182 Bentley Rd, Tullera 2480
6628 2757 0449 893 239
helen@homesolutions.org.au

Sustainable HOME Solutions

Bushfire Assessment Report

Prepared for

MH Village Pty Lt

510 Goonengerry Rd

Montecollum

Lot 21 DP 1045761

Helen Robinson MDPR, BAppSc, BEnvSc(Hons), PGDBushfireProtection
BPAD accredited bushfire consultant 34868
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BPAD Bushfire Planning & Design Accredited Practitioner Level 2

Executive summary

This Bushfire Assessment is produced in response to the statutory requirement under the Environmental Planning and Assessment Act 4.14 that residential development on Bushfire Prone Land (BPL) must comply with Planning for Bushfire Protection 2019 (PBP).

The development of four additional lots on this approved Multiple Occupancy (MO) results in an increased residential density and while a Bushfire Safety Authority (BFSA) is not required the same principles and criteria associated with subdivisions must be applied (PBP 8.2.1). This assessment is therefore conducted in the same manner as for a 100B assessment under the Rural Fires Act.

This assessment for the development of four additional lots on Bushfire Prone Land at 510 Goonengerry Rd, Montecollum in the Byron Shire Council (BSC) local government area, Lot 21 DP 1045761 is therefore conducted in accordance with Section 100B.

The Bushfire Attack Level (BAL) for this MO has been assessed using Method 1 in PBP and Australian Standard 3959 – Construction of Buildings in Bushfire-prone Areas 2018 (AS3959) (Standards Australia, 2009), Rural Fire Regulation 2008 (RFR) and is determined to be **BAL 12.5 for all lots**.

The proposed additional four lots, providing all recommendations within this report, including but not limited to maintenance of satisfactory Asset Protection Zones (APZ), provision of suitable water supply for fire fighting purposes, a suitable Emergency Management Plan, appropriate access and construction of dwellings to BAL 29, for added protection, are implemented, will comply with the requirements and specifications of PBP, AS3959, RFA, the Building Code of Australia (BCA), RFR and planning and development controls of BSC.

It must be remembered, by all parties, that while every effort has been made to obtain true and accurate data and analysis of this data was conducted within the framework of PBP and AS3959 as well as other standards, there is no guarantee when it comes to bushfire. While all recommendations contained in this report need to be complied with to meet the requirements of PBP and AS3959, Environmental Planning and Assessment (EP&A) and hence BSC's planning requirements, any fire event could pose a threat to both the property and the people therein.

Additionally it is incumbent upon the owners and operators and all future owners and operators to, in perpetuity, comply with all the conditions outlined here and in the Bushfire Safety Authority.

Introduction

This report has been produced for MH Village Pty Ltd and is to form part of submissions to BSC for a Development Application for an additional four lots on an existing approved Multiple Occupancy.

The proposed development site is classified as bushfire prone land on BSC's Bushfire Prone Land Maps which have been ratified by the Commissioner, NSW Rural Fire Service (RFS). This development is treated as a subdivision for the purposes of this assessment as it will result in the land being adapted for separate occupation, use or disposition under the Environmental Planning and Assessment Act 6.2 (EP&A) (NSW Government, 1979) and therefore requires an application for a Bushfire Safety Authority under Section 100B of the Rural Fires Act.

To assess the development and reach the conclusions and recommendations contained in this report, PBP, the Rural Fires Act 100B and Rural Fires Regulation 46a, AS3959, RFA and RFR and other documents and standards, as noted throughout the report, were consulted.

Details required by the RFS so that they may make a determination on this development are:

a) Site

Location

The development site is located at 510 Goonengerry Rd, Montecollum. Lot 21 DP 1045761 (Fig 1).

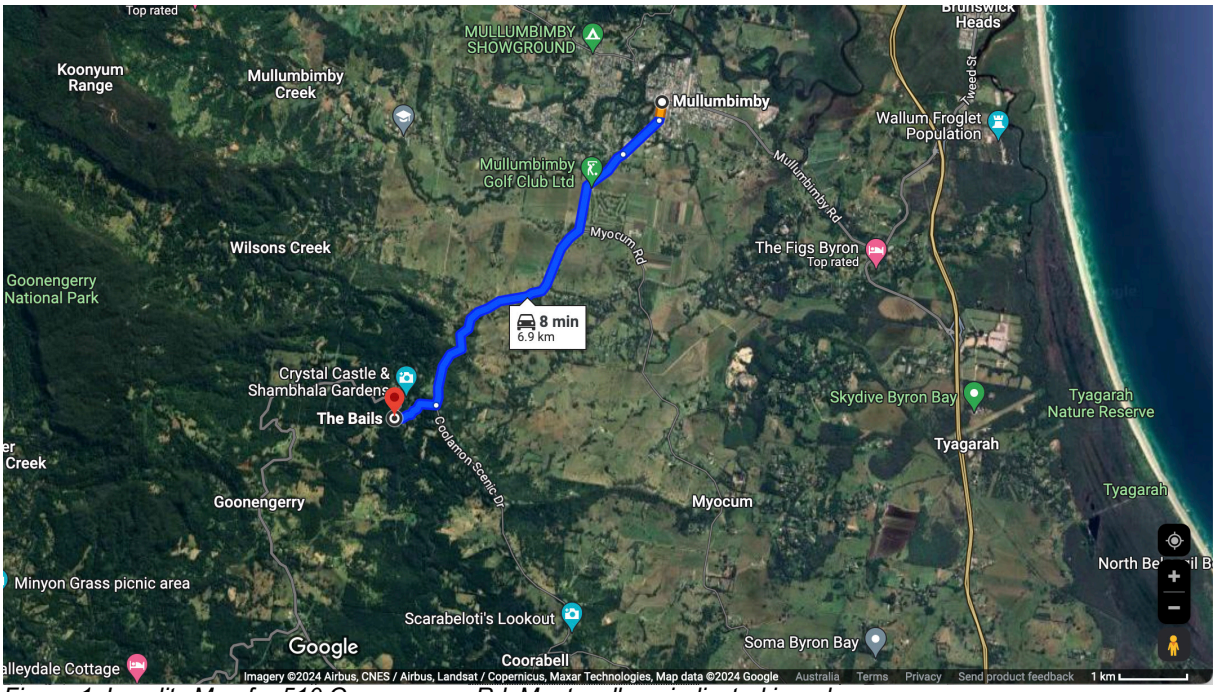


Figure 1: Locality Map for 510 Goonengerry Rd, Montecollum, indicated in red.

The site is approximately 7kms from Mullumbimby and 13km from the Pacific Highway at Saint Helena near Bangalow.

A nine lot Multiple Occupancy has previously been approved on this site. This application is for a further 4 lots in an area to the east of the existing approved lots. (Fig 2).

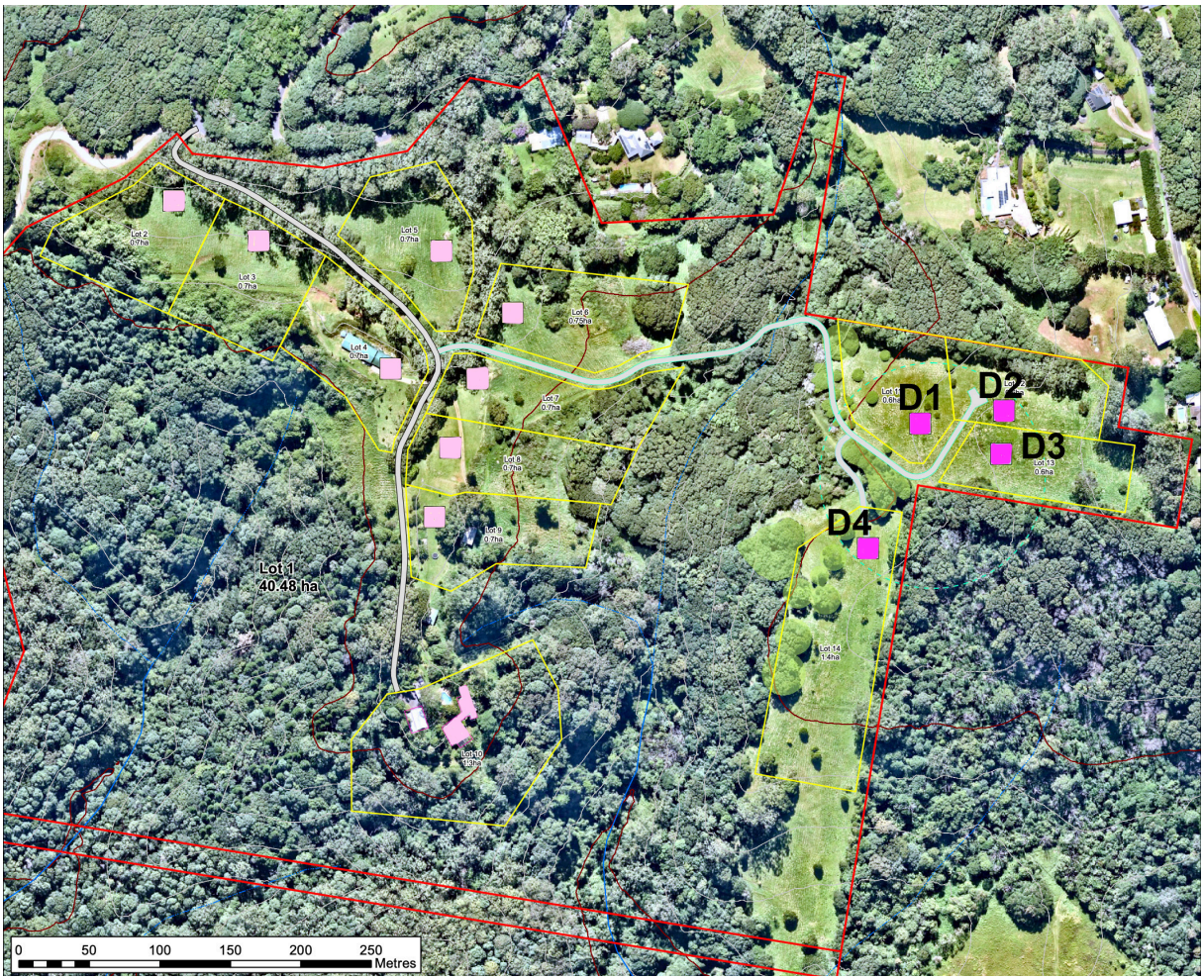


Figure 2: Layout of existing approved dwelling sites (pale pink) and four proposed new dwelling sites (dark pink) as provided by Balanced Systems.

b) Vegetation

The vegetation is mapped as bushfire prone by BSC as outlined in *Guide to Bush Fire Prone Land Mapping* (NSW Rural Fire Service, 2014).

Vegetation was assessed in accordance with Ocean Shores to Desert Dunes (Keith, 2004) and PBP A1.1, A1.2, A1.21 and A1.3 to a distance of 140m from each margin of the development (Fig 3).

Figure 3: Vegetation with 140m radius from the development. Dark green = Rainforest, Yellow hatched = Managed land.

There are significant areas of Managed Land in the area of the proposed development, most of these are domestic gardens. The dominant vegetation that could potentially support a bushfire is Rainforest. Some of this Rainforest has significant old and regrowth endemic sub-tropical rainforest species and conformation, some is invaded by *Cinnamomum camphora* and other weed species.

c) Slope

Slope and aspect were assessed in accordance with PBP A1.4 and A1.5. to a distance of 100m, using 10m contour map, from each margin of the development (Fig *4*).

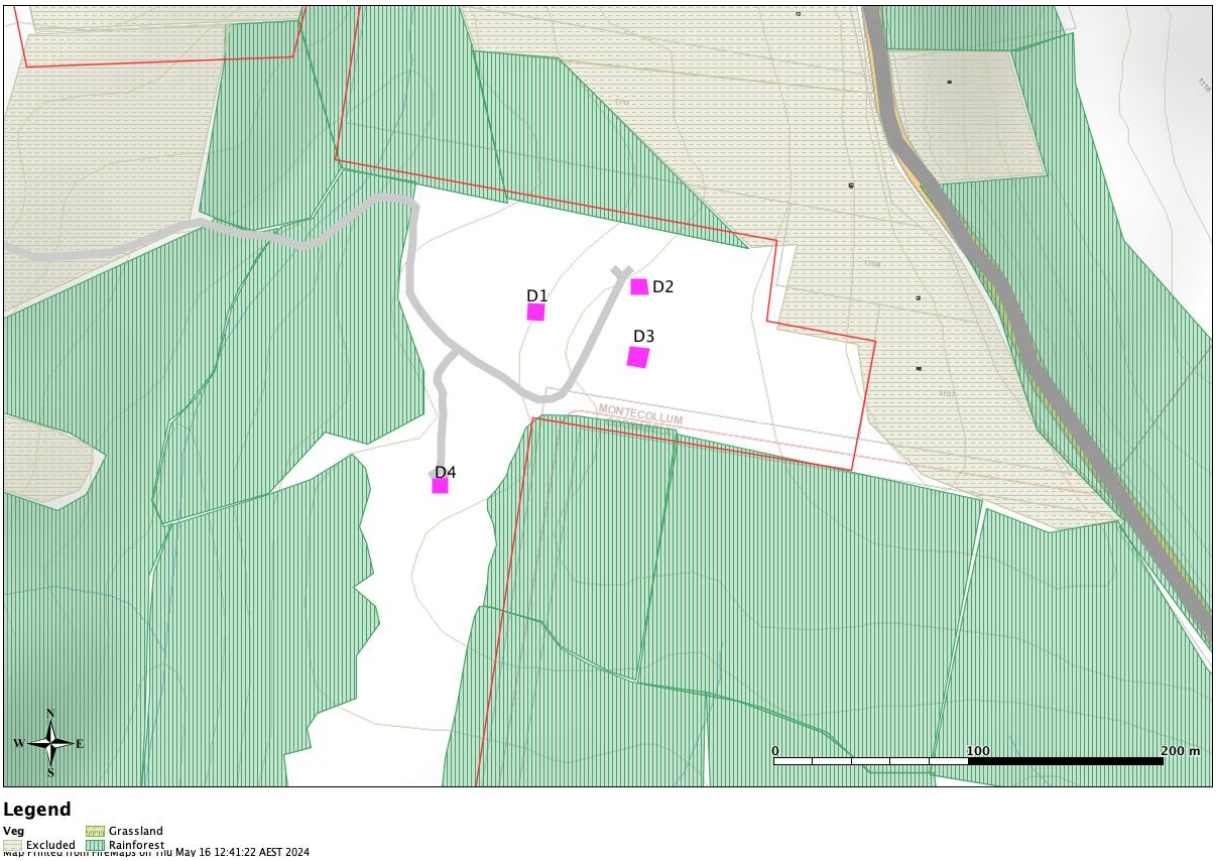


Figure 4: 10m contour topographic map showing slopes under classified vegetation.

The results are presented with vegetation classification in Table 1 and Figure 5 below.

d) Significant environmental features

There are no significant environmental features within the 140m vegetation assessment area of the proposed development.

The development is not near a riparian zone, there are no areas of geological interest near the development and there is no evidence of Koala presence near the development.

e) Details of threatened species, populations, endangered ecological communities and critical habitat known to the applicant

There are no threatened species, populations, endangered ecological communities or critical habitat known to the applicant or observed at time of assessment. There are no past studies or surveys of this site or the immediate vicinity.

f) Details of Aboriginal heritage known to the applicant

The applicant is not aware of any Aboriginal heritage on the site nor in the immediate vicinity of the site. There are no past surveys or information held by DEC regarding this site.

g) Bushfire assessment

Forest Fire danger index (FFDI)

From AS3959 Table 2.1 the FDI rating for the Far North Coast of NSW, where this development is located, is 80.

BAL assessment

Table 1: Principle factors affecting bushfire impact on the development site

Lot	Aspect	Vegetation classification	Distance between vegetation and development (m)	Effective slope under vegetation degrees	BAL
N1	North	Rainforest	50	0 – 5	12.5
	East	Managed Land	n/a	Upslope/flat	LOW
	South	Rainforest	48	0 – 5	12.5
	West	Rainforest	65	10 – 15	12.5
N2	North	Rainforest	27	0 – 5	12.5
	East	Managed Land	n/a	Upslope/flat	LOW
	South	Rainforest	66	0 – 5	12.5
	West	Rainforest	>100	10 – 15	LOW
N3	North	Rainforest	61	0 – 5	12.5
	East	Managed Land	n/a	Upslope/flat	LOW
	South	Rainforest	30	0 – 5	12.5
	West	Rainforest	>100	10 – 15	LOW
N4	North	Rainforest	34	Upslope/flat	LOW
	East	Rainforest	23	Upslope/flat	12.5
	South	Managed Land	n/a	0 – 5	LOW
	West	Rainforest	32	0 – 5	12.5
			80	15 – 20	12.5

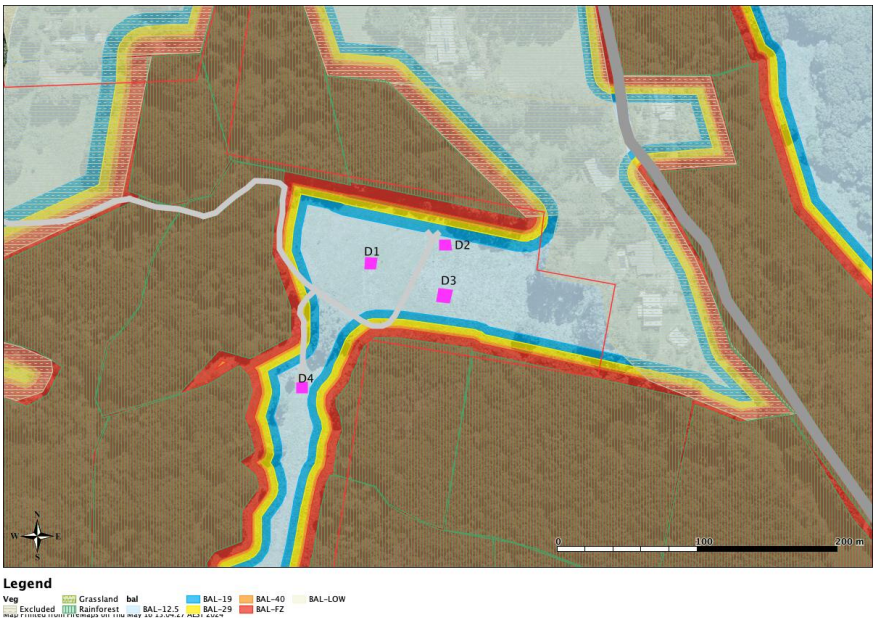


Figure 5: BAL contour map for the dwelling sites.

1) Asset protection zone (APZ)

From PBP Table A1.12.3 the minimum APZ required for this development to meet the basic requirement of BAL 29.

Table 2: Minimum APZs to be observed for each dwelling site to achieve BAL 12.5

Lot	Aspect	Vegetation classification	Effective slope under vegetation degrees	APZ required for BAL 2.5 (m)
N1	North	Rainforest	0 – 5	25
	East	Managed Land	Upslope/flat	20
	South	Rainforest	0 – 5	25
	West	Rainforest	10 – 15	40
N2	North	Rainforest	0 – 5	25
	East	Managed Land	Upslope/flat	20
	South	Rainforest	0 – 5	25
	West	Rainforest	10 – 15	40
N3	North	Rainforest	0 – 5	25
	East	Managed Land	Upslope/flat	20
	South	Rainforest	0 – 5	25
	West	Rainforest	10 – 15	40
N4	North	Rainforest	Upslope/flat	20
	East	Rainforest	Upslope/flat	20
	South	Managed Land	0 – 5	25
	West	Rainforest	0 – 5	25

These APZs satisfy requirements.

2) Water supply

Each dwelling shall in perpetuity water supply of 10,000L for fire fighting purposes.

This water supply shall (PBP 6.4c):

- Have access point located within the IPA but away from structures
- Have a hardened ground surface for truck access within 4m of the access point
- Have all above ground fittings and pipes of metal
- Be either above or below ground
  - Above ground tanks shall:
    - Be of metal or concrete construction
    - Have 65mm metal Storz fitting with gate or ball valve
    - Have an inner diameter of minimum 50mm for all fittings
    - Have above ground pipes of metal
  - Below ground tanks shall:
    - Be clearly marked
    - Have an access hole of 200mm

Other acceptable solutions for water supply, providing they meet volume, location and access criteria above, are inground pools and dams (PBP 3.5).

Static water supplies shall be indicated by SWS signs which shall be located in visible locations on the street front and in strategic locations near dwellings to aid in fire fighters locating water supplies.

3) Capacity of public roads

The property is accessed from Goonengerry Rd, a busy through road. This addition of four dwellings will have no impact on the ability of this road to support emergency access and egress.

4) Public road links to fire trails

There are no fire trails near this property.

5) Access and egress

The distance from Goonengerry Rd to the furthest of these 4 dwelling sites is approximately 780m (Fig 6). The road, once it branches off the main entrance road is for the most part 4m wide with some passing bays and roll top curbs, allowing a 2m wide clear verge either side of the road, with the exception of two pinch points, providing an effective trafficable width of 6m.

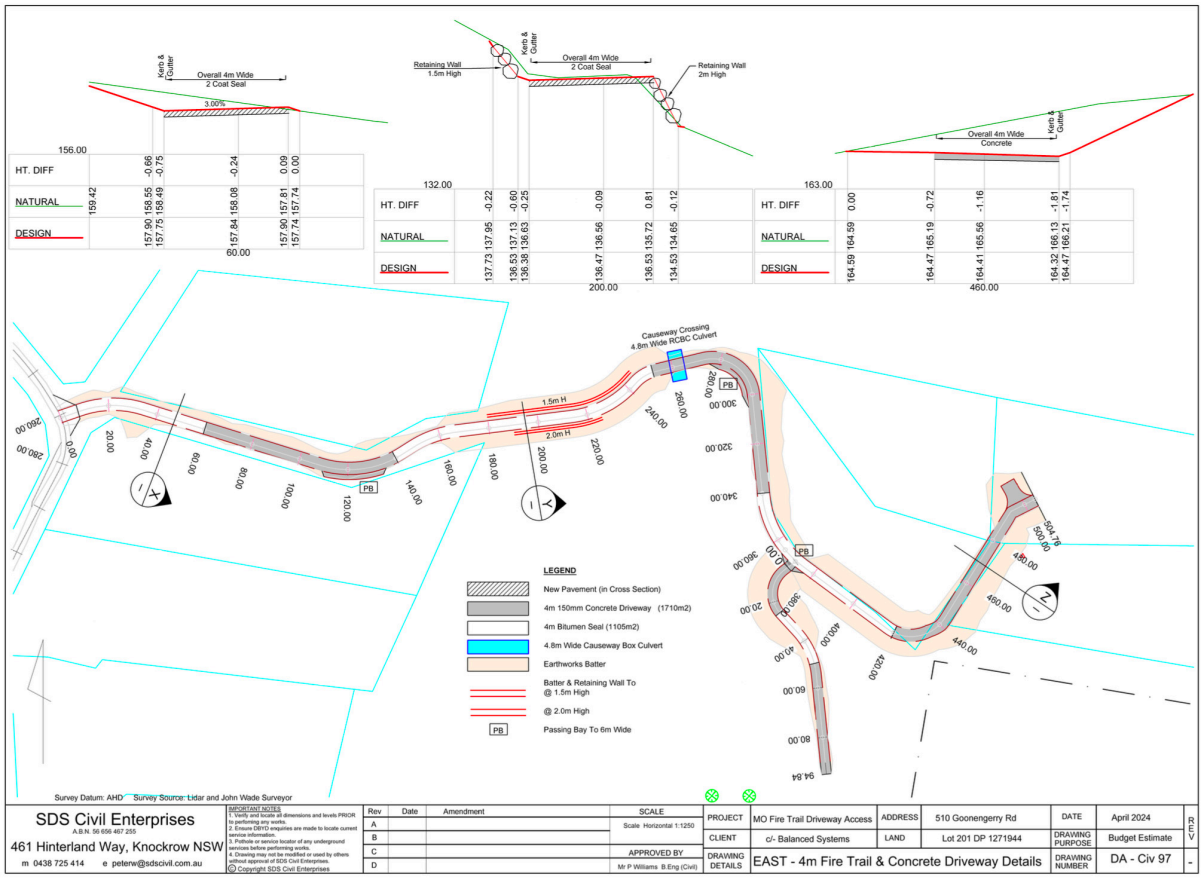
Map Printed from FireMaps on Thu May 16 15:16:27 AEST 2024

Figure 6: development site showing access road.

The pinch points, indicated in Figure 7 as Transect Y – where there will be retaining walls either side of the road for a distance of approximately 25m and the causeway.

In the unlikely event of a fire in this small valley, colloquially known as a gully, this road will provide safe access and egress for fire fighting vehicles and should the need arise safe operating area for emergency services personnel.

As an added measure of protection the plan, discussed further down in Construction Measures is, while all four dwelling sites assess as BAL 12.5, to build dwellings to BAL 29 standards. The Emergency Management Plan for the whole Multiple Occupancy shall include instructions for occupants of these four dwellings to shelter in place if a fire occurs close to their access road.



6) Adequacy of bushfire maintenance and fire emergency plans

Maintenance

Dwellings shall be maintained in perpetuity by:

- regularly removing all litter from gutters and roof
- ensuring external painted surfaces are in good condition
- ensuring water supply is available and tanks and outlets are in good working order
- maintaining driveways in good condition
- ensuring roofing materials are firmly fixed
- screens on windows and doors are in good order with no gaps or holes

- doors are fitted with draft seals to ensure no gaps of greater than 2mm
- mats are of non-combustible materials
- woodpiles, garden sheds and other combustible materials are located away from the dwellings

Gardens and APZs shall be maintained in perpetuity as outlined in PBP A4 and NSW RFS Standards for Asset Protection Zones by:

- a clear area of low cut lawn, ground cover or pavement adjacent to the dwelling
- woodpiles, garden sheds and other combustible materials are located away from the dwellings
- areas under fences, near fence posts and under trees raked and cleared of fuels
- non-combustible fencing and retaining walls
- canopy not continuous, that is gaps between tree canopies

Carrying out this level of maintenance in perpetuity meets the requirements of PBP.

Emergency measures

A comprehensive Emergency Management Plan shall be developed prior to application for Occupancy Certificate. This plan shall encompass all aspects of emergency management, particularly in Bushfire situations and will include indicators of days when the facility will not be open because of fire danger ratings as well as the need to hold briefings for guests as they arrive and instructions on emergency evacuation. This plan will bear in mind the special needs of visitors who may be very transitory and therefore have no knowledge of the area.

This plan will meet the requirements of PBP.

7) Construction measures

The lots on this subdivision have been assessed as meeting BAL 12.5. However, in acknowledgement that the access road is long and it may be safest to shelter in place if there is a fire all four dwellings shall be constructed in accordance with AS3959 Section 3 - Construction General and Section 7 – Construction for Bushfire Attack Level 29 (BAL-29) and PBP Table 7.4b.

8) Adequacy of sprinklers and other fire protection measures

There are no sprinklers or other fire protection measures, other than those outlined above, planned for this development. Owners are welcome to install these if they choose but they do not form part of this report.

h) An assessment of the extent to which the proposed development conforms with the standards, specific objectives, performance criteria and acceptable solutions in PBP Chapters 5 – 8

The measures proposed above for this development conform fully to the standards, specific objectives and performance criteria set out in PBP Chapters 5 - 8 – Performance Based Controls.

i) Registered fire trails on the property

There are no registered fire trails on this property.

References

KEITH, D. 2004. *Ocean shores todesert dunes: the native vegetation of New South Wales and ACT,* Hurstville, NSW, Department of Environmetn and Conservation (NSW).

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STANDARDS AUSTRALIA 2018. *Australian Standard Construciton of building in bushfire-prone areas - AS3959,* Sydney, Australia, SAI Global Limited.