

# Bushfire Assessment Report

***Proposed:***  
**Industrial Unit  
Complex**

***At:***  
**130-140 Old Pittwater Road  
Brookvale**

*Reference Number:* 190161

*Prepared For:*  
Leech Harmon Architects

**11<sup>th</sup> October 2018**



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

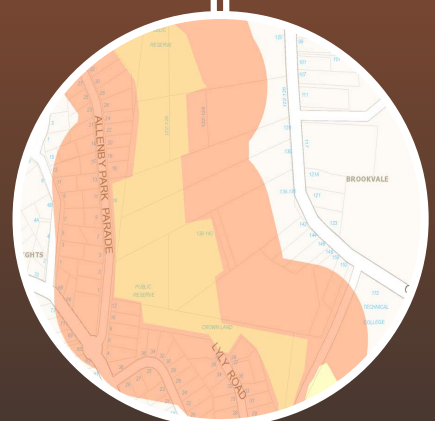
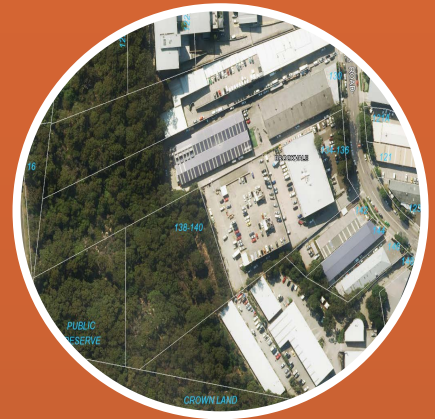
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## List of Abbreviations:

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APZ	Asset Protection Zone
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
ELVIS	Elevation and Depth – Foundation Spatial Data
FRNSW	Fire & Rescue NSW
IPA	Inner Protection Area
NCC	National Construction Code
NP	National Park
NSP	Neighbourhood Safer Places
OPA	Outer Protection Area
PBP	Planning for Bush Fire Protection - 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

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This report addresses two (2) concurrent applications regarding the alterations to the approved additions (S4.55) at 138 – 140 Old Pittwater Road, Brookvale and the construction of a new industrial complex at 130 Old Pittwater Road, Brookvale (DA) consisting of three levels of industrial units and associated infrastructure. The subject property is accessed from Old Pittwater Road to the east through an existing industrial estate, and abuts other commercial / industrial allotments to the north and south and Allenby Park recreation reserve and Allenby Park Parade to the west. The development site is 130 - 140 Old Pittwater Road Brookvale (Lot A DP 402556 and Lot 11 DP 1146661) located in Northern Beaches Councils local government area and currently consists of an existing Industrial Complex and unmanaged vegetation.

Following development of the subject site the vegetation that will remain as being the potential bushfire hazard is located to the north and south (associated with neighbouring allotments) and west within the rear portion of the subject properties and Allenby Park.

Northern Beaches Council's Bushfire Prone Land Map identifies the subject property as containing Category 1 Vegetation and its associated 100 metre buffer zone and therefore the application of *Planning for Bush Fire Protection - 2006* (PBP) must apply in this instance. The proposed development does not contain any residential or Special Fire Protection Purpose component and is therefore assessed under s4.14 of the EP&A Act and section 4.3.6 "PBP and other development" (f) for Class 5 – 8 buildings of 'Planning for Bush Fire Protection' 2006 applied.

## 2.0 Purpose of Report

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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

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The scope of this report is limited to providing a bushfire hazard 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.

## 4.0 Referenced Documents and Persons

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Comments provided are based on the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act), the *Rural Fires Act 1997*, the *Rural Fires Regulation 2008*, the RFS document known as '*Planning for Bush Fire Protection 2006*' for the purposes of bushfire hazard determination and Australian Standard 3959 2009 titled 'Construction of buildings in bushfire-prone areas' as amended for building/structural provisions.

A company representative has made a site inspection of the subject property and the surrounding area. The plans prepared by Leech Harmon Architects Project No. 570, Drawings DA01- DA10, dated 20<sup>th</sup> September 2018 were 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	South	East	West
<b>Vegetation Structure</b>	Forest	Forest	n/a	Forest
<b>Slope</b>	15 degrees Up*	0 degrees and up	n/a	15 degrees Up*
<b>Proposed asset protection zone</b>	2.5 metres	19 metres	n/a	11 metres
<b>Significant Environmental Features</b>	Vegetated neighbouring allotments	Allenby Park	n/a Fully developed	Unmanaged vegetation / Allenby Park Parade
<b>Threatened Species</b>	Not known By others	Not known By others	n/a Fully developed	Not known By others
<b>Aboriginal Relics</b>	Not Known By Others	Not Known By Others	n/a Fully developed	Not Known By Others

\*bushfire design modelling was capped at 15 degrees upslope regardless of the steeper recorded gradient

### Asset Protection Zones Compliance

The available Asset Protection Zones were measured from aerial imagery and plans provided. The APZ's consist of maintained land

### Construction Level Compliance

The proposed building will comprise of reinforced concrete walls, tilt slab walls, concrete slab floors and roof between building levels and Colorbond roofing (fully sarked and compliant with AS3959 – 2009) on the roof top units. Furthermore other essential fire safety equipment (e.g. fire hose reels and fire extinguishers) will be provided within the individual units as required by the National Construction Codes. It is noted that the design does not include any windows or openings on the elevations identified as BAL FZ and the units identified as BAL FZ will be fire isolated by a wall complying with BAL FZ extending to the underside of the roof.

The National Construction Code does not provide for any bush fire specific performance requirements for Class 5 to 8 structures and as such Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009 does not apply as a set of 'deemed to satisfy' provisions. PBP 2006 States:

*The general fire safety construction provisions are taken as acceptable solutions, but the aim and objectives of PBP apply in relation to other matters such as access, water and services, emergency planning and landscaping / vegetation management.*

*In circumstances where the aim and objectives of PBP (section 1.1) are not met, then the construction requirements for bush fire protection will need to be considered on a **case-by-case basis**.*

The following specific construction detail has been considered:



- Slab on ground construction,
- Steel cladding and concrete walls,
- Colorbond roofing,
- Other essential fire safety equipment supplied (e.g. fire hose reels and fire extinguishers),
- The building will be provided with measures to mitigate smoke and ember attack, including screening or enclosing all gaps >3mm in size, installing draught excluders on external side-hung doors, fitting external roller doors with relevant seals and added protection on any ducted air ventilation systems.

## Access and Services

Guideline Ref.	Proposed Development Determinations
Internal Roads	Access from the ground floor through level 2 and onto the rooftop (level 3) has been designed to permit the passage of Medium Rigid trucks and facilitates the passage of fire-fighting appliances.
Water Supply	An internal hydrant system will be installed throughout the proposed development. The sizing, pressure and spacing of this internal hydrant system must be installed in accordance with AS2419.1-2005.
Evacuation	Evacuation is possible by utilising proposed and existing road infrastructure. It has been recommended that a Bush Fire Evacuation Plan be prepared in accordance with section 4.2.7 of Planning for Bush Fire Protection 2006 prior to occupancy of the proposed building.

## 6.0 Aerial view of the subject allotment

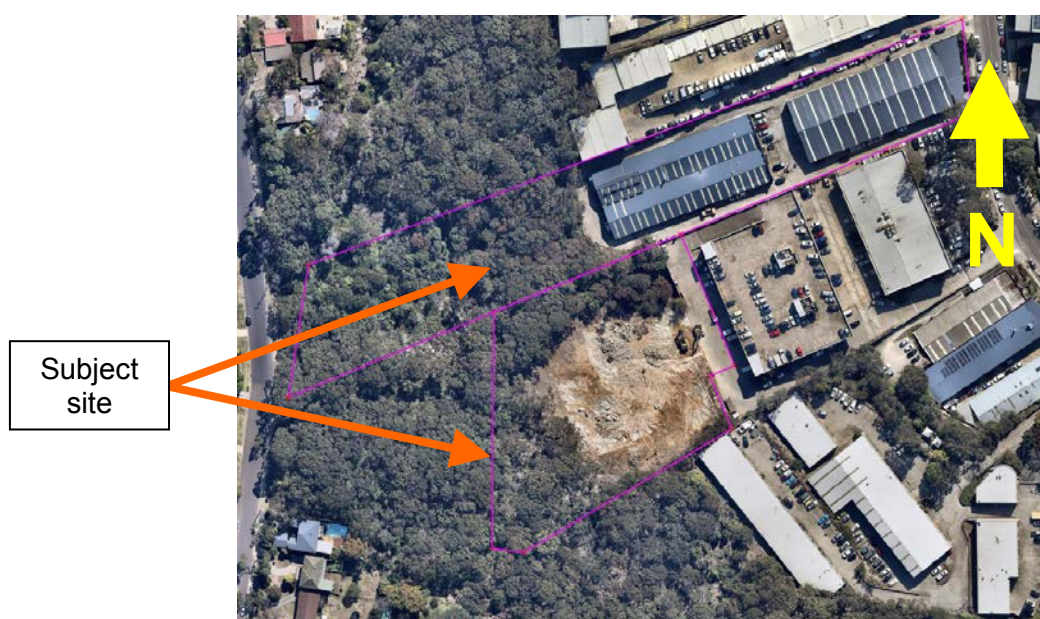


Image 01: Aerial view of the subject area from Nearmap 2018

## 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 and amended 3<sup>rd</sup> May 2010 (Appendix 3) 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 an industrial development comprising the construction of a number of individual industrial units and associated infrastructure within a three level commercial / industrial building, and is assessed as a S4.14 application under the Environmental Planning and Assessment Act 1979.

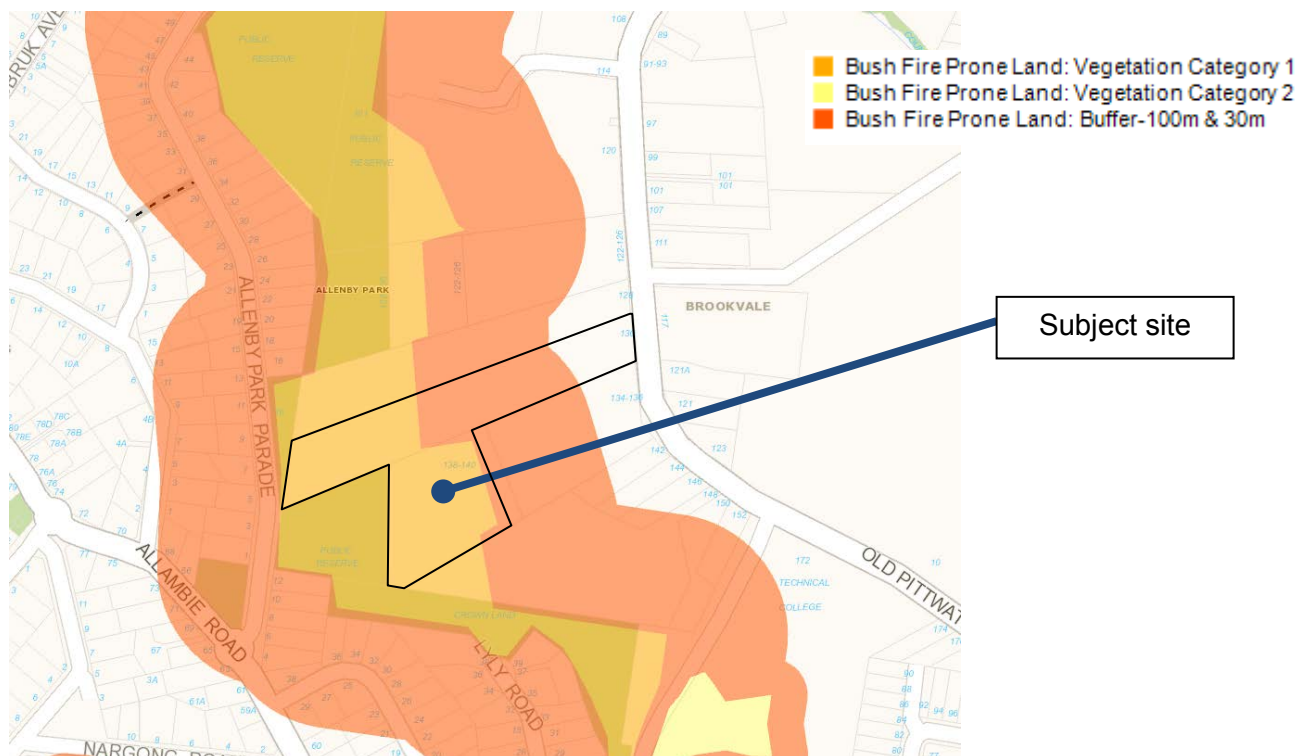


Image 02: Extract from Northern Beaches Council's Bushfire Prone Land Map



## 7.02 Location

The subject site is known as 130-140 Old Pittwater Road Brookvale (Lot 11 DP 1146661 and Lot A DP 402556) and comprises of two (2) large industrial allotments zoned 1 Industrial General within an area of similar properties. The subject property is accessed from Old Pittwater Road to the east through an existing industrial estate, and abuts other industrial allotments to the north and south and Allenby Park and Allenby Park Parade to the west. The site is located in Northern Beaches Councils local government area.

Following development of the subject site the vegetation that will remain as being the potential bushfire hazard is located to the north and south (associated with neighbouring commercial allotments) and west within the rear portion of the site and Allenby Park.



Subject site

Photograph 01: View southwest toward the subject site from the eastern neighbouring property



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

### 7.03 Vegetation

The vegetation that is posing a threat to the proposed development site is located to the north, south and west associated with neighbouring commercial allotments, Allenby Park and residual vegetation to be retained as natural bushland within the western portion of the subject site.

The vegetation posing a hazard to the found to be located along an existing sandstone ridgeline escarpment extending from the south to the west parallel to the site. The vegetation was found to consist of shrubs >2 metres in height with scattered overstorey of mature eucalypt trees 10-30 metres in height with a 30-70% foliage cover and an understorey of low trees, shrubs and grasses. This vegetation is identified as Sydney Coastal Dry Sclerophyll Forest in the Native Vegetation of the Sydney Metropolitan Area Volume 1: Technical Report dated November 2016.

For the purpose of assessment under PBP the vegetation posing a hazard to the north, south and west was determined Forest.



Photograph 02: View southwest across the subject site from a neighbouring allotment



Photograph 03: View west into the subject site from a neighbouring allotment

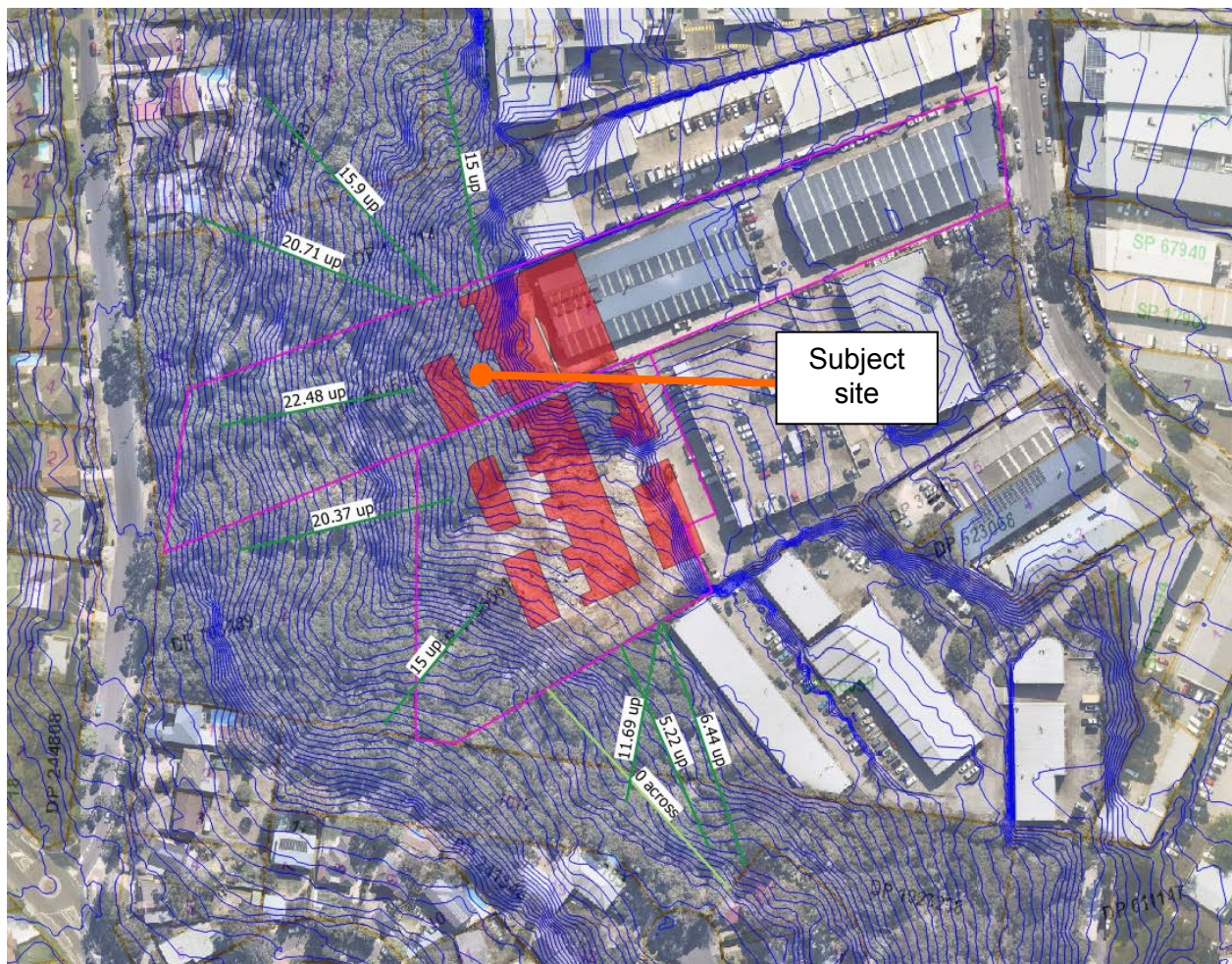


## 7.04 Slope and Topography

The slope that would most significantly affect fire behaviour within the hazard must be assessed for at least 100 metres from within the hazard. The slope was measured from LiDAR imagery of the area.

The most significant bushfire impact from the north, south and west is expected to be a bushfire travelling down slope toward the building footprint. The slope that was used to determine the Asset Protection Zones and Bushfire Attack Levels is as follows:

- 15 degrees up slope within the hazard to the north and west\*
- 0 degrees and upslope within the hazard to the south



\*bushfire design modelling was capped at 15 degrees upslope

Image 04: Extract from Nearmap, ELVIS – 1m Contours (LiDAR)

## 7.05 Asset Protection Zones

The proposed application relates to a commercial development and as such there are no minimum required Asset Protection Zones under Planning for Bush Fire Protection 2006. The design of the industrial complex has been designed to carry a Medium Rigid vehicle and as such sufficient widths have been applied to provide fire appliance access through to the roof top.

All grounds within the subject site to the northern, eastern and southern boundary and to the west for a minimum distance of 11 metres from the building footprint will be maintained in accordance with an Asset Protection Zone as detailed in Appendix 2 of Planning for Bush Fire Protection 2006 and the NSW Rural Fire Service publication 'Standards for Asset Protection Zones'.

## 7.06 Property Access – Fire Services & Evacuation

The subject site has street access to Old Pittwater Road to the east via a neighbouring industrial estate. Persons seeking to egress the proposed development will be able to do so via the proposed internal road system, through the adjoining allotment (away from the hazard interface) and along existing road infrastructure.

Access from the ground floor through level 2 and onto the rooftop (level 3) has been designed to permit the access of Medium Rigid vehicles this will facilitate the movement of Fire Fighting appliances. Pedestrian access will be provided into the western portion of the subject site.

Direct access to the hazard is available via Allenby Park Parade for fire suppression and hazard reduction activities.

The proposed access arrangements in conjunction with the existing access provisions are considered acceptable for occupant evacuation and fire-fighter access.



Access onto  
the subject  
site

Photograph 05: View west within the eastern neighbouring allotment



## 7.07 Fire Fighting Water Supply

In ground hydrants are available along the Old Pittwater Road, Allenby Park Parade and surrounding streets available for the replenishment of attending fire services. A hydrant system will be installed throughout the developed portion of the subject site. The sizing, pressure and spacing of this internal hydrant system must be installed in accordance with AS2419.1-2005.

All proposed industrial units will be fitted with relevant essential fire services (i.e. fire hose reels and fire extinguishers).

The proposed water supply will be considered adequate for the replenishment of attending fire services.

## 7.08 Planning for Bush Fire Protection

*The Building Code of Australia does not provide for any bush fire specific performance requirements for Class 5 to 8 structures and as such Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009 does not apply as a set of 'deemed to satisfy' provisions.*

*The general fire safety construction provisions are taken as acceptable solutions, but the aim and objectives of Planning for Bush Fire Protection 2006 (PBP) apply in relation to other matters such as access, water and services, emergency planning and landscaping/vegetation management.*

*In circumstances where the aim and objectives of PBP are not met, then the construction requirements for bush fire protection will need to be considered on a case-by-case basis.*

The following table details the aims and objectives of Planning for Bush Fire Protection 2006 and the proposal ability to comply.

Aim / Objective	Comment
<b>The aim of PBP is to use the NSW development assessment system to provide for the protection of human life (including firefighters) and to minimize impacts on property from the threat of bush fire, while having due regard to development potential, on-site amenity and protection of the environment.</b>	With the inclusion of the recommendations made herein it is of our opinion that the aim of PBP has been satisfied.
<b>(i) afford occupants of any building adequate protection from exposure to a bush fire;</b>	This report has made specific recommendations to mitigate smoke and ember attack on the proposed buildings. These recommendations in conjunction with the proposed type of building (i.e. concrete and concrete walls and colorbond roof) are considered to provide adequate protection to occupants seeking refuge within the buildings. Units identified as being within the Flame Zone will be fire isolated and constructed to BAL FZ.
<b>(ii) provide for a defensible space to be located around buildings;</b>	The proposed buildings are located 2.5 metres from the northern hazard, 19 metres from the southern hazard and 11 metres from the western hazard. The



	<p>proposed internal access arrangements will also provide access around the proposed buildings. In consideration of the site specific circumstances it is of our opinion that a suitable defensible space is provided around the proposed buildings.</p>
<p><b>(iii) ensure that safe operational access and egress for emergency service personnel and residents is available;</b></p>	<p>The proposed internal access arrangements will also provide access around the proposed buildings and exceed the minimum carriageway requirements for Public Roads. The proposed access arrangements have been designed to accommodate a Medium Rigid vehicle and are considered adequate for fire-fighter access and occupant evacuation.</p>
<p><b>(iv) ensure that utility services are adequate to meet the needs of firefighters (and others assisting in bush firefighting).</b></p>	<p>A hydrant system will be installed throughout the development site as part of this development. The sizing, spacing and pressures of this system must comply with AS2419.1-2005.</p> <p>The proposed hydrants and existing external hydrants are considered adequate for the replenishment of attending fire services.</p>

It is therefore of our opinion that the proposal can satisfactorily comply with the requirements for Class 5 and 8 structures under Planning for Bush Fire Protection 2006.

## 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:

#### Northern Aspect:

- a) Vegetation Structure Forest
- b) Slope 15 degrees up
- c) A 2.5 metre Asset Protection Zone is provided

#### Southern Aspect:

- a) Vegetation Structure Forest
- b) Slope 0 degrees and up
- c) An 19 metre Asset Protection Zone is provided

#### Western Aspect:

- a) Vegetation Structure Forest
- b) Slope 15 degrees up
- c) A 11 metre Asset Protection Zone is provided

### 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 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.

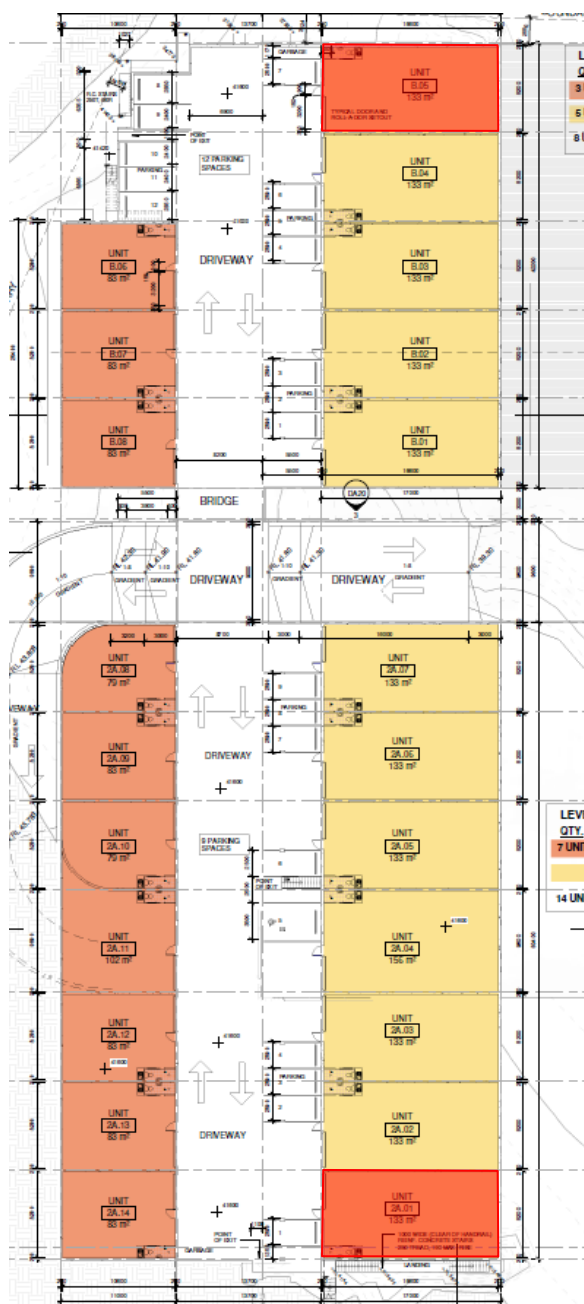
The National Construction Code does not provide for any bush fire specific performance requirements for Class 5 to 8 structures and as such Australian Standard 3959 'Construction of buildings in bushfire-prone areas' 2009 does not apply as a set of 'deemed to satisfy' provisions. PBP 2006 States:

*The general fire safety construction provisions are taken as acceptable solutions, but the aim and objectives of PBP apply in relation to other matters such as access, water and services, emergency planning and landscaping / vegetation management.*

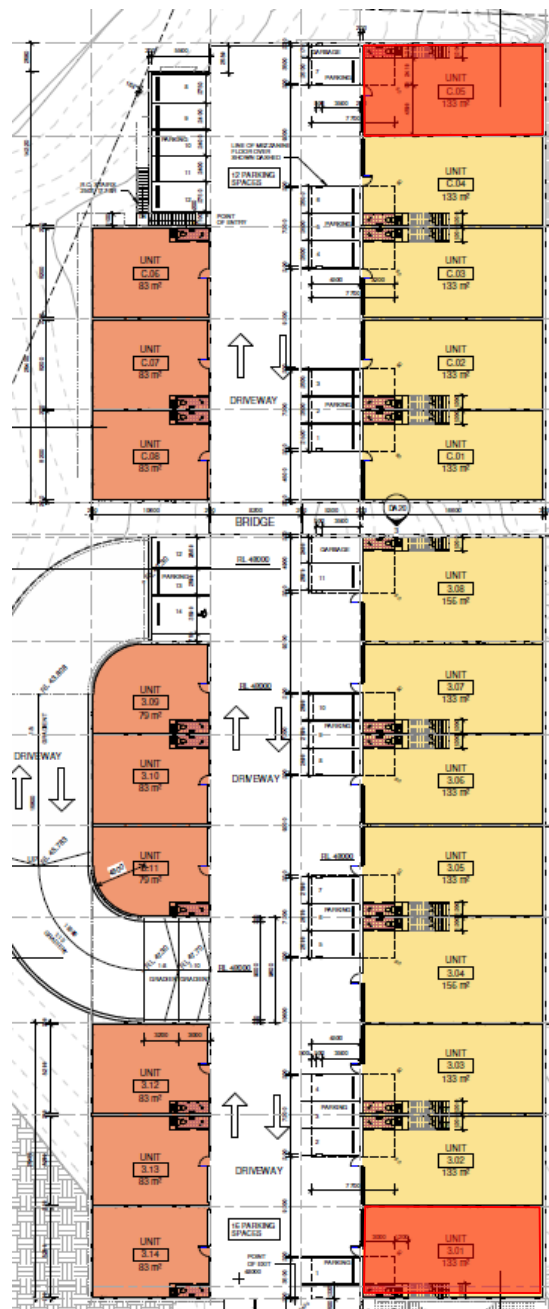
*In circumstances where the aim and objectives of PBP (section 1.1) are not met, then the construction requirements for bush fire protection will need to be considered on a **case-by-case basis**.*

The following specific construction detail has been considered:

- Slab on ground construction,
- Concrete walls,
- Colorbond roofing,
- Other essential fire safety equipment supplied (e.g. fire hose reels and fire extinguishers),
- The building will be provided with measures to mitigate smoke and ember attack, including screening or enclosing all gaps >3mm in size, installing draught excluders on external side-hung doors, fitting external roller doors with relevant seals and added protection on any ducted air ventilation systems.
- Units identified as being located within BAL Flame Zone will be fire isolated and constructed to BAL FZ.



Level 2.



Level 3.

BAL Flame Zone construction

Note all doors to be ember proof in the closed position. This may require draught excluders on the stiles, head, sill or threshold and rebated or planted jambs & centre stiles.

Image 06: Extract from Plans

## 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.

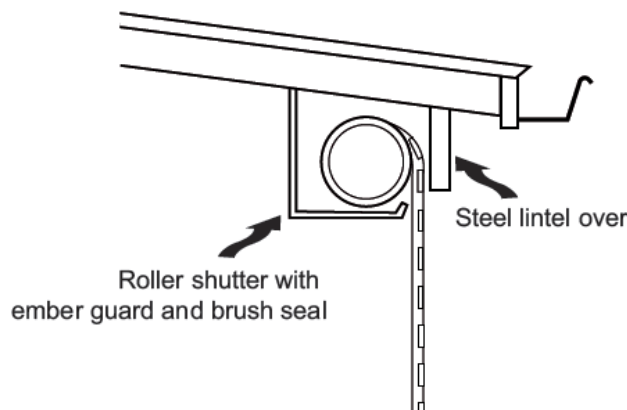
### Asset Protection Zones

1. That all grounds within the subject site to the north, south and east and for a minimum distance of 11 metres to the west from the building footprint is to be maintained in accordance with an Asset Protection Zone as detailed in Appendix 2 of *Planning for Bush Fire Protection* 2006 and the NSW Rural Fire Service publication 'Standards for Asset Protection Zones'.

### Construction

2. That units B.05, C.05, 2A.01 and 3.01 and the roof above these units shall comply with Australian Standard A53959-2009 "Construction of buildings in bush fire-prone areas" Section 9. However, any material, element of construction or system when tested to the method described in Australian Standard AS1530.8.2 "Methods for fire tests on building materials, components and structures Part 8.2: Tests on elements of construction for buildings exposed to simulated bushfire attack—Large flaming sources" shall comply with Clause 13.8 of that Standard except that flaming of the specimen is not permitted.
3. That the units identified as BAL FZ within Image 06 of this report are fire separated by a wall that complies with BAL FZ and extends to the underside of the roof covering.
4. That the openable windows on all other proposed units be screened within aluminium, steel or bronze metal mesh having an aperture size of  $\leq 2\text{mm}$  in such a way that the entire opening remains screened when the window is in the opened position.
5. That all gaps  $>3\text{mm}$  be screened within aluminium, steel or bronze metal mesh having an aperture size of  $\leq 2\text{mm}$  or enclosed.
6. That the external side-hung doors on the proposed building be tight fitting and fitted with a draft excluder. This may require draft excluders on the stiles, head, sill or threshold and rebated or planted jambs & centre stiles.
7. That the external roller doors on the proposed building have tight fitting guide tracks (not providing a gap  $>3\text{mm}$ ).
8. That any mechanical ducted ventilation on the proposed building provides screens over air intake vents and ensuring that exhaust vents are either screened or fitted with dampers that close when positive outward air pressure is lost to ensure the maintain ember protection to the inside of the building.
9. That the external roller doors on the proposed building be provided with an ember protection device at the top of the door that captures any embers where a gap of 2.0 mm on the external surface exists.





## Access

10. That the proposed access is to comply with the requirements for internal roads under s4.2.7 Planning for Bush Fire Protection 2006 which will allow fire appliance access throughout the building.

- Roads are two-wheel drive, sealed, all-weather roads;
- Traffic management devices are constructed to facilitate access by emergency services vehicles.
- A minimum vertical clearance of four metres to any overhanging obstructions, including tree branches, is provided.
- Curves have a minimum inner radius of six metres and are minimal in number to allow for rapid access and egress.
- The minimum distance between inner and outer curves is six metres.
- Maximum grades do not exceed 15 degrees and average grades are not more than 10 degrees.
- Crossfall of the pavement is not more than 10 degrees.
- Roads are clearly sign-posted and bridges clearly indicate load ratings.
- The internal road surfaces and bridges have a capacity to carry fully-loaded firefighting vehicles (15 tonnes).

## Water

11. The sizing, pressure and spacing of the hydrant system be installed in accordance with AS2419.1-2005.

## Emergency Management

12. That an Emergency /Evacuation Plan be prepared consistent with the NSW Rural Fire Service document Guidelines for the Preparation of Emergency/Evacuation Plan.

## 10.0 Conclusion

Given that the property is deemed bushfire prone 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 site is zoned IN1 Industrial and currently contains existing vegetation and industrial complex. Following development of the site the potential hazard was identified as being located to the north, south and west of the proposed building platform. The vegetation posing a hazard was determined to be forest to all aspects.

The proposed application relates to a commercial development and as such there are no minimum required Asset Protection Zones under Planning for Bush Fire Protection 2006.

The highest Bushfire Attack Level to the proposed building 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. All building elements directly exposed to the hazard interface will comply with AS3959 – 2009 and the general provisions for the remaining units are that all hinged doors shall be ember proof when in the closed position (draught excluders and closing on a rebated or planted jamb) and roller doors shall be provided with an ember protection.

Access provisions have included a recommendation to maintain suitable access for a fire appliance. The installation of an internal hydrant system will extend a water supply onsite compliant with AS2419 which satisfy the requirements of PBP 2006.

In accordance with the bushfire safety measures contained in this report, and consideration of the site specific bushfire risk assessment it is our opinion that when combined, they will provide a reasonable and satisfactory level of bushfire protection to the subject development and also satisfy both the Rural Fire Service's concerns and those of Council in this area.

We are therefore in support of the development application. Should you have any enquiries regarding this project please contact me at our office.

Prepared by  
Building Code & Bushfire Hazard Solutions



**Glyn Bickford**

Bushfire Consultant  
Planning for Bushfire Prone Areas – UTS Sydney

Reviewed and endorsed by  
Building Code & Bushfire Hazard Solutions P/L



**Stuart McMonnies**

Manager Bushfire Section  
G. D. Design in Bushfire Prone Areas.  
Certificate IV Fire Technology  
Fire Protection Association of Australia BPAD – L3 Accredited Practitioner  
Certification number – BPAD 9400



## 11.0 Annexure 01

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### 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
  - Nearmap
  - Geoscience Australia - ELVIS

### Attachments

Attachment 01: S4.14 Compliance Certificate



# Building Code & Bushfire Hazard Solutions

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

PROPERTY ADDRESS:	130 - 140 Old Pittwater Road, Brookvale
DESCRIPTION OF PROPOSAL:	Industrial Unit Complex
PLAN REFERENCE: (relied upon in report preparation)	Plans by Leech Harmon Architects Project No. 570, Drawings DA01- DA10 Dated 20th September 2018
BAL RATING:	BAL FZ <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:	<b>YES</b> NO <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:	190161
REPORT DATE:	11th October 2018
CERTIFICATION NO/ACCREDITED SCHEME	BPAD9400

I Stuart 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: 11th September 2018

