Appendix B

Bushfire Management Plan

Bushfire Management Plan Coversheet

This Coversheet and accompanying Bushfire Management Plan has been prepared and issued by a person accredited by Fire Protection Association Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme.

Bushfire Management Plan and Site Details

Site Address / Plan Reference:	Lot 12 Sultana Rd East				
Suburb:	Forrestfield	**State:**	WA	**P/code:**	6058
Local government area:	City of Kalamunda				
Description of the planning proposal:	Residential Development				
BMP Plan / Reference Number:		**Version:**	Revision 1.1	**Date of Issue:**	26 April 2024
Client / Business Name:	Acott Equities Pty Ltd				

Reason for referral to DFES	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)?	☐	☒
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 BPC elements)?	☐	☒
Is the proposal any of the following special development types (see SPP 3.7 for definitions)?		
Unavoidable development (in BAL-40 or BAL-FZ)	☐	☒
Strategic planning proposal (including rezoning applications)	☐	☒
Minor development (in BAL-40 or BAL-FZ)	☐	☒
High risk land-use	☐	☒
Vulnerable land-use	☐	☒

If the development is a special development type as listed above, explain why the proposal is considered to be one of the above listed classifications (E.g. considered vulnerable land-use as the development is for accommodation of the elderly, etc.)?

Note: The decision maker (e.g. local government or the WAPC) should only refer the proposal to DFES for comment if one (or more) of the above answers are ticked "Yes".

BPAD Accredited Practitioner Details and Declaration

Name	Sue Brand	**Accreditation Level**	Level 2 BPAD Practitioner	**Accreditation No.**	36638	**Accreditation Expiry**	30 April 2024
Company	MBS Environmental			**Contact No.**	0439 435 110		

I declare that the information provided within this bushfire management plan is to the best of my knowledge true and correct

Signature of Practitioner	SBrand	**Date**	26 April 2024

BUSHFIRE MANAGEMENT PLAN
LOT 12 SULTANA ROAD EAST, FORRESTFIELD

PREPARED FOR:

ACOTT EQUITIES PTY LTD

APRIL 2024

PREPARED BY:

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LOT 12 SULTANA ROAD EAST, FORRESTFIELD
BUSHFIRE MANAGEMENT PLAN

Distribution List:

Company	Contact Name	Copies	Date
Acott Equities Pty Ltd	Brendan Acott	[01]	26 April 2024

Document Control for Job Number: AEGFBMP

Document Status	Prepared By	Authorised By	Date
Final Report	Sue Brand	Matthew Todd	14 November 2023
Revision 1.1	Sue Brand	Matthew Todd	26 April 2024

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1. BACKGROUND INFORMATION

Acott Equities Pty Ltd (the Developer) are proposing a residential development at Lot 12 Sultana Road East, Forrestfield (the Site, Lot 12), with a Bushfire Management Plan required to support a subdivision application, with this document updating the previous 2023 BMP due to the proposed change to the Lot layout. The broad aim of the assessment process was to identify potential bushfire risks to future properties along with appropriate management actions when the site is developed.

The Site is located within a bushfire prone area as designated by the Fire and Emergency Services Commissioner, Office of Bushfire Risk Management (OBRM), within the Department of Fire and Emergency Services (2021). Accordingly, there is a requirement for landowners to undertake an assessment to determine the risks and identify appropriate management strategies such that the development does not increase the inherent bushfire risk. Portions of the site that are located within 100 m of vegetation designated as being bushfire prone necessitate the need for a bushfire attack level assessment (BAL assessment) and assigning a BAL rating that will determine appropriate construction standards as per *AS 3959:2018 Construction of Buildings in Bushfire Prone Areas*. The BAL assessment component of this document considers current and projected site conditions (i.e. vegetation classification pre- and post-development), along with the provisions of State Planning Policy (SPP) 3.7 *Planning in Bushfire Prone Areas* (DoP and WAPC, 2015), *Guidelines for Planning in Bushfire Prone Areas* (DPLH and WAPC, V1.4, 2021).

1.1 LOCATION

Lot 12 Sultana Road East is located in Forrestfield within the City of Kalamunda (Figure 1), and is:

- Approximately 14.5 km east of the Perth Central Business District (CBD) within the City of Kalamunda.
- Approximately 1.00 ha (total).

The Site is bounded by Sultana Road East and vegetated rural residential properties to the northeast, managed rural residential properties to the southeast and northwest, and POS including retained vegetation and higher density residential Lots to the southwest.

1.2 AIMS AND OBJECTIVES

The aim of the BMP is to outline the bushfire management methods and requirements that will be implemented within the Lot 12 Sultana Road East subdivision. Accordingly, broad aims include:

- Reduce the occurrence of and minimise the impact of bushfire to the life and property of future residents and the environment.
- Allow easy access of firefighters if a bushfire does occur.
- Protect the landscape within the site as far as is possible.
- Document bushfire prevention requirements of the area to which it relates.

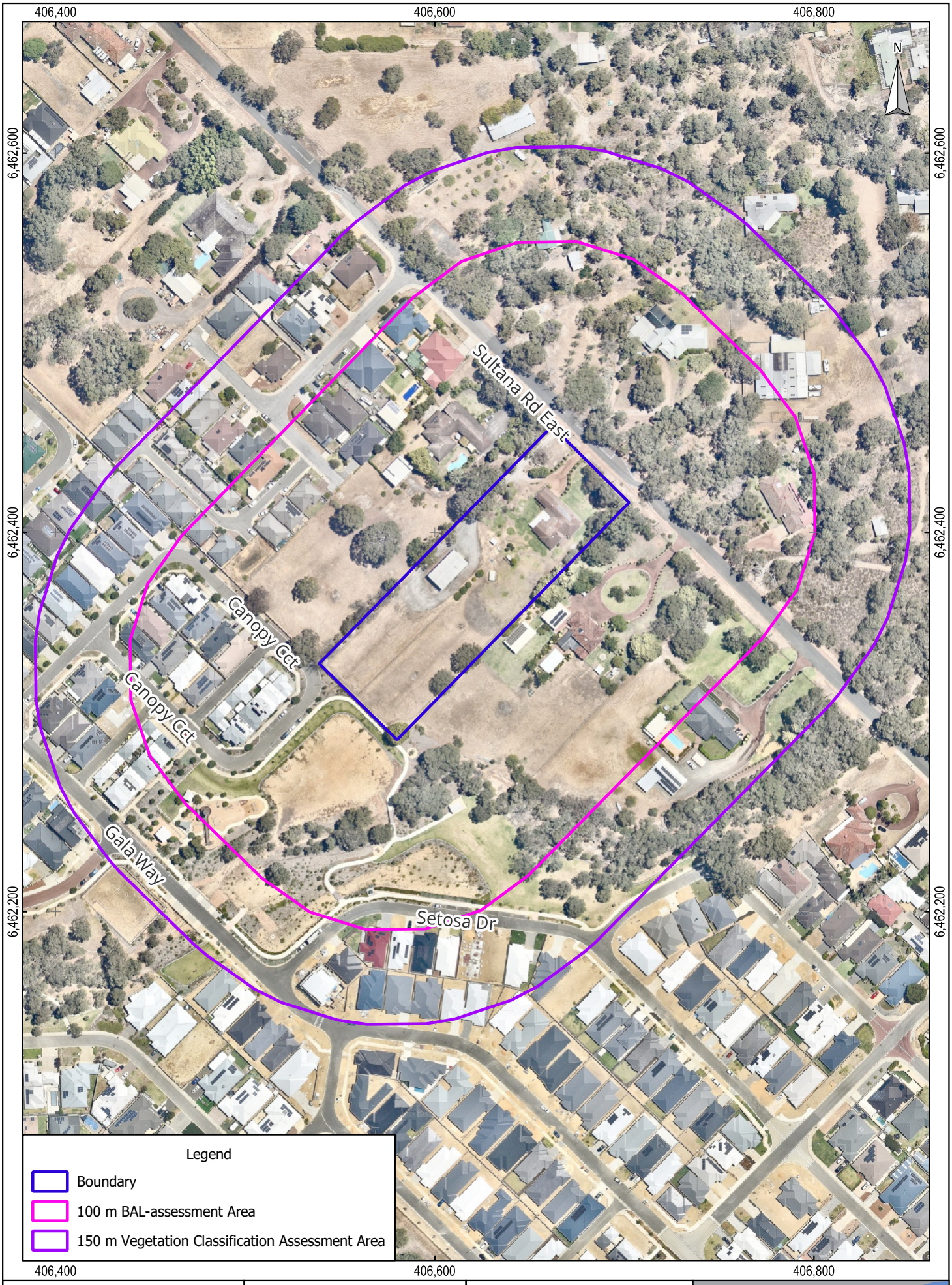
The objectives of this BMP are to:

- Define land use areas and values within the subdivision, with the entire subdivision being developed as urban residential Lots.
- Define and rank bushfire hazard areas according to the vegetation type and fire fuels present.
- Outline the roles and responsibilities of individuals and organisations in relation to fire management within the subdivision.
- Document fire management strategies for the subdivision, taking into consideration:
  - Retained and unmanaged vegetation within properties surrounding the Site as well as POS areas to the southwest (Figure 1).
  - The need for building construction standards where vegetated areas interface with the urban development.
  - Identify access for fire-fighting operations and daily maintenance in and around vegetated areas and stages of development.
  - Define an assessment procedure that will evaluate the effectiveness and impact of existing and proposed fire prevention activities and strategies.
  - Document the performance criteria and acceptable solutions adopted for the site.

1.3 DOCUMENT PREPARATION

This document has been prepared by Sue Brand, an accredited Level 2 Bushfire Planning and Design (BPAD) practitioner with the Fire Protection Association Australia. Activities involved with the plan preparation process included:

- Assessing the vegetation type and class present within and adjacent to the proposed development site using descriptions provided in *AS 3959:2018 Construction of Buildings in Bushfire Prone Areas* (*AS 3959:2018*).
- Assigning hazard ratings based on the vegetation types present on and offsite.
- Determining bushfire attack level (BAL) ratings and suggesting management strategies that could be implemented based on current and projected site considerations.
- Preparing this BMP.



Scale: 1: 2,600
Original Size: A4
Aerial Imagery: NearMap Feb 2024
Grid: GDA94 / MGA zone 50
0 25 50 m

Bushfire Management Plan
Lot 12 Sultana Road,
Forrestfield
Acott Equities Pty Ltd

Figure 1

Location

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2. CONSIDERATION OF BUSHFIRE THREAT

2.1 SITE CHARACTERISTICS

2.1.1 Regional Context

Perth is located within the Swan Coastal Plain region of the Interim Biogeographical Regionalisation of Australia (IBRA). The Swan Coastal Plain comprises of two major divisions, namely the Swan Coastal Plain 1 – Dandaragan Plateau and Swan Coastal Plain 2 – Perth Coastal Plain. The Site is in the Perth subregion, which is broadly characterised as including areas of Jarrah and Banksia woodlands on sandy soils in a series of sand dunes, along with wetland areas, often within the interdunal swales (Mitchell, Williams, and Desmond, 2002).

2.1.2 Vegetation

The Site currently contains vegetation characteristic of a managed rural residential lot including lawn areas, landscaped gardens, and the occasional tree. The entire Site will be cleared of buildings and vegetation to accommodate the proposed subdivision. Vegetation occurs to the northeast of Sultana Road East within rural residential properties, treed areas, as well as within an area of public open space (POS) to the south of the Site (Figure 1).

2.1.3 Contours and Slope

The Site and vegetation are upslope of flat land, and this is the slope that has been applied for the BAL assessment component of this document.

2.1.4 Land Use

Current land use within the subdivision is a managed rural residential lot including lawn areas and landscaped gardens. The entire Site will be cleared of buildings and vegetation to accommodate the proposed subdivision development (Figure 2).



Figure 2: Current Land Use

2.1.5 Environmental Considerations

There are no patches of vegetation currently retained within the Site. Vegetation to the northeast of Sultana Road East within rural residential properties as well as within a POS area to the south of the Site are expected to be retained in the future.

Within the Site boundary, there are no:

- Bush Forever Sites.
- Wetlands or waterways, with the closest streamline (Crumpet Creek) that flows from the northeast from Sultana Road East to the southwest located approximately 150 m to the northeast.

2.1.6 Landscaping

The proposed development area is approximately 1 ha, which encompasses the entire Site. This area will be developed as residential Lots and roads, with no POS areas and therefore no landscaping will occur.

2.2 VEGETATION CLASSIFICATION

Vegetation on and within 150 m of the Site was assessed during a site visit on 04 October 2023 using descriptions provided in Table 2.3 and Figure 2.4 of *AS 3959:2018*. Each vegetation class is discussed and shown in Figures 3, 4, 5, and 6. The pre-development vegetation classifications for the Site are shown in (Figure 7), with the post-development classifications shown in (Figure 8). Note, some areas were not accessible given private property adjacent, therefore the classification of some of the vegetation classes was inferred from aerial imagery.

2.2.1 Patch 1: Class A Forest

Class A Forest is characterised by trees, commonly eucalypts, to 30 m with a 30–70% canopy over layered vegetation that may include sclerophyllous low trees or shrubs. This vegetation class is present in medium to large patches in several properties across Sultana Road East to the northeast that represents an ongoing bushfire risk into the future (Figure 3). There is a small patch of Class A Forest is associated with the riparian zone of the streamline approximately 150 m to the southeast of the Site. This vegetation will not contribute to BAL ratings given its distance away from the site (Figure 3).

Patch: 1	**Classification or Exclusion Clause:**	Class A Forest



Photo ID 1



Photo ID 2



Photo ID 3

Figure 3: Class A Forest

2.2.2 Patch 2: Class C Shrubland

Class C Shrubland is characterised by shrubs to 2 m with a continuous canopy from ground level. A small patch of this vegetation class with plant height averaging 1 m and grass trees to 2 m is present across Sultana Road East approximately 90 m to the northeast of the Site (Figure 4). This vegetation class will be retained into the future, it will have no influence on BAL ratings as the Class A Forest immediately across Sultana Road East is the vegetation Class that will determine the BAL ratings for proposed Lots.

Patch: 2	Classification or Exclusion Clause:	Class C Shrubland



Photo ID 4

Figure 4: Class C Shrubland

2.2.3 Patch 3: Low-Threat Vegetation

Vegetation may be considered low threat due to characteristics such as poor flammability, high moisture content, or low fuel load, with examples including managed parkland/reserve areas, grassland maintained in a minimal fuel load through cropping to 20 cm or less, nature strips, wind breaks, market gardens, orchards, and playing fields. These locations are subject to exclusion clause 2.2.3.2 (f). Low-threat vegetation subject to exclusion clause 2.2.3.2(f) is present in (Figure 5):

- The landscaped and maintained reserve area that fronts Setosa Dr (Photo ID 5).
- The treed area to the rear of Lot 10 that has been cleared of all understorey and branches under-pruned, with the area being used as bike park (Photo ID 6).
- Maintained lawns and gardens in rural residential Lots along Sultana Road East (Photo ID 7).

Patch: 3	**Classification or Exclusion Clause:**	Exclusion Clause 2.2.3.2 (f)

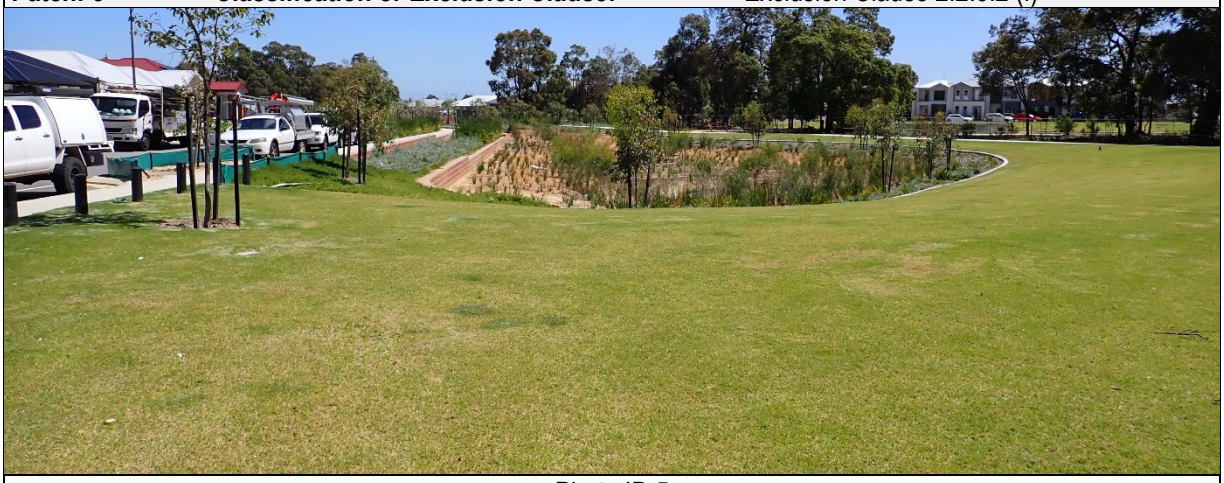


Photo ID 5



Photo ID 6



Photo ID 7

Figure 5: Low-Threat Vegetation

2.2.4 Patch 4: Non-vegetated Areas

Non-vegetated areas are subject to exclusion clause 2.2.3.2 (e), with those in proximity to the Site including (Figure 6):

- Roads and footpaths.
- Cleared areas in locations being developed by others.
- Existing buildings in previously developed areas.

Patch: 3	**Classification or Exclusion Clause:**	Exclusion Clause 2.2.3.2 (e)

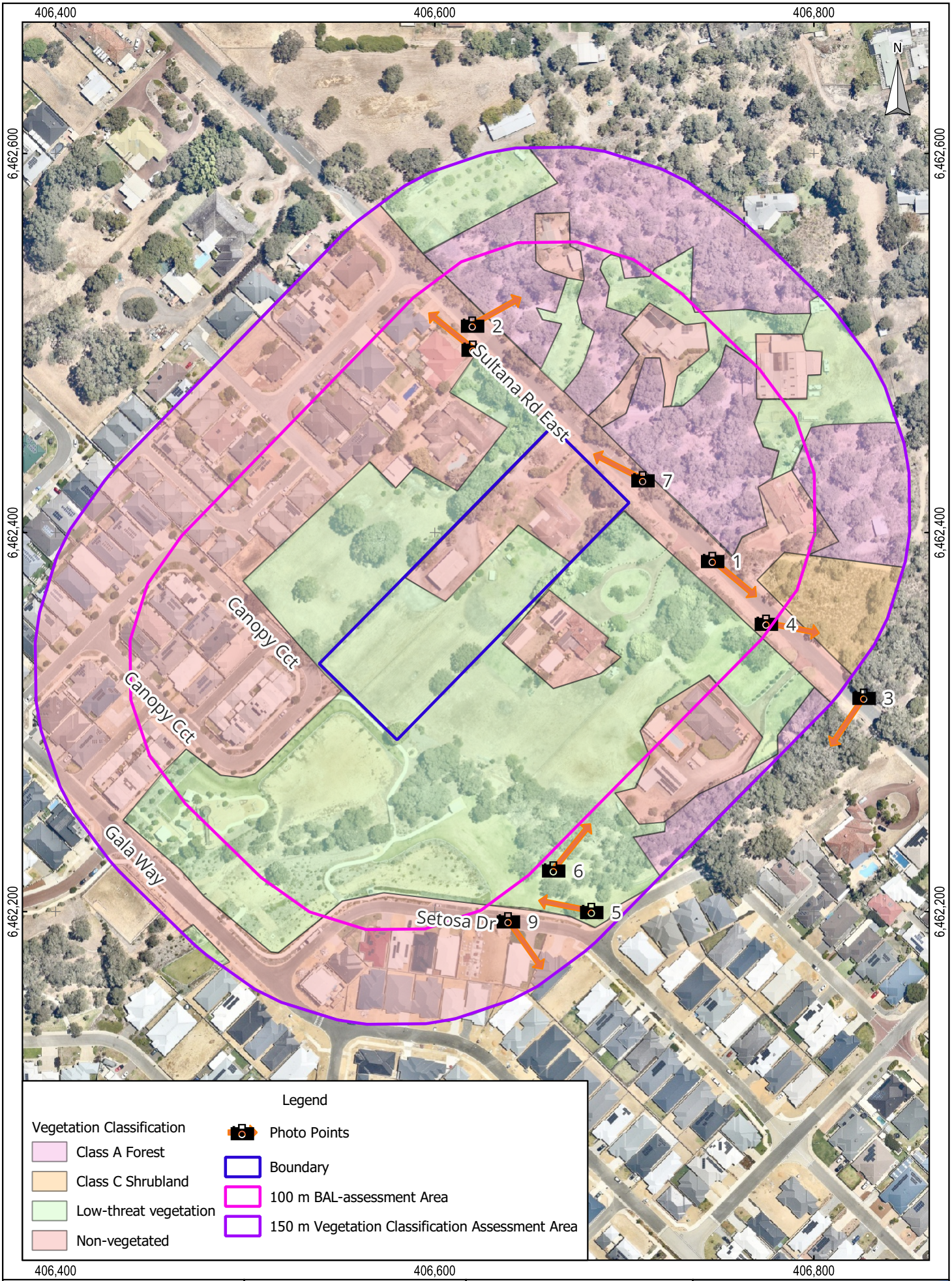


Photo ID 8



Photo ID 9

Figure 6: Non-vegetated Areas



Scale: 1: 2,600
Original Size: A4
Aerial Imagery: NearMap Feb 2024
Grid: GDA94 / MGA zone 50
0 25 50 m

Bushfire Management Plan
Lot 12 Sultana Road,
Forrestfield
Acott Equities Pty Ltd

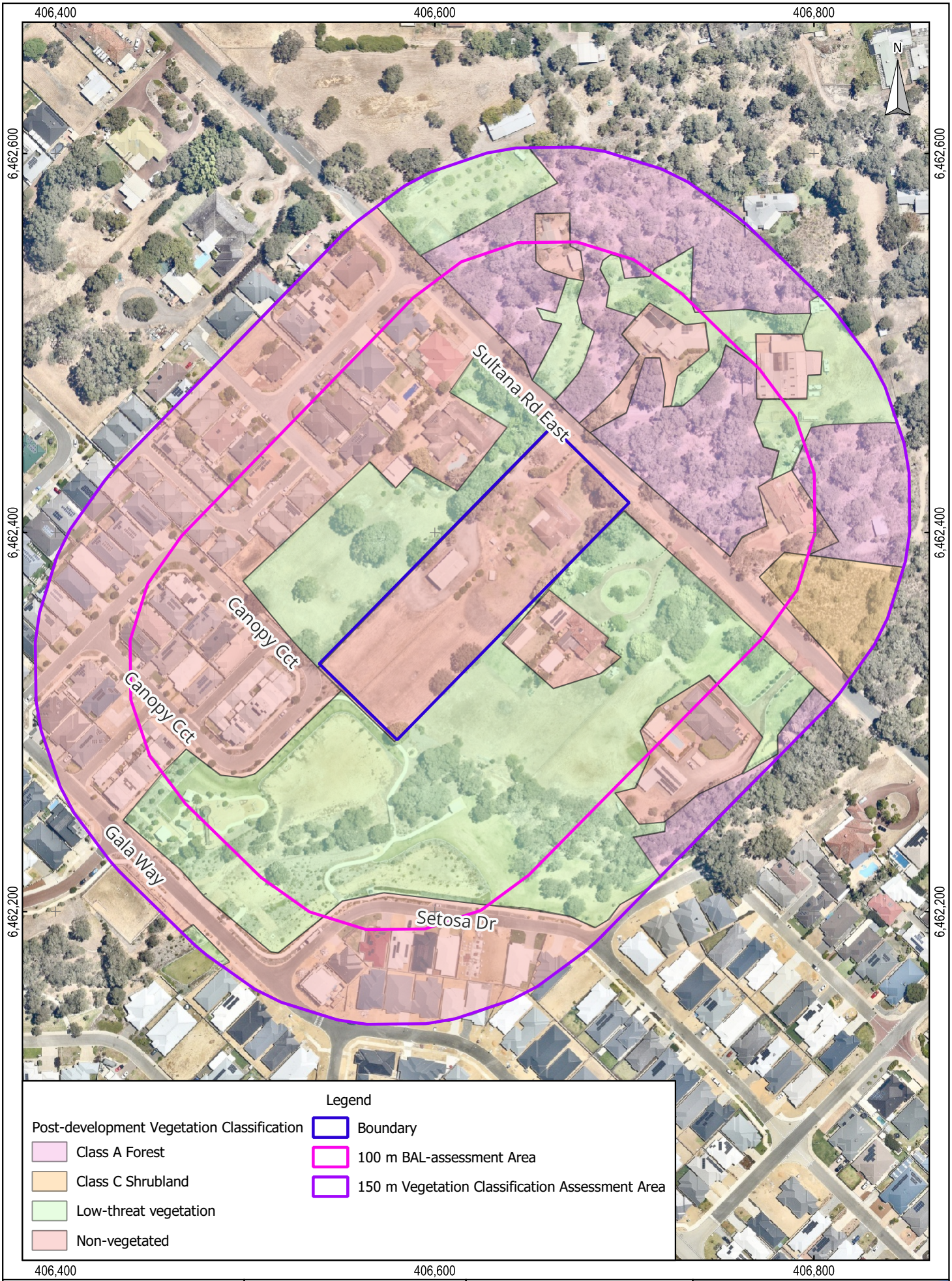
Figure 7

Vegetation Classification as per AS 3959:2018

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\\mbssvr\working\Acott Equities\GIS\Lot 12 BMP.qgz 03/03/2024 F7 Vegetation Classification



Scale: 1: 2,600
Original Size: A4
Aerial Imagery: NearMap Feb 2024
Grid: GDA94 / MGA zone 50
0 25 50 m

Bushfire Management Plan
Lot 12 Sultana Road,
Forrestfield
Acott Equities Pty Ltd

Figure 8

Post-development Vegetation Classification

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2.3 BUSHFIRE HAZARD LEVEL

2.3.1 Bushfire Hazard Assessment

Depending on the vegetation type, a hazard rating of low, moderate, or extreme is assigned. The nature of the vegetation in and around the development area means that the pre-development bushfire hazard rating ranges from Low to Extreme due to the Class A Forest present in proximity to the Site (Figure 9). All locations within 100 m of the Class A Forest are assigned a Moderate hazard rating due to the increased risk in those locations, with remaining areas being assigned a Low hazard rating.

2.3.2 Fire Danger Index

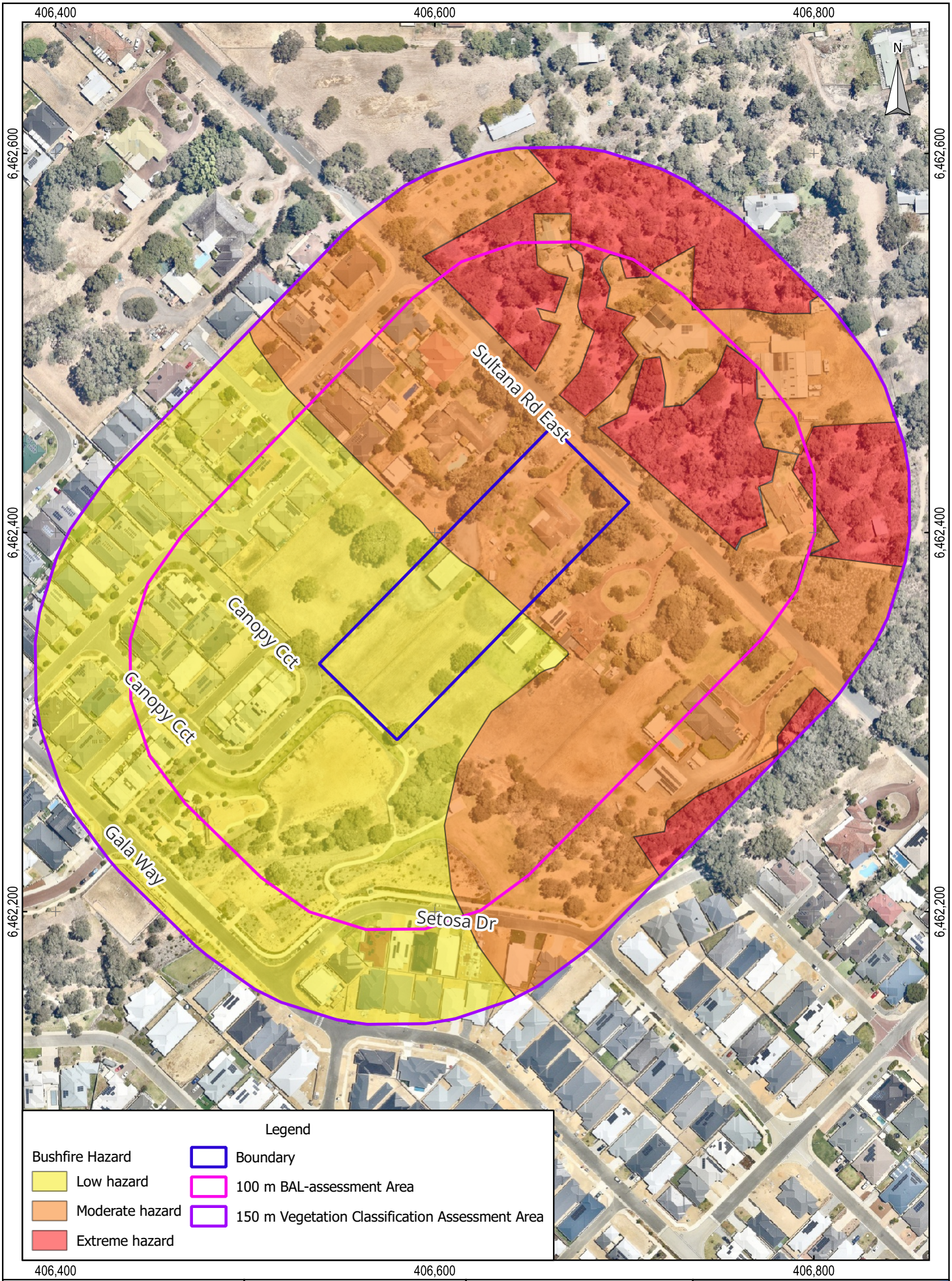
The fire danger index (FDI) for the Site is FDI 80, as documented in Table 2.4.3 of AS 3959:2018, and which is the nominated FDI for Western Australia.

2.3.3 Potential Fire Impacts

Potential fire impacts within the Site include radiant heat, smoke, and ember attack, with the BAL analysis provided in Table 1. The subdivision will create 28 residential Lots, of which eight will be located within the proposed group housing site (GHS) (Figure 10). Note that a minimum building setback of 4 m (in keeping with the R25 designation) will apply to Lots 1 to 4 facing Sultana Road East. This will enable the construction of dwellings outside the BAL-40 zone and a BAL-29 rating to be assigned whilst also providing a mechanism for the required building setback to be enforced.

Table 1: BAL Analysis

Patch	Vegetation Class	Slope	Separation Distance (m)	BAL rating
1	Class A Forest	Upslope	>18	BAL-40
	Class A Forest		>21	BAL-29
	Class A Forest		>42	BAL-12.5
	Class A Forest		>100	BAL-Low
2	Class C Shrubland	Upslope	>80	BAL-12.5
3	Low Threat Vegetation	N/A	N/A	BAL-Low
4	Non-vegetated Areas	N/A	N/A	BAL-Low



Scale: 1: 2,600
Original Size: A4
Aerial Imagery: NearMap Feb 2024
Grid: GDA94 / MGA zone 50
0 25 50 m

Bushfire Management Plan
Lot 12 Sultana Road,
Forrestfield
Acott Equities Pty Ltd

Figure 9

Bushfire Hazard Assessment

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2.4 BAL ASSESSMENT

An indicative Lot layout for the Site is known, so it is possible to provide an indication of BAL ratings for each Lot and these are shown in Figure 10. The following provides a summary of the assigned BAL ratings for the Site, noting that Lot numbers are as provided by others:

- Lots 8 to 18 will be rated BAL-Low.
- Lots 1 to 8 (GHS), along 6 and 7 that are separate from the GHS will be rated BAL-12.5.
- No Lots will be rated BAL-19.
- Lots 1 to 4 facing Sultana Road East will be rated BAL-29 with the application of a minimum 4-m setback for R25 Lots from the front Lot boundary to avoid building in the BAL-40 zone.
- No Lots will be rated BAL-40 or BAL-FZ.

2.5 ASSET PROTECTION ZONE

The asset protection zone (APZ) for the Site is that area that provides the separation distance between the classified vegetation and building walls, with a preferred width of 100 m. For locations where a 100-m APZ width cannot be achieved, a reduced APZ can be implemented when a BAL rating is determined for the building, as is the case for some of the Lots that are the subject of this BMP. The reduced APZ commences at the junction of the BAL-40 and BAL-29 zones, or the junction of the orange and yellow zones shown in Figure 10, and will extend to the building walls as that is the point where the potential radiant heat impact of a bushfire does not exceed 29 kW/m^2. As a suitable separation distance can be demonstrated for each of the Lots that will be created, it indicates that the bushfire risk can be managed within the subdivision area.

2.6 SHIELDING

Clause 3.5 of *AS 3959:2018* allows for a reduction in the nominated construction standard for a building in a bushfire prone area where the elevation is not exposed to the source of the bushfire attack, noting that the reduction in building standard cannot reduce below BAL-12.5. For BAL-29-rated Lots, elevations that are not exposed to the source of the bushfire attack may be reduced to BAL-19. This Clause will not apply to Lots rated BAL-12.5 or BAL-Low.

2.7 OTHER BUSHFIRE PROTECTION MEASURES

No other bushfire protection measures are required for the Site other than those documented in this BMP.

406,500 406,600 406,700

6,462,500 6,462,400 6,462,300 6,462,200

N

Sultana Rd East

Canopy Cct

Canopy Cct

Setosa Dr

Legend

BAL-ratings
- BAL-12.5
- BAL-29

BAL-contours
- BAL-12.5 Zone
- BAL-19 Zone
- BAL-29 Zone
- BAL-40 Zone
- BAL-FZ Zone

- Lot Layout
- Boundary
- 100 m BAL-assessment Area
- 150 m Vegetation Classification Assessment Area

406,500 406,600 406,700

Scale: 1: 1,300
Original Size: A3
Aerial Imagery: NearMap Feb 2024
Grid: GDA94 / MGA zone 50 (EPSG:28350)
0 25 50 m

Bushfire Management Plan
Lot 12 Sultana Road East, Forrestfield
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Figure 10

BAL-contours and Ratings

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2.8 IMPLEMENTATION

Implementation of this BMP will commence immediately and the Developer will hold responsibility for both for installation and ongoing maintenance until Lots within the Site are sold. The Developer is also responsible for ensuring the new owner of the site receives a copy of this BMP to support the building process.

When ownership arrangements change over time, the responsibility for the maintenance of fire management measures will devolve to the new owner or managing organisation, noting that landowners or managers are responsible for land under their direct control only. For example, Lot owners will be responsible for ensuring asset protection zones within their property are maintained. Activities that will be involved with the implementation of this plan are described in Table 2, which also includes an indication of maintenance responsibilities associated with particular activities.

2.9 RESPONSIBILITIES

Responsibilities for bushfire preparedness and response within the development area are shared by the Developer, the City of Kalamunda and building owners/occupiers.

2.9.1 Developer Responsibilities

The Developer is responsible for implementing key portions of this BMP including:

- Provide a copy of this BMP to owner to inform future building construction standard and approvals.
- Apply a minimum 4-m building setback from the front Lot boundary of Lots 1 – 4 facing Sultana Rd East as per the R25 designation; this will enable a BAL-29 rating to apply to these Lots.
- Install and maintain firebreak/low fuel/asset protection zones on their land.
- Arranging for a notification on titles to inform that some Lots are located within a designated bushfire prone area and a BAL rating applies.

2.9.2 City of Kalamunda Responsibilities

It should be noted that the City of Kalamunda has the responsibility and powers under the Local Planning Scheme and the *Bush Fires Act 1954* (WA) to ensure that this BMP, annual firebreak notices, any bushfire Information, and any special orders issued under the *Bush Fires Act* 1954 are complied with.

The City will be responsible for:

- Providing appropriate bushfire advice in relation to firebreaks, hazard reduction, and similar.
- Ensuring appropriate information relating to bushfire prone status is included on titles.
- Ensure that buildings are constructed in accordance with the nominated BAL rating.

2.9.3 Owner and/or Occupier Responsibilities

It is the responsibility of individual property owners building near the vegetated areas to:

- Ensure that residences are constructed in accordance with the relevant clauses of *AS 3959:2018* for the confirmed BAL rating.
- Maintain the nominated asset protection zone between the edge of the classified vegetation and building walls.
- If evaporative air conditioners are installed on dwelling(s), install ember shields.
- Respond to/comply with bushfire advice issued by the developer, the City of Kalamunda or DFES.

Table 2: Implementation Schedule

Item	Activity	Responsibility	Maintenance	Responsibility
Developer Responsibilities				
1	Provide a copy of this BMP to Lot owners to inform future building approval and construction process.	Developer	Not required	N/A
2	Apply a minimum 4-m building setback from the front Lot boundary of Lots 1 to 4 as per the R25 designation.	Developer	Not required	N/A
3	Install and maintain firebreak/low fuel/asset protection zones on their land.	Developer	Ongoing, in accordance with City of Kalamunda firebreak notices	Developer or owner/occupier as appropriate
4	Arrange for a notification on titles of Lots with a BAL rating to indicate that they are in a designated bushfire prone area.	Developer	Not required	N/A
City of Kalamunda Responsibilities				
5	Provide appropriate bushfire advice in relation to firebreaks, hazard reduction, and similar.	City of Kalamunda	As required	City of Kalamunda
6	Ensure appropriate information relating to bushfire prone status is included on titles.	City of Kalamunda	Not required	N/A
7	Ensure that buildings are constructed in accordance with the nominated BAL rating.	City of Kalamunda	Not required	N/A
Owner/Occupier Responsibilities				
8	Ensure that buildings constructed in accordance with the relevant clauses of *AS 3959:2018* for the confirmed BAL rating.	Owner/builder	Not required	N/A
9	Maintain the nominated asset protection zone between the edge of the classified vegetation and building walls.	Owner/occupier	Ongoing as required	Owner/occupier
10	If evaporative air conditioners are installed on dwelling(s), install ember shields.	Owner	Regular maintenance in accordance with manufacturer's instructions	Owner
11	Respond to/comply with bushfire advice issued by the developer, the City of Kalamunda or DFES.	Owner/occupier	Ongoing as required	Owner/occupier

3. COMPLIANCE AND JUSTIFICATIONS

3.1 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 3 summarises the intent and objectives of SPP 3.7 and provides evidence of how the Lot 12 Sultana Road East subdivision complies.

Table 3: SPP 3.7 Compliance Evidence

SPP Reference	Description	Evidence of Compliance
Intent	• Ensure that risks associated with bushfires are planned using a risk-based approach.	• Preparation of a BMP in accordance with SPP 3.7. • Hazard assessment indicates risks associated with bushfire are manageable.
Objective 1	• Avoid any increase in the threat of bushfire to people, property, and infrastructure.	• Hazard assessment indicates risks associated with bushfire are manageable. • Some Lots within the Site will have a BAL rating, with none higher than BAL-29 with the application of a 4-m building setback for Lots 1 to 4 facing Sultana Rd E (Figure 10).
Objective 2	• Reduce vulnerability to bushfire.	• Hazard assessment indicates risks associated with bushfire are manageable. • Some Lots within the Site will have a BAL rating, with none higher than BAL-29 with the application of a 4-m building setback for Lots 1 to 4 facing Sultana Rd E (Figure 10).
Objective 3	• Ensure that higher order strategic planning documents and proposals consider bushfire protection requirements at an early stage.	• The planning process has considered the risk of bushfire in an early stage. • The preparation of this document has been completed to inform owners of BAL ratings assigned to Lots ahead of sale and the later building process.
Objective 4	• Achieve an appropriate balance between bushfire risk management and biodiversity conservation.	• There will be no patches of retained vegetation within the Site. Retained vegetation to the northeast of Sultana Road East within rural residential properties and the Crumpet Creek riparian zone are expected to be retained for into the future.

3.2 BUSHFIRE PROTECTION CRITERIA

Appendix 4 of the *Guidelines for Planning in Bushfire Prone Areas* (DPLH and WAPC, v1.4, 2021) provides details of the acceptable bushfire protection solutions that can be used to demonstrate how a location can be developed in bushfire prone areas. Table 4 demonstrates the Site's Compliance with Bushfire Protection Criteria and Figure 10 provides the Lot layout with BAL contours and ratings for the Lots.

Table 4: Compliance with Bushfire Protection Criteria

Intent	Acceptable Solutions	Solution
Element 1: Location		
Ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure	**A1.1 Development Location**	
	Bushfire hazard assessment is or will on completion be moderate or low.	• The subdivision is in an area where the bushfire hazard level is manageable. • Some Lots within the Site will have a BAL rating, with none higher than BAL-29 with the application of a 4-m building setback for Lots 1 – 4 facing Sultana Rd East (Figure 10).
	BAL rating is BAL-29 or lower.	• Bushfire hazard assessment indicates manageable bushfire risk. • Some Lots within the Site will have a BAL rating, with none higher than BAL-29 with the application of a 4-m building setback for Lots 1 – 4 facing Sultana Rd East (Figure 10).
Element 2: Siting and Design of Development		
To ensure that the siting and design of development minimises the level of bushfire impact	**A2.1 Asset Protection Zone (APZ)**	
	Every habitable building is surrounded by, and every proposed lot can achieve an APZ depicted on plans that meets the following: • **Width** — bushfire radiant heat does not exceed radiant heat of 29 kW/m^2 (BAL-29) as measured from any external wall or supporting post or column in all circumstances. • **Location** — APZ contained solely within the boundaries of the Lot on which the building is situated, except in instances where the neighbouring lot(s) will be managed in a low-fuel state on an ongoing basis, in perpetuity. • **Management** — the APZ is managed in accordance with the requirements of '*Standards for Asset Protection Zones*' (Schedule 1 on page 71 of the Guidelines).	• The APZ coincides with the boundary between BAL-40 and BAL-29 zones (Figure 10) and includes roads and cleared areas. • Subdivision design ensures width is suitable to ensure radiant heat does not exceed 29 kW/m^2 (BAL-29) as measured from any external wall or supporting post or column in all circumstances. • Some Lots within the Site will have a BAL rating, with none higher than BAL-29 with the application of a 4-m building setback for Lots 1 to 4 facing Sultana Rd East (Figure 10).

Intent	Acceptable Solutions	Solution
Element 3: Vehicular Access		
Ensure that the vehicular access serving a subdivision/ development is available and safe during a bushfire event. To achieve the intent, all applicable acceptable solutions must be addressed: • **SP** — Strategic planning proposal and structure plan where the lot layout is not known. • **Sb** — Structure plan where the lot layout is known and subdivision application. • **Dd** — Development application for a single dwelling, ancillary dwelling, or minor development. • **Do** — Development application for any other development that is not a single dwelling, ancillary dwelling, or minor development.	**A3.1 Public Roads (SP Sb Do)**	
	Public roads are to meet the minimum technical requirements in Table 6, Column 1 on page 76 of the Guidelines. The trafficable (carriageway/pavement) width is to be in accordance with the relevant class of road in the Local Government Guidelines for Subdivisional Development (IPWEA Subdivision Guidelines), Liveable Neighbourhoods, Austroad standards and/or any applicable standards for the local government area.	Public roads associated with this subdivision will be constructed in accordance with the technical requirements outlined in Column 1 of Table 5 on page 76 of the Guidelines.
	A3.2a Multiple Access Routes (SP Sb Do)	
	Public road access is to be provided in two different directions to at least two different suitable destinations with an all-weather surface (two-way access).	• Lots 1 to 4 face Sultana Road East, with access/egress options available to the northeast and northwest (Figure 10). • In the short term, access and egress for the GHS (Lots 1 – 8), Lots 6 and 7, and 8 to 18 will be via the internal road that will connect to Canopy Cct and the existing road network with several egress options provided to the northwest and southwest (Figure 10). • Access and egress for the GHS (Lots 1 to 8) will be via a 6 m wide access/lane way that connects to the planned internal road networks and Canopy Cct and is wide enough to provide for passing (Figure 10). • In time, development of neighbouring rural residential Lots will result in the creation of additional roads that will provide alternative access/egress options (Figure 10).
	If the public road access is via a no-through road that cannot be avoided due to demonstrated site constraints, the road access is to be a maximum of 200 m from the subject lot(s) boundary to an intersection where two-way access is provided.	• At present, the planned internal road is a no-through road that connects to Canopy Cct. • The maximum distance from GHS Lots 1 – 8 to Canopy Cct is approximately 170 m where egress can occur to the northwest and southwest, with the distance for all other Lots being a maximum of 120 m. • These access options will lead away from the probable fire source.

Intent	Acceptable Solutions	Solution
	A no-through road may exceed 200 m if it is demonstrated that an alternative access way cannot be provided due to site constraints and the following requirements are met: • The no-through road travels towards a suitable destination. • The balance of the no-through road that is greater than 200 m from the subject site is wholly within BAL-Low or is in a residential built-out area (Figure 23 on page 81 of the guidelines).	N/A — the length of the no-through road does not exceed 200 m.
	A3.2b Emergency Access Way (SP Sb Do)	
	Where it is demonstrated that A3.2a cannot be achieved due to site constraints, or where an alternative design option does not exist, an emergency access way can be considered as an acceptable solution. An emergency access way is to meet all the following requirements: • Requirements in Table 6, Column 2 on page 76 of the guidelines. • Provides a through connection to a public road. • Be no more than 500 m. • Must be signposted and if gated, gates must open the whole trafficable width and remain unlocked.	N/A — access will be via the existing and planned road network.
	A3.3 Through-roads (SP Sb)	
	All public roads should be through-roads. No-through roads should be avoided and should only be considered as an acceptable solution where: • It is demonstrated that no alternative road layout exists due to site constraints, and • The no-through road is a maximum length of 200 m to an intersection providing two-way access, unless it satisfies the exemption provisions in A3.2a.	• As the development is for a single rural residential Lot, the design is constrained by the rural residential Lots either side and which limits the potential location of roads until Lots either side are developed. • The maximum distance from GHS Lots 1 – 8 to Canopy Cct is approximately 170 m where egress can occur to the northwest and southwest, with the distance for all other Lots being a maximum of 120 m.
	A no-through road is to meet all the following requirements: • Requirements of a public road (Table 6, Column 1, Page 76). • Turn-around area as shown in Figure 24 on page 81 of the Guidelines.	• The no-through roads will be constructed in accordance with the requirements for public roads and turn around areas specified in the guidelines. • Engineering design will be approved by the City of Kalamunda.

Intent	Acceptable Solutions	Solution
	A3.4a Perimeter Roads (SP Sb)	
	A perimeter road is a public road and should be provided for greenfield or infill development where 10 or more lots are being proposed, including as part of a staged subdivision, with the aim of: • Separating areas of classified vegetation under AS 3959 that adjoin the subject site from the proposed lots, and • Removing the need for battle-axe lots that back onto areas of classified vegetation.	Sultana Road East acts as a perimeter road between Lots 1 – 4 and the classified vegetation to the northwest, with no other perimeter roads required.
	A perimeter road is to the meet the requirements contained in Table 6, Column 1 on page 76 of the Guidelines.	N/A – Sultana Road East is a perimeter road, with none required within the proposed subdivision area.
	A perimeter road may not be required where: • The adjoining classified vegetation is Class G Grassland. • Lots are zoned for rural living or equivalent. • It is demonstrated that it cannot be provided due to site constraints. • All lots have frontage to an existing public road.	N/A — Sultana Road East is a perimeter road.
	A3.4b Fire Service Access Route (SP Sb)	
	Where proposed lots adjoin classified vegetation under AS 3959 (excluding Class G Grassland) and a perimeter road is not required in accordance with A3.4a, a fire service access route can be considered as an acceptable solution to provide firefighter access, where access is not available, to the classified vegetation. A fire access route is to meet all the following requirements: • Requirements in Table 6 Column 3 on page 76 of the Guidelines. • Be through-routes with no dead-ends. • Linked to the internal road system at regular intervals, every 500 m. • Must be signposted. • No further than 500 m from a public road. • If gated, gates must open the required trafficable width and be locked by the local government and/or emergency services, if keys are provided for each gate. • Turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 m.	N/A — fire access will be via the existing and planned road network.

Intent	Acceptable Solutions	Solution
	A3.5 Battle-axe Access Legs (Sb)	
	Where it is demonstrated that a battle-axe access leg cannot be avoided due to site constraints, it can be considered as an acceptable solution. There are no battle-axe technical requirements where the point of the battle-axe access leg joins the effective area of the battle-axe lot is less than 50 m from a public road in a reticulated water area.	N/A — there are no battle-axe Lots planned.
	In circumstances where the above condition is not met, or the battle-axe lot is in a non-reticulated water area, the battle-axe access leg is to meet all the following requirements: • Requirements in Table 6, Column 4 on page 76 of the Guidelines. • Passing bays every 200 m with a minimum length of 20 m and minimum additional trafficable width of 2 m (i.e. the combined trafficable width of the passing bay and constructed driveway to be a minimum 6 m).	N/A — there will be no battle-axe Lots.
	A3.6 Private Driveways (Dd Do)	
	There are no private driveway technical requirements where the private driveway is: • Within a lot serviced by reticulated water. • No greater than 70 m in length between the most distant external part of the development site and the public road as measured as a hose lay. • Accessed by a public road where the road speed limit is not greater than 70 km/h.	N/A — there will be no private driveways.
	In circumstances where all the above conditions are not met, or the private driveway is in a non-reticulated water area, the private driveway is to meet all the following requirements: • Requirements in Table 6, Column 4 on page 76 of the Guidelines. • Passing bays every 200 m with a minimum length of 20 m and minimum additional trafficable width of 2 m (i.e. the combined trafficable width of the passing bay and constructed driveway to be a minimum 6 m). • Turn around areas as shown in Figure 28 on page 86 of the Guidelines and within 30 m of the habitable building.	N/A — there will be no private driveways.

Intent	Acceptable Solutions	Solution
Element 4: Water		
Ensure that water is available to enable people, property, and infrastructure to be defended from bushfire. To achieve the intent, all applicable acceptable solutions must be addressed: • **SP** — Strategic planning proposal and structure plan where the lot layout is not known. • **Sb** — Structure plan where the lot layout is known and subdivision application. • **Dd** — Development application for a single dwelling, ancillary dwelling, or minor development. • **Do** — Development application for any other development that is not a single dwelling, ancillary dwelling, or minor development.	**A4.1 Identification of Future Water Supply (SP)**	
	Evidence that a reticulated or sufficient non-reticulated water supply for bushfire fighting can be provided at the subdivision and/or development application stage, in accordance with the specifications of the relevant water supply authority or the requirements of Schedule 2 on Page 90 of the Guidelines.	The Lots are located in an area with a reticulated water supply available for firefighting purposes.
	Where the provision of a strategic water tank(s) is required in a suitable area within a road reserve or a dedicated lot the location should be identified on the structure plan to the satisfaction of the local government.	N/A — subdivision will be connected to a reticulated water supply.
	A4.2 Provision of Water for Firefighting Purposes (Sb Dd Do)	
	Where a reticulated water supply is existing or proposed, hydrant connection(s) should be provided in accordance with the specifications of the relevant water supply authority. Where these specifications cannot be met, then the following applies: • The provision of a water tank(s) in accordance with the requirements of Schedule 2 on page 90 of the guidelines. • Where the provision of a strategic water tank(s) is applicable, then the following requirements apply: — Land to be ceded free of cost to the local government for the placement of the tank(s). — The lot or road reserve where the tank is to be located is identified on the plan of subdivision. — Tank capacity, construction, and fittings provided in accordance with the requirements of Schedule 2 on page 90 of the Guidelines. — A strategic water tank is to be located no more than 10 minutes from the subject site (at legal road speeds). Where a subdivision includes an existing habitable building(s) that is to be retained, a water supply should be provided to this existing habitable building(s) in accordance with the requirements listed above.	Hydrants will be installed in accordance with Water Corporation Design Standard DS 63.
Element 5: Vulnerable Tourism Land Uses		

Intent	Acceptable Solutions	Solution
Provide for bushfire protection for tourism land uses relevant to the characteristics of the occupants and/or the location, to preserve life and reduce the impact of bushfire on property and infrastructure. All applicable acceptable solutions must be addressed.	Every habitable building is surrounded by Asset Protection Zone (APZ) in accordance with Element 2: Siting and Design of Development — A2.1 APZ.	N/A — Residential subdivision
	Habitable buildings are sited and designed to: • Minimise clearing of existing vegetation. • Provide hazard separation between classified vegetation and a development site that is managed in perpetuity to protect life, prevent the spread of, and manage the impacts of fire.	N/A
	Suitable access/egress is provided for users of tourism sites.	N/A
	Adequate water is available for firefighting purposes in the event of a bushfire.	N/A

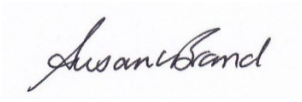
3.3 COMPLIANCE WITH RELEVANT DOCUMENTS

Sections 3.1 and 3.2 document how the Lot 12 Sultana Road East subdivision complies with *State Planning Policy 3.7* (Department of Planning and WA Planning Commission, 2015), *Guidelines for Planning in Bushfire Prone Areas* (Department of Planning, Lands and Heritage (DPLH) and the WA Planning Commission (WAPC), (V1.4, 2021).

Site owners/occupiers must comply with relevant sections of the annual firebreak notice and bushfire information prepared by the City of Kalamunda, such as total fire ban and hazard reduction programs.

3.4 COMPLIANCE STATEMENT

This BMP 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* (DPLH and WAPC, V1.4, 2021). The information contained in this document represents current site conditions based on a visit to the site on 04 October 2023 and associated planning.

Signed: 

Date: 26 April 2024

Accreditation Number: BPAD 36638

Accreditation Expiry Date: 30 April 2024

BPAD Bushfire Planning & Design Accredited Practitioner Level 2

4. REFERENCES

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

Bushfires Act 1954 (WA)

DPLH (Department of Planning, Lands and Heritage), and WAPC (the Western Australian Planning Commission). (2021). Guidelines for Planning in Bushfire Prone Areas V1.4, Western Australian Planning Commission, Perth, Western Australia.

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Mitchell, Williams and Desmond. (2002). Swan Coastal Plain 2 (SWA2 – Swan Coastal Plain subregion), Department of Conservation and Land Management, https://www.dpaw.wa.gov.au/images/documents/about/science/projects/waaudit/swan_coastal_plain02_p606-623.pdf, accessed October 2023.