

# **SMITH CONSULTING**

**Bushfire Consultants**

## **BUSHFIRE MANAGEMENT PLAN**

**Lot 601 (No 782) Welshpool Road East, Wattle Grove**  
Shire of Kalamunda



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Site visited 5 April 2017; Report completed 21 April 2017

# Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address: Lots 601 (No 782) Welshpool Road East, Wattle Grove

Site visit: Yes ☒ No ☐

Date of site visit (if applicable): Day 5 Month April Year 2017

Report author: Ralph Smith

WA BPAD accreditation level (please circle):

Not accredited ☐ Level 1 BAL assessor ☐ Level 2 practitioner ☒ Level 3 practitioner ☐

If accredited please provide the following.

BPAD accreditation number: 27541 Accreditation expiry: Month August Year 2017

Bushfire management plan version number: 1

Bushfire management plan date: Day 11 Month April Year 2017

Client/business name: Altus Planning & Appeals

	Yes	No
Has the BAL been calculated by a method other than method 1 as outlined in AS3959 (tick no if AS3959 method 1 has been used to calculate the BAL)?		<input checked="" type="checkbox"/>
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the bushfire protection criteria elements)?		<input checked="" type="checkbox"/>

Is the proposal any of the following (see [SPP 3.7 for definitions](#))?

	Yes	No
Unavoidable development (in BAL-40 or BAL-FZ)		<input checked="" type="checkbox"/>
Strategic planning proposal (including rezoning applications)		<input checked="" type="checkbox"/>
Minor development (in BAL-40 or BAL-FZ)		<input checked="" type="checkbox"/>
High risk land-use		<input checked="" type="checkbox"/>
Vulnerable land-use		<input checked="" type="checkbox"/>

None of the above ☐

**Note:** Only if one (or more) of the above answers in the tables is yes should the decision maker (e.g. local government or the WAPC) refer the proposal to DFES for comment.

Why has it been given one of the above listed classifications (E.g. Considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

The information provided within this bushfire management plan to the best of my knowledge is true and correct:

Signature of report author



Date 21/04/2017

## NOTE

This Bushfire Management Plan has been developed by Smith Consulting for the exclusive use of the client, Altus Planning & Appeals.

The plan has been compiled using the standard methodologies required by Western Australian government departments and agencies. It is based on the following:

- *State Planning Policy 3.7 Planning in Bushfire Prone Areas (SPP 3.7)*, December 2015
- *Guidelines for Planning in Bushfire Prone Areas*, March 2017
- *Australian Standard 3959 – Construction of buildings in bushfire-prone areas (incorporating amendments 1, 2 and 3)*, March 2009
- Standard fuel load field data collection methods and conversion to a fuel load applicable for the appropriate fire spread models.

The techniques described in the above publications have been applied in the appropriate areas and circumstances for the development of this document.

Where there was no public access the interpretation is based on photographic and satellite imagery, and a laser distance meter was used to measure distances and effective slope.

It is recommended that this Bushfire Management Plan be revised every five years to ensure that it remains relevant and in-line with current requirements. This will optimise protection. It is proposed that the property owners undertake the review.

## DISCLAIMER

This Bushfire Management Plan has been prepared in good faith. It is derived from sources believed to be reliable and accurate at the time of publication. Nevertheless, this plan is distributed on the terms and understanding that the author is not responsible for results of any actions taken based on information in this publication or for any error or omission from this publication.

Smith Consulting has exercised due and customary care in the preparation of this Bushfire Management Plan and has not, unless specifically stated, independently verified information provided by others.

Any recommendations, opinions or findings stated in this report are based on circumstances and facts as they existed at the time Smith Consulting performed the work. Any changes in such circumstances and facts upon which this document is based may adversely affect any recommendations, opinions or findings contained in this plan.

## DOCUMENT STATUS

Version	Comment	Reviewer	Review Date
1	Original version	RDS	13 April 2017



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## 1. Introduction

This Bushfire Management Plan (BMP) is provided to provide guidance for the planning and management of the potential bushfire threat on the proposed change of land use on Lot 601 (No 782) Welshpool Road East, Wattle Grove. The Bushfire Management Plan is a supporting document for the proposed change of land use to permit weddings and associated functions.

The development site is adjacent to a Bush Forever site, but not any Aboriginal Heritage sites. A portion of the development site has been designated by the Fire and Emergency Services Commissioner as a bushfire prone area. The BMP is prepared as a condition of development at the request of the Western Australian Planning Commission (WAPC). It should also be noted that the Department of Fire and Emergency Services (DFES) advise that it is an unreasonable expectation that a fire appliance will be available to protect every home during a bushfire emergency. It is therefore critical that all new residential buildings are constructed to an appropriate standard and the surrounding vegetation appropriately managed.

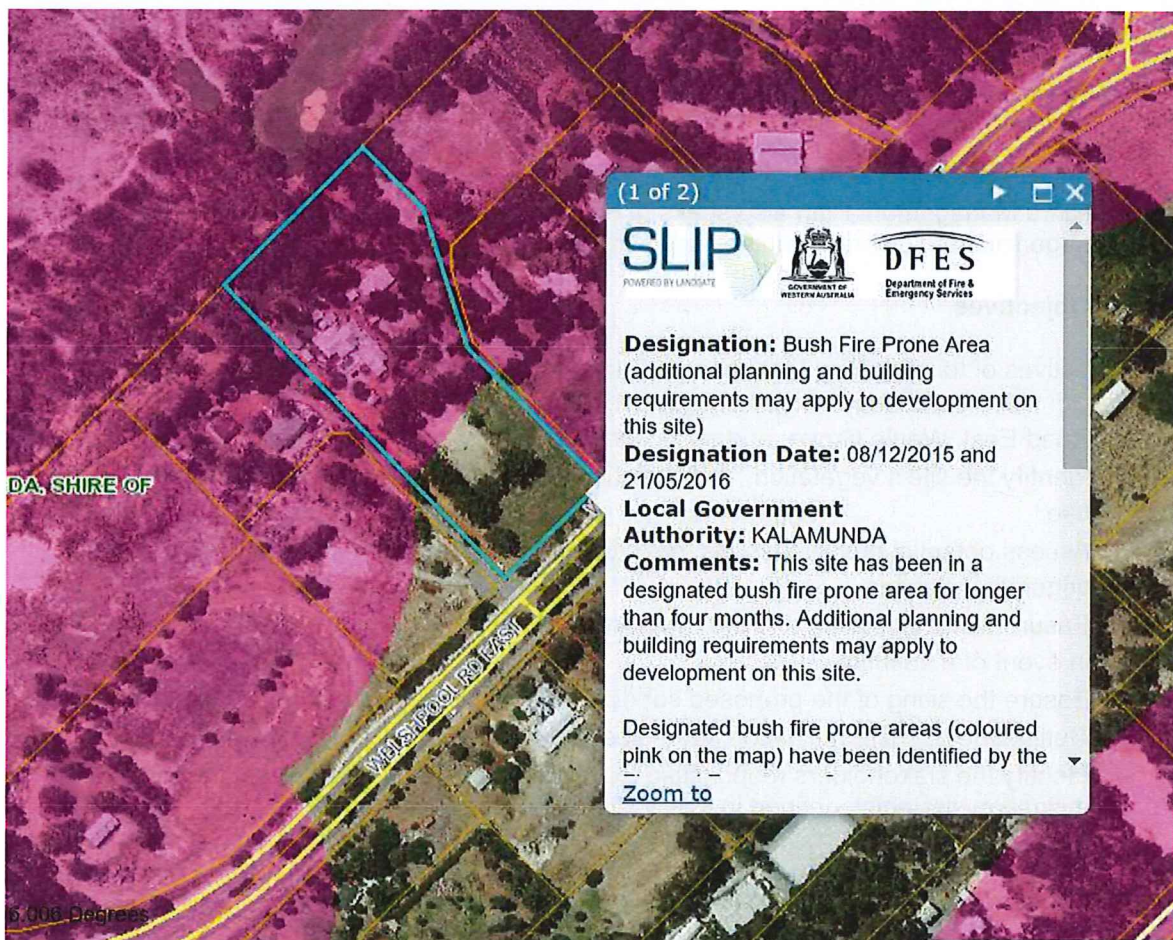


Figure 1. Aerial photo showing the subject site Lot 601 (no 782) Welshpool Rd East, Wattle Grove, and surrounding lots as being designated bushfire prone. Source: Department of Fire and Emergency Services.

## **2. Aim**

It is generally recognised that bushfires are an inevitable threat in the spring, summer and autumn months in the south-west of Western Australia.

The aim of this Bushfire Management Plan when implemented is to reduce occurrence of, and minimise the potential impact of bushfires onto buildings and vegetation located within the subject site, thereby reducing the threat to life, property and the environment.

This plan will document the minimum fire prevention requirements for the site.

## **3. Objectives**

### **3.1 Purpose**

The purpose of this Bushfire Management Plan is to address the fire protection risks within the subject site, Lot 601 (No 782) Welshpool Road East, Wattle Grove. Implementation of the Bushfire Management Plan will reduce the threat to the landowners, residents, visitors and firefighters in the event of a bushfire within or near the site. It achieves this by presenting the minimum requirements to be implemented.

The Bushfire Management Plan also seeks to ensure that the landowners, residents and relevant agencies are aware of their responsibilities.

### **3.2 Objectives**

The objectives of this Bushfire Management Plan are achievable and measurable:

- Consider the change of land use proposal for the existing Lot 601 (No 782) Welshpool Road East, Wattle Grove, and associated vehicular access
- Identify the site's vegetation, and surrounding vegetation, topography and proposed land use
- Assess potential bushfire issues, hazards and the proximity of the site to predominant vegetation classes
- Ensure water is available to the development to enable property and life to be defended in event of a bushfire
- Ensure the siting of the proposed subdivision minimises the level of bushfire impact
- Outline the bushfire mitigation strategies for the site
- Identify the stakeholders responsible for undertaking and implementing the bushfire mitigation strategies defined in this Bushfire Management Plan.

## **4. Legislation and Policy Considerations**

The Western Australian Planning Commission and the Shire of Kalamunda require the preparation of a Bushfire Management Plan for the proposed change of land use as part of the proposed scheme amendment to the Shire of Kalamunda's Plan. This document has been prepared to satisfy that requirement.



All relevant provisions of applicable planning legislation and policies have been considered in the preparation of this Bushfire Management Plan. These include:

- Bush Fires Act (1954)
- State Planning Policy 3.7 (2015)
- Guidelines for Planning in Bushfire Prone Areas (2017)
- Visual guide for bushfire risk assessment in Western Australia (2016)
- Local planning scheme requirements (bush fire related)
- Local planning policy requirements (bush fire related)
- Fire Control Notice requirements
- Relevant approvals

## **5. Description of the Area (Current Status)**

### **5.1 General**

Lot 601 (No 782) Welshpool Road East, Wattle Grove, is located within the Shire of Kalamunda. The subject site has been designated in part by the Fire and Emergency Services as bushfire prone.

The land has been extensively cleared and has reticulated grass (for managed horse feed and management) through the south-east side of the lot (nearest Welshpool Road East) and cultivated gardens and lawns through the area around the current dwellings and sheds. The neighbouring property to the north provide a potential bushland bushfire threat. To the west, south and east is land that has been developed for housing, associated infrastructure and semi-rural activities. To the south-west a portion of the neighbouring property has been cleared of most vegetation with unmanaged grassland remaining.

There are no environmentally significant features on the lot being developed. There is a municipal heritage listing being Category D – Formerly Taylor's House which is on the first home developed on the site.

### **5.2 Climate**

The scheme area of the Shire of Kalamunda has a Mediterranean climate with four seasons: cool, wet winters (June-August) followed by a mild spring (September-November), and hot, dry summers (December-February) leading into autumn (March-May). Rainfall usually occurs in autumn through to spring. This rainfall facilitates substantial vegetation growth during the winter and spring months, which dries in summer and continues through autumn.

The maximum temperatures occur during summer when the bushfire fuels are at their driest. As the summer progresses the grass fuels cure and become available as bushfire fuel. Grass fuels are a diminishing bushfire risk as they start to break down, post being 100% cured. This is in stark contrast to the natural environment where forest, woodland or shrubland with a scrub multi-tiered understorey become a greater bushfire risk late in summer and early autumn, until the winter rains break. The bulk of the bushfire fuel in this assessed location, which includes up to 100 metres from the development site is grassland to the west and north and banksia to the east.



### 5.3 Topography

Lot 601 (No 782) Welshpool Road East, Wattle Grove is basically flat. The potential bushfire threat is the vegetation, (forest) associated with neighbouring properties to the north-west and the unmanaged grassland to the south-west.

### 5.4 Bushfire fuels

Historically, Lot 601 (No 782) Welshpool Rd East, Wattle Grove (and the surrounding lots), were part of a modified vegetation area that was partially cleared. To the north-west is forest vegetation which is a Bush Forever Site (Crown Reserve R17098) that is 136 ha and was recently subject to a bushfire. To the west, south and east is land that has been developed for housing, associated infrastructure and semi-rural activities. Properties within the general area have been subdivided.

The predominant vegetation type, as described in the *Australian Standard 3959 – Construction of buildings in bushfire-prone areas (AS 3959)*, on Lot 601 (No 782) Welshpool Road East, Wattle Grove, is cleared land that is fully reticulated. The very scattered overstorey in the area is mixed introduced tree species and reticulated grassland surface fuels.



Figure 2. Photographs showing the vegetation immediately to the east of Lot 601 (No 782) Welshpool Road East, Wattle Grove.

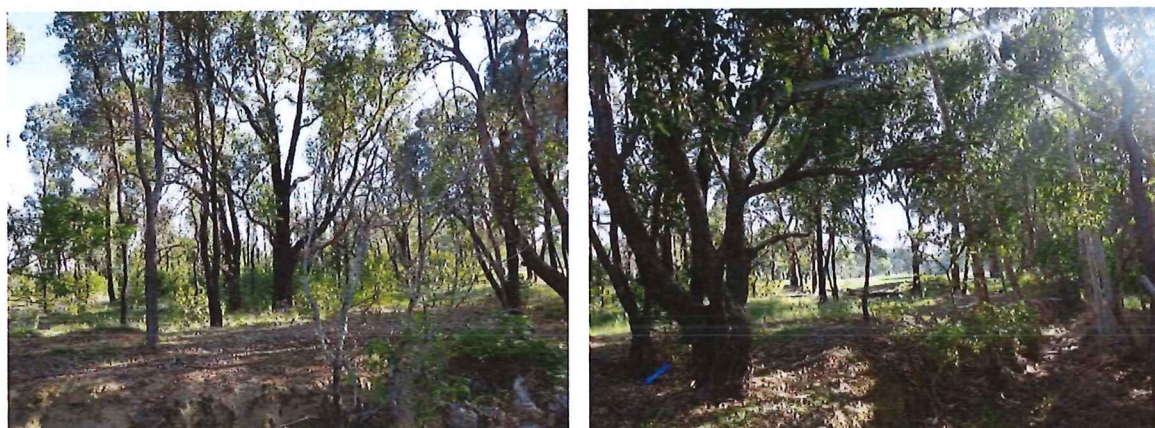
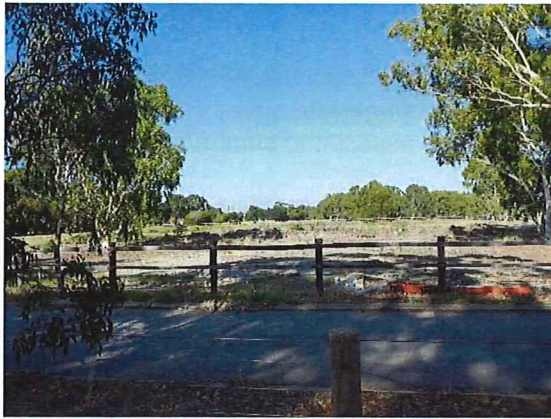


Figure 3. Photographs showing the vegetation north of Lot 601 (No 782) Welshpool Road East, Wattle Grove.





*Figure 4. Photographs showing the vegetation to the west of Lot 601 (No 782) Welshpool Road East, Wattle Grove.*



*Figure 5. Photographs showing the vegetation and infrastructure to the south of Lot 601 (No 782) Welshpool Road East, Wattle Grove.*



*Figure 6. Photographs showing the potential access on the neighbouring property and on Lot 601 (No 782) Welshpool Road East, Wattle Grove.*



## 5.5 Land use

The general land use adjacent to Lot 601 (No 782) Welshpool Rd East, Wattle Grove, is land that has been subdivided into smaller special rural lots (many single lots have been subdivided into two lots since the initial subdivision of the estate) and the associated semi-rural infrastructure.



*Figure 7. Aerial photograph showing Lot 601 (No 782) Welshpool Road East, Wattle Grove, and surrounding land use.  
Source: Shire of Kalamunda Online Mapping System.*

## 5.6 Assets

The subject site is ready for the proposed change of use with all buildings and gardens developed and in place. There is ample parking available onsite for guests.

Within the local area, the assets include all the built structures on neighbouring properties, and the animals within the paddocks, windbreaks and the grass (pasture) within those areas. The local assets are changing and becoming a more 'standard' semi-urban development.

There are no environmentally significant features on the lot where the change of land use is proposed. There is a municipal heritage listing being Category D – Formerly Taylor's House which is on the first home developed on the site.

## 5.7 Access

General access to the development site is currently via the main road being Welshpool Road East, which is a major bitumen road. Alternative access is the bitumen driveway that runs



between the boundaries of the subject land and the neighbouring property to the north-east. The distance between the two driveways is 75 metres. This provides multiple ingress/egress routes for individual properties in the area. It also facilitates emergency services access.

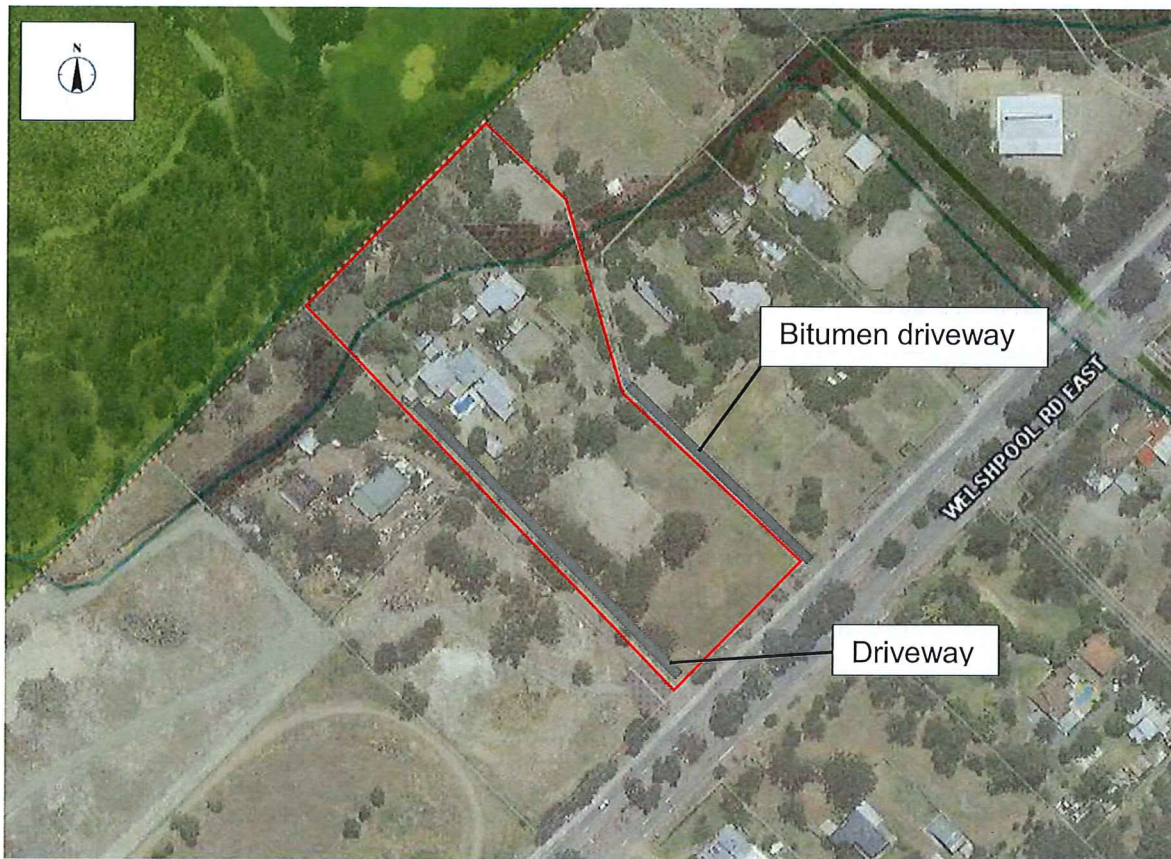


Figure 8. Aerial photograph showing the indicative Lot 601 (No 782) Welshpool Rd East, Wattle Grove, and location of access options. Source: Shire of Kalamunda Online Mapping System.

## 5.8 Water supply

Reticulated mains water supply is available to the lot. There are also two ground water bores that are used to reticulate the grass and gardens. There is a fire hydrant on Welshpool Road East opposite the lot.

## 6. Bushfire

### 6.1 Bushfire hazard level

The bushfire hazard assessment for this site is moderate and has a bushfire attack level of BAL-12.5 when considered against the requirements in *Guidelines for Planning in Bushfire Prone Areas* (2017), AS 3959 and the Building Code of Australia (BCA). This determination is based on the observation of the predominant vegetation type on the lot and adjacent assessable lands and aligning that to the published criteria.

All vegetation within 100 metres of the lot boundaries or building have been considered in accordance with the Western Australian Government criteria. AS 3959 only requires consideration of 50 metres between the vegetation and the lot boundary or building for grassland.

For AS 3959 to be applicable requires the formal declaration of the site to be bushfire prone. This site is declared as bushfire prone.

## 6.2 Bushfire Attack Level (BAL) Assessment

### 6.2.1 Potential Bushfire Impacts

The potential bushfire impacts to the built structures on the site from the identified vegetation plots are identified below.

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Exclusion 2.2.3.2 (e) and (f)	Not applicable	Not applicable	BAL-LOW
2	Class A – Forest	Flat	58m	BAL-12.5
3	Class G – Grassland	Flat	68m	BAL-LOW
4	Class G – Grassland	Flat	56m	BAL-LOW

### 6.2.2 Determination of Bushfire Attack Level (BAL)

The vegetation on the proposed land use change site will continue to be managed to the standard required in AS 3959 for 'low threat' vegetation and the State Government's asset protection zone.

The determined Bushfire Attack Level (highest BAL) on the building nearest to the vegetation has been determined in accordance with clause 2.2.6 of AS 3959 using the above analysis.

There is no intention to construct any new buildings on the site.

The determined Bushfire Attack Level (BAL) for the site is **BAL-12.5**.



#### 6.2.4 Assessment area with the current vegetation classified

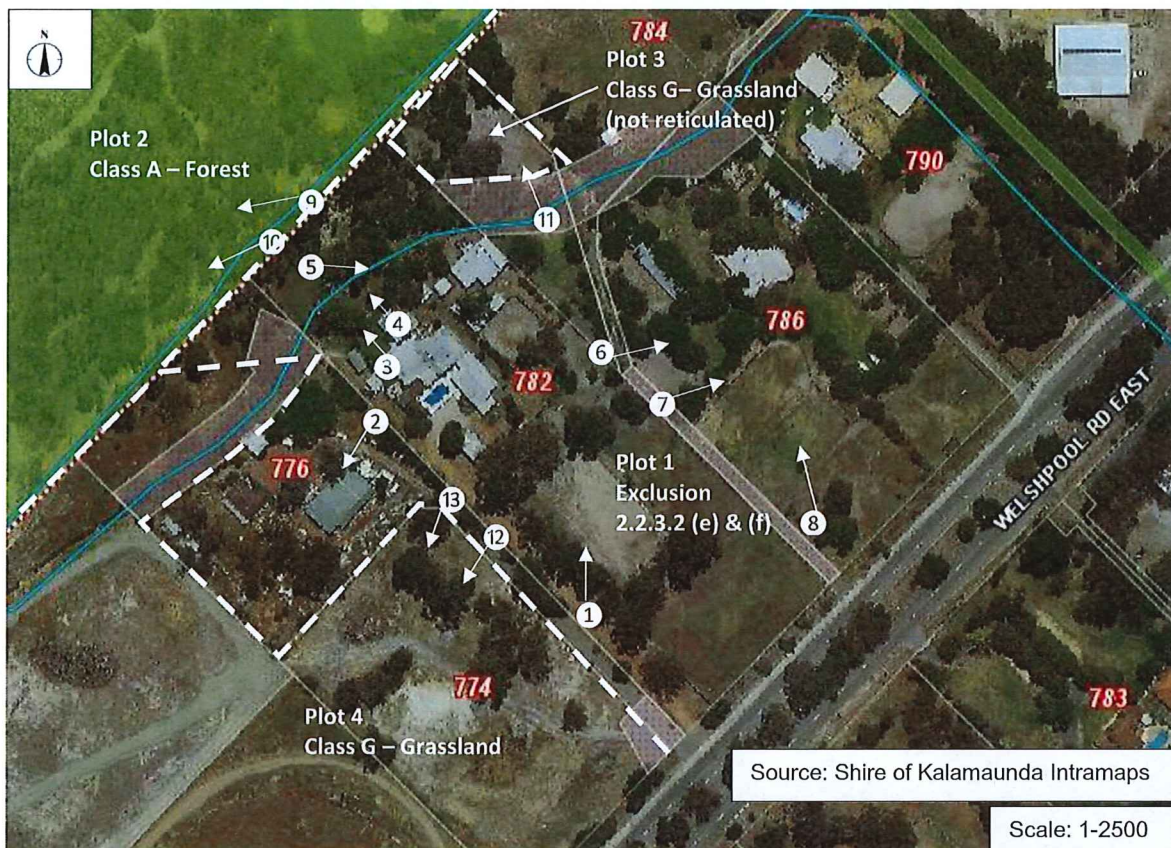


Figure 9. Plan showing assessment area with AS 3959 vegetation classification and photo points and direction.



Figure 10. Aerial photo showing assessment area to 100 metres.



6.2.5 Photos showing vegetation classification to a distance of 100 metres from the assessment site on Lot 601 (No 782) Welshpool Rd East, Wattle Grove

**Plot 1**

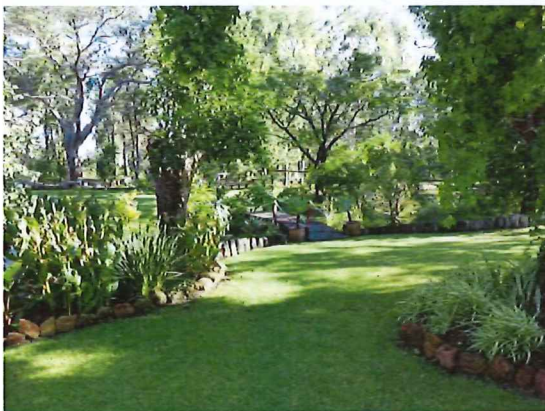
Exclusion 2.2.2.3 (e) and (f)



**PHOTO 1** Facing north-east showing the reticulated horse paddock.



**PHOTO 2** Facing south-west looking at the neighbouring garden.



**PHOTO 3** Facing north at the reticulated, cultivated garden near the houses on the lot.



**PHOTO 4** Showing the cultivated and reticulated garden near the houses and sheds on the lot.





**PHOTO 5** Facing north at the reticulated, cultivated garden near the houses on the lot.



**PHOTO 6** Showing the cultivated and reticulated grass on the neighbouring property.

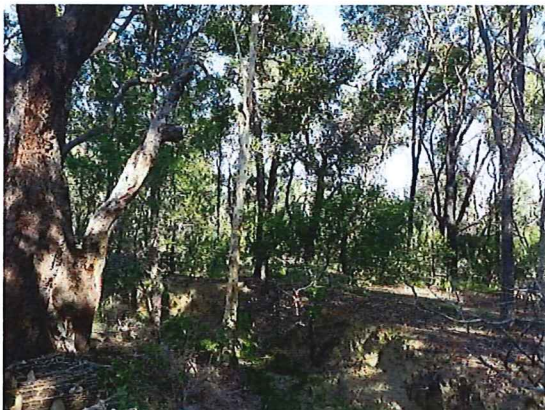


**PHOTO 7** Facing north at the reticulated, cultivated garden near the houses on the lot.



**PHOTO 8** Showing the cultivated and reticulated garden near the houses and sheds on the neighbouring property.

## Plot 2 Class A – Forest



**PHOTO 9** Showing the forest north of the site.



**PHOTO 10** Showing the forest vegetation.



### Plot 3

Class G – Grassland



**PHOTO 11** Showing the unmanaged grassland behind the reticulated grass surface fuel.

### Plot 4

Class G – Grassland



**PHOTO 12** Facing west showing the grassland on the neighbouring property.



**PHOTO 13** Showing the grassland on the neighbouring property.



## 7. Bushfire Mitigation Strategies

This Bushfire Management Plan is developed to provide guidance for the planning and management of the potential bushfire threat on the proposed change of land use on Lot 601 (No 782) Welshpool Rd East, Wattle Grove. The Bushfire Management Plan (BMP) is a supporting document for the proposed scheme amendment to the Shire of Kalamunda's Local Planning Scheme No. 3. In accordance with the State Government's requirements, the BMP considers the bushfire threat after the BMP has been implemented.

This Bushfire Management Plan adopts an acceptable solution and performance-based system of control for each bushfire hazard management issue. The approach is consistent with Appendix 4 of *Guidelines for Planning in Bushfire Prone Areas* (2017).

### 7.1 Bushfire protection performance criteria and acceptable solutions

#### Element 1: Location

*Intent: To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk to bushfire to facilitate the protection of people, property and infrastructure.*

#### Performance principle

*The intent may be achieved where:*

#### **P1**

The strategic planning proposal, subdivision and development application is located in an area where the bushfire hazard assessment is, or will, upon completion, be moderate or low, or a BAL-29 or below, and the risk can be managed. For minor or unavoidable development in areas where BAL-40 or BAL-FZ applies, demonstrating that the risk can be managed to the satisfaction of the Department of Fire and Emergency Services and the decision-maker.

#### **COMPLIANT**

The change of land use is located in an area where the bushfire hazard level is moderate, and the bushfire attack level is assessed as BAL-12.5 on the buildings on the lot. The area surrounding the building is established, reticulated, cultivated garden and grassland under a tree overstorey.

The change of land use is to provide a temporary land use activity, of only limited hours of use per session, where visitors will be mobile.

#### Element 2: Siting and Design of Development

*Intent: To ensure that the siting and design of development minimises the level of bushfire impact.*

#### Performance principle

*The intent may be achieved where:*

## P2

The siting and design of the proposal, subdivision or development application, including roads, paths and landscaping, is appropriate to the level of the bushfire threat that applies to the site. It minimises the bushfire risk to people, property and infrastructure, including compliance with AS 3959 if appropriate.

### COMPLIANT

The proposed change of land use is located in an area that will remain as semi-rural area. The Western Australian government has declared only a portion of the site as bushfire prone and the buildings (which are currently on the site) have been BAL rated as BAL-12.5 because of the vegetation type and separation distance from the vegetation. There is no intention to construct new buildings, but rather to utilise the site as it is in regard to structures.

The buildings have an extensive APZ, which is surrounded by a well-managed garden and lawns currently reticulated, which will be maintained post development.

The horse paddocks on the lot are reticulated and maintained in a 'low threat' status as described in AS 3959 sections 2.2.3.2. (f).

The driveway is all weather access and is estimated to be 131 metres long and is 13 metres wide. The required turn around area is currently in place (parking area) and is adjacent to the houses (and within 50 metres of the dwellings as required in the Guideines) and the turn-around does allow a 3.4 fire appliance to turn around safely and meet the minimum of 17.5m kerb to kerb.

The internal firebreaks will continue to be maintained in accordance with the Shire of Kalamunda fire break notice.

### Element 3: Vehicular access

*Intent: To ensure that the vehicular access serving a subdivision/development is available and safe during a bushfire event.*

### Performance principle

*The intent may be achieved where:*

## P3

The internal layout, design and construction of public and private vehicular access and egress in the development allow emergency and other vehicles to move through it easily and safely at all times.

### COMPLIANT

There are two 4x2 alternative access driveways to facilitate movement onto Welshpool Road East, which provides two alternative routes east and west. These are located on the north side of the southern boundary of the lot and the north side of the northern boundary. These are shown on figure 8 (page 10) of this BMP.

The second or alternative access is the bitumen driveway that runs between the boundaries of the subject land and the neighbouring property to the north-east. The distance between the two driveways is 75 metres. This provides multiple ingress/egress routes for individual properties in the area. It also facilitates emergency services access.



#### Element 4: Water

*Intent: To ensure that water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.*

#### Performance principle

*The intent may be achieved where:*

#### **P4**

The subdivision, development or land use is provided with a permanent and secure water supply that is sufficient for fire-fighting purposes.

#### **COMPLIANT**

The site is serviced by reticulated scheme water. There is also a fire hydrant on Welshpool Road East immediately opposite the site that provides secure fire-fighting water.

## **8. Implementing the Bushfire Management Plan**

### **8.1 Property owner's responsibilities**

To maintain the reduced level of risk and threat of fire, the owners/occupiers of lots created by this proposal will be responsible for undertaking, complying and implementing measures protecting their own assets from the threat and risk of bushfire.

The owner/occupier shall be responsible for:

- Where specified, maintaining firebreaks on their property clear of flammable material by the dates shown on the Shire of Kalamunda's *Fire Break Notice and Bushfire Information*. This is a statutory requirement. A copy is available from the Shire of Kalamunda website.
- The APZ will be established prior to construction and maintained after dwelling construction to comply with the APZ requirements
- Maintaining in good order and condition all fencing and gates
- Ensuring that any new domestic dwellings to be built on the property are designed and constructed in full compliance with the requirements of the Shire of Kalamunda and as detailed in *Australian Standard 3959 – Construction of buildings in bushfire-prone areas*
- Implementing and maintaining bushfire fuels as specified in the Bushfire Management Plan and in accordance with the Shire of Kalamunda requirements
- Reviewing and implementing hazard reduction, when required, as required by the Shire of Kalamunda
- Installing and maintaining crossovers and driveways as required by the Shire of Kalamunda

## 8.2 Shire of Kalamunda responsibilities

The responsibility for compliance with the law rests with individual property owners and occupiers. The following conditions are not intended to transfer some of the responsibilities to the Shire of Kalamunda. The Shire of Kalamunda has statutory control and responsibility for ensuring that community fire safety is maintained.

The Shire of Kalamunda shall be responsible for:

- Providing timely advice on standards and methods to achieve community fire protection to owners/occupiers of land
- Administering development controls in accordance with the local planning scheme, with due regard for *State Planning Policy 3.7 – Planning in Bushfire Prone Areas* and other policies and publications outlined in these guidelines
- Seeking compliance with Bushfire Management Plans, including issuing the annual issuing of Firebreak Notices under section 33 of the *Bush Fires Act 1954*

## 9. Revising the Bushfire Management Plan

It is recommended that this Bushfire Management Plan be revised every five years to ensure that it is current and in-line with contemporary requirements to optimise protection. It is proposed that the property owners undertake the review.

## 10. References

Australian Government Bureau of Meteorology climate reports, summaries and maps. Retrieved 17 January 2017 from [http://www.bom.gov.au/climate/averages/tables/cw\\_009225.shtml](http://www.bom.gov.au/climate/averages/tables/cw_009225.shtml)

Shire of Kalamunda, (2016). *Fire Break Notice 2016/17*. Retrieved 31 March 2017 from <https://www.wanneroo.wa.gov.au/our-services/emergency-services/Documents/Firebreaks.pdf>

Department of Fire and Emergency Services (DFES), (2016). *Map of Bushfire Prone Areas 2016*. Retrieved 31 March 2017 2017 from <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/Pages/default.aspx>

Standards Australia. (2009). *Australian Standard 3959 – Construction of buildings in bushfire-prone areas (incorporating amendment numbers 1, 2 and 3)*. Standards Australia, Sydney, NSW.

Western Australian Planning Commission. (2015). *State Planning Policy 3.7 – Planning in Bushfire Prone Areas*. Western Australian Planning Commission, Perth, WA. Retrieved 14 January 2015 from [http://www.planning.wa.gov.au/dop\\_pub\\_pdf/SPP\\_3.7\\_Planning\\_in\\_Bushfire\\_Prone\\_Areas.pdf](http://www.planning.wa.gov.au/dop_pub_pdf/SPP_3.7_Planning_in_Bushfire_Prone_Areas.pdf)

Western Australian Planning Commission. (2017). *Guidelines for Planning in Bushfire Prone Areas*. Western Australian Planning Commission, Perth, WA. Retrieved 14 January 2015 from [http://www.planning.wa.gov.au/dop\\_pub\\_pdf/SPP\\_3.7\\_Planning\\_in\\_Bushfire\\_Prone\\_Areas.pdf](http://www.planning.wa.gov.au/dop_pub_pdf/SPP_3.7_Planning_in_Bushfire_Prone_Areas.pdf)