

# Bushfire Assessment Report

***Proposed:***  
**Alterations & additions**

***At:***  
**50 Cowan Drive,  
Cottage Point NSW**

*Reference Number:* 200530

*Prepared For:*  
Louise Emmett  
C/- Brad Inwood Architects

**13<sup>th</sup> December 2019**



*Prepared By:*  
**Building Code & Bushfire  
Hazard Solutions Pty Limited**

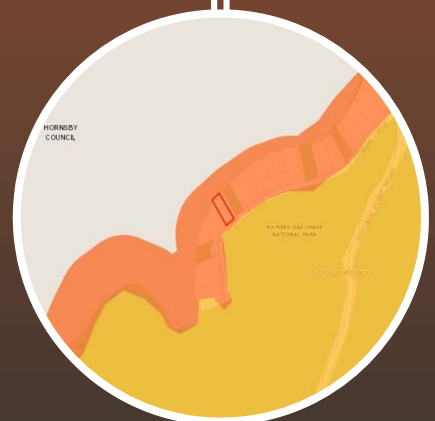
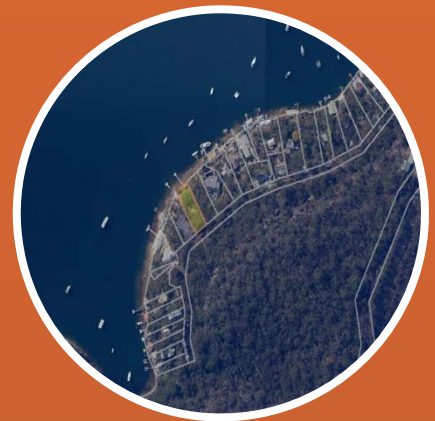
Tel: (02) 9457 6530  
Fax: (02) 9457 6532

PO Box 124  
Berowra NSW 2081  
ABN 19 057 337 774

[www.bushfirehazardsolutions.com.au](http://www.bushfirehazardsolutions.com.au)



**SILVER  
MEMBER**  
Fire Protection  
Association Australia



## Contents

---

	<u>Page No.</u>
Copyright and Disclosure	2
Executive Summary	3
List of Abbreviations	4
1.0 Introduction	5
2.0 Purpose of Report	5
3.0 Scope of Report	5
4.0 Referenced Documents and Persons	5
5.0 Compliance Table and Notes	6 - 7
6.0 Aerial view of the subject allotment	8
7.0 Bushfire Hazard Assessment	9 - 13
8.0 Site and Bushfire Hazard Determination	14 - 15
9.0 Recommendations	16
10.0 Conclusion	17 - 18
11.0 Annexure	18
- List of referenced documents and attachments	
- Attachments	

**Copyright:**

Where agreed to by Building Code and Bushfire Hazard solutions Pty. Ltd, this report may only be copied, distributed or forwarded to other parties in its original format. No part of this document including any wording, images, or graphics can be modified, changed or altered in any way without the express permission of Building Code and Bushfire Hazard Solutions Pty. Ltd. (Copyright Act 1968).

Where this document is found to have been used or altered in any way without the express permission of Building Code and Bushfire Hazard Solutions Pty. Ltd. including any wording, images, or graphics, Building Code and Bushfire Hazard Solutions Pty. Ltd. will not be held liable for any incidental or consequential loss or damages, financial or otherwise resulting from the use of the modified document. Building Code & Bushfire Hazard Solutions Pty. Ltd. will if it considers it necessary, seek to advise third parties including authorities of such illegal use or modifications.

**Legal status:**

This report has been prepared as a submission document in support of a development application to Council and in instances may rely upon information provided by a number of external sources including Councils, State Government Agencies and it is assumed that the information provided was accurate at the time. This report cannot be relied upon for commencement of works or construction until such time as it has been endorsed or otherwise included within the consent conditions issued by Council as part of the DA determination.

S4.14 applications (under the Environmental Planning and Assessment Act 1979) and all infill development applications may be referred by Council to the NSW Rural Fire Service for review and concurrence during the DA process. S100B applications under the Rural Fires Act 1997 (subdivisions and Special Fire Protection Purpose Developments), Flame Zone determinations and Alternate Solutions must be referred by Council to the NSW Rural Fire Service for review and receipt of a Bushfire Safety Authority (BSA) or other such recommended conditions from the NSW Rural Fire Service before the consent can be granted.

The onus is on the applicant to cross reference this document with any conditions of consent issued by Council or any requirements supplied by the NSW Rural Fire Service following development approval. BCBHS can review and cross reference these documents however the onus is on the applicant to provide them to us and request this review – Building Code and Bushfire Hazard Solutions Pty. Ltd. is not in a position to track every DA through Council and we rely upon the applicant to undertake this role as project co-ordinator.

Where any discrepancy between this document and the development approval or the NSW Rural Fire Service requirements is found, the conditions of consent always take precedence until such time as an application to review, amend or vary these conditions is approved.

**Disclaimer:**

This report has been prepared with due care and diligence by Building Code and Bushfire Hazard Solutions Pty. Ltd and the statements and opinions contained in this report are given in good faith and in the belief on reasonable grounds that such statements and opinions are correct and not misleading bearing in mind the necessary limitations noted in previous paragraphs.

Further, no responsibility is accepted by Building Code and Bushfire Hazard Solutions Pty. Ltd. or any of its officers or employees for any errors, including errors in data which is supplied by a third party, or which Building Code and Bushfire Hazard Solutions Pty. Ltd. is required to estimate, or omissions howsoever arising in the preparation of this report, provided that this will not absolve Building Code and Bushfire Hazard Solutions Pty. Ltd. from liability arising from an opinion expressed recklessly or in bad faith.

Any representation, statement of opinion, or advice expressed or implied in this document is made in good faith on the basis that Building Code and Bushfire Hazard Solutions Pty. Ltd. employees and / or agents are not liable (whether by reason of negligence, lack of care or any other reason ) to any person, company or their agents 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 referred to above.

## Executive Summary

---

The development proposal relates to the alterations and additions to an existing sole occupancy dwelling within an existing residential allotment located at 50 Cowan Drive, Cottage Point. The scope of works relate to a new deck, internal alterations and replacement of some windows. As the subject site is bushfire prone land the application of Planning for Bush Fire Protection - 2006 (PBP) must apply in this instance.

The highest Bushfire Attack Level to the subject dwelling and proposed works was determined to be 'Flame Zone' from Table 2.4.2 of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009.

Flame Zone would only apply to the new windows facing north and not change any of the existing windows facing the hazards to the south and east.

The applicant wishes to improve bushfire protection at the property and in this regard rather than achieving compliance with BAL Flame Zone for the new windows and deck facing north, they have expanded their scope of works to now include replacing all existing doors and windows with BAL 40 compliant doors and windows.

Should the development not proceed then obviously occupation of a dwelling not built to any bushfire codes and in a high risk location would continue, and no better outcome would be provided to the inhabitants.

It has been brought to our attention that the NSW Rural Fire Service are applying a discretionary approach to some applications. The concept being that, where altering an existing dwelling that was constructed prior to the bushfire regulations and a significantly improved bushfire safety outcome is being achieved by upgrade of the dwelling with additional works, then a downgrade in the Bushfire Attack Level applied by DA consent may be possible. This approach is reinforced in the pre-release of PBP 19.

Upgrade works are encouraged by the RFS in their Fast Fact 1/2011 Best Practice Guide for Bushfire Protection and this applicant proposes to exceed the minimum additional protection measures advocated by the RFS in their own document for the retained parts of the dwelling. We also advocate and encourage compliance with this Fast Fact and the fact that upgrade works are combined with new works should not be used to apply a blanket FZ determination, instead the RFS and Council should seek a better outcome than if the development did not proceed.

The new works do not extend towards the hazard and the provision of the upgrade package will provide a much better outcome than if the development only proceeded and the Flame Zone provisions were applied to the original scope of works. A far better level of safety is achieved and we are in support of this approach. While this solution relies on the discretion of the Rural Fire Service we appeal to the Rural Fire Service for this to be included in the approval.

## List of Abbreviations:

---

APZ	Asset Protection Zone
AS3959	Australian Standard 3959 – 2009 as amended.
BAL	Bushfire Attack Level
BPMs	Bushfire Protection Measures
BPLM	Bushfire Prone Land Map
Council	Northern Beaches Council
DA	Development Application
EP&A Act	Environmental Planning and Assessment Act - 1979
ESD	Ecologically Sustainable Development
FRNSW	Fire & Rescue NSW
IPA	Inner Protection Area
LPMA	Land and Property Management Authority
NCC	National Construction Code
NP	National Park
NSP	Neighbourhood Safer Places
OPA	Outer Protection Area
PBP	<i>Planning for Bush Fire Protection</i> - 2006
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 development proposal relates to the alterations and additions to an existing sole occupancy dwelling within an existing residential allotment located at 50 Cowan Drive, Cottage Point.

The subject property has street frontage to Cowan Drive to the south, abuts a private residential allotment to the west, a vacant allotment associated with Kuring-gai Chase National Park to the east and Cowan Creek to the north. The vegetation identified as being the hazard is within vacant allotment associated with Kuring-gai Chase National Park to the east and Kuring-gai Chase National Park to the south.

Northern Beaches Council's Bushfire Prone Land Map identifies the subject property as being within the 100 metre buffer zone from designated Category 1 Vegetation therefore the application of Planning for Bush Fire Protection - 2006 (PBP) must apply in this instance.

## 2.0 Purpose of Report

---

The purpose of this Bushfire Assessment Report is to provide the owners, The Rural Fire Service and Council with an independent bushfire hazard determination together with appropriate recommendations for both new building construction and bushfire mitigation measures considered necessary having regard to construction within a designated 'bushfire prone' area.

The recommendations contained within this report may assist in forming the basis of any specific construction conditions and/or bushfire mitigation measures that Council and/or the NSW Rural Fire Service may elect to place within any consent conditions issued for the subject Development Application.

## 3.0 Scope of this Report

---

The scope of this report is limited to providing a bushfire assessment and recommendations for the subject property. Where reference has been made to the surrounding lands, this report does not purport to directly assess those lands; rather it may discuss bushfire impact and/or progression through those lands and possible bushfire impact to the subject property.

Where Council considers a bushfire risk is associated with surrounding private lands or lands owned by an authority, Council could seek to issue notice under Section 66 of the Rural Fires Act on any or all surrounding properties for the purposes of reducing and maintaining safe levels of vegetation and thus reducing the possibility of bushfire impact to the subject property and any adjoining properties.

## 4.0 Referenced Documents and Persons

---

Comments provided are based on the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act), the RFS document known as '*Planning for Bush Fire Protection 2006*' for the purposes of bushfire hazard determination and Australian Standard 3959 '*Construction of buildings in bushfire-prone areas*' 2009 as amended for building/structural provisions.

A company representative has made a site inspection of the subject property and the surrounding area. The site plan by Brad Inwood Architects, Drawing No. 0909-01, Dated 27.11.19 has been relied upon for this assessment.

## 5.0 Compliance Tables & Notes

The following table sets out the projects compliance with *Planning for Bush Fire Protection – 2006*.

	North	East	South	West
<b>Vegetation Structure</b>	Maintained curtilages	Remnant	Forest	Maintained curtilages
<b>Slope</b>	N/A	0 degrees across	0 degrees & up	N/A
<b>Asset Protection Zone</b>	N/A	3 metres	20 metres	N/A
<b>Significant Environmental Features</b>	Cowan Creek	Access path / maintained grounds	Cowan Drive / Kuring-gai Chase National Park	Neighbouring residential allotment
<b>Threatened Species</b>	APZ Existing	APZ Existing	APZ Existing	APZ Existing
<b>Aboriginal Relics</b>	APZ Existing	APZ Existing	APZ Existing	APZ Existing
<b>Bushfire Attack Level</b>	N/A	BAL FZ	BAL 40	N/A
<b>Required Construction Level</b>	N/A Consultation with RFS required	N/A Consultation with RFS required	N/A Consultation with RFS required	N/A Consultation with RFS required

### Asset Protection Zones Compliance

The available Asset Protection Zone was measured to be 3 metres to the east and 20 metres to the south. The APZ consists of maintained grounds within the subject property and land equivalent to an APZ within Cowan Drive.

### Construction Level Compliance

The highest Bushfire Attack Level to the proposed works was determined to be 'Flame Zone' and construction requirements within NSW are therefore outside the scope of AS 3959 – 2009 as 'BAL FZ' has not been adopted as a set of deemed to satisfy provisions.

The proposed better outcome includes:

- All new works to be constructed to BAL 40
- All existing doors and windows being replaced with BAL 40 compliant doors and windows
- The existing dwelling will be upgraded for ember protection
- The entire site to be maintained as an Asset Protection Zone

The new works do not extend towards the hazard and the provision of the upgrade package will provide a much better outcome than if the development only proceeded with the Flame Zone provisions applied to the original scope of works. A far better level of safety is achieved and we are in support of this approach. While this solution relies on the discretion of the Rural Fire Service we appeal to the Rural Fire Service for this to be included in the approval.



## Access and Services

Guideline Ref.	Proposed Development Determinations
Property Access (Driveway)	The most distant external point of the subject dwelling is greater than 70 metres from a public through road supporting a hydrant system and therefore access requirements are applicable to this development. The existing access will not be altered as part of this DA.
Water Supply	The most distant external point of the building footprint is greater than 70 metres from a public road supporting a hydrant network and therefore a Static Water Supply is required. The property has water frontage to the tidal Cowan Creek allowing draughting for firefighting purposes. The subject property also has tanks for domestic purposes.
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 <a href="http://www.rfs.nsw.gov.au/">http://www.rfs.nsw.gov.au/</a> under publications / bushfire safety.
Electrical Supply	Existing supply provided.

## 6.0 Aerial view of the subject allotment

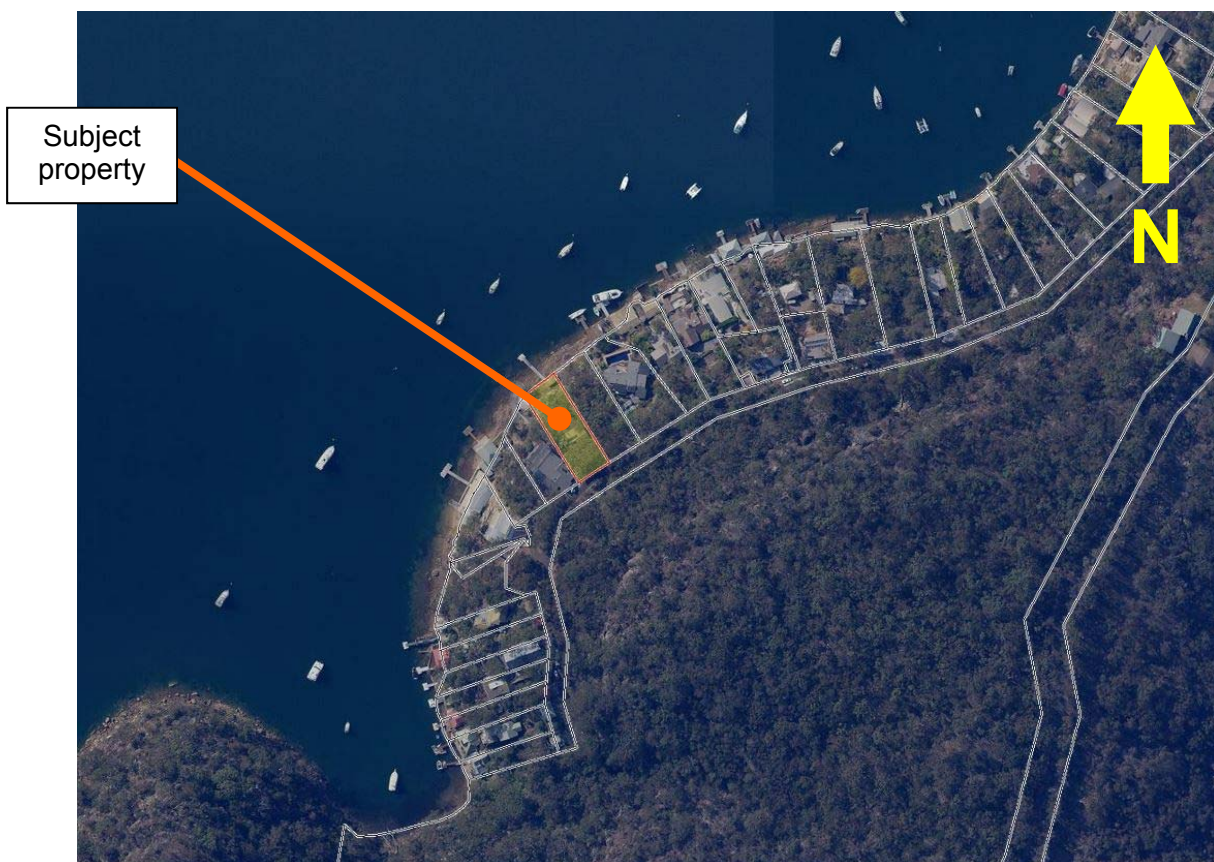


Image 01: Aerial view of the subject area C/- Sixmaps



## 7.0 Bushfire Hazard Assessment

### 7.01 Preface

Properties considered to be affected by possible bushfire impact are determined from the local Bushfire Prone Land Map as prepared by Council and or the Rural Fire Service. All property development within affected areas is subject to the conditions detailed in the document '*Planning for Bush Fire Protection 2006*' (PBP). Set back distances for the purpose of creating Asset Protection Zones (APZ's) must be applied and any buildings must then conform to corresponding regulations detailed in Australian Standard 3959 '*Construction of buildings in bushfire prone areas*' 2009.

*Planning for Bush Fire Protection 2006*, (PBP) formally adopted on the 1<sup>st</sup> March 2007 provides for the protection of property and life (including fire-fighters and emergency service personnel) from bushfire impact.

The thrust of the document is to ensure that developers of new properties or sub-divisions include the constraints associated with the construction of buildings in bushfire prone areas within their proposed development sites. PBP is applicable to proposed development inside a determined Category 1 or 2 areas and also inside a buffer zone radius of 100m from a Category 1 bushfire area or 30m from a Category 2 bushfire area.

The document also acknowledges 'infill' developments associated with re-development of existing properties and allows some higher levels of building safety where the increased 'set backs' (APZ's) may not be achievable.

The subject development relates to the alterations and additions to an existing sole occupancy dwelling within an existing residential allotment. To accord with PBP the development is classified as infill development and assessed as a S4.14 application under the Environmental Planning and Assessment Act 1979.

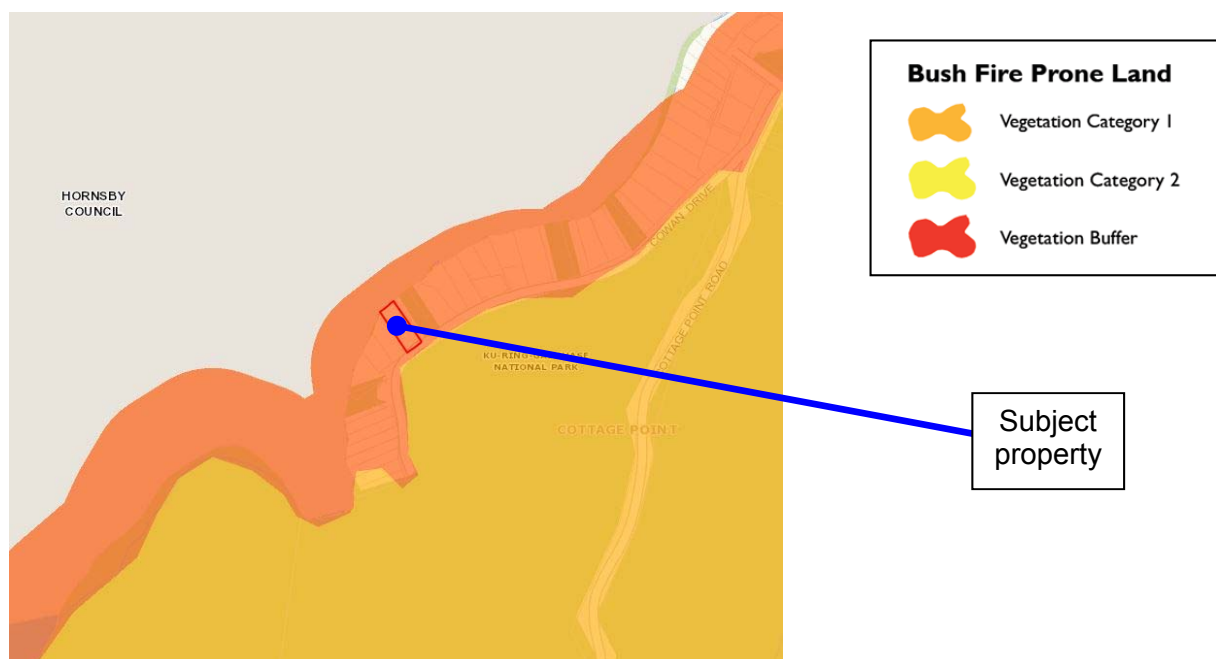


Image 02: Extract from Northern Beaches Council's Bushfire Prone Land Map

## 7.02 Location

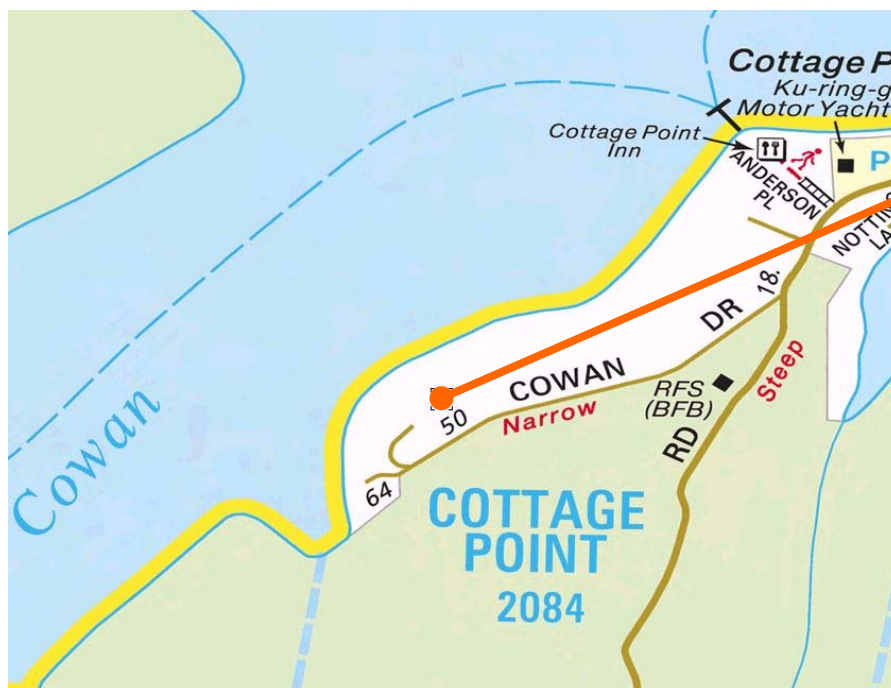
The subject property is known as 50 Cowan Drive, Cottage Point (Lot 24 DP 5204) and is a residential allotment located within Northern Beaches Councils Local Government Area. The subject property has street frontage to Cowan Drive to the south, abuts a private residential allotment to the west, a vacant allotment associated with Kuring-gai Chase National Park to the east and Cowan Creek to the north.

The vegetation identified as being the hazard is within vacant allotment associated with Kuring-gai Chase National Park to the east and Kuring-gai Chase National Park to the south.



Subject dwelling

Photograph 01: View north from Cowan Drive toward the subject property



Location of the subject property

Image 03: Extract from street-directory.com.au



### 7.03 Vegetation

The vegetation within the subject property and the neighbouring private residential allotments was found to consist of landscaped gardens and mown lawns.

The vegetation identified as being the hazard is within vacant allotment associated with Kuring-gai Chase National Park to the east and Kuring-gai Chase National Park to the south. The vegetation posing a hazard to the south and east was found to consist of trees 10 - 30 metres in height with 30 - 70% foliage cover, the understorey consisted of low trees, ferns and shrubs.

The vegetation to the east was found to provide a fire run of less than 50 metres toward the subject dwelling and proposed works. For the purpose of assessment under PBP we have determined the vegetation posing a hazard to the south as Forest and to the east to be Remnant.



Photograph 02: View west along Cowan Drive past the subject property



Photograph 03: View from Cowan Drive into the vegetation within the vegetated neighbouring allotment east of the subject property

## 7.04 Slope and Topography

The slope that would most significantly influence bushfire behaviour must be assessed for a distance of 100 metres from within the hazard. The most significant bushfire impact from the south is expected to be a bushfire travelling down slope toward the subject property. The most significant bushfire impact from the east is expected to be a bushfire travelling across slope toward the subject property.

The slope that would **most significantly** influence bushfire impact was determined onsite using an inclinometer and verified from topographic imagery to be:

- 0 degrees and up slope within the hazard to the south
- 0 degrees across slope within the hazard to the east



Image 04: Extract from Sixmaps



## 7.05 Asset Protection Zones

The subject property is a residential allotment located in an area of similar properties. The vegetation identified as being the hazard is within vacant allotment associated with Kuring-gai Chase National Park to the east and Kuring-gai Chase National Park to the south.

The available Asset Protection Zone was measured to be 20 metres to the south and 3 metres to the east. The APZ consists of maintained grounds within the subject property and land equivalent to an APZ within Cowan Drive.



Photograph 04: View along Cowan Drive of the existing southern APZ



Photograph 05: View south along the access path forming part of the existing eastern APZ

## 7.06 Property Access – Fire Services & Evacuation

Persons seeking to egress from the subject dwelling can do so freely along the existing road infrastructure. As the most distant external point of the subject dwelling is located less than 70 metres of Cowan Drive the requirements for 'Property Access' as detailed within section 4.1.3 (2) of PBP are not applicable. Access to the subject property is also available via Cowan Creek.

Fire services have free access to the property and around the subject dwelling. Attending fire services can access the hazard via Cowan Drive or Cottage Point Road for hazard reduction or fire suppression activities.

Access to the subject dwelling and hazard interface is considered satisfactory.

## 7.07 Fire Fighting Water Supply

The most distant external point of the building footprint is greater than 70 metres from a public road supporting a hydrant network and therefore a Static Water Supply is required. The property has water frontage to the tidal Cowan Creek allowing draughting for firefighting purposes. The subject property also has tanks for domestic purposes.

The existing water supply is considered adequate and satisfies section 4.1.3 of Planning for Bush Fire Protection 2006.



Photograph 06: View north from within the subject property toward Cowan Creek



## 8.0 Site & Bushfire Hazard Determination

### 8.01 Planning for Bush Fire Protection - 2006

Planning for Bush Fire Protection – 2006 (PBP) is applicable to those lands determined as being within a 'bushfire prone area' in accordance with a local Bushfire Prone Land Map as provided by the Rural Fire Service and Council.

The most appropriate method of determining site bushfire hazard under the terms of PBP is to consider the site in a singular form.

*Bushfire prone areas are defined as those areas;*

- *within or within 100m of high or medium bushfire hazards; or*
- *within or within 30m of low bushfire hazards.*

In this instance the subject property has been identified as being bushfire prone land therefore it is appropriate to apply PBP as follows:

#### Southern Aspect:

- a) Vegetation Structure Forest
- b) Slope 0 degrees and up
- c) A 20 metre Asset Protection Zones is available
- d) The Bushfire Attack Level was determined to be 'BAL 40'

#### Eastern Aspect:

- a) Vegetation Structure Remnant
- b) Slope 0 degrees across
- c) A 3 metre Asset Protection Zones is available
- d) The Bushfire Attack Level was determined to be 'BAL FZ'

### 8.02 Australian Standard AS 3959 – 2009 'Construction of buildings in bushfire –prone areas'

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 therefore have a NSW variation to the listed standard provisions of BAL FZ under AS3959 - 2009.

### 8.03 Correlation between bushfire impact and AS3959

Bushfire Attack Level	Maximum radiant heat impact (kW/m <sup>2</sup> )	Level of construction under AS3959-2009
Low		No special construction requirements
12.5	≤12.5	BAL - 12.5
19	12.6 to 19.0	BAL - 19
29	19.1 to 29.0	BAL - 29
40	29.1 to 40.0	BAL - 40
Flame Zone	>40.0	BAL FZ No deemed to satisfy provisions

## 8.04 Site Specific Bushfire Hazard Determination

All property development must be assessed on an individual basis as broad-brush approaches of documents such as PBP may not be applicable in every instance. The proposed development located at 50 Cowan Drive, Cottage Point was assessed against the requirements of Planning for Bush Fire Protection 2006 noting the following:

- a) Water supplies for firefighting purposes are adequate.
- b) Access to the subject property is available directly from Cowan Drive or Cowan Creek.
- c) Recommendations to maintain the Asset Protection Zones within the subject property will be included.
- d) The provision of the additional upgrade works on the dwelling to BAL 40 will provide a significantly better outcome than if the development did not proceed.

## 8.05 Viable Construction Method

The objectives of *Planning for Bush Fire Protection – 2006* are for the protection of life including fire fighters. Provided these objectives can be met the construction of buildings is feasible and both the Rural Fire Service and Council should be in a position to consider such applications.

The scope of works relate to a new deck, internal alterations and replacement of some windows. As the subject site is bushfire prone land the application of Planning for Bush Fire Protection - 2006 (PBP) must apply in this instance.

The highest Bushfire Attack Level to the subject dwelling and proposed works was determined to be 'Flame Zone' from Table 2.4.2 of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009.

Flame Zone would only apply to the new deck and north facing windows and not address the windows facing the eastern or southern hazards.

The applicant wishes to improve bushfire protection at the property and in this regard rather than achieving compliance with BAL Flame Zone for the works to the new windows only, they have expanded their scope of works to now include replacing all existing doors and windows with BAL 40 compliant doors and windows.

The proposed better outcome includes:

- All new works to be constructed to BAL 40
- All existing doors and windows being replaced with BAL 40 compliant doors and windows
- The existing dwelling will be upgraded for ember protection
- The entire site to be maintained as an Asset Protection Zone

The new works do not extend towards the hazard and the provision of the upgrade package will provide a much better outcome than if the development only proceeded with the Flame Zone provisions applied to the original scope of works only. A far better level of safety is achieved and we are in support of this approach. While this solution relies on the discretion of the Rural Fire Service we appeal to the Rural Fire Service for this to be included in the approval.

## 9.0 Recommendations

---

The following recommendations are provided as the minimum necessary for compliance with *Planning for Bush Fire Protection* 2006 and Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009. Additional recommendations are provided to supplement these minimum requirements where considered necessary.

### Asset Protection Zones

1. That all grounds within the subject property that are not built upon are 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.

### Construction

2. That the new works and all existing windows and doors of the existing dwelling be constructed to or upgraded to comply with the requirements of section 3 and BAL 40 under section 8 of AS3959 – 2009.
3. That the new works and the upgrade works be constructed to that of the 'Additional Construction Requirements' detailed in A3.7 of the Addendum to Appendix 3 of *Planning for Bush Fire Protection* 2010.
4. The existing dwelling is required to be upgraded to improve ember protection. This is to be achieved by enclosing all openings (excluding roof tile spaces) or covering openings with a non-corrosive metal screen mesh with a maximum aperture of 2mm. Where applicable, this includes any sub floor areas, openable windows, vents, weepholes and eaves. External doors are to be fitted with draft excluders.

### New Fencing

5. That to comply with NSW Rural Fire Service Practice Note 2/06 'Fences or Gates in Bush Fire Prone Areas' any new fencing is non-combustible.

### Emergency Management

6. 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.

### Landscaping

7. That any new landscaping is to comply with Appendix 5 'Landscaping and Property Maintenance' under *Planning for Bush Fire Protection* 2006.

## 10.0 Conclusion

Given that the property is deemed bushfire prone under Northern Beaches Council's Bushfire Prone Land Map any development would need to meet the requirements of '*Planning for Bush Fire Protection*' 2006 and of the construction requirements of Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009. The determination of any bushfire hazard must be made on a site-specific basis that includes an assessment of the local bushland area and its possible impact to the subject property.

The subject property is a residential allotment within an area of similar properties. The vegetation identified as being the hazard is within vacant allotment associated with Kuring-gai Chase National Park to the east and Kuring-gai Chase National Park to the south. The vegetation posing a hazard to the south was found to be Forest and to the east was found to be Remnant.

The available Asset Protection Zone was measured to be 20 metres to the south and 3 metres to the east. The APZ consists of maintained grounds within the subject property and land equivalent to an APZ within Cowan Drive.

The highest Bushfire Attack Level to the existing and proposed building footprint was determined to be 'Flame Zone' and construction requirements within NSW are therefore outside the scope of AS 3959 – 2009 as 'BAL FZ' has not been adopted as a set of deemed to satisfy provisions.

It has been brought to our attention that the NSW Rural Fire Service are applying a discretionary approach to some Flame Zone applications. The concept being that, where altering an existing dwelling that was constructed prior to the bushfire regulations and a significantly improved bushfire safety outcome is being achieved by upgrade of the dwelling with additional works, then a downgrade in the Bushfire Attack Level applied by DA consent may be possible. This approach has been reinforced in the pre-release of PBP 18.

The scope of works originally related to the installation of a new deck, north facing windows and internal modifications. As the subject site is bushfire prone land the application of Planning for Bush Fire Protection - 2006 (PBP) must apply in this instance.

The applicant wishes to improve bushfire protection at the property and in this regard rather than achieving compliance with BAL Flame Zone for the new windows only, they have expanded their scope of works to now include replacing all existing doors and windows with BAL 40 compliant doors and windows.

The new works do not extend towards the hazard and the provision of the upgrade package will provide a much better outcome than if the development only proceeded with the Flame Zone provisions applied to the new works.

We are in support of this discretionary approach and while this solution relies on concurrence from the Rural Fire Service we appeal to the Rural Fire Service for this to be included in the approval.

Should you have any enquiries regarding this project please contact me at our office.

Prepared by  
Building Code & Bushfire Hazard Solutions



**Duncan Armour**  
Bushfire Consultant

Reviewed and endorsed by  
Building Code & Bushfire Hazard Solutions



David McMonnies, AFSM. / M I Fire E  
Masters of Const. Mgt. / G. D. Design in  
Bushfire Prone Areas  
Managing Director.  
FPA Australia BPAD Level 3 Accredited Practitioner  
BPAD Accreditation No. BPAD2354



## 11.0 Annexure 01

### List of Referenced Documents

- a) *Environmental Planning and Assessment Act 1979*
- b) 'Planning for Bush Fire Protection' - 2006 - NSW Rural Fire Services & Planning NSW
- c) 'Construction of buildings in bushfire prone areas' - AS 3959 – 2009 (as - amended) – Standards Australia
- d) 'Northern Beaches Council's Bushfire Prone Land Map'
- e) Acknowledgements to:  
NSW Department of Lands – SIXMaps  
Street-directory.com.au
- f) Site plan by Brad Inwood Architects, Drawing No. 0909-01, Dated 27.11.19

### Attachments

Attachment 01: s4.14 Compliance Certificate



# Building Code & Bushfire Hazard Solutions

(Pty. Limited) ABN 19 057 337 774  
PO Box 124, Berowra NSW 2081  
Telephone: (02) 9457 6530 Facsimile: (02) 9457 6532  
www.bushfirehazardsolutions.com.au



## BUSHFIRE RISK ASSESSMENT CERTIFICATE UNDER PART 4 DIVISION 4.3 SECTION 4.14 OF THE EP&A ACT 1979 NO 203

PROPERTY ADDRESS:	50 Cowan Avenue, Cottage Point
DESCRIPTION OF PROPOSAL:	Alterations and additions
PLAN REFERENCE: (relied upon in report preparation)	Site plan by Brad Inwood Architects, Drawing No. 0909-01, Dated 27.11.19
BAL RATING:	BAL 40 <small>(If the BAL rating is FZ the application is to be referred to NSW RFS for assessment)</small>
DOES THE PROPOSAL RELY ON ALTERNATE SOLUTIONS:	<div><div>YES</div><div>NO</div></div> <small>(Circle the relevant response)</small> <small>(If YES the application is to be referred to NSW RFS for assessment)</small>
BUSHFIRE ASSESSMENT REPORT REFERENCE:	200530
REPORT DATE:	13 <sup>th</sup> December 2019
CERTIFICATION NO/ACCREDITED SCHEME	BPAD2394

I David McMonnies of Building Code and Bushfire Hazard Solutions Pty Ltd hereby certify, in accordance with Part 4 Division 4.3 Section 4.14 of the *Environmental Planning and Assessment Act 1979 No 203*:

1. That I am a person recognised by the *NSW Rural Fire Service* as a qualified consultant in bushfire risk assessment; and
2. That subject to the recommendations contained in the Bushfire Risk Assessment Report the proposed development conforms specifications and requirements of the documents entitled *Planning for Bush Fire Protection* prepared by the NSW Rural Fire Service in co-operation with the Department of Planning and any other documents as prescribed by Part 4 Division 4.3 Section 4.14 of the *Environmental Planning and Assessment Act 1979 No 203*.

I am aware that the Bushfire Assessment Report, prepared for the above mentioned site is to be submitted in support of a development application for this site and will be relied upon by Council as the basis for ensuring that the bushfire risk management aspects of the proposed development have been addressed in accordance with *Planning for Bushfire Protection 2006*.

Signature: 

Date: 13<sup>th</sup> December 2019

