



AUSTRALIAN BUSHFIRE CONSULTING SERVICES



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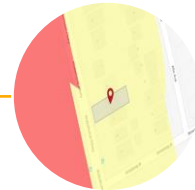
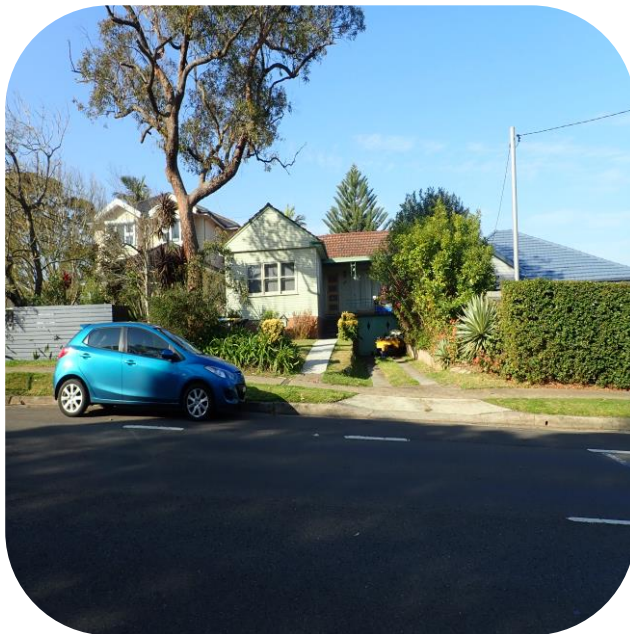
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Bush Fire Assessment Report



Residential alterations and additions

49 Wakehurst Parkway

Seaforth NSW 2092

21st September 2018

Reference 18-206

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Abbreviations:

ABCS	Australian Bushfire Consulting Services Pty Ltd
APZ	Asset Protection Zone
AS3959	Australian Standard 3959 – 2009 including amendments 1-3
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Northern Beaches Council
DA	Development Application
DSF	Dry Sclerophyll Forest
EP&A Act	Environmental Planning and Assessment Act - 1979
ELVIS	Geoscience Australia Elevation Information System
ESD	Ecologically Sustainable Development
FR NSW	Fire & Rescue NSW
IPA	Inner Protection Area
LGA	Local Government Area
NCC	National Construction Codes
NP	National Park
NSP	Neighbourhood Safer Place
OPA	Outer Protection Area
PBP	Planning for Bush Fire Protection – 2006
ROW	Right of Way
RF Act	Rural Fires Act - 1997
RFS	NSW Rural Fire Service
SEPP	State Environmental Planning Policy
SFPP	Special Fire Protection Purpose
SWS	Static Water Supply

1.0 Introduction.

The building certificate application seeks retrospective approval for the alterations and additions to the rear of an existing dwelling at 49 Wakehurst Parkway Seaforth. The works undertaken include the construction of an attached deck with awning over, recladding of part of the rear laundry wall and replacement of the rear laundry door. Construction of the deck is approx. $\frac{3}{4}$ completed with works proposed to complete the rear extension include fully enclosing the subfloor space, finishing the facial/eave detail and addition of stairs. The subject site is mapped as bushfire prone land and therefore the application of Planning for Bush Fire Protection 2006 (PBP 2006) is relevant to the development proposal.

The aims of PBP 2006 are to *provide for the protection of human life (including firefighters) and to minimise impacts on property from the threat of bush fire, while having due regard to development potential, on-site amenity and protection of the environment*. This is achieved by determining available asset protection zones, applying the relevant construction requirements, ensuring adequate access and egress has been considered, providing safe service supply and adequate water provisions for occupants and attending emergency services.

2.0 Property details.

Address: 49 Wakehurst Parkway Seaforth NSW 2092
Lot/DP: Lot 57 DP 11162
Zoned: R2 Low Density Residential
LGA: Northern Beaches Council

The site has street access to Wakehurst Parkway to the west and abuts similar private R2 zoned allotments to all aspects. The subject site contains an existing residential dwelling and the incomplete construction of an unauthorised deck extension and external wall / door detail to the laundry. All new works are rear facing and extend outward from the rear of the dwelling away from the hazard interface.

3.0 Legislative context.

The application is for a building information certificate under Division 6.7 of the EPA Act 1979. In terms of compliance with PBP 2006 the development is classified as infill development and would ordinarily be assessed under section 4.14 of the EPA Act 1979. Under Section 4.14 of the EP&A Act, Council can determine a development application on bushfire prone land providing;

Council is satisfied that the development conforms to the specifications and requirements of Planning for Bush Fire Protection that are relevant to the development or

Council has been provided with a certificate by a person who is recognised by the NSW Rural Fire Service as a qualified consultant in bush fire risk assessment stating that the development conforms to the relevant specifications and requirements of Planning for Bush Fire Protection.

If the Council is satisfied that the development does not conform to the relevant specifications and requirements of Planning for Bush Fire Protection Council may grant consent but only if it has consulted with the Commissioner of the NSW Rural Fire Service concerning measures to be taken with respect to the development to protect persons, property and the environment from danger that may arise from a bush fire.

The highest bushfire attack level (BAL) to the existing dwelling is BAL 40 and to the location onsite of the new works has been determined to be BAL 29. Suitable recommendations have also been made herein to enable Council to issue a building certificate inclusive of conditions required to ensure compliance with both AS3959 – 2009 and PBP 2006.

4.0 Referenced documents and people.

The following documents have been referenced in the preparation of this report;

- Manly Local Environmental Plan 2013
- Manly Development Control Plan 2013 amended Sept 2016,
- Manly Council Bushfire Prone Land Map,
- AS3959 – 2009 Construction of buildings in bushfire prone areas,
- Planning for Bush Fire Protection 2006,
- Rural Fires Act 1997
- Rural Fires Regulation 2013
- 10/50 Vegetation Clearing Code of Practice
- NSW RFS Guide for bush fire prone land mapping V5b Nov 2015
- Ocean Shores to Desert Dunes – David Andrew Keith 2004

I undertook an inspection of the property on 12/9/2018. At that time, I had free access within the subject site and the land immediately around the proposed development. Access into the vegetation on the western side of the Wakehurst Parkway was also available to assess the bushfire hazard. The plans, site plan and elevations by Marco Steel Ref 4998-230818 Sheets 1 – 10 inclusive have been relied upon in the preparation of this report.

5.0 Copyright, scope and disclaimer.

This assessment of possible bushfire impact (including smoke, ember, radiant heat and flame contact) and compliance with other matters such as access and service supply is pertinent to the subject site only. Where reference has been made to the surrounding lands, this report does not assess impact to those lands rather it is an assessment of possible bushfire progression and impact on or from those lands towards the subject site.

Apart from any use permitted under the Copyright Act 1968 no part of this document, including any wording, images, or graphics, can be modified, changed or altered in any way without written permission from Australian Bushfire Consulting Services Pty Ltd. This report may only be referenced, distributed or forwarded to other parties in its original format.

This report has been prepared as a submission document in support of a building certificate application to Council and cannot be relied upon for commencement of works or construction until it has been included within the notice of assessment issued by Council as part of their approvals. **The onus is on the applicant to cross reference this document with any conditions issued by Council or any requirements supplied by the NSW Rural Fire Service should they be consulted.** I can review and cross reference these documents however the onus is on the applicant / client to provide them to me and request this review.

Where any difference between this document and the Council notice of determination (or the NSW Rural Fire Service requirements) is found then the Councils consent conditions always take precedence until an application to review, amend or vary those conditions is approved.

The statements and opinions contained in this report are given in good faith and in the belief that such statements and opinions are correct and not misleading. AS3959 – 2009 states that “...*there can be no guarantee that a building will survive a bushfire event of every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather conditions*”. The NSW RFS state “*Homes are not designed to withstand fires in catastrophic conditions*”. Correspondingly any representation, statement of opinion, or advice expressed or implied in this document is made on the basis that Australian Bushfire Consulting Services Pty Ltd is not liable to any person for any damage or loss whatsoever which has occurred or may occur in relation to that person taking or not taking (as the case may be) action in respect of any representation, statement or advice made by Australian Bushfire Consulting Services Pty Ltd.

6.0 Assessment summary table.

Aspect	North	South	West	East
Vegetation Structure	n/a	n/a	Forest	n/a
Hazard Slope	n/a	n/a	7° downslope	n/a
Asset Protection Zone – existing dwelling	n/a	n/a	≥31 metres	n/a
Asset Protection Zone – rear extension	n/a	n/a	≥39 metres	n/a
Features that may mitigate the impact bushfire on the proposed development.	The separation from the hazard interface includes maintained land within the subject property and land considered equivalent to an APZ being the maintained and formed areas within Wakehurst Parkway road reserve.			
Noteworthy landform & environmental features.	Maintained curtilage	Maintained curtilage	Wakehurst Parkway	Maintained curtilage
Threatened Species	n/a	n/a	Not known APZ existing	n/a
Aboriginal Relics	n/a	n/a	Not known APZ existing	n/a
Bushfire Attack Level - existing dwelling	n/a	n/a	BAL 40	n/a
Bushfire Attack Level - rear extension	n/a	n/a	BAL 29	n/a
Proposed Construction Level	The highest Bushfire Attack Level to the nearest part of the dwelling footprint was determined to be BAL 40 however the works are located at the rear of the dwelling and the new laundry wall and door is facing away from the hazard interface. By virtue of the increased separation and shielding by the dwelling itself the new works subject to this application were determined to be BAL 29 for the deck and BAL 19 for those parts completely shielded from the hazard interface (laundry door and wall facing east). Specific recommendations will be included herein to ensure works undertaken to date and any future construction to complete the structure will comply with these requirements.			

Guideline Ref.	Proposed Development Determinations
Property Access (Driveway)	The most distant external point of the existing dwelling and new work is within 70 metres of a road supporting the operational use of fire fighting vehicles (i.e. hydrants) and therefore the Property Access requirements detailed in section 4.1.3 (2) of PBP are not applicable. The existing access will not be altered or impeded as part of this development.
Water Supply	The most distant external point of the existing dwelling and new work is within 70 metres of a road supporting the operational use of fire fighting vehicles (i.e. hydrants) and a static water supply is not required.
Evacuation	Evacuation is possible by utilising existing road infrastructure. It is encouraged that the occupants complete a Bush Fire Safety Plan addressing “Prepare, Act, Survive” as advocated by the NSW RFS http://www.rfs.nsw.gov.au/ under publications / bushfire safety.

7.0 Images and maps.



Image 01: Aerial image NSW Land &Property Information / Spatial Information Exchange



Image 02: 1 metre contour data from NSW Gov. Elevation Information Systems Foundation Dataset

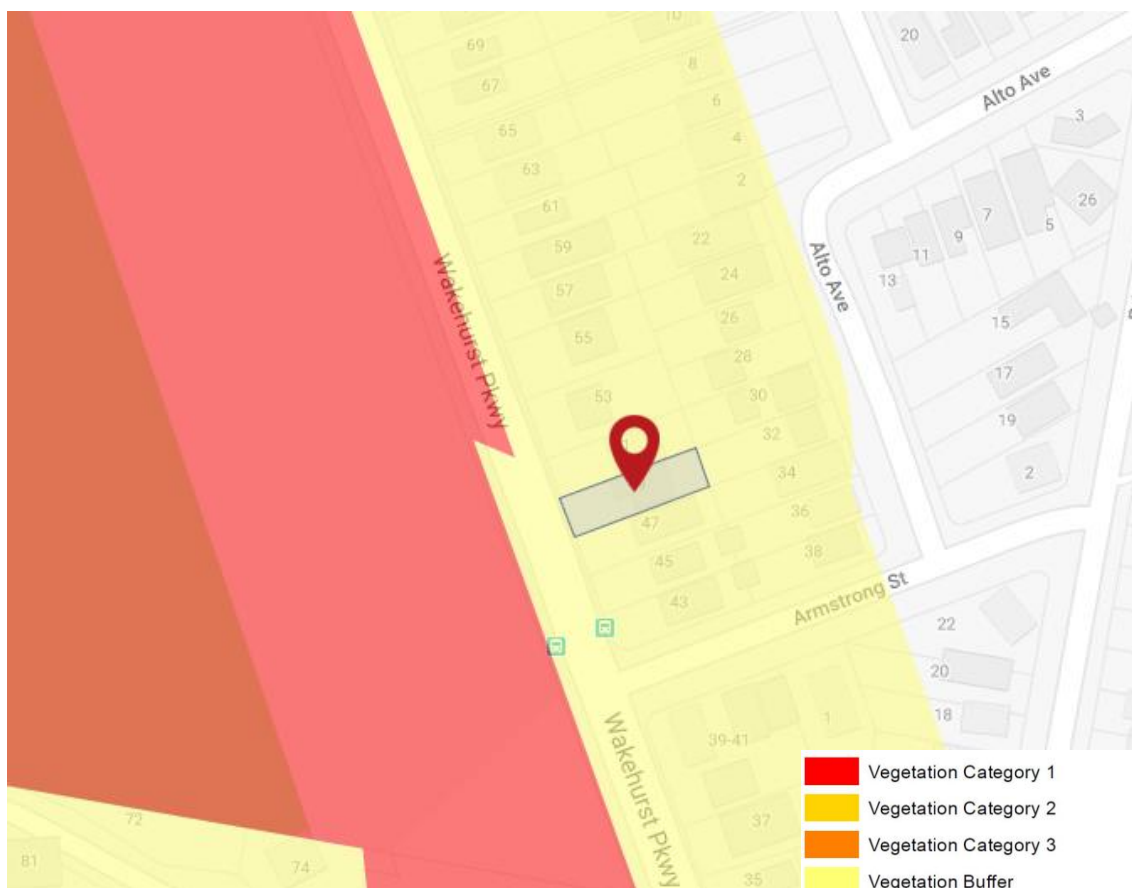


Image 03: Northern Beaches Council Bushfire Prone Land Map (From Dept. Planning Portal)

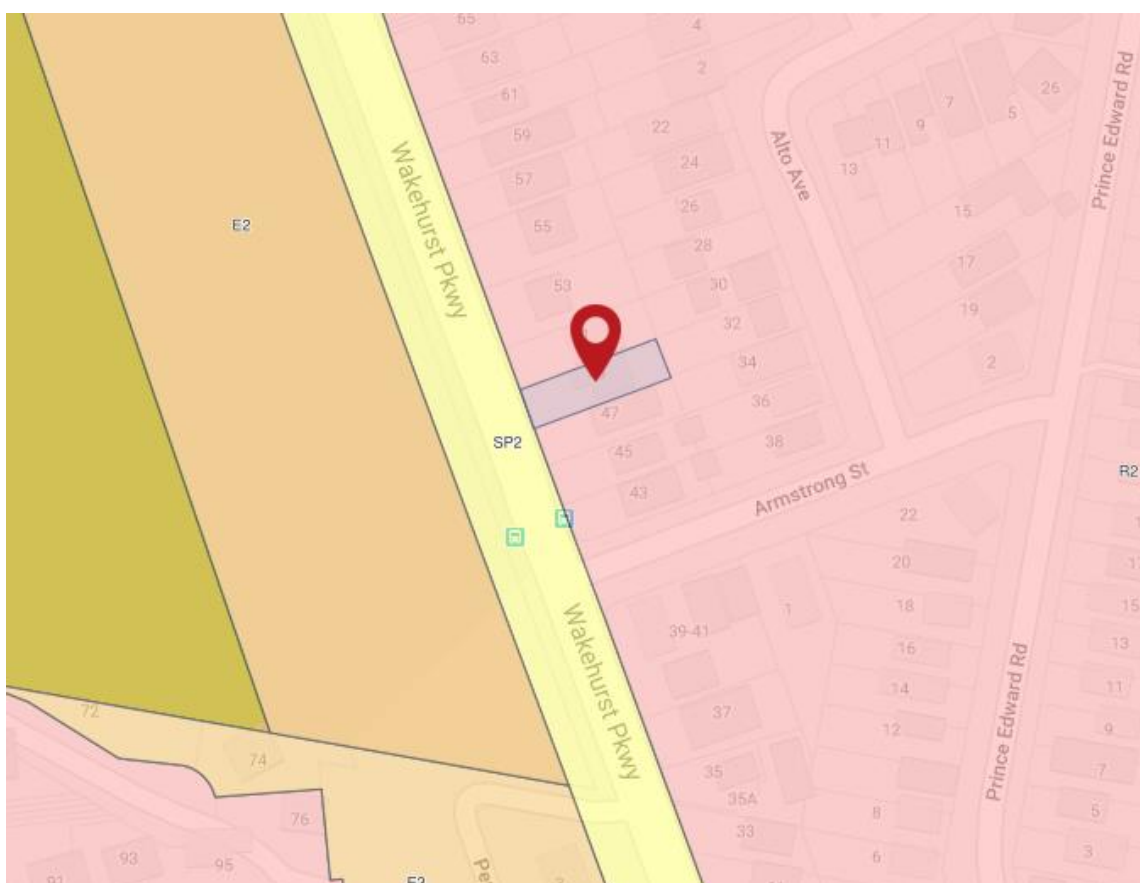


Image 04: Manly LEP Zoning Map (From Dept. Planning Portal)

8.0 Bush fire hazard assessment

Properties considered to be bushfire prone land are identified on Councils Bushfire Prone Land Map as being:

- *within or within 100 m of Category 1 (high) hazards or,*
- *within or within 30 m of Category 2 (low) hazards or,*
- *within or within 30 m of Category 3 (medium) hazards.*

The NSW RFS document PBP – 2006 is applicable to all development on bushfire prone land, this includes an assessment of the proposals adequacy in providing an appropriate combination of bushfire protection measures in terms of asset protections zones, landscaping, access and service supply. This document also provides a means of determining the necessary level of building construction under AS3959 - 2009. All development on bushfire prone land must be accompanied with a bush fire hazard assessment that includes;

- *a statement that the site is bush fire prone land, where applicable*
- *the location, extent and vegetation formation of any bushland on or within 100 metres of the site*
- *the slope and aspect of the site and of any bush fire prone land within 100 metres of the site which may determine the likely path of any bush fires*
- *any features on or adjoining the site that may mitigate the impact of a high intensity bush fire on the proposed development*
- *a statement assessing the likely environmental impact of any proposed Bush Fire Protection Measures*
- *whether any building is capable of complying with AS 3959-2009 in relation to the construction level for bush fire protection*

By incorporating bush fire protection measures into a development the six objectives of PBP 2006 are addressed:

1. *afford occupants of any building adequate protection from exposure to a bush fire*
2. *provide for a defensible space to be located around buildings*
3. *provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition*
4. *ensure that safe operational access and egress for emergency service personnel and residents is available*
5. *provide for ongoing management and maintenance of bush fire protection measures, including fuel loads in the asset protection zone (APZ)*
6. *ensure that utility services are adequate to meet the needs of fire fighters (and others assisting in bush fire fighting).*

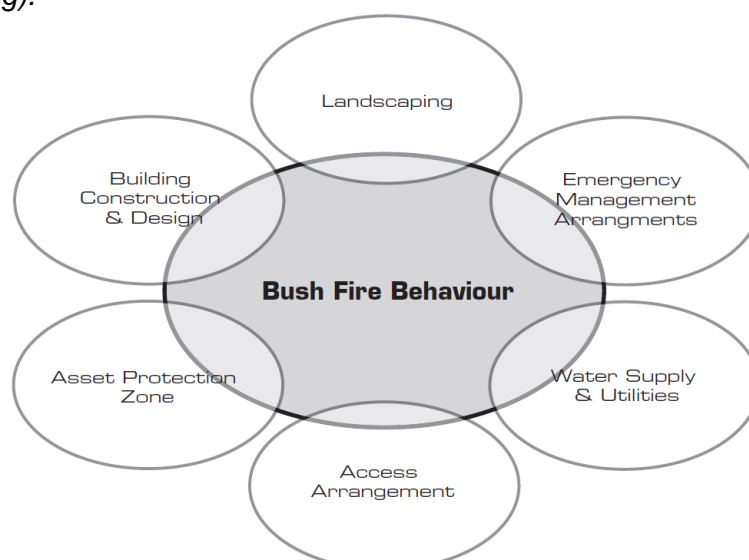


Image 05: Extract from PBP 2006 showing bushfire protection measures in combination

8.1 Site

The site has street access to Wakehurst Parkway to the west and abuts similar developed private R2 zoned allotments to the remaining three aspects. The subject site consists of managed gardens, hard surfaced areas and maintained lawns around the building footprint.

Councils Bushfire Prone Land Map identifies this property as being within the 100 metre buffer zone from a Category 1 Vegetation and therefore it is appropriate to apply PBP 2006. The vegetation considered to pose a bushfire threat is within a vegetated reserve to the west beyond Wakehurst Parkway.



Photograph 01: View east across Wakehurst Parkway showing existing asset protection zone



Image 06: Extract from streetdirectory.com

8.2 Vegetation

The vegetation considered to pose a bushfire threat is within a vegetated reserve to the west beyond Wakehurst Parkway. This vegetation is interconnected with Garigal National Park further north. The vegetation was found to consist of trees 10 – 20 metres in height having approx. 60-70% canopy foliage cover. The understorey consisted of smaller trees, shrubs and grasses. For the purposes of assessment under PBP 2006 and AS3959 – 2009 the vegetation has been assessed as Keith Classification Dry Sclerophyll Forest (DSF).



Photograph 02: View northeast within the vegetated reserve west of the subject site.

8.3 Topography

The slope must be assessed over a distance of at least 100 metres from the existing property boundary (or building footprint) towards the various vegetation communities constituting the hazard. In assessing the slope, it may be found that there are a variety of slopes covering different distances. The gradient within the hazard (vegetation) which will most significantly influence the fire behaviour must be determined.

The slope was determined onsite using an inclinometer and verified by topographic mapping to be;

- 7 degrees downslope within the hazard to the west

8.4 Asset Protection Zones

The existing Asset Protection Zone is ≥ 31 metres to the existing dwelling and ≥ 39 metres to the location onsite of the new works. The separation from the hazard interface includes maintained land within the subject property and land considered equivalent to an APZ being the maintained and formed areas within the Wakehurst Parkway road reserve.

The Asset Protection Zone is existing and no tree removal or other vegetation modification is necessary to create the APZ. As such there is no environmental impact of the proposed bushfire protection measures. Recommendations to ensure the ongoing maintenance of the APZ will be included within this report.



Photograph 03: View south along Wakehurst Parkway taken north of the subject site.

Components of an Asset Protection Zone

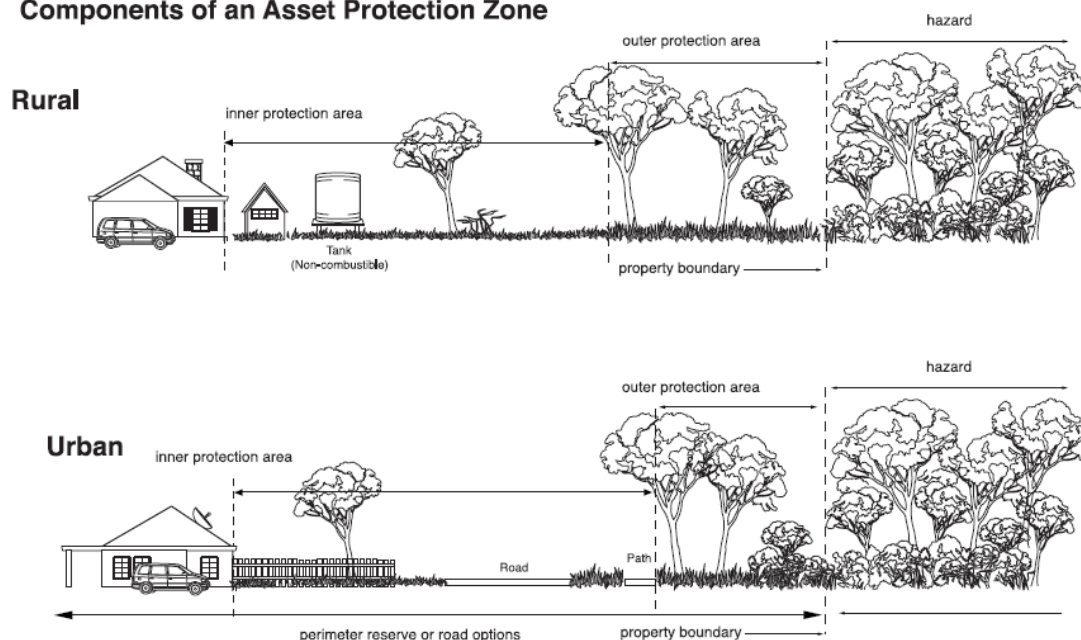


Image 07: Extract from PBP 2006 showing components of an Asset Protection Zone

8.5 Access & egress

The subject property has direct street frontage to Wakehurst Parkway to the west and persons seeking to egress the subject site will be able to do so via the existing access drive and surrounding road infrastructure. There is free pedestrian access around the existing dwelling and new works. Access to the hazard interface for fire suppression and hazard reduction activities is available without the need to enter the subject site.

The most distant external point of the existing dwelling and new work is within 70 metres of a road supporting the operational use of fire fighting vehicles (i.e. hydrants) and therefore the Property Access requirements detailed in section 4.1.3 (2) of PBP are not applicable. The existing access will not be altered or impeded as part of this development.

It is encouraged that the occupants complete a Bush Fire Safety Plan addressing “Prepare, Act, Survive” as advocated by the NSW RFS <http://www.rfs.nsw.gov.au/> under publications / bushfire safety.

8.6 Services

Existing overhead electrical supply is available to the subject site. An online internet check also indicates that there is natural gas available in this street. There is no new electrical or gas connected included in this building certificate application.

Reticulated water supply is also available in this area. The most distant external point of the existing dwelling and new work is within 70 metres of a road supporting the operational use of fire fighting vehicles (i.e. hydrants) and a static water supply is not required.

8.7 Construction

Australian Standard 3959 – 2009 'Construction of buildings in bushfire-prone areas' provides for six (6) levels of building construction these being BAL - Low, BAL - 12.5, BAL - 19, BAL - 29, BAL - 40 and BAL - FZ. The Australian Standard 3959 specifies construction standards for buildings within various Bushfire Attack Levels as determined by the Planning for Bush Fire Protection – 2006 document. The NSW Rural Fire Service will not accept deemed to satisfy provisions for BAL Flame Zone and the NCC requires consultation with the RFS during a development application process. This is further enforced under s4.14 of the EPA Act 1979.

The highest Bushfire Attack Level to the nearest part of the dwelling footprint was determined to be BAL 40 however the works are located at the rear of the dwelling and the new laundry wall and door is facing away from the hazard interface. By virtue of the increased separation and shielding by the dwelling itself the new works subject to this application were determined to be BAL 29 for the deck and BAL 19 for those parts completely shielded from the hazard interface (laundry door and wall facing east).

The submission is a building certificate application to Council for the construction an attached deck with awning over, recladding of part of the rear laundry wall and replacement of the rear laundry door. Works required to the existing structure and future works to complete the building include:

As built assessment;

- The external cladding on eastern facade of the laundry wall is softwood.
- The external laundry door is 35 mm solid core door with 4mm toughened glass insert.
- The deck support and frame is steel and joists are softwood.
- The roof sheeting is metal and is sarked. The roof frame is almost fully enclosed and sheeted underneath with f/c sheet. Fascia's are end capped with aluminium and there is a small timber decorative trim. Roof supports, rafters and joist is softwood.
- The roof does not share the same void as the dwelling roof (i.e. is a separate roof space).
- The stairs are not installed, temporary stairs in place only. The proposal includes finishing with metal stairs.
- The deck is softwood.
- The handrails and balustrades are softwood and are located greater than 125mm from any glazed area.

Proposed finishes;

- The exposed rafters at the eastern end are to be fully enclosed with a non combustible sheet underneath and metal fascia (fixed at 450 centres) and the gaps between the fascia and the corrugations in the roof are to be sealed.
- The subfloor is to be fully enclosed (either the deck area only or the entire dwelling area).

To finish the project compliant with AS3959 – 2009 and Addendum Appendix 3 to PBP 2006 for BAL 29 (deck) and BAL 19 (laundry door and wall) the following options are available.

Deck:

- The subfloor (of either the deck area or the entire dwelling) shall be fully enclosed with either;
 - a wall that complies with section 7.4 of AS3959 – 2009 (except that sarking is not required where specified in clause 7.4.1) in particular it shall be cladding that is,
 - non combustible material or
 - a hardwood specified in Appendix H of AS3959 – 2009 or
 - timber treated with a fire retardant coating that complies with Appendix F of AS3959 – 2009
 - or
 - a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion resistant steel, bronze or aluminium
 - or
 - a combination of the above.
- All openings in the subfloor walls greater than 3 mm are to be screened with a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium
- Timber support posts and the roof joist (where exposed) is to be treated with a
 - covered with a non combustible material
 - or,
 - replaced with a timber compliant with Appendix H AS3959 – 2009
 - or
 - treated with a fire retardant coating that complies with Appendix F of AS3959 – 2009.
- Timber decking is to be replaced with a non combustible material or a timber species compliant with Appendix H of AS3959 – 2009. Fire retardant treatments are not acceptable on trafficable areas. Decking may be spaced.

Laundry wall and door:

- Where any timber cladding and the timber frame on the door (eastern façade on the laundry wall) is within 400 mm of finished ground level or a flat surface having an angle to the wall of less than 18 degrees (e.g. the deck) then the cladding shall be either;
 - covered with a non combustible material
 - or,
 - replaced with a timber compliant with Table E2 Appendix E or Appendix H AS3959 – 2009
 - or
 - treated with a fire retardant coating that complies with Appendix F of AS3959 – 2009.
- The glazed insert on the laundry door shall be fully protected by an external screen made from steel, bronze or aluminium mesh having a maximum aperture of 2 mm (the screen can be fixed to the door and must cover the entire glazed area to satisfy clause 6.5.2 (b) of AS3959 – 2009).

APPENDIX F AS3959 - 2009

Bushfire resisting timber is timber that is deemed to be acceptable to withstand exposure up to BAL 29 condition.

Timber may be bushfire resisting timber by means of one or more of;

- (a) The inherent properties of the material itself or,
- (b) Being impregnated with fire retardant chemicals or,
- (c) The application of fire retardant coatings or substrates.

APPENDIX H AS3959 - 2009

The following species have been tested and have met the requirements of Appendix F for Bushfire Resisting Timber;

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

Note: Fire retardant coating acceptable under Appendix F of AS3959 – 2009 can be Exfire Fireshell F1E[™] or similar. I don't specifically promote Exfire Fireshell F1E[™] as the only suitable fire retardant coating however I retain test certificates on file for this product. Where an alternate treatment is used test certificates *including accelerated weather test* shall be provided to assess the products suitability.

8.8 Risk

The level of risk is determined using the combination of likelihood and consequences. The purpose of analysing risk is to establish an understanding of the level of bushfire threat and will help to evaluate the appropriateness of bushfire protection measures recommended for a development application.

This section of the report is a predictive risk evaluation only and assumes development consent includes the recommendations contained within this report. This is for risk evaluation only and has been based on an abridged version of the assessment process detailed within the Bush Fire Risk Management Planning Guidelines for Bushfire Risk Management Committees. This evaluation does not reflect the Bushfire Attack Level determined under PBP 2006 or AS3959 - 2009.

The likelihood of a bushfire occurring can be determined using fire history data or local knowledge. The likelihood must be considered in the context of long term planning and not simply if a bushfire is likely to occur during the next five years. The consequences of a bushfire event can be determined by considering the vulnerability of the asset. Vulnerability is related to the capacity of an asset to cope with or recover from the impacts of a bushfire.

Likelihood Rating	Description and indicative probability
Almost certain	Expected to occur, many recorded incidents, strong anecdotal evidence, high opportunity, reason or means to occur; may occur or be exceeded once in every 5 years.
Likely	Will probably occur; consistent record of incidents and good anecdotal evidence; considerable opportunity, reason or means to occur; may occur or be exceeded once in every 10 years.
Possible	Might occur; a few recorded incidents in each locality and some anecdotal evidence; some opportunity, reason or means to occur; may occur or be exceeded once in every 20 years.
Unlikely	Is not expected to occur; isolated recorded incidents in this community, anecdotal evidence in other communities; little opportunity, reason or means to occur;

Consequence Rating	Description and indicative result
Minor	Inconsequential or no damage. Little or no disruption to occupation. Little or no financial loss.
Moderate	Localised damage that is rectified by routine arrangements. Normal functioning with some inconvenience. Localised displacement of people who return within 24 hours. Personal support satisfied through local arrangements.
Major	Significant damage that requires external resources. Displacement for more than 24 hours duration. Extensive resources required for personal support.
Catastrophic	Extensive damage. Extensive personal support. General and widespread displacement for extended durations.

Consequence Likelihood	Minor	Moderate	Major	Catastrophic
Almost certain	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	Extreme
Possible	Insignificant	Low	Medium	High
Unlikely	Insignificant	Insignificant	Low	Medium

The bushfire risk to this development is determined to be Low and the package of bushfire protection measures recommended in section 9 of this report are considered Satisfactory.

9.0 Recommendations

9.1 Asset Protection Zones / landscaping

- 9.1.1 That all grounds within the subject property are continued to be maintained as an Asset Protection Zone / Inner Protection Area as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 2 of Planning for Bush Fire Protection 2006.
- 9.1.2 That any new landscaping is to comply Appendix 5 'Landscaping and Property Maintenance' under Planning for Bush Fire Protection 2006.

9.2 Construction

- 9.2.1 That the works to construct the deck and any works undertaken to complete the structure shall comply with section 3 and 7 BAL 29 of AS 3959 – 2009 and Addendum Appendix 3 under PBP 2006.
- 9.2.2 That the works on the external façade facing away from the hazard (the laundry wall and door) and any works undertaken to complete the structure shall comply with section 3 and 6 BAL 19 of AS 3959 – 2009 and Addendum Appendix 3 under PBP 2006

Note 01: The works required to achieve 9.2.1 and 9.2.2 above are listed in detail within section 8.7 of this report.

Note 02: Forward of the building line of the works subject to this assessment the site is rated BAL 40. The owner should be aware of this rating in planning and proposing any future works on the existing structure.

10.0 Conclusion

The National Construction Code 2016 (NCC) Volume 2 requires that a Class 1 building or a Class 10a building or deck associated with a Class 1 building that is constructed in a designated bushfire prone area must, to the degree necessary, be designed and constructed to reduce the risk of ignition from a bushfire, (appropriate to the potential for ignition caused by burning embers, radiant heat or flame generated by a bushfire) and intensity of the bushfire attack on the building.

The subject property is determined to be bushfire prone land and the proposal must achieve compliance with the NCC by meeting the aims and objectives of PBP 2006. This is achieved by providing construction measures to mitigate against the impacts from bushfire including smoke, embers, radiant heat and flame contact and also including suitable access, services supply and means of maintaining the bushfire protection measures for the life of the development.

This bushfire hazard and determination has been made on a site-specific basis which includes an assessment of the local bushland area and its possible impact to the subject property.

The highest bushfire attack level (BAL) to the existing dwelling is BAL 40 and by virtue of increased separation to the location onsite of the new works and shielding they have been determined to be BAL 29 for the deck & BAL 19 for those parts that are shielded from the hazard interface (laundry door and wall facing east). Suitable recommendations have been made herein to enable Council to issue a building certificate inclusive of conditions required to ensure compliance with both AS3959 – 2009 and PBP 2006.

In consideration of the bushfire risk posed to the proposed development in conjunction with the recommended bushfire protection measures contained within this report I am satisfied they will provide a reasonable and satisfactory level of bushfire protection to the proposed development.

I am in support of the building certificate application.

Australian Bushfire Consulting Services Pty Ltd




Wayne Tucker

Managing Director
G. D. Design in Bushfire Prone Areas.
Certificate IV Fire Technology
Ass Dip Applied Science
FPA Australia BPAD Level 3 Accredited Practitioner
BPAD Accreditation No. BPAD9399

List of attachments

Nil Attachments.