



Natural Area  
CONSULTING MANAGEMENT SERVICES

## **LWP Property Group Pty Ltd**

# **BAL-contour Report – Part Lot 9195, Flynn Drive Banksia Grove**

**V1 –27 October 2020**

Natural Area Holdings Pty Ltd  
94D Lord Street, Whiteman, WA, 6076  
Ph: (08) 9209 2767  
info@naturalarea.com.au  
[www.naturalarea.com.au](http://www.naturalarea.com.au)



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- City of Wanneroo
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## 1.0 Proposal Details

Natural Area Consulting Management Services has prepared this BAL-assessment report to support a development application for the northern portion of Lot 9195 of Banksia Grove within the City of Wanneroo for LWP Property Group Pty Ltd (LWP) to provide current BAL-ratings for Lots being sold in the vicinity of Bush Forever Site 295 to the west and Flynn Drive to the north. The overall development is progressing in a northerly direction towards Flynn Drive, with the subject site being cleared of vegetation. The site is located within 100 m of vegetation designated as being bushfire prone, necessitating the need for the BAL-assessment and assigning a BAL-rating that will determine appropriate construction standards as per AS 3959:2018.

The BAL-assessment considers current site conditions along with the provisions of *SPP 3.7 Planning in Bushfire Prone Areas* (Department of Planning and the Western Australian Planning Commission, 2015) and *Guidelines for Planning in Bushfire Prone Areas* (Department of Planning, Western Australian Planning Commission and Department of Fire and Emergency Services, V1.3, 2017).

### 1.1 Location

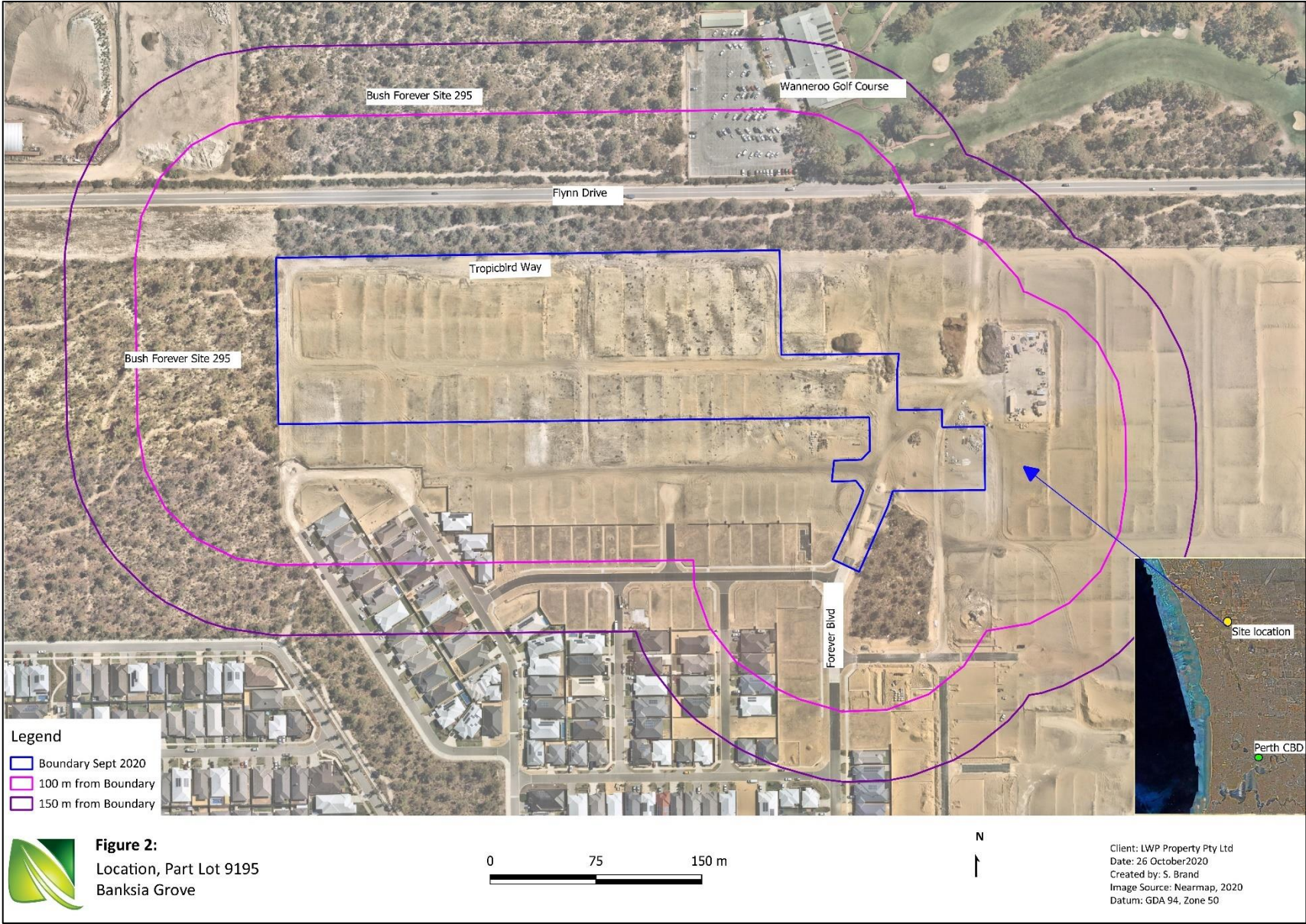
The site is located within the north-western portion of the Banksia Grove development site, with the Bush Forever site to the west, existing and current development to the south and east, and the Flynn Drive road and road reserve to the north (Figure 2). The Wanneroo Golf Course and another section of Bush Forever Site 295 is also present across Flynn Drive to the north.

### 1.2 Land Uses and Proposed Development

The site is in the process of being engineered ahead of Lots being sold and built on, with drainage works completed, roads in the process of construction, and final engineering of Lots to occur in the near future (Figure 1).



**Figure 1:** Current land use, Banksia Grove



### **1.3 Aims and Objectives**

The objective of the BAL-assessment is to outline the BAL-ratings for the nominated stage of the subdivision on site and the associated bushfire management methods and any requirements that will be implemented to support the proposed development. Accordingly, broad aims include:

- reduce the occurrence of and minimise the impact of fire to the life and property of future building occupants and the environment
- allow easy access for fire-fighters if a fire does occur
- protect the landscape within the site as far as is possible
- document bushfire prevention requirements of the area to which it relates.

## **2.0 Environmental Considerations**

### **2.1 Native Vegetation**

The site is in a developed area, with environmental values considered during the early planning phases of the development process, thus, there are:

- no Bush Forever sites present within the site boundaries, however, two components of Bush Forever Site 295 are present to the west of the site and north of Flynn Drive
- no conservation category wetlands present
- no threatened ecological communities present
- no declared rare or priority listed flora species present.

### **2.2 Revegetation/Landscaping**

As no native vegetation will be cleared to accommodate the proposed residence, there will be no revegetation requirement.

## 3.0 Bushfire Assessment

### 3.1 Vegetation Classification

All vegetation within 100 m of the proposed Lots was classified in accordance with Clause 2.2.3 of AS 3959:2018 *Construction of Buildings in Bushfire-prone Areas*. All classified vegetation within 100 m of the subject site is Class D scrub that will be retained in the longer term (Figure 6), with all other areas being subject to exclusion clauses.

#### 3.1.1 Area 1: Class D Scrub

Class D Scrub is characterised by shrubs 2 – 4 m high with a continuous canopy. This vegetation class represents all the classified vegetation within 100 m of the subject area, and is present within (Figure 3):

- Bush Forever Site 295 to the west and north of Flynn Drive
- the patches of remnant vegetation within the Wanneroo Golf Club north of Flynn Drive.

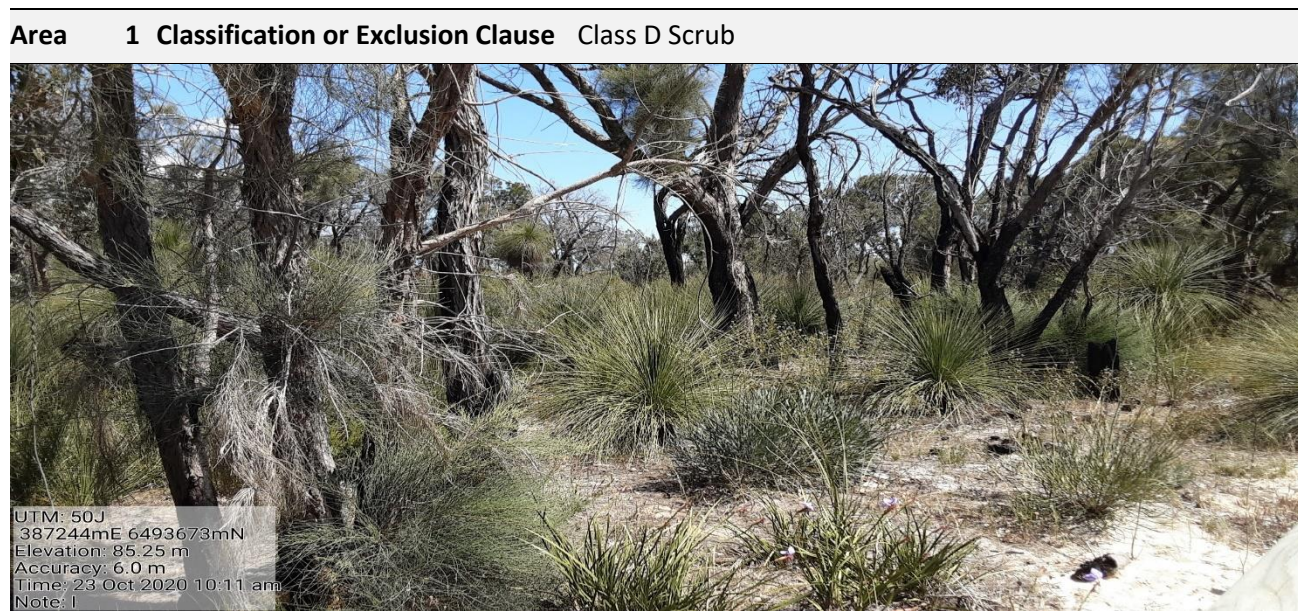


Photo ID: 1 – Bush Forever Site 295 to the West



Photo ID: 2 – Bush Forever Site 295 across Flynn Drive to the North

**Figure 5:** Class D Scrub

### 3.1.2 Area 2: Low-threat Vegetation

Low threat vegetation is present within the Wanneroo Golf Course north of Flynn Dr that is subject to exclusion clause 2.2.3.2 (f) of AS 3959:2018 (Figure 4)

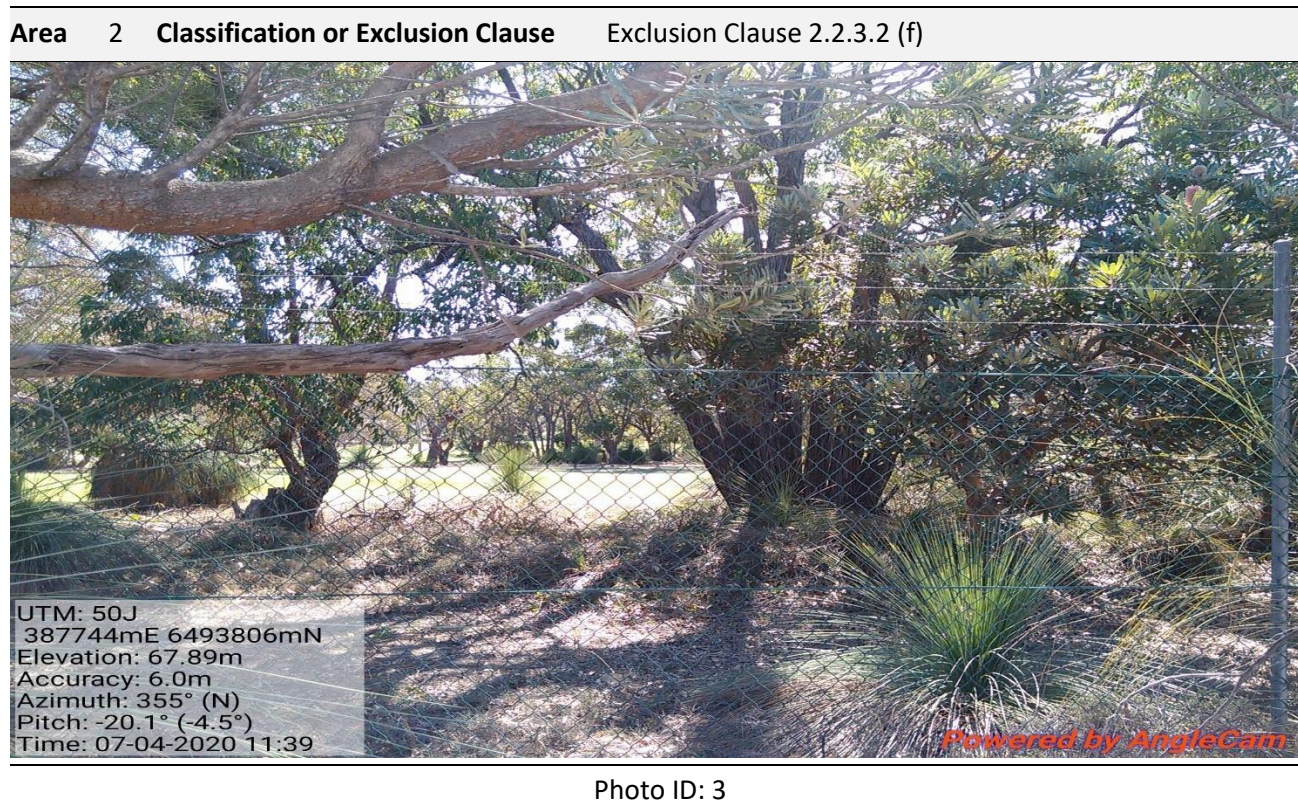


Figure 4: Area 2 – Low-threat vegetation

### 3.1.3 Area 3: Non-vegetated Areas

Non-vegetated areas are present in the form of cleared areas within and in proximity to the subject site, roads, footpaths, and existing buildings within areas currently being developed to the south (Figure 5).

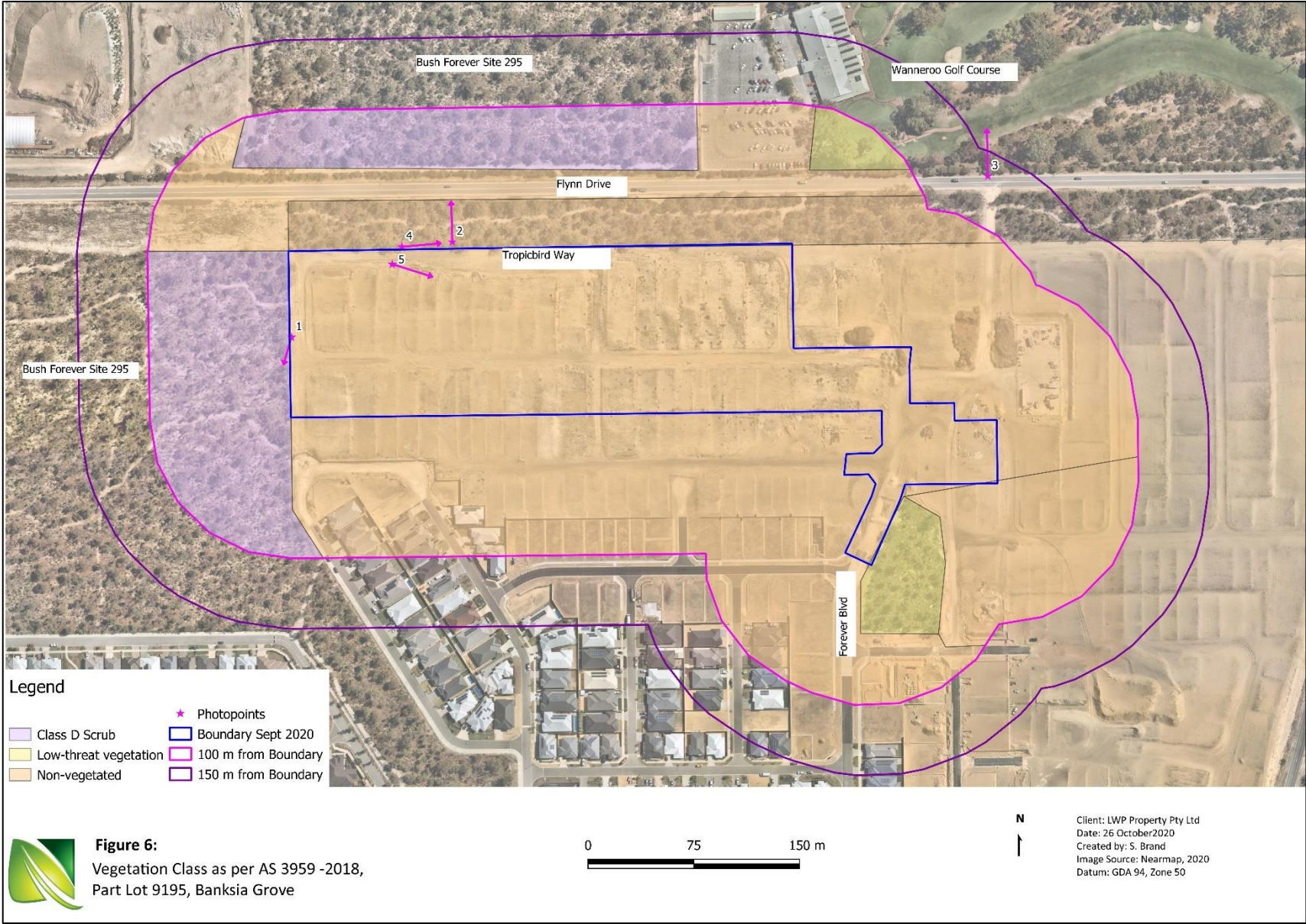




Photo ID: 5 – Current site development works

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**Figure 5:** Non-vegetated areas



### **3.2 Effective Slope**

Banksia Grove is located on the Swan Coastal Plain within an interface area between the Spearwood and Bassendean Dune Systems, meaning the land slopes downward from west to east. Accordingly, vegetation in Bush Forever Site 295 to the west is upslope, vegetation to the north and south is flat land, and to the south is downslope 0 – 5° (Figure 7).

### **3.3 Relevant Fire Danger Index**

The fire danger index for this site is FDI 80, as documented in Table 2.4.3 of AS 3959:2018, which is the nominated FDI for Western Australia.

### **3.4 Potential Fire Impacts**

The potential fire impacts associated with the site include smoke and ember attack.

### **3.5 BAL-Assessment**

The bushfire attack level (BAL) assessment considers the current site characteristics, including which include the recent clearing of vegetation within the Flynn Drive road reserve. All Lots within 100 m of classified vegetation will require a BAL-rating (Figure 8).

#### **3.5.1 Northern Lots adjacent to Flynn Drive**

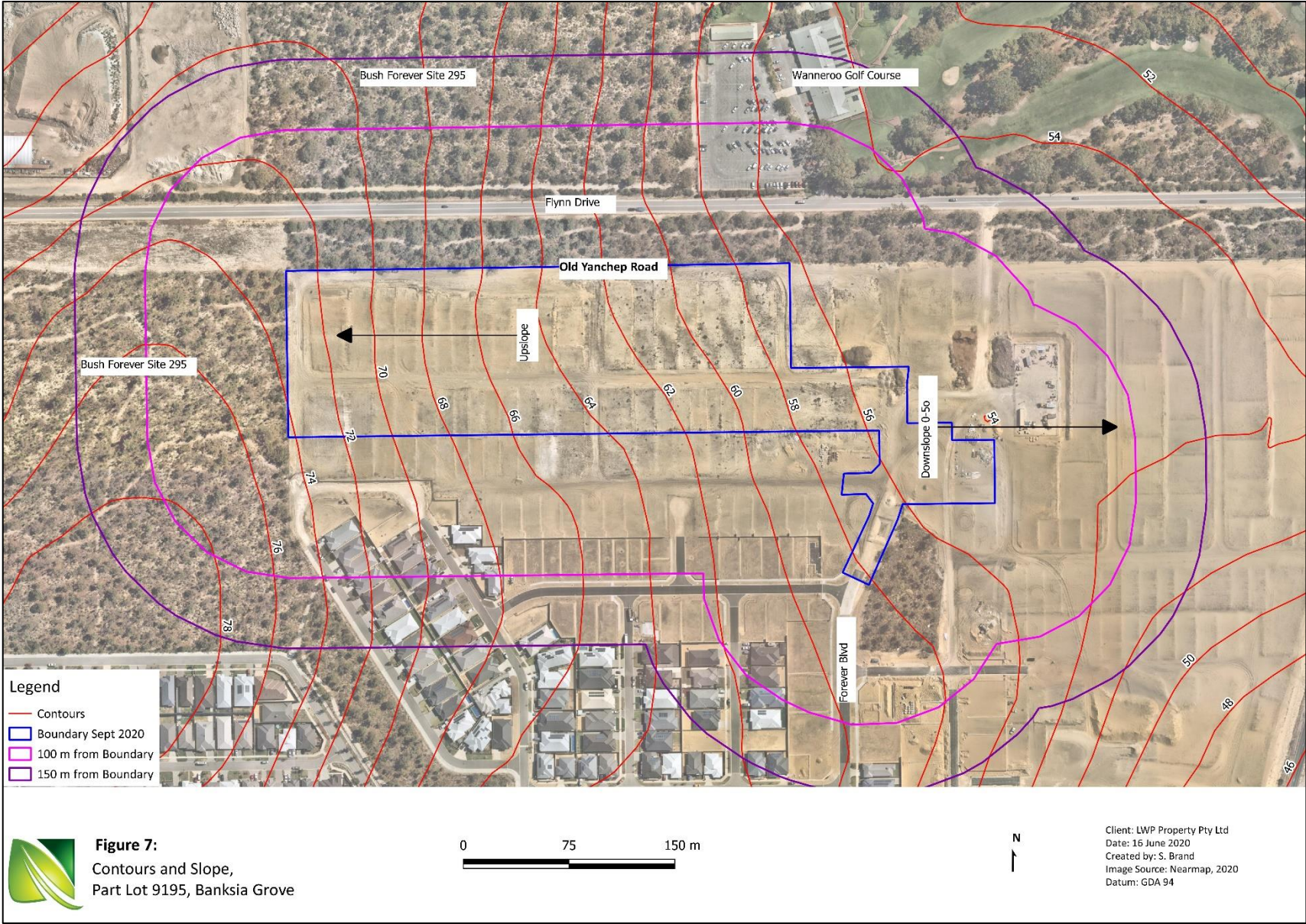
As the vegetation within the Flynn Drive road reserve has recently been cleared, it means that the classified vegetation that will influence BAL-ratings in Lots facing Flynn Drive to the north will be that located within the portion of Bush Forever Site 295 across Flynn Drive and the pockets of remnant vegetation in the Wanneroo Golf Club. Accordingly, 41 Lots will be allocated a BAL-12.5 rating as they are more than 60 m from the classified vegetation (Figure 8).

#### **3.5.2 Lots Facing Bush Forever Site 295 to the West**

Six Lots facing Bush Forever Site 295 to the west will be rated BAL-19 with the application of a 4 m setback from the Lot boundary, with an additional four Lots within 100 m of this vegetation class will be rated BAL-12.5. The presence of vegetation in the portion of Bush Forever Site 295 across Flynn Drive to the north will not contribute to the BAL-ratings of these Lots.

#### **3.5.3 Lots more than 100 m from Classified Vegetation**

All other Lots within the stage boundaries are located more than 100 m from the classified vegetation and are rated BAL-Low.





## 4.0 Compliance and Justifications

### 4.1 SPP 3.7 Objectives and Application of Policy Measures

The intent of *State Planning Policy (SPP) 3.7 Planning in Bushfire Prone Areas* (Department of Planning and Western Australian Planning Commission, 2015) is to ensure that bushfire risks are considered in a timely manner and that planning documents demonstrate the appropriate application of the various policy measures. Table 1 summarises the intent and objectives of SPP 3.7 and provides evidence of how the proposed subdivision area within Lot 9195 at Banksia Grove complies.

**Table 1:** Evidence of compliance with SPP 3.7 intent and objectives

SPP Reference	Description	Evidence of Compliance
Intent	<ul style="list-style-type: none"><li>Ensure that risks associated with bushfires are planned using a risk-based approach</li></ul>	<ul style="list-style-type: none"><li>Undertaking a BAL-assessment and documenting in a report that complies with SPP 3.7</li><li>Hazard assessment indicates risks associated with bushfire are manageable, noting that some additional clearing will be required to ensure all Lots can comply</li></ul>
Objective 1	<ul style="list-style-type: none"><li>Avoid any increase in the threat of bushfire to people, property and infrastructure</li></ul>	<ul style="list-style-type: none"><li>Hazard assessment indicates risks associated with bushfire are manageable</li><li>Lots within 100 m of classified vegetation with have a BAL-rating, with most being lower than BAL-29</li><li>The developer acknowledges that some additional clearing is planned within the drainage reserve and the Flynn Drive road reserve before a maximum BAL-29 can be achieved for all Lots; they have committed to this occurring before those Lots rated BAL-40 and BAL-FZ are developed</li></ul>
Objective 2	<ul style="list-style-type: none"><li>Reduce vulnerability to bushfire</li></ul>	<ul style="list-style-type: none"><li>Hazard assessment indicates risks associated with bushfire are manageable</li><li>Lots within 100 m of classified vegetation with have a BAL-rating, with most being lower than BAL-29</li><li>The developer acknowledges that some additional clearing is planned within the drainage reserve and the Flynn Drive road reserve before a maximum BAL-29 can be achieved for all Lots; they have committed to this occurring before those Lots rated BAL-40 and BAL-FZ are developed</li></ul>

SPP Reference	Description	Evidence of Compliance
Objective 3	<ul style="list-style-type: none"> <li>Ensure that higher order strategic planning documents and proposals consider bushfire protection requirements at an early stage</li> </ul>	<ul style="list-style-type: none"> <li>Planning within the area is well advanced, with tree retention and environmental values assessed prior to planning approval for this stage being granted</li> </ul>
Objective 4	<ul style="list-style-type: none"> <li>Achieve an appropriate balance between bushfire risk management and biodiversity conservation</li> </ul>	<ul style="list-style-type: none"> <li>Site environmental values have been considered during earlier stages of the planning approvals process</li> <li>No trees or POS areas are retained within proposed subdivision area, but are retained in Bush Forever Site 295 to the west and north, pockets of remnant vegetation within Wanneroo Golf Course and Boomerang Park, remnant vegetation across Old Yanchep Road to the east, along with some tree retention planned within the drainage reserve and another POS immediately to the south of the subject site</li> </ul>

## 4.2 Bushfire Protection Criteria

Table 2 demonstrates the sites compliance with Bushfire Protection Criteria; with Figures 8 and 9 indicating BAL-ratings on a Lot by Lot basis for the proposed subdivision area.

**Table 2:** Compliance with bushfire protection criteria

Intent	Performance Principle	Site Solution
<b>Element 1: Location</b>		
Ensure subdivision and development applications are located in areas with the least possible risk of bushfire	<ul style="list-style-type: none"> <li>Bushfire hazard assessment is or will on completion be moderate or low</li> <li>BAL-rating is BAL-29 or lower</li> </ul>	<ul style="list-style-type: none"> <li>Bushfire hazard assessment indicates that the bushfire risk is manageable</li> <li>Lots within 100 m of classified vegetation with have a BAL-rating, with most being lower than BAL-29</li> <li>The developer acknowledges that some additional clearing is planned within the drainage reserve and the Flynn Drive road reserve before a maximum BAL-29 can be achieved for all Lots; they have committed to this occurring before those Lots rated BAL-40 and BAL-FZ are developed</li> </ul>

Intent	Performance Principle	Site Solution
<b>Element 2: Siting and Design of Development</b>		
Siting and design of development minimises the level of bushfire impact	<ul style="list-style-type: none"> <li>Siting and design of development is appropriate to the level of bushfire threat and minimises risk to people, property and infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Bushfire hazard assessment indicates that the bushfire risk is manageable</li> <li>Lots within 100 m of classified vegetation with have a BAL-rating, with most being lower than BAL-29</li> <li>The developer acknowledges that some additional clearing is planned within the drainage reserve and the Flynn Drive road reserve before a maximum BAL-29 can be achieved for all Lots; they have committed to this occurring before those Lots rated BAL-40 and BAL-FZ are developed</li> </ul>
<b>Element 3: Vehicular Access</b>		
Vehicular access servicing a subdivision is available and safe during a bushfire event	<ul style="list-style-type: none"> <li>Internal layout, design and construction of public and private vehicular access and egress in the subdivision allow emergency and other vehicles to move easily and safely at all times</li> </ul>	<ul style="list-style-type: none"> <li>Access will be via the existing road network and that planned for construction during subdivision works (refer Figures 1, 8, 9)</li> <li>Lots within 100 m of classified vegetation with have a BAL-rating, with most being lower than BAL-29</li> <li>The developer acknowledges that some additional clearing is planned within the drainage reserve and the Flynn Drive road reserve before a maximum BAL-29 can be achieved for all Lots; they have committed to this occurring before those Lots rated BAL-40 and BAL-FZ are developed</li> <li>When clearing of vegetation within Flynn Drive and the drainage reserve are complete, only one cul-de-sac will be present within the north-western portion of the site; construction will comply with guidelines</li> </ul>

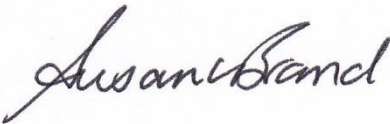
Intent	Performance Principle	Site Solution
		<ul style="list-style-type: none"><li>Two access/egress options will be available to all locations of the proposed subdivision</li></ul>
<b>Element 4: Water</b>		
Water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire	<ul style="list-style-type: none"><li>Subdivision is provided with a permanent and secure water supply that is sufficient for firefighting purposes</li></ul>	<ul style="list-style-type: none"><li>The site will be connected to scheme water, i.e., located within a reticulated area, with hydrants compliant with Water Corporation requirements</li></ul>

### 4.3 Compliance with Relevant Documents

Sections 5.1 and 5.2 demonstrate how the proposed subdivision area Ave complies with *State Planning Policy 3.7* (Department of Planning and WA Planning Commission, 2015) and *Guidelines for Planning in Bushfire Prone Areas* (Department of Planning, Department of Fire and Emergency Services and WA Planning Commission, V1.3, 2017). The Lot owner must comply with relevant sections of the annual firebreak notice and bushfire information prepared by the City of Wanneroo, such as total fire ban and hazard reduction programs.

### 4.4 Compliance Statement

This BAL-assessment report has been prepared in accordance with the requirements of *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (Department of Planning and Western Australian Planning Commission, 2015) and *Guidelines for Planning in Bushfire Prone Areas* (Department of Planning, Department of Fire and Emergency Services and Western Australian Planning Commission, V1.3 2017). The BAL-assessment was undertaken in accordance with the simple procedure (Method 1) of AS 3959:2018. Information provided in this document is correct as at 27 October 2020.

Signed: 

Dated: 27 October 2020

Accreditation Number: 36638

Accreditation Expiry Date: 30 April 2021



## 5.0 References

*AS 3959:2018 Construction of Buildings in Bushfire Prone Areas*, Standards Australia, NSW.

Department of Planning, Department of Fire and Emergency Services Authority, and the Western Australian Planning Commission, (2015), *Guidelines for Planning in Bushfire Prone Areas* (Edition 3), Western Australian Planning Commission, Perth, Western Australia.

Department of Planning and Western Australian Planning Commission, (2015), *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth Western Australia.