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Bushfire Hazard Assessment

**For the subdivision of
Central Road and Jetty Road Drysdale**

**Prepared for:
St Quentin Consulting**

**On behalf of:
Ample Investments Group Pty Ltd**



Document Information


Bushfire Hazard Assessment for the subdivision of Central Road and Jetty Road,
Drysdale

Report prepared by Okologie Consulting Pty Ltd for St Quentin Consulting on behalf of
Ample Investments Group Pty Ltd

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Summary

This Bushfire Hazard Assessment has been prepared to support a planning permit application for the proposed subdivision of Central Road and Jetty Road, Drysdale. The assessment was undertaken to inform the bushfire risk and management response to reduce this risk to appropriate levels.

City of Greater Geelong requires development applications in a bushfire prone area (not subject to the Bushfire Management Overlay) to address Clause 13.05-1 (Bushfire Planning). This includes preparation of a bushfire site hazard and landscape hazard assessment and implementation of appropriate bushfire protection measures to address the identified bushfire risk.

The site was characterised by open, introduced pasture, with areas of planted trees and shrubs surrounding dwellings and windrows around property boundaries. No classifiable vegetation types were recorded within the 150-metre assessment area. The assessment area included areas of modified vegetation (planted trees and shrubs) and low-threat vegetation that consisted of grassland managed in a minimal fuel condition, planted windbreaks, cultivated gardens and non-vegetated areas (i.e. roads, buildings).

The surrounding landscape was identified as Broader Landscape Type One. The subdivision is located in a Rural Living Zone, adjacent to residential development, the local road network, town water supply and existing cleared areas. Areas of grassland to the west of the site represent a potential bushfire risk to the local area, however this threat is considered to be low through the presence of surrounding non-vegetated areas and low-risk vegetation managed in a minimum fuel condition.

The bushfire hazard site assessment identified the development is capable of achieving BAL-12.5 defensible space and construction in accordance with Column A of Table 2 to Clause 52.47-3. The bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level, as the subdivision is capable of managing the bushfire risk within the property boundary.

The proposed subdivision will not increase the bushfire risk to the local community or the adjacent area and it is located in a low bushfire risk area. Implementing bushfire protection measures may assist in reducing the risk to adjacent areas of residential development.



1 Introduction

1.1 Background

Okologie Consulting Pty Ltd was engaged by St Quentin Consulting on behalf of Ample Investments Group Pty Ltd to prepare a Bushfire Hazard Assessment for the proposed subdivision of Central Road and Jetty Road, Drysdale.

City of Greater Geelong requires development applications in bushfire prone areas (not subject to the Bushfire Management Overlay) to address Clause 13.05-1 (Bushfire Planning) (DELWP 2017a). This includes preparation of a bushfire hazard site assessment, landscape hazard assessment and implementation of appropriate bushfire protection measures to address the identified bushfire risk.

The relevant information provided with this application comprises:

- A bushfire hazard site assessment, which calculates the defensible space from the bushfire hazard as informed by the methodology of AS 3959-2009 *Construction of buildings in bushfire prone areas* (Australian Standard 2009).
- A bushfire hazard landscape assessment including a plan that describes the bushfire hazard of the general locality more than 150-metres from the site.
- Review of Clause 13.05 to shows how the development responds to the identified bushfire risk.



2 Site Description

2.1 Site Details

The site comprises several parcels of land at Precinct 1 Development, Thomas Street and Jetty Road, Drysdale (Figure 1). The site covers approximately 52 hectares and is bound by residential development to the north, private property to the east, Wyndham Street to the south and Jetty Road to the west. The development proposal is for >10-lot residential subdivision and access to the site is from Jetty Road, which extends north through the Township of Clifton Springs and south to Portarlington Road.

The site comprises areas of open exotic grassland used for agriculture (cropping, grazing), interspersed with several existing dwellings that are surrounded by planted trees and shrubs, windrows and gardens.

The topography varies throughout the site, with low undulating slopes towards the north, west, and south and low to moderate slopes to the east of the assessment area. The surrounding area comprises a mix of residential and semi-rural development in the townships of Drysdale and Clifton Springs. Agricultural land occurs further towards to east, south and west, and Corio Bay is located to north of Clifton Springs.



The site is located in the City of Greater Geelong municipality and occurs within a bushfire prone area. It is zoned Rural Living Zone and is not subject to the Bushfire Management Overlay or any environmental overlays under the Greater Geelong Planning Scheme (DELWP 2018a).

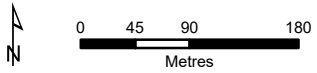
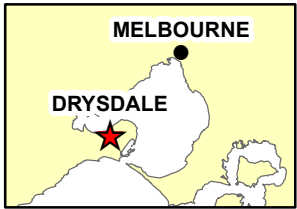
Figure 1

Site Location

Jetty Road, Drysdale

Legend

-  Subject Site
-  150m Assessment



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3 Methodology

3.1 Desktop Assessment

The desktop assessment included a review of relevant literature and database information, including:

- State Planning Policy Framework 13.05-1 *Bushfire planning* (DELWP 2017a).
- Clause 52.47 *Planning for Bushfire* (DELWP 2017b).
- Clause 44.06 *Bushfire Management Overlay* (DELWP 2017c).
- Planning Schemes Online for planning information (DELWP 2018a).
- NatureKit for modelled vegetation, topography and bushfire history (DELWP 2018b).
- Planning Advisory Note 68: Bushfire State Planning Policy Amendment VC140 (DELWP 2018c).
- Practice Note 65: Preparing and Assessing a Planning Application Under the Bushfire Provisions in Planning Schemes (DTPLI 2014).
- CFA guideline 'Applying the Bushfire Hazard Landscape Assessment in Bushfire Management' (CFA 2015).
- Planning for Bushfire Victoria: Version 2. (CFA 2012).
- The Australian Standard: *AS 3959-2009 Construction of buildings in bushfire prone areas* (Australian Standards 2009).
- Aerial photographs of the site and surrounding areas.

3.2 Bushfire Hazard Site Assessment

A bushfire hazard site assessment was undertaken on 19 March 2018. The assessment involved determining the classifiable vegetation and effective slope within a 150-metre radius of the proposed development using the method described by AS3959-2009 (Australian Standards 2009). The results of the site assessment were used to inform the requirement for defensible space and building construction under Clause 52.47 (DELWP 2017b).

3.3 Vegetation

For the purposes of determining the defensible space and construction requirements, classified vegetation is vegetation that constitutes a bushfire hazard within 150 metres of the development in accordance with the classification system of AS 3959-2009 (Australian Standards 2009) and Table 1 or Table 2 of Clause 52.47 (DELWP 2017b). If more than one classified vegetation type is present the 'worst case scenario' is applied to determine the BAL (Standards Australia, 2009).

Areas of low-threat vegetation are described as:



- Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.
- Low-threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks (Standards Australia 2009).

Modified vegetation refers to vegetation that is different from the other vegetation classifications in AS3959 because it:

- Has been modified, altered or is managed due to urban development, or gardening;
- Has different fuel loads from those assumed in the standard;
- Has limited or no understorey vegetation; or
- Is not low-threat or low-risk vegetation as defined in the standard (DELWP 2017b).

3.4 Topography

The site topography was assessed within the 150-metre assessment area, to determine the effective slope under classified vegetation in accordance with AS 3959-2009 (Australian Standards 2009). For the landscape assessment, the effective slope is determined on worst case rather than an average (CFA 2015).

Topography (or slope) influences the rate of spread and intensity of a bushfire. Fire burns faster uphill as the slope increases so does the speed of the fire and its intensity. As a general rule, for every 10° slope, the fire will double its speed. Fires tend to move more slowly as the slope decreases, and for every 10° of downhill slope, the fire will halve its speed (CFA 2012).

3.5 Bushfire Attack Level

The BAL is calculated by identifying classifiable vegetation type, the effective slope under classifiable vegetation and distances between vegetation (the hazard) and the proposed development. The higher the BAL, the higher the exposure to the effects of flame, radiant heat and ember attack from a bushfire (Plate 1).

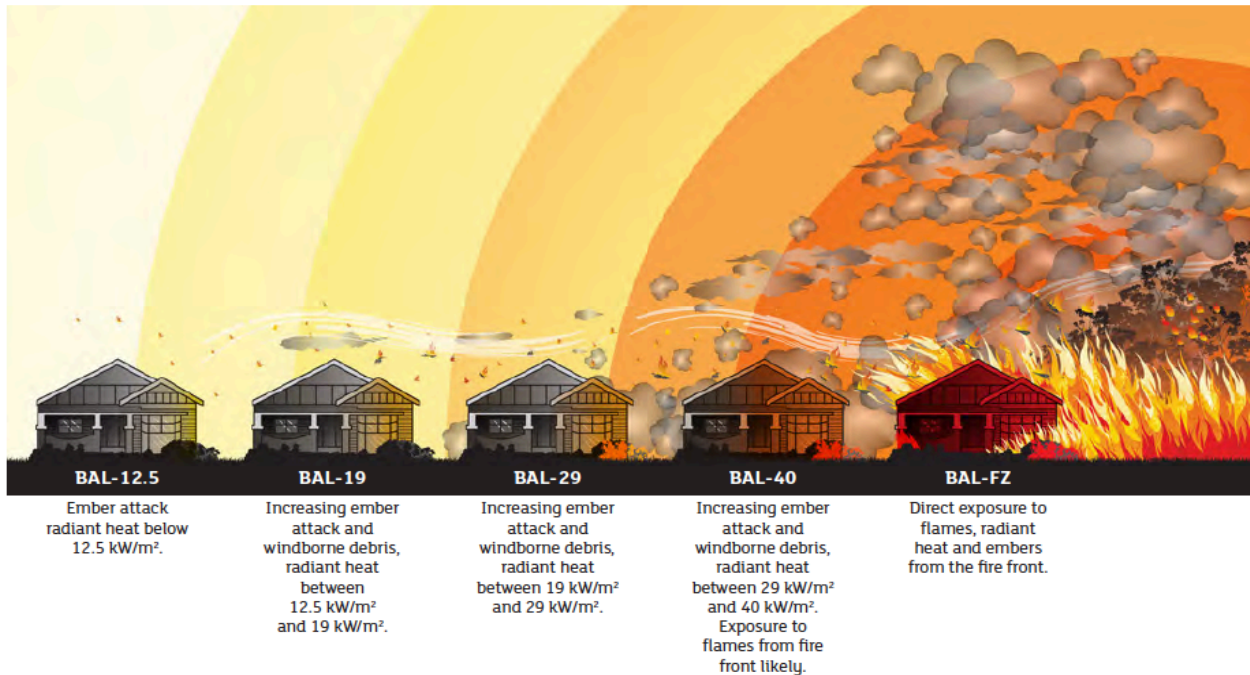


Plate 1. Bushfire Attack Levels and hazards associated with bushfire threats (Source: CFA 2012).

3.6 Defendable Space

Defendable space is one of the most effective ways of reducing the impact of bushfire on a building. It comprises an area of land around a building (inner zone and outer zone) where vegetation is modified and managed to reduce the effects of flame contact, radiant heat and embers associated with bushfire (Plate 2) (CFA 2015).

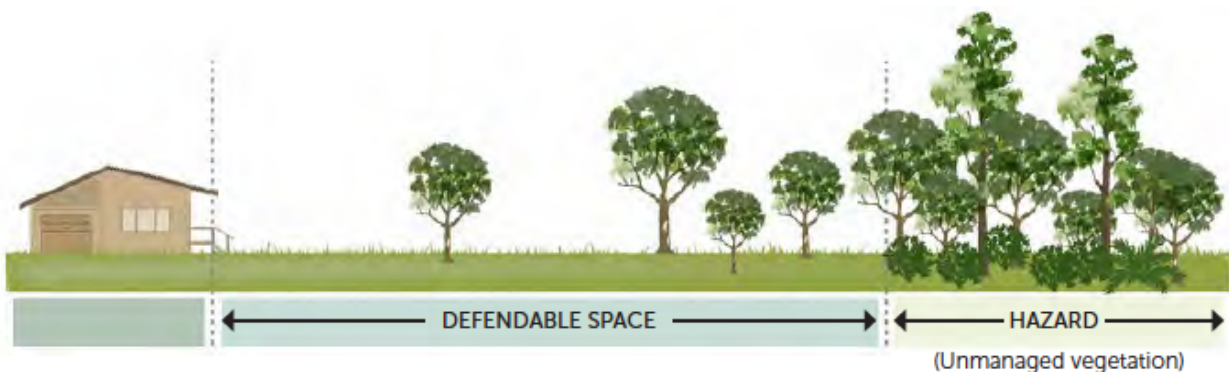


Plate 2. Defendable space around a building (Source: CFA 2015).

3.7 Construction Standards

Construction requirements for buildings relating to a calculated BAL are prescribed in AS3959-2009 (Standards Australia 2009). Building construction and design can be used to minimise the impacts of ember attack and radiant heat on a building. The materials



and design of a building can be used to prevent the accumulation of debris and entry of embers. Appropriate construction helps the building to withstand the potential exposure from a bushfire as the fire front passes (CFA 2015).

3.8 Bushfire Hazard Landscape Assessment

The bushfire hazard landscape assessment provides information on the bushfire hazard more than 150 metres away from a development site (CFA 2015). The landscape assessment followed CFA guidelines (2015) and included review of aerial photographs to determine the vegetation extent in the broader locality; the proximity of the site to township areas or fire refuges; vegetation and slope, site access, defensible space and construction, local bushfire history and consideration of the likely bushfire scenarios.

3.9 Limitations

The information outlined in this report relies on the accuracy of GIS layers and spatial imagery. To minimise potential errors, the most current available data was obtained from relevant sources. The bushfire hazard within the local area was determined from interpretation of aerial photography, as access to all private property was not available. Determination of vegetation classification was based on relevant standards and guidelines, and vegetation condition and extent observed during the site assessment.



4 Bushfire Hazard Landscape Assessment

4.1 Site and Landscape Context

The site is located on the western boundary of the Township of Drysdale. Access to the site is from Jetty Road, which extends north through the Township of Clifton Springs and south to Portarlinton Road. The Township of Drysdale contains a mix of residential and semi-rural development, and is bounded by agricultural land to the east, south and west. Corio Bay is located approximately one kilometre north of the site. No nearest neighbourhood safer place is listed for Drysdale; however, the township contains areas of residential parkland and ovals that can provide protection from the impact of bushfire conditions.

4.2 Vegetation Extent in the Locality

Vegetation within the surrounding landscape (within one kilometre) is highly modified and dominated by agricultural land that includes grassland and cropped vegetation, interspersed with planted trees around properties and in windrows. Native vegetation is limited to isolated patches in paddocks and along road reserves. Drysdale recreation reserve is located to the south of Wyndham Street, and supports wetland areas. Corio Bay forms an extensive water body to the north of Clifton Springs.

4.3 Recent Bushfire History

NatureKit (DEWLP 2018b) contains data on the bushfire history for the local area from 1970. A 311-hectare bushfire occurred to the approximately 12 kilometres southwest of the site in 2007, a 5.4-hectare bushfire occurred 11 kilometres south of the site in 2016 and a 49 hectare bushfire occurred eight kilometres southeast of the site in 1997 (DEWLP 2018b) (Figure 2).

4.4 Potential Bushfire Scenario

The bushfire risk to the site has been assessed at the landscape scale by identifying likely bushfire scenarios and mechanisms of a bushfire that may impact the proposed development. The mechanisms of bushfire attack on a building can be a combination of sparks and embers, direct flame contact or radiant heat (CFA 2012).

Bushfire Scenario 1

Grassland vegetation is located to the west of the site in agricultural land. West or southwest winds can result from a northerly wind change during high-threat or extreme bushfire conditions. The site could potentially be impacted by a grassfire approaching from the west resulting from local ignition. However, potential fire runs



to the west are generally less than one kilometre and the presence of residential development, local roads and managed (low-risk) vegetation adjacent to the site would reduce the potential for direct flame contact (Figure 2). Ember attack represents the main bushfire threat to the site under this bushfire scenario.




The site is located in a low bushfire risk area. The fire risk from the north and east is mitigated from the presence of Corio Bay and the townships of Drysdale and Clifton Springs.

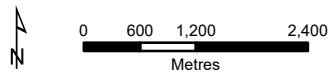
4.5 Landscape Type

The site corresponds to Broader Landscape Type One as specified in Practice Note 65 (DTPLI 2014) as it meets the following criteria:

- There is little vegetation beyond 150 metres of the site (except grasslands, modified and low-threat vegetation).
- Extreme bushfire behaviour is not possible.
- The type and extent of vegetation (agricultural grassland) is unlikely to result in neighbourhood-scale destruction of property.
- Immediate access is available to a place that provides shelter from bushfire (<100 metres north).

Figure 2
Landscape Hazard Assessment
 Jetty Road, Drysdale
 Legend

-  Subject Site
-  150m Assessment
-  Recent Bushfires from 1970



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5 Bushfire Hazard Site Assessment

5.1 Vegetation Assessment

The site was characterised by open, introduced pasture, with areas of planted trees and shrubs surrounding dwellings and windrows around property boundaries. No classifiable vegetation types were recorded within the 150-metre assessment area. The assessment area included low-threat vegetation that consisted of grassland managed in a minimal fuel condition, planted windbreaks, cultivated gardens and non-vegetated areas (i.e. roads, buildings) (Figure 3). A description of the vegetation types within the 150-metre assessment area is outlined below.

Low-threat Vegetation

Areas of open grassland throughout the site and within the 150-metre assessment area were generally managed in a minimal fuel condition (slashed to 100 mm) and were considered to meet the low-threat vegetation criteria (DTPLI 2014). Grassland vegetation was dominated by exotic pasture species such as Perennial Ryegrass *Lolium perenne*, Cocksfoot *Dactylis glomerata*, Brown-top Bent *Agrostis capillaris*, Onion Grass *Romulea rosea*, Soft Brome *Bromus hordeaceus*, Yorkshire Fog-grass *Holcus lanatus*, Sweet Vernal-grass *Anthoxanthum odoratum*, Kikuyu *Cenchrus clandestinus* and Galenia *Galenia pubescens*, (Plates 3, 4 and 6).

The site also supported areas of slashed lawn, planted windbreaks, cultivated gardens and non-vegetated areas (i.e. roads and building).

Modified Vegetation

A pine plantation is located in the southeastern section of the site and several properties surrounding the site and the 150-metre assessment area contained areas of mature planted trees and shrubs. However, this vegetation was considered modified vegetation as it was sufficiently varied from vegetation classifications under AS 3959-2009, comprised limited or no understorey cover and is managed to a minimal fuel condition (DTPLI 2014) (Plate 5).



Plate 3: Low-threat vegetation northerly aspect



Plate 4: Low-threat and modified vegetation easterly aspect




Plate 5: Modified vegetation southerly aspect



Plate 6: Low-threat vegetation westerly aspect

Figure 3
Site Hazard Assessment
Jetty Road, Drysdale

Legend

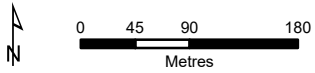
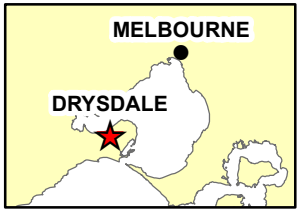
 Subject Site

 150m Assessment

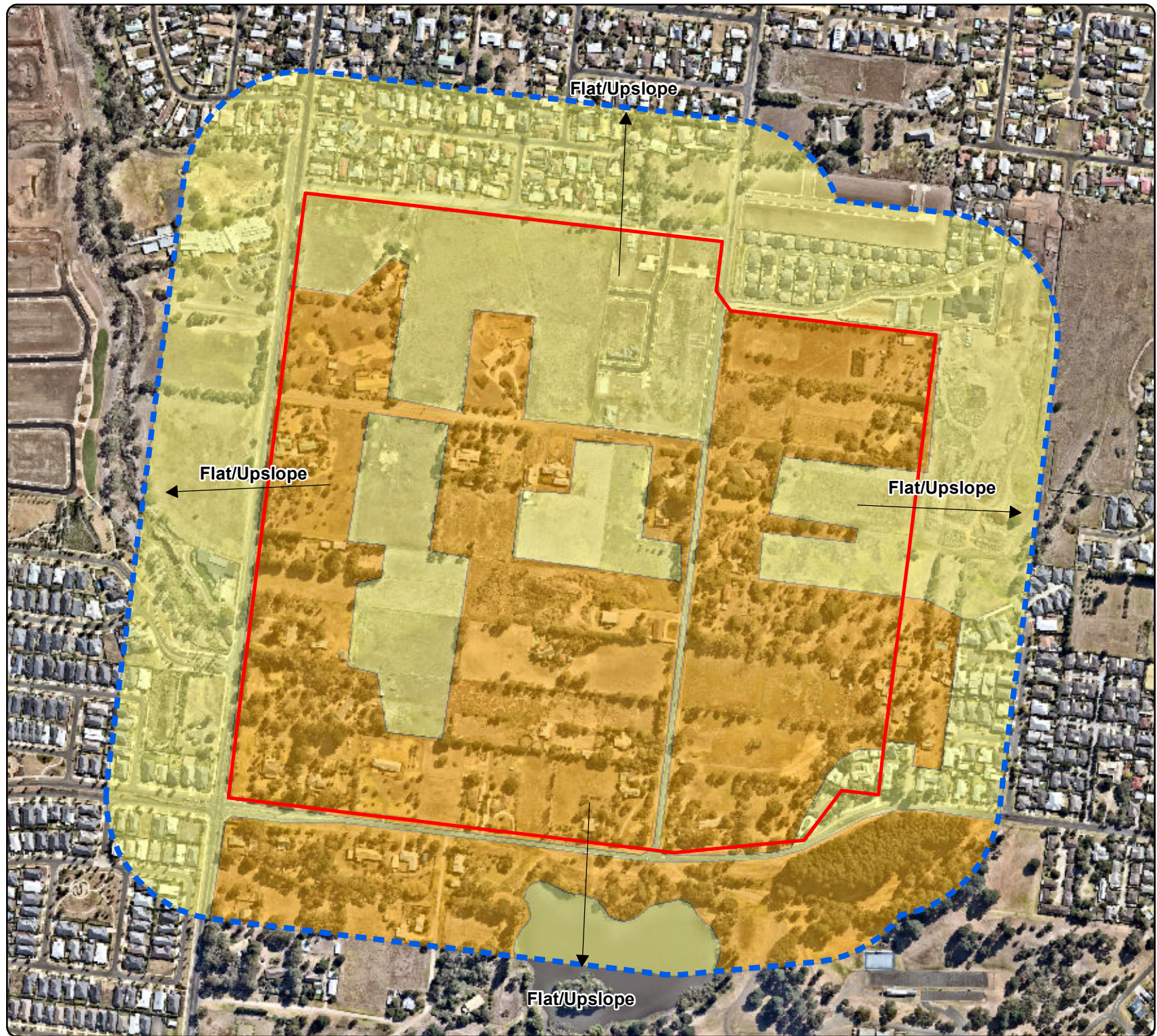
Classifiable Vegetation

 Modified Vegetation

 Low Threat



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5.2 Bushfire Hazard Site Assessment

The Bushfire Hazard Site Assessment process is used to determine how far away from unmanaged vegetation a building would need to be to receive less than a certain level of radiant heat (e.g. a building constructed to BAL-12.5 has been designed to withstand a radiant heat flux of 12.5 kW/m²). The development BAL also includes consideration of the bushfire hazard landscape assessment to ensure defensible space provides an adequate safety zone around each building (CFA 2015).

The results of the site assessment in conjunction with Table 2 under Clause 52.47-3 were used to determine the appropriate BAL and associated defensible space and construction standard. The highest BAL threat is from Modified Vegetation to the east and south (adjacent to the site boundary) (Figure 3).

The subdivision is capable of achieving BAL-12.5 defensible space and construction to the north, east, south and west in accordance Column A of Table 2 to Clause 52.47-3 for a subdivision that creates 10 or more lots (Table 1) (Figure 4).




Table 1. Bushfire Hazard Site Assessment Results

Orientation	Classified Vegetation#	Effective Slope	Distance to Classified Vegetation*	Defendable Space**	BAL
North	Low-threat	Flat/Upslope	0 metres	Property boundary	12.5
East	Modified Vegetation	Flat/Upslope	0 metres	Property boundary	12.5
South	Modified Vegetation	Flat/Upslope	0 metres	Property boundary	12.5
West	Low-threat	Flat/Upslope	0 metres	Property boundary	12.5



#Modified vegetation refers to vegetation that is sufficiently varied from the vegetation classification in AS3959: 2009 *Distance from the property boundary; ** Defendable space is to be provided for a distance of 50 metres, or the property boundary whichever is the lesser, for buildings constructed to all bushfire attack levels. The minimum construction standard is BAL 12.5 (DELWP 2017b).

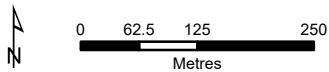
Figure 4
Bushfire Management
Plan
 Jetty Road, Drysdale

Legend

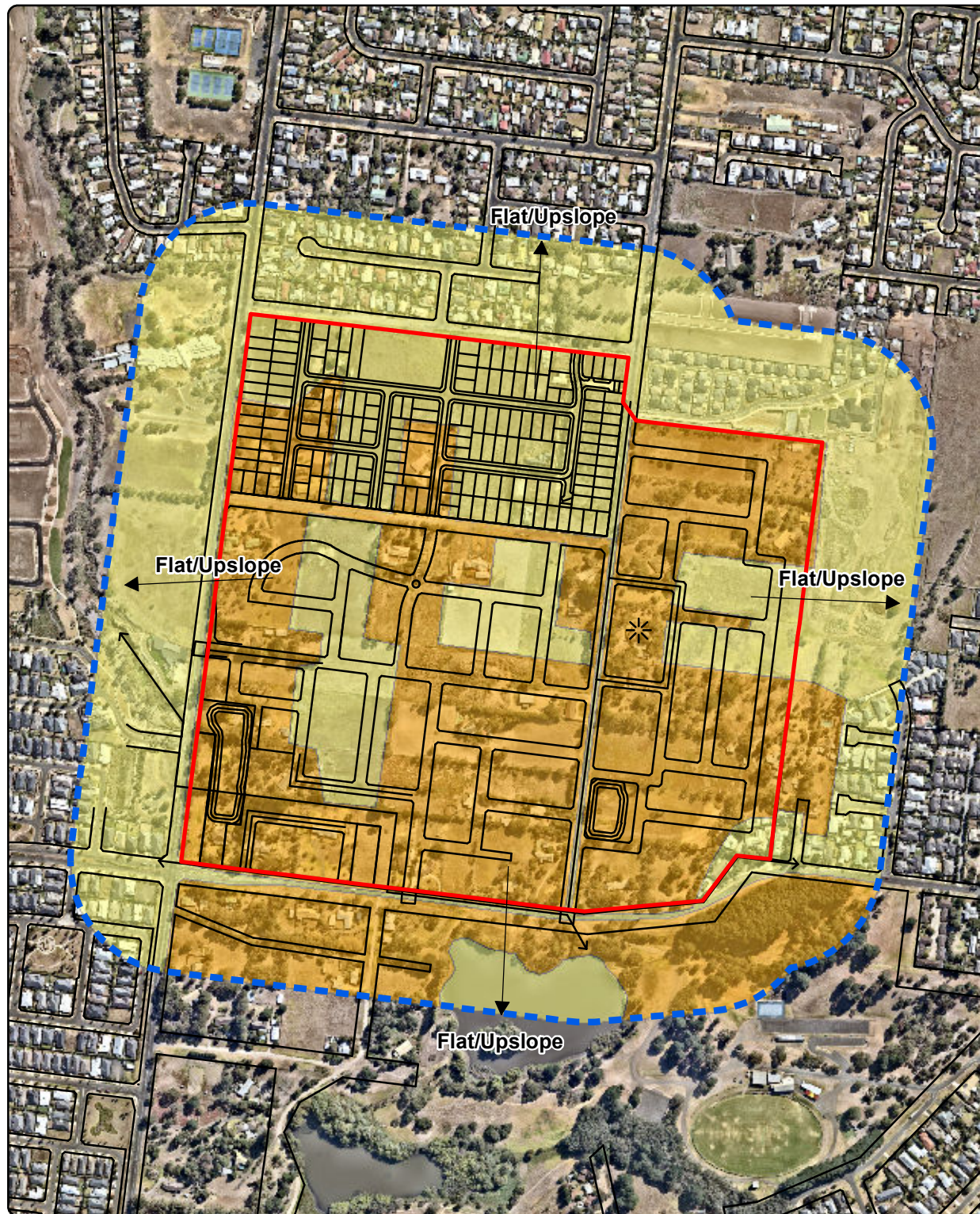
-  Subject Site
-  150m Assessment
-  Development Plan

Classifiable Vegetation

-  Modified Vegetation
-  Low Threat



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Defendable Space Management

- Grass must be short cropped and maintained during the declared fire danger period.
- All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
- Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.
- Shrubs must not be located under the canopy of trees.
- Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.
- Trees must not overhang or touch any elements of the building.
- The canopy of trees must be separated by at least 5 metres.
- There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

Water Supply and Access

- Water hydrants for fire fighting will be specified in the plan of subdivision.
- There are no access design and construction requirements as the length of access is less than 30 metres.

Construction Requirements

- Each dwelling is to be constructed to BAL-12.5 in accordance with AS3959 requirements.

Landscaping

- Any landscaping will conform to the CFA Landscaping for Bushfire Guidelines to reduce the bushfire risk



6 Clause 13.05-1 Bushfire Planning

6.1 Application Requirements

Clause 13.05-1 (Bushfire Planning) requires development applications in bushfire prone areas to address the objectives and application requirements of this policy at the planning permit application stage. The objective of Clause 13.05 *is to strengthen the resilience of settlements and communities and prioritise protection of human life*. The relevant application requirements of Clause 13.05-1 are addressed in Table 2.

Table 2. Response to Clause 13.05-1

Protection of Human Life	
Strategy	Response
Prioritising the protection of human life over all other policy considerations.	<p>The site occurs within the Drysdale town boundary and is located immediately adjacent to residential development to the north and west. Land use to the east and south includes a mix of residential and agricultural land use.</p> <p>The subdivision is located in a Rural Living Zone, adjacent to residential development, the local road network, town water supply and existing cleared areas. Areas of grassland to the west of the site represent a potential bushfire risk to the local area, however this threat is considered to be low.</p> <p>The bushfire risk to human life can be mitigated to an acceptable level through the layout, siting and design of the subdivision and implementation of bushfire protection measures.</p>
Directing population growth and development to low risk locations and ensuring the availability of, and safe access to, areas where human life can be better protected from the effects of bushfire.	<p>The proposed subdivision is located within the Drysdale town boundary, and immediately adjacent to residential development to the north and west. Access to the site is via the Jetty Road, which provides clear and ready access for residents and emergency services.</p> <p>No nearest neighbourhood safer place is listed for Drysdale; however, the township contains areas of residential parkland and ovals that can provide protection from the impact of bushfire conditions.</p>
Reducing the vulnerability of communities to bushfire through the consideration of bushfire risk in decision-making at all stages of the planning process.	<p>The proposed subdivision will not increase the bushfire risk to the local community or the adjacent area and it is located in a low bushfire risk area. Implementing bushfire protection measures may assist in reducing the risk to adjacent residential development.</p>
Bushfire hazard identification and assessment	



Strategy	Response
Applying the best available science to identify vegetation, topographic and climatic conditions that create a bushfire hazard.	The bushfire hazard has been reviewed using the most current available vegetation, topographic and climatic data, GIS layers and spatial imagery.
Considering the best available information about bushfire hazard including the map of designated bushfire prone areas prepared under the Building Act 1993 or regulations made under that Act.	The area surrounding the subdivision is identified as a bushfire prone area.
Applying the Bushfire Management Overlay in planning schemes to areas where the extent of vegetation can create an extreme bushfire hazard.	The site is located in a modified agricultural area, where the existing vegetation cannot create an extreme bushfire risk.
<p>Considering and assessing the bushfire hazard on the basis of:</p> <ul style="list-style-type: none"> • Landscape conditions - meaning the conditions in the landscape within 20 kilometres and potentially up to 75 kilometres from a site. • Local conditions - meaning conditions in the area within approximately 1 kilometre from a site. • Neighbourhood conditions - meaning conditions in the area within 400 metres of a site; and the site for the development. 	<p>The bushfire hazard landscape assessment has address the bushfire hazard of the locality approximately 20 km from the site (Figure 2). The highest bushfire risk within the broader landscape comprises areas of unmanaged grassland vegetation on agricultural land to the west; however, this threat is mitigated through the presence of low-risk vegetation managed in a minimum fuel condition.</p> <p>The local bushfire conditions were addressed within the bushfire hazard landscape assessment (Figure 2). The bushfire risk within the local area comprises areas of unmanaged grassland vegetation on agricultural land to the west; however, surrounding low-threat vegetation, residential development, the local road network, Corio Bay and agricultural crops reduce this risk to the subdivision.</p> <p>The neighbourhood bushfire risk is considered low to the immediate north and west due to the presence of residential development and low-threat areas. Areas of unmanaged grassland vegetation on agricultural land occur to the west, however, residential development, the local road network and agricultural crops reduce this risk to the subdivision.</p>
Consulting with emergency management agencies and the relevant fire authority early in the process to receive their recommendations and implement appropriate bushfire protection measures.	Consultation has been undertaken with CFA Fire Safety Officer Phillip Wall (Fire & Emergency Management).
Ensuring that strategic planning documents, planning scheme amendments, planning permit applications and development plan approvals properly assess bushfire risk and include appropriate bushfire protection measures.	This application has assessed the bushfire risk through preparation of a bushfire hazard site assessment, landscape hazard assessment, which includes appropriate bushfire protection measures.
Not approving development where a landowner or proponent has not satisfactorily demonstrated that the relevant policies have been addressed, performance measures satisfied or bushfire protection measures can be adequately implemented.	The required BAL 12.5 defensible space and construction for >10 lot subdivision can be met as well as associated bushfire protection measures to reduce this risk to appropriate levels.
Settlement planning	



Strategy	Response
Directing population growth and development to low risk locations, being those locations assessed as having a radiant heat flux of less than 12.5 kilowatts/square metre under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009).	The Bushfire Hazard Site Assessment identified the development is capable of achieving BAL-12.5 defensible space and construction in accordance with Column A of Table 2 to Clause 52.47-3.
Ensuring the availability of, and safe access to, areas assessed as a BAL-LOW rating under AS 3959-2009 Construction of Buildings in Bushfire-prone Areas (Standards Australia, 2009) where human life can be better protected from the effects of bushfire.	No nearest neighbourhood safer place is listed for Drysdale; however, the township contains areas of residential parkland and ovals that can provide protection from the impact of bushfire conditions.
Ensuring the bushfire risk to existing and future residents, property and community infrastructure will not increase as a result of future land use and development	The proposed subdivision will not increase the bushfire risk to the local community or the adjacent area and it is located in a low bushfire risk area.
Achieving no net increase in risk to existing and future residents, property and community infrastructure, through the implementation of bushfire protection measures and where possible reduce bushfire risk overall.	The subdivision is capable of managing the bushfire risk within the property boundary, as the defensible space can be wholly contained on the subject land. Implementing bushfire protection measures may assist in reducing the overall risk to adjacent residential development.
Assessing and addressing the bushfire hazard posed to the settlement and the likely bushfire behaviour it will produce at a landscape, settlement, local, neighbourhood and site scale, including the potential for neighbourhood-scale destruction.	The bushfire risk to the development from the landscape beyond the site can be mitigated to an acceptable level, as the required defensible space vegetation management measures will be implemented with the ongoing use of the land.
Assessing alternative low risk locations for settlement growth on a regional, municipal, settlement, local and neighbourhood basis.	The development area is located on agricultural land that is considered a low bushfire risk location for settlement growth. It occurs within the existing town boundary, is immediately adjacent to residential development and is accessible from the Jetty Road.
Not approving any strategic planning document, local planning policy, or planning scheme amendment that will result in the introduction or intensification of development in an area that has, or will on completion have, more than a BAL-12.5 rating under AS 3959-2009.	The Bushfire Hazard Site Assessment identified the development is capable of achieving BAL-12.5 defensible space and construction in accordance with Column A of Table 2 to Clause 52.47-3.

Use and development control in a Bushfire Prone Area

Strategy	Response
Consider the risk of bushfire to people, property	The bushfire risk has been assessed through



and community infrastructure.	preparation of a bushfire hazard site assessment, and landscape hazard assessment, which includes appropriate bushfire protection measures. The development is capable of achieving BAL-12.5 defensible space and construction, and is capable of managing the bushfire risk within the property boundary.
Require the implementation of appropriate bushfire protection measures to address the identified bushfire risk.	The required defensible space vegetation management measures will be implemented with the ongoing use of the land (slashing).
Ensure new development can implement bushfire protection measures without unacceptable biodiversity impacts.	The site is highly modified as a result of agricultural use and is generally devoid of indigenous vegetation. The development will not result in unacceptable impacts to biodiversity.



7 References

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DEWLP 2017b. Clause 52.47 Planning for Bushfire. Department of Environment, Water, Land and Planning: <http://planning-schemes.delwp.vic.gov.au/schemes/vpps>DEWLP

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Appendix 1: Defendable Space

Defendable space is to be managed in accordance with the following requirements:

- Grass must be short cropped and maintained during the declared fire danger period.
- All leaves and vegetation debris must be removed at regular intervals during the declared fire danger period.
- Within 10 metres of a building, flammable objects must not be located close to the vulnerable parts of the building.
- Plants greater than 10 centimetres in height must not be placed within 3m of a window or glass feature of the building.
- Shrubs must not be located under the canopy of trees.
- Individual and clumps of shrubs must not exceed 5 sq. metres in area and must be separated by at least 5 metres.
- Trees must not overhang or touch any elements of the building.
- The canopy of trees must be separated by at least 5 metres.
- There must be a clearance of at least 2 metres between the lowest tree branches and ground level.

Unless specified in a schedule or otherwise agreed in writing to the satisfaction of the relevant fire authority (DELWP 2017b).