors and door frames shall comply with the following:
(i) Doors shall be-
(A) non-combustible; or
(B) a solid timber, laminated timber, or reconstituted timber door, having a minimum thickness of 35 mm for the first 400 mm above the threshold; or
(C) a door, including a hollow core door, with a non-combustible kickplate on the outside for the first 400 mm above the threshold; or
(D) a door, including a hollow core door, protected externally by a screen complying with Clause 5.5.1A of the Standard; or
(E) a fully framed glazed door, where the framing is made of materials specified for bushfire shutters (see Clause 5.5.1 of the Standard), or from a timber species as specified in Paragrah E2, Appendix F of the Standard.
(ii) Where doors incorporate glazing, the glazing shall comply with glazing requirements for windows.
(III) Doors shall be tight fitting in the door frame and to an abutting door, if applicable.
(iv) Where any part of the door frame is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings, having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the door (see Figure D3, Appendix 3 of the Standard) that part of the door shall be made from:
(A) Bushfire-resisting timber (see Appendix F of the Standard); or
(B) A timber species as specified in Paragraph E2, Appendix E of the Standard; or
(C) Metal; or
(D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the frame and sash shall satisfy the design load, performance and structural strength of the member.
(v) Weather strips, draught excluders, or draught seals shall be installed at the base of side hung doors.
Sliding doors shall comply with one of the following:
(a) They shall be completely protected externally by a bushfire shutter that complies with Clause 5.5.1 of the Standard, or

(b) They shall be completely protected externally by screens that comply with Clause 5.5.1A of the standard, or
(c) They shall comply with the following:
(i) Any glazing incorporated in the sliding doors shall be Grade A safety glass complying with AS 1288.
(ii) Both the door frame supporting the sliding door and the framing surrounding any glazing shall be made from:
(A) Bushfire-resisting timber (see Appendix F of the Standard); or
(B) A timber species as specified in Paragraph E2, Appendix E of the Standard; or
(C) Metal; or
(D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the frame and sash shall satisfy the design load, performance and structural strength of the member.
(iii) There is no requirement to screen the openable part of the sliding door. However, if screens are fitted, the screens shall comply with Clause 5.5.1 of the Standard.
(iv) Sliding doors shall be tight fitting in the frames.
Vehicle access doors (garage doors)
Not applicable.

ROOFS (INCLUDING VERANDA AND ATTACHED CARPORT ROOFS, PENETRATIONS, EAVES, FASCIAS, GABLES, GUTTERS AND DOWNPIPES)
1. General
The following apply to all types of roofs and roofing systems:
(a) roof tiles, roof sheets and roof-covering accessories are to be non-combustible.
(b) the roof/wall junction is to be sealed to prevent openings greater than 3 mm, either by the use of fascia and eaves linings or by sealing between the top of the wall and the underside of the roof and between the rafters at the line of the wall.
(c) roof ventilation openings, such as gable and roof vents, are to be fitted with ember guards made of
non-combustible material or a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.
2. Tiled roofs.
(a) be located on top of the roof framing, except that the roof battens may be fixed above the sarking;
(b) cover the entire roof area including ridges and hips; and
(c) extend into gutters and valleys.
3. Sheet roofs
(a) be fully sarked, except that foil-backed insulation blankets may be installed over the battens; and
(b) have any gaps greater than 3 mm (such as under corrugations or ribs of sheet roofing and between roof components) sealed at the facia or wall line, and at the valleys, hips and ridges by
(i) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium; or
(ii) mineral wool; or
(iii) other non-combustible material; or
(iv) a combination of any of Items (i), (ii) or (iii) above.
Note: Sarking is used as a secondary form of ember protection for the roof space to account for minor gaps that may develop in sheet roofing.
4. Verandah, carport and awning roofs
The following apply to veranda, carport and awning roofs:
(a) A veranda, carport or awning roof forming part of the main roof space shall meet all the

requirements for the main roof.
(b) A veranda, carport or awning roof separated from the main roof space by an external wall shall have a non-combustible roof covering.
NOTE: There is no requirement to line the underside of a veranda, carport or awning roof that is separated from the main roof space.
5. Roof penetrations
The following apply to roof penetrations:
(a) Roof penetrations, including roof lights, roof ventilators, roof-mounted evaporative cooling units, aerials, vent pipes and supports for solar collectors, shall be adequately sealed at the roof to prevent gaps greater than 3 mm. The material used to seal the penetration shall be non-combustible.
(b) Openings in vented roof lights, roof ventilators or vent pipes shall be fitted with ember guards made from a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.
This requirement does not apply to the exhaust flues of heating or cooking devices with closed combustion chambers. In the case of gas appliance flues, ember guards shall not be fitted.
NOTE: Gasfitters are required to provide a metal flue pipe above the roof and terminate with a certified gas flue cowl complying with AS 4566. Advice may be obtained from State gas technical regulators.
(c) All overhead glazing shall be Grade A safety glass complying with AS 1288.
(d) Glazed elements in roof lights and skylights may be of polymer provided a Grade A safety glass diffuser, complying with AS 1288, is installed under the glazing. Where glazing is an insulating glazing unit (IGU), Grade A toughened safety glass minimum 4 mm thickness, shall be used in the outer pane of the IGU.
(e) Flashing elements of tubular skylights may be of a fire-retardant material, provided the roof integrity is maintained by an under-flashing of a material having a flammability index no greater than 5.
(f) Evaporative cooling units shall be fitted with non-combustible butterfly closers as close as practicable to the roof level or the unit shall be fitted with non-combustible covers with a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.
(g) Vent pipes made of PVC are permitted.
6. Eaves linings, fascias and gables
The following apply to eaves linings, fascias and gables:
(a) Gables shall comply with the requirements for external walls above.
(c) Eaves ventilation openings greater than 3 mm shall be fitted with ember guards made of non-combustible material or a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.
Joints in eaves linings, fascias and gables may be sealed with plastic joining strips or timber storm moulds.
NOTE: The Standard does not provide construction requirements for fascias, bargeboards and eaves linings.
7. Gutters and downpipes
The standard does not provide material requirements for-
(a) gutters, with the exception of box gutters; and
(b) downpipes.
If installed, gutter and valley leaf guards shall be non-combustible. Box gutters shall be non-combustible and flashed at the junction with the roof with non-combustible material.

VERANDAHS, DECKS, STEPS, RAMPS AND LANDINGS
1) General

Decking may be spaced.
There is no requirement to enclose the subfloor spaces of verandas, decks, steps, ramps or landings.
2) Enclosed subfloor spaces of verandas, decks, steps, ramps and landings
(a) This Standard does not provide construction requirements for the materials used to enclose a sub-floor space except where those materials are less than 400 mm from the ground.
Where the materials are used to enclose a subfloor space are less than 400 mm from the ground, they shall comply with Clause 5.4 of the Standard.
b) Supports
This Standard does not provide construction requirements for support posts, columns, stumps, stringers, piles, and poles.
c) Framing
This Standard does not provide construction requirements for the framing of verandas, decks, steps, ramps or landings.
d) Decking
This Standard does not provide construction requirements for decking, stair treads and trafficable surfaces of ramps and landings that are more than 300 mm from a glazed element.
Decking, stair treads, and trafficable surfaces of ramps and landings less than 300 mm (measured horizontally at deck level) from glazed elements that are less than 400 mm (measured vertically) from the surface of the deck (see Figure D2, Appendix D of the Standard) shall be made from-
(a) non-combustible material, or
(b) Bushfire-resisting timber (see Appendix F of the Standard); or
(c) A timber species as specified in Paragraph E1, Appendix E of the Standard; or
(d) PVC-U, or
(e) a combination of any of (a), (b), (c), and (d) above.
3) Unenclosed subfloor spaces of verandas, decks, steps, and landings.
a) Supports
This Standard does not provide construction requirements for support posts, columns, stumps, stringers, piles, and poles.
b) Framing
This Standard does not provide construction requirements for the framing of verandas, decks, steps, ramps or landings.
(c) Decking, stair treads, and trafficable surfaces of ramps and landings
This Standard does not provide construction requirements for decking, stair treads and trafficable surfaces of ramps and landings that are more than 300 mm from a glazed element.
Decking, stair treads, and trafficable surfaces of ramps and landings less than 300 mm (measured horizontally at deck level) from glazed elements that are less than 400 mm (measured vertically) from the surface of the deck (see Figure D2, Appendix D of the Standard) shall be made from-
(a) non-combustible material, or
(b) Bushfire-resisting timber (see Appendix F of the Standard); or
(c) A timber species as specified in Paragraph E1, Appendix E of the Standard; or
(d) PVC-U, or
(e) a combination of any of (a), (b), (c), and (d) above.
4) Balustrades, handrails or other barriers
This Standard does not provide construction requirements for balustrades, handrails, and other barriers.
WATER AND GAS SUPPLY PIPES
Above-ground, exposed water and gas supply pipes are to be metal.

Window and door openings shall be protected as follows:
-Screens shall have a maximum aperture of 2mm. Made from steel, bronze, or aluminium.

-Frame to be naturally high bushfire resistant timber (high density).
-Glazing less than 400mm above ground, decks, or awnings shall be grade A minimum 4 mm safety glass. Annealed grass may be used.
-Door openings, including roller doors, shall be sealed (no gap to exceed 3 mm).
Alternatively openings can have bushfire shutters fitted. Built from non-combustible materials.

Roofs

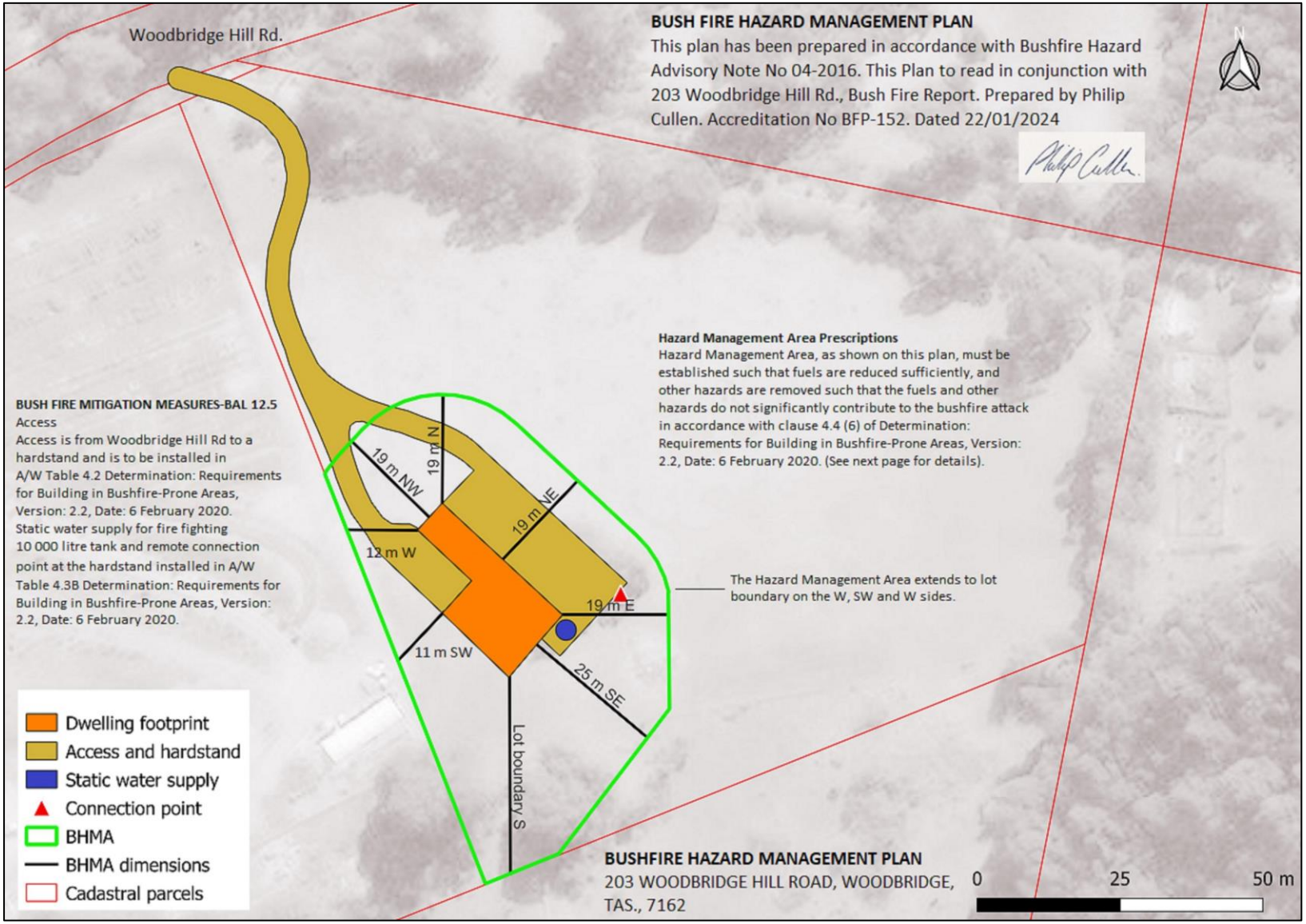
-Roofs to be fully sarked.
-Gaps between roofing material and facia, valleys, and ridges to be fitted with non-combustible material i.e. Fireseal blanket or equivalent.

Decks, steps, and landings

No requirement for sub-deck spaces to be enclosed, or for supports, framing, and decking material. Decking to be non-combustible or fire-resistant within 300mm horizontally and 400mm vertically from any glazed element.

BUSH FIRE RESISTING SPECIES
The following species have been tested and meet the requirements for a bush fire resisting timber species:
Standard trade name Botanical name
Ash silvertop Eucalyptus sieberi
Blackbutt Eucalyptus pilularis
Gum, red, river Eucalyptus camaldulensis
Gum, spotted Corymbia maculata
Corymbia henryi
Corymbia citriodora
Ironbark, red Eucalyptus sideroxylon
Kwila (Merbau) Intsia bijuga
Turpentine Syncarpia glomulifera

Attachment 3. Bushfire Hazard Management Plan: 203 Woodbridge Hill Road, Woodbridge, Tasmania, 7162.



Hazard Management Area Prescriptions

The Hazard Management Area extends to lot boundary on South, Southwest and West sides

Hazard reduction and removal

- The Hazard Management Area as low threat vegetation as mowed grassland with paddock trees, lawns, gardens, areas of gravel, driveways and a hardstand.
- Ground cover vegetation (grasses, herbs and graminoids) to be maintained no higher than 100mm.
- If planted, trees should be positioned and pruned so as to maintain a canopy separation of at least 15 m between both individual trees and from the dwelling.
- Remove fallen branches, bark and leaves and keep ground litter to a maximum of 20mm depth from around trees.
- Prune to create and maintain a separation distance of 2m (vertically) between the ground cover (maintained to <100mm) and the lowest branches of trees in the HMA.
- Clear private access of any trees and branches within 2m of carriageway and 4m over carriageway.
- Remove any fire hazards such as woodpiles and garden waste to at least 10m from dwelling.
- Keep roofs and guttering clear of flammable debris.
- Minimise the storage of petroleum fuels and store fuels at least 10m from dwelling in a suitable enclosed shed.

Landscaping

- Use low flammability plants in the garden and refrain from plantings within 1m of the dwelling (see *Fire resisting garden plants* Tasmanian Fire Service Brochure).
- Include non-flammable areas adjacent to dwelling such as paths, driveways, areas of pebbles or crushed stone and mowed lawns.
- Use non-flammable mulches (not pine bark, woodchips etc.).