



**BUSHFIRE ASSESSMENT REPORT**

**PROPOSED UNIT DEVELOPMENT  
PART LOT 194 DP 10172 & LOTS 1&2 DP 795606  
# 19A, 21 & 23  
MEMORIAL AVENUE  
BLACKWALL**

**AUGUST 2016  
REF: 6047 V3**

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# 19A, 21 & 23  
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**AUGUST 2016**

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## PREFACE

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This document prepared by *Conacher Consulting*, provides an assessment of the bushfire attack potential and the necessary bushfire protection strategies for a proposed unit development at Blackwall. Aspects considered in relation to the Bushfire Assessment Report include; vegetation type, slopes, water supplies, entry and egress access, provision of asset protection zone defensible space and construction standards for any future dwellings.

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# SECTION 1

## INTRODUCTION

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### 1.1 INTRODUCTION

This Bushfire Assessment Report has been prepared by *Conacher Consulting* for a proposed residential unit development of land at Memorial Avenue, Blackwall.

The objectives of this Report are to:

- i) Address the relevant requirements of Planning for Bushfire Protection (Rural Fire Service, 2006);
- ii) Identify if the development complies with the aims and objectives of Planning for Bushfire Protection (RFS, 2006);
- iii) Prepare a Report that supplies the relevant information for the Rural Fire Service and Council prior to granting a Bushfire Safety Authority (RFS) or development approval (Council).

### 1.2 SITE DETAILS

#### **Location**

The subject site is located within part Lot 194 DP 10172 & Lots 1 & 2 DP 795606, #19A, 21 & 23 on Memorial Avenue and Wallaby Street, Blackwall.

#### **Topography**

The site consists of the flat to gently sloping land (0-5% gradient) with an easterly aspect located on the lower coastal sand plain in the vicinity of Blackwall Mountain.

#### **Surrounding Land Use**

The site adjoins Memorial Avenue to the east with Blackwall Mountain Reserve further to the east. Developed land is located to the west, north and south.

#### **Drainage**

There is street drainage on Wallaby Street, no drainage lines are present on or near to the site.

#### **Vegetation**

The site contains cleared land with patches of *Melaleuca* Scrub Tea Trees). This vegetation will be removed for future development to occur.

### 1.3 PROPOSED DEVELOPMENT

The proposed development is a residential unit development comprising 12 units as part of a proposed strata subdivision following construction of the units.

## SECTION 2

### BUSHFIRE ATTACK ASSESSMENT

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#### 2.1 BUSHFIRE ASSESSMENT CRITERIA

##### ***Bushfire Prone Land Map***

Council's Bushfire Prone Land Map (Figure 1) shows the subject site mapped as Buffer to Category 1 Vegetation. Category 1 Vegetation is located on the Blackwall Mountain Reserve located 50-70 metres to the east of the site.

##### ***Forest Fire Danger Index***

The subject site is located within the Central Coast Council Local Government Area in the Greater Sydney Region. The Forest Fire Danger Index for the Greater Sydney Region is rated at 100 for use in determining asset protection zone requirements and categories for bushfire attack.

##### ***Vegetation Classification***

The principal vegetation types affecting the bushfire hazard located within 140 metres of the proposed development are outlined below:

- North – Reduced vegetation – developed residential land
- South – Reduced vegetation – developed residential land
- East – Forest included as part of Blackwall Mountain Reserve with cleared land on Memorial Avenue adjoining the site.
- West – Reduced vegetation – developed residential land

##### ***Development Category***

The proposed development is classified as a 'residential strata subdivision' under Chapter 4 of Planning for Bushfire Protection (RFS, 2006).

##### ***Planning for Bushfire Protection (RFS, 2006)***

Due to the presence of Buffer to Category 1 vegetation on the site as shown on the Bushfire Prone Land Map any development application for subdivision is required to include a Bushfire Assessment Report prepared in accordance with the requirements of *Planning for Bushfire Protection* (RFS, 2006).

##### ***State Legislation***

This development is an integrated development and is therefore subject to Section 91 of the EP&A Act. Section 100 of the Rural Fires Act also applies to the proposed development as it is a subdivision of land. Section 79BA of the EP&A Act applies to any future unit apartments to be constructed on the site.

## 2.2 BUSHFIRE ASSET PROTECTION ZONE ASSESSMENT

An assessment of the asset protection zone requirements and bushfire attack in relation to the adjoining lands, vegetation and slope gradients for the site is provided in Table 2.1.

<b>TABLE 2.1</b> <b>ASSET PROTECTION ZONE ASSESSMENT</b> (from Table A2.4 of RFS 2006)			
<b>Direction</b>	<b>Vegetation Classification (within 140m)</b>	<b>Effective Slope (within 100m)</b>	<b>Recommended APZ Distance from Bushfire Hazard (metres)</b>
North	Reduced Vegetation	Cross-slope	NR
South	Reduced Vegetation	Upslope	NR
East	Forest Vegetation	Upslope	20
West	Reduced Vegetation	Cross-slope	NR

NR = No Requirements as no hazard present

### 2.3 BUILDING CONSTRUCTION REQUIREMENTS AND BUSHFIRE ATTACK LEVEL DETERMINATION

The asset protection zones (20 metres to the east) applying to the proposed residential units have been determined using the APZ assessment criteria from Table A2.4 of Planning for Bushfire Protection (RFS 2006). However for any future dwellings to be located within the proposed allotments determination of the Bushfire Attack Level for each lot in accordance with Table 2.4.2 of AS3959-2009 is required.

All dwellings to be located within 100 metres of the Category 1 Vegetation to the east will require construction to meet the bushfire attack levels as per the requirements of AS3959-2009 (Construction of Dwellings in Fire Prone Areas). There are no specific construction requirements in relation to AS3959-2009 for dwellings located beyond 100 metres from the identified bushfire hazards.

An assessment for the BAL determinations has identified the following BAL's for the site, as measured from upslope forest in the Blackwall Mountain Reserve:

BAL 40	-	19 - <25 metres
BAL 29	-	25 - <35 metres
BAL 19	-	35 - <48 metres
BAL 12.5	-	48 - <100 metres
BAL LOW	-	>100 metres (no specific construction times)

The future units will be located at a distance of beyond fifty metres from the upslope forest vegetation in the Blackwall Mountain Reserve. Therefore construction to BAL 12.5 has been determined as the most relevant BAL applying to future unit apartments.



## SECTION 3

### BUSHFIRE PROTECTION MATTERS

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#### 3.1 PROVISION OF ASSET PROTECTION ZONES

All future lots will contain managed gardens/lawns which are effectively low hazard areas.

The presence of Memorial Avenue to the east will provide an appropriately sized APZ of 20 metres to the east.

#### 3.2 ACCESS

Section 4.1.3 of PBP (RFS 2006) outlines the requirements for public roads within a residential subdivision. The objective of the public road system in a bushfire emergency is stated in PBP (RFS 2006) as: *"To provide safe operational access to structures and water supply for emergency services, while residents are seeking to evacuate from an area"*.

The existing road system has been constructed to Councils requirements and meets the requirements of Planning for Bushfire Protection RFS (2006).

#### 3.3 WATER SERVICES

The existing urban development in the local area has reticulated water mains. The future development will extend the existing water reticulation from the surrounding infrastructure therefore a supplementary form of water supply will not be necessary for fire fighting purposes. This water supply arrangement is in compliance with *'Planning for Bushfire Protection, 2006'* in respect of water supply.

The reticulated water supply, fire hydrant spacing, sizing and pressure has been installed to comply with the requirements of AS2419.1 – 2005. A certification or test report from the Water Supply Authority demonstrates that the requirements of AS2419.1-2005 can be achieved during a bushfire event.

## SECTION 4

### CONCLUSIONS AND RECOMMENDATIONS

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#### 4.1 AIM AND OBJECTIVES OF PLANNING FOR BUSHFIRE PROTECTION

*"The aim of Planning for Bushfire Protection is to use the NSW development assessment system to provide for the protection of human life and to minimise impacts on property from the threat of bushfire, while having due regard to development potential, on site amenity and protection of the environment" (PBP pg 1).*

The preparation of this Bushfire Assessment Report and subsequent assessment by Council and the Rural Fire Service ensures compliance with the aim of Planning for Bushfire Protection.

The following comments are provided in relation to satisfying the objectives of PBP.

##### *Objective 1*

- (i) *afford occupants of any building adequate protection from exposure to a bush fire;*

Construction of future units to meet the requirements of the specific bushfire attack levels BAL 12.5 and the provision of the APZ as outlined in Sections 2 and 3, will ensure that adequate protection is provided to occupants of any future dwelling in the event of a bushfire.

##### *Objective 2*

- (ii) *provide for a defensible space to be located around buildings;*

The establishment and maintenance of the completed development, Memorial Avenue and Wallaby Street will provide a defensible space located around buildings.

##### *Objective 3*

- (iii) *provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent direct flame contact and material ignition;*

The asset protection zones identified in Table 2.1 shows that units are not to be constructed within the flame zone for any strata lot. The management of the APZ's within the site and adjoining roads as an inner protection area is designed to prevent direct flame contact to future dwellings.

##### *Objective 4*

- (iv) *ensure that safe operational access and egress for emergency service personnel and residents is available;*

The existing road system will enable safe operational ingress for emergency services and also simultaneous safe egress for residents during a bushfire emergency within the local area.

##### *Objective 5*

- (v) *provide for ongoing management and maintenance of bush fire protection measures, including fuel loads in the asset protection zone (APZ);*

The APZ within the strata lots and the roadways is to be managed as an inner protection zone during the development of the site.

*Objective 6*

*(vi) ensure that utility services are adequate to meet the needs of fire fighters (and others assisting in bush fire fighting)*

The adequacy of utility services such as water supply is discussed in Section 3 of this document. The utility services are adequate to meet the needs of fire fighters (and others assisting in bush fire fighting).

## **4.2 CONCLUDING COMMENTS**

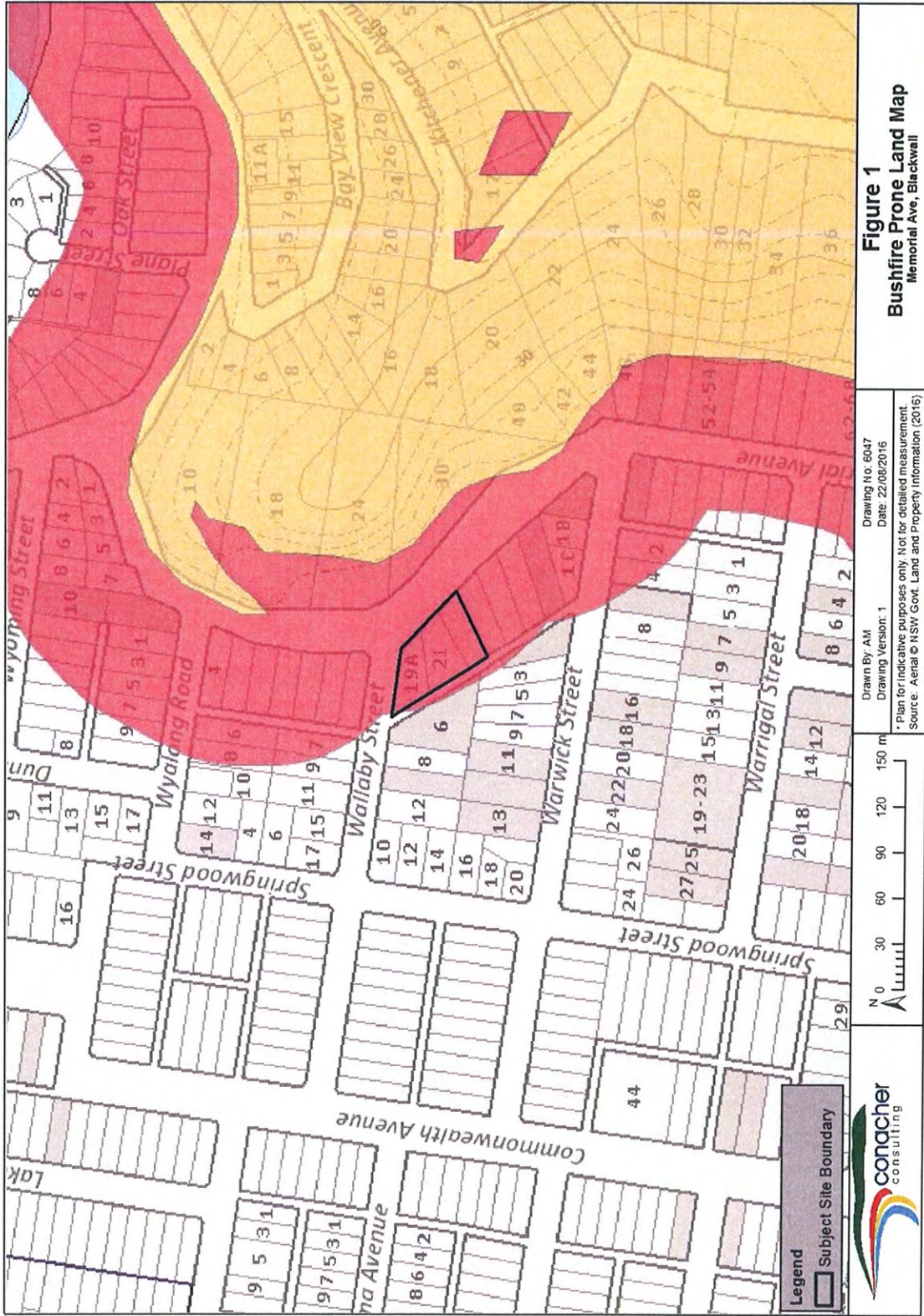
With the implementation of the combination of measures recommended, and outlined in Sections 2 and 3 of this report, the overall aims and objectives of Planning for Bushfire Protection (RFS 2006) can be achieved for the proposed development.

## **4.3 RECOMMENDATIONS**

The following recommendations are provided in relation to the requirements of RFS (2006).

- i. Management of the areas identified as asset protection zones to the standards of an inner protection area.
- ii. Provision of water and services to be in accordance with Section 4.1.3 of RFS (2006).
- iii. Construction of future units to meet BAL 12.5 construction requirements.

## FIGURES



## REFERENCES

Councils of Standards Australia AS3959 (2009) – Australian Standard Construction of buildings in bush fire-prone areas.

NSW Rural Fire Service (2006) - *Planning for Bush Fire Protection - A Guide for Councils, Planners, Fire Authorities and Developers*. NSW Rural Fire Service.