

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: Allara Estate Stage 6

Suburb: Eglinton

State: WA

P/code: 6034

Local government area: City of Wanneroo

Description of the planning proposal: Subdivision application

BMP Plan / Reference Number: 62795/144,693

Version: R01 Rev 0

Date of Issue: 24/06/2022

Client / Business Name: Satterley Property Group

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)?	<input type="checkbox"/>	<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 BPC elements)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the proposal any of the following special development types (see SPP 3.7 for definitions)?		
Unavoidable development (in BAL-40 or BAL-FZ)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Strategic planning proposal (including rezoning applications)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Minor development (in BAL-40 or BAL-FZ)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
High risk land-use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vulnerable land-use	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.)? N/A		

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	Accreditation Level	Accreditation No.	Accreditation Expiry
Zac Cockerill	Level 2	BPAD37803	31/08/2022
Company		Contact No.	
Strategen-JBS&G		(08) 9792 4797	

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

Signature of Practitioner



Date 24/06/2022

Name:	Justin Radici	Date:	24 June 2022
Company:	Satterley Property Group	Job/Doc. No.:	62795/144,693
Email:	justinr@satterley.com.au	Inquiries:	Zac Cockerill

Bushfire Management Plan Addendum: Allara Estate Stage 6 subdivision, Eglinton

1.1 Purpose

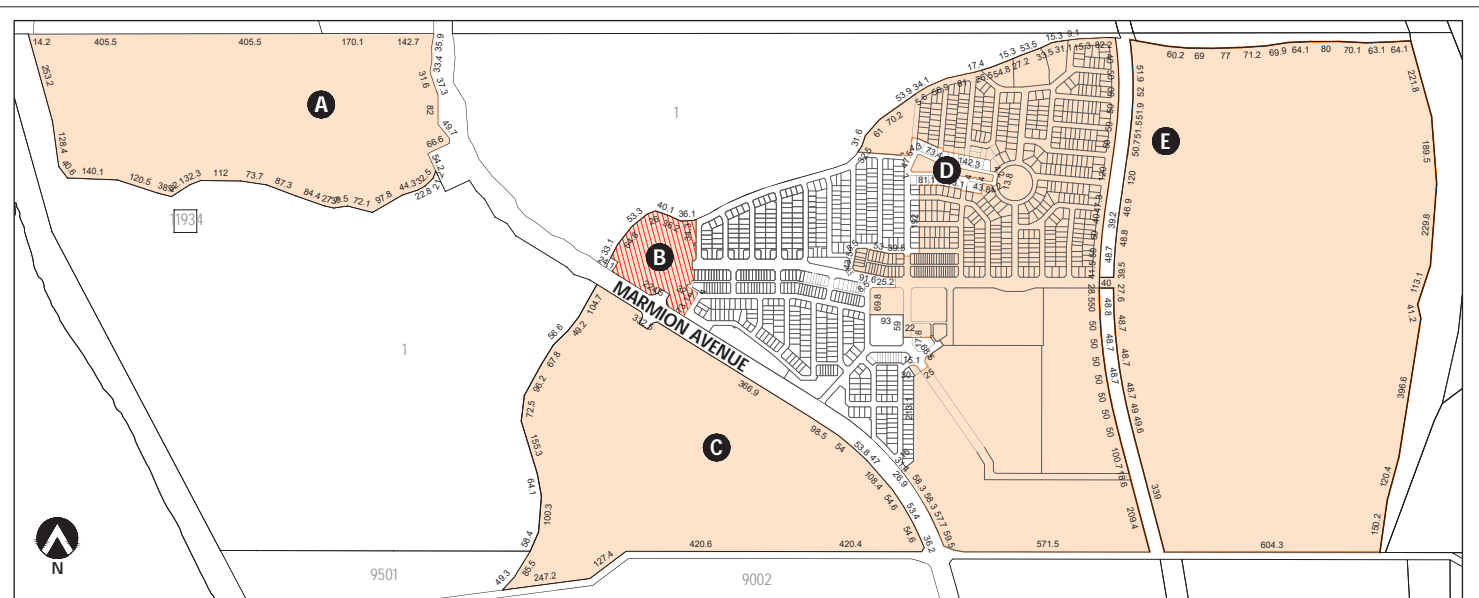
FirePlan WA prepared a comprehensive Fire Management Plan (FMP) in 2014 to support Satterley Property Group in their Structure Plan submission for Allara Estate, located in Eglinton, City of Wanneroo. Subsequently, multiple stages of subdivision application have been approved throughout the Allara Structure Plan area, which have been supported by various subdivision stage Bushfire Management Plans (BMPs) and addendums, including the 2018 subdivision stage BMP prepared by Strategen Environmental (now Strategen-JBS&G). The proposed subdivision redesign of Stage 6 Allara Estate (the project area) will create 25 new residential lots, one temporary pump station, four Public Open Space (POS) reserves for recreation/drainage/conservation, internal public roads and one balance of title (refer to Figure 1).

This BMP is an addendum to the original Allara Estate Structure Plan FMP (FirePlan WA 2014) and subsequent subdivision stage BMP (Strategen 2018) and provides an updated bushfire assessment specific to the proposed Stage 6 subdivision area. As such, this BMP addendum should be read in conjunction with the original Structure Plan FMP and subdivision stage BMP.

This addendum includes the following information:

1. A revised bushfire assessment including:
 - a. an updated Vegetation Classification and Effective Slope map (depicting post-development vegetation classifications and exclusions) specific to the Stage 6 subdivision area and current vegetation conditions (Figure 2)
 - b. a revised BAL contour map specific to the Stage 6 subdivision area and current vegetation conditions mapped under Item 1a above (Figure 3).
2. A revised assessment against the bushfire protection criteria including updated statements of assessment/compliance against the bushfire protection criteria of the Guidelines demonstrating compliance within the boundary of the subdivision site (Table 3).
3. A revised table outlining responsibilities for implementation and management of the bushfire measures specific to the proposed subdivision (Table 4) that can be appropriately conditioned as part of subdivision approval.

This BMP addendum has been prepared to accompany subdivision application for Allara Stage 6 and address requirements under Policy Measures 6.2 and 6.4 of *State Planning Policy 3.7 Planning in Bushfire Prone Areas* (SPP3.7; WAPC 2015) and *Guidelines for Planning in Bushfire-Prone Areas Version 1.4* (the Guidelines; WAPC 2021). The majority of the project area is designated as bushfire prone on the Map of Bush Fire Prone Areas (refer to Figure 2); therefore, bushfire risk considerations and BAL assessment are required to inform subdivision design and application for Stage 6, as per requirements under Policy Measure 6.2 of SPP3.7.



LOCATION PLAN - EXISTING LOTS

EXISTING LOT 9014 SUBJECT AREA

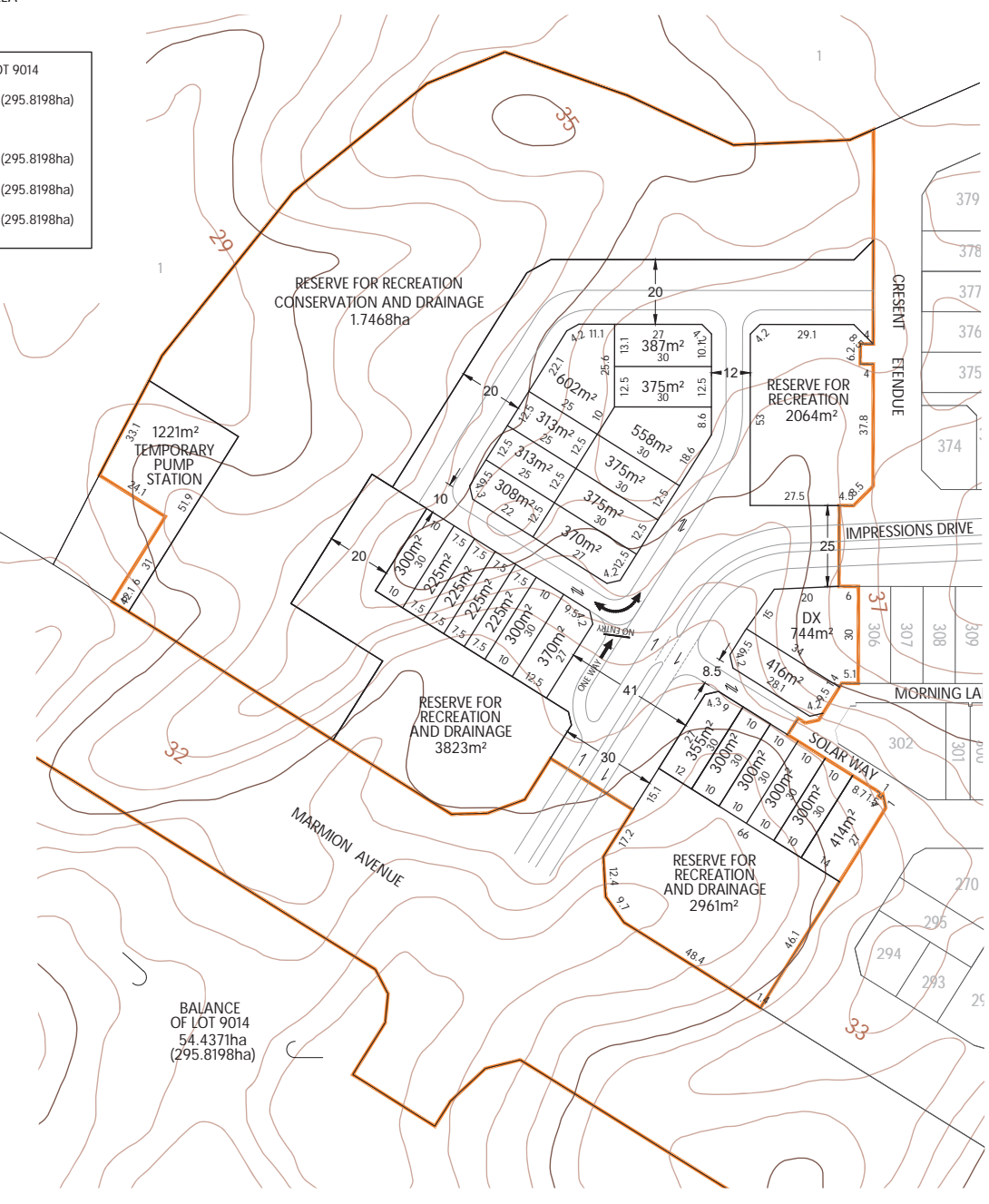
EXISTING LOT 9014	BALANCE LOT 9014
A 47.8720ha (300.4138ha)	A 47.8720ha (295.8198ha)
B 4.5940ha (300.4138ha)	C 54.4371ha (295.8198ha)
C 54.4371ha (300.4138ha)	D 0.5845ha (295.8198ha)
D 0.5845ha (300.4138ha)	E 192.9262ha (295.8198ha)
E 192.9262ha (300.4138ha)	

- LEGEND**
- EXISTING LOT 9014
 - PROPOSED LOT BOUNDARY
 - EXISTING LOT BOUNDARIES
 - 9501 EXISTING LOT NUMBERS
 - EXISTING CONTOURS

PROPOSED LAND USE/DEVELOPMENT

Zone	Lot Size	No. of Lots
Residential	180m ² - 234m ²	4
Residential	235m ² - 319m ²	9
Residential	320m ² - 449m ²	9
Residential	550m ² - 599m ²	1
Residential	600m ² - 699m ²	1
Residential	700m ² - 799m ²	1
Other	1000m ² - 1400m ²	1
Other	Over - 25ha	1
TOTAL		27

Existing Lots	1
Proposed Lots	
Residential (Single)	24
Residential (Duplex)	1
Balance of Title	1
Temporary Pump Station	1
TOTAL	27
Reserve for Recreation and Drainage	2
Recreation, Conservation and Drainage	1
Reserve for Recreation	1



CADASTRAL INFORMATION
 SOURCE: MING
 YMMDD: 220218
 DWG REF: 97504pr-007ab
 PROJECTION: PCG94
AERIAL PHOTOGRAPHY
 SOURCE: NA
 YMMDD: NA

HATCH | RobertsDay

SCALE: 1:1500

0 metres 15 30 45 60 75

C	CONVERT TO SUBDIVISION	220223	SB	DP
B	MODS TO LOTS	211222	SB	DP
A	BASE PLAN			
REV	DESCRIPTION	YMMDD	DRAWN	APPR'D

STAGE 6 - SUBDIVISION PLAN
Lot 9014 Marmion Avenue, Eglinton
 City of Wanneroo

REF NO. **SAT EGL** DRAW NO. **RD1 323** REV. **C**

DISCLAIMER: ISSUED FOR DESIGN INTENT ONLY. ALL AREAS AND DIMENSIONS ARE SUBJECT TO DETAIL DESIGN AND SURVEY

1.2 Bushfire assessment results

1.3 Assessment inputs

1.3.1 Vegetation classification

Strategen-JBS&G assessed classified vegetation and exclusions within the 150 m assessment area during site inspection on 21 March 2022 in accordance with *AS 3959-2018 Construction of Buildings in Bushfire-Prone Areas* (AS 3959; SA 2018) and the *Visual Guide for Bushfire Risk Assessment in Western Australia* (DoP 2016). Georeferenced site photos are contained in Appendix A and the spatial extent of assessed classified vegetation and exclusions is depicted in Figure 2.

Class D scrub was identified as the predominant vegetation within and surrounding the project area, as follows:

- throughout conservation vegetation to the north
- throughout vegetated undeveloped land opposite Marmion Avenue to the south
- throughout on-site vegetation proposed to be retained within POS for conservation purposes, as per the POS Landscape Plan in Appendix B.

Aside from on-site vegetation proposed to be retained within POS for conservation purposes, the project area will be modified to a low threat state as part of proposed Stage 6 development and excluded from classification under Clauses 2.2.3.2 (e) and (f), including provision for non-vegetated areas (i.e. buildings, roads, footpaths, sealed areas, etc) and low threat managed vegetation (i.e. managed gardens, urban streetscapes, POS reserves for recreation and drainage).

The remainder of the 150 m assessment area already constitutes non-vegetated areas and low threat managed vegetation, excluded from classification under Clauses 2.2.3.2 (e) and (f).

1.3.2 Effective slope

Effective slope under classified vegetation was assessed during site inspection on 21 March 2022 in accordance with AS 3959. Results were cross referenced with DPIRD 2m contour data and are depicted in Figure 2. Effective slope under classified vegetation was assessed to be flat or upslope in all instances.

1.3.3 Post-development inputs

Figure 2 illustrates the anticipated post-development vegetation classifications and exclusions following completion of subdivisional works, implementation of low threat POS landscaping and retention of conservation vegetation. The post-development vegetation classifications/exclusions and effective slope are summarised in Table 1.

Table 1: Summary of post-development vegetation classifications, exclusions and effective slope

Vegetation plot	Vegetation classification	Effective slope	Comments
1	Class D Scrub	Flat/upslope (0°)	Shrub vegetation between 2–6 m high at maturity with a continuous horizontal fuel profile.
2	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Existing non-vegetated/low threat areas including existing residential areas, roads, footpaths and managed POS.
3	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Areas to be modified and maintained to a non-vegetated/low threat managed state as part of proposed subdivision and development.



Legend	
	Project area
	100m assessment area
	150m assessment area
	Cadastral boundary
	Bushfire prone areas
	Conservation fencing
	POS
	Temporary pump station
	Stage boundaries
	Roads (MRWA)
	Vegetation classification
	Class D Scrub
	Clause 2.2.3.2 (e) & (f)
	Area to be modified to non-vegetated and low threat state
	Proposed lot layout
	Future indicative lot layout on adjacent stages
	Topographic contours (mAHD)
	Photo point directions

Scale 1:3,000 at A4	
Coord. Sys. GDA 1994 MGA Zone 50	Z
Job No: 62795	
Client: Satterley Property Group	
Version: A	Date: 24-Jun-2022
Drawn By: jcrute	Checked By: CT

Stage 6 Allara Estate, Eglinton, WA

VEGETATION CLASSIFICATION AND EFFECTIVE SLOPE

FIGURE 2

1.3.4 Bushfire Attack Level (BAL) contour assessment

Strategen-JBS&G has undertaken a BAL contour assessment in accordance with Method 1 of AS 3959 for the project area (Figure 3). The Method 1 procedure incorporates the following factors:

- state-adopted FDI 80 rating
- vegetation classification
- effective slope
- distance maintained between proposed development areas and the classified vegetation.

The BAL rating gives an indication of the level of bushfire attack (i.e. the radiant heat flux) that may be received by proposed development and subsequently informs the standard of building construction and/or setbacks required for proposed habitable development to potentially withstand such impacts and deliver compliance with relevant bushfire protection criteria of the Guidelines.

The BAL contours are based on:

- the vegetation classifications and effective slope observed during site inspection
- consideration of the proposed on-site clearing extent, proposed low threat POS areas and resultant separation distances achieved in line with the subdivision plan
- consideration of proposed retention of on-site vegetation for conservation purposes in accordance with the POS landscape plan in Appendix B.

Results of the BAL contour assessment are detailed in Table 2 and illustrated in Figure 3. The determined worst case BAL impact to proposed habitable development within the project area is BAL-19.

Table 2: BAL contour assessment results

Method 1 BAL determination				
Vegetation plot	Vegetation classification	Effective slope	Separation distance	Highest BAL
1	Class D Scrub	Flat/upslope (0°)	20 m	BAL-19
2	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A
3	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A



- Legend**
- Project area
 - 100m assessment area
 - 150m assessment area
 - Cadastral boundary
 - Bushfire prone areas
 - Conservation fencing
 - POS
 - Temporary pump station
 - Classified vegetation
 - Stage boundaries

- BAL contours**
- BAL FZ
 - BAL 40
 - BAL 29
 - BAL 19
 - BAL 12.5
 - BAL Low
 - Roads (MRWA)
 - Proposed lot layout
 - Future indicative lot layout on adjacent stages

Scale 1:3,000 at A4	
Coord. Sys. GDA 1994 MGA Zone 50	Z
Job No: 62795	
Client: Satterley Property Group	
Version: A	Date: 31-May-2022
Drawn By: jcrute	Checked By: CT

**Stage 6 Allara Estate,
Eglinton, WA**

BAL CONTOUR MAP

FIGURE 3

1.4 Assessment against bushfire protection criteria

1.4.1 Compliance with Elements 1–4

Compliance with Elements 1–4 of the bushfire protection criteria of the Guidelines (Version 1.4) is demonstrated by meeting the acceptable solutions, as detailed in Table 3.

Table 3: Compliance with the bushfire protection criteria of the Guidelines (Elements 1–4)

Bushfire protection criteria	Performance Principle criteria	Method of compliance		Statement of development compliance	Compliance achieved
		Acceptable solutions			
Element 1: Location	Performance Principle P1 The strategic planning proposal, subdivision and development application is located in an area where the bushfire hazard assessment is or will, on completion, be moderate or low, or a BAL-29 or below, and the risk can be managed. For unavoidable development in areas where BAL-40 or BAL-EZ applies, demonstrating that the risk can be managed to the satisfaction of the decision-maker.	A1.1 Development location The strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low bushfire hazard level, or BAL-29 or below.	The BAL contour assessment (see Figure 3 and Table 2) demonstrates that all future habitable development will be located in areas of BAL-29 or lower.	✓	
Element 2: Siting and design	Performance Principle P2 The siting and design of the strategic planning proposal, subdivision or development application, including roads, paths and landscaping, is appropriate to the level of bushfire threat that applies to the site. The proposal incorporates a defensible space and significantly reduces the heat intensities at the building surface thereby minimising the bushfire risk to people, property and infrastructure, including compliance with AS 3959 if appropriate.	A2.1 Asset Protection Zone Every habitable building is surrounded by, and every proposed lot can achieve, an APZ depicted on submitted plans, which meets the requirements set out in Schedule 1.	No formal Asset Protection Zones are required to deliver BAL-29 or lower given the suitable extent of Clause 2.2.3.2 (e) and (f) exclusions proposed around residential lots. Any land to be modified to a low threat state as part of proposed development (e.g. on-site development footprint, POS reserves for recreation and drainage, etc) is to comply with Schedule 1 APZ standards of the Guidelines (refer to Appendix C).	✓	
Element 3: Vehicular access	Performance Principle P3i The design and capacity of vehicular access and egress is to provide for the community to evacuate to a suitable destination before a bushfire arrives at the site, allowing emergency services personnel to attend the site and/or hazard vegetation.	A3.1 Public roads <i>The minimum requirements under this acceptable solution are applicable to all proposed and existing public roads.</i> Public roads are to meet the minimum technical requirements in Table 6, Column 1. 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.	All public roads will be constructed to the minimum technical requirements of the Guidelines (see Appendix D) and in accordance with relevant federal, State and local government requirements.	✓	
		A3.2a Multiple access routes 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). If the public road access to the subject site is via a no-through road which cannot be avoided due to demonstrated site constraints, the road access is to be a maximum of 200 metres from the subject lot(s) boundary to an intersection where two-way access is provided. The no-through road may exceed 200 metres if it is demonstrated that an alternative access, including an emergency access way, cannot be provided due to site constraints and the following requirements are met: <ul style="list-style-type: none"> the no-through road travels towards a suitable destination; and the balance of the no-through road, that is greater than 200 metres from the subject site, is wholly within BAL-LOW, or is within a residential built-out area – Figure 23. 	Allara Estate contains an existing primary access connection with Marmion Avenue via Revolution Avenue to the southeast of the project area. Development of the project area will formalise the secondary access route for the estate via extension of Impressions Drive and secondary connection with Marmion Avenue. Allara Estate is, by definition, a suitable destination, whilst Marmion Avenue provides access to multiple other suitable destinations in the broader locality, such as Yanchep to the north and Alkimos to the south.	✓	

Bushfire protection criteria	Performance principle	Method of compliance	Statement of development compliance	Compliance achieved
		<p>Acceptable solutions</p> <p>A3.2b Emergency access way <i>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.</i> An emergency access way is to meet all the following requirements:</p> <ul style="list-style-type: none"> requirements in Table 6, Column 2; provides a through connection to a public road; be no more than 500 metres in length; and must be signposted and if gated, gates must open the whole trafficable width and remain unlocked. 	<p>Any temporary EAWs required as part of internal staging will be constructed to comply with relevant Guidelines requirements, as per Appendix D.</p>	✓
		<p>A3.3 Through-roads All public roads should be through-roads. No-through roads should be avoided and should only be considered as an acceptable solution where:</p> <ul style="list-style-type: none"> it is demonstrated that no alternative road layout exists due to site constraints; and the no-through road is a maximum length of 200 metres to an intersection providing two-way access, unless it satisfies the exemption provisions in A3.2a of this table. <p>A no-through road is to meet all the following requirements:</p> <ul style="list-style-type: none"> requirements of a public road (Table 6, Column 1); and turn-around area as shown in Figure 24. 	<p>All proposed public roads are through roads. Any temporary no-through-roads required as part of internal staging will be constructed to comply with relevant Guidelines requirements, as per Appendix D.</p>	✓
<p>Performance Principle P3ii The design of vehicular access and egress provides:</p> <ul style="list-style-type: none"> access and egress for emergency service vehicles while allowing the community to evacuate; a defendable space for emergency services personnel on the interface between classified vegetation and development site; and hazard separation between classified vegetation and the subject site to reduce the potential radiant heat that may impact a lot(s). 	<p>A3.4a Perimeter roads 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:</p> <ul style="list-style-type: none"> separating areas of classified vegetation under AS3959, which adjoin the subject site, from the proposed lot(s); and removing the need for battle-axe lots that back onto areas of classified vegetation. <p>A perimeter road is to meet the requirements contained in Table 6, Column 1.</p> <p>A perimeter road may not be required where:</p> <ul style="list-style-type: none"> 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; or all lots have frontage to an existing public road. 	<p>Perimeter roads have been provided at all development interfaces with classified vegetation to provide separation between the adjoining classified vegetation hazards and a defendable space for firefighting activities.</p>	✓	
<p>Performance Principle P3iii Vehicular access is provided which allows:</p> <ul style="list-style-type: none"> access and egress for emergency service vehicles; defendable space for emergency services personnel on the interface between classified vegetation and development; and 	<p>A3.4b Fire service access route <i>Where proposed lots adjoin classified vegetation under AS3959, 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.</i> A fire service access route is to meet all the following requirements:</p>	<p>As discussed under A3.4a, the subdivision design includes perimeter roads at all permanent vegetation interfaces with the boundary of the subdivision area. In this regard, fire service access routes (FSARs) are not considered to be required for the proposed development.</p>	N/A	

Bushfire protection criteria	Performance principle	Method of compliance	Statement of development compliance	Compliance achieved
	<ul style="list-style-type: none"> hazard separation between classified vegetation and the site to reduce the potential radiant heat that may impact a lot(s). 	<p>Acceptable solutions</p> <ul style="list-style-type: none"> requirements in Table 6, Column 3; be through-routes with no dead-ends; linked to the internal road system at regular intervals, every 500 metres; must be signposted; no further than 500 metres from a public road; if gated, gates must open the required horizontal clearance and can be locked by the local government and/or emergency services, if keys are provided for each gate; and turn-around areas designed to accommodate type 3.4 fire appliances and to enable them to turn around safely every 500 metres. 		
	<p>Performance Principle P3iv Vehicular access is provided which allows emergency service vehicles to directly access all habitable buildings and water supplies and exit the lot without entrapment.</p>	<p>A3.5 Battle-axe access legs <i>Where it is demonstrated that a battle-axe cannot be avoided due to site constraints, it can be considered as an acceptable solution.</i> There are no battle-axe technical requirements where the point the battle-axe access leg joins the effective area of the lot, is less than 50 metres from a public road in a reticulated area. In circumstances where the above condition is not met, or the battle-axe is in a non-reticulated water area, the battle-axe is to meet all the following requirements:</p> <ul style="list-style-type: none"> requirements in Table 6, Column 4; and passing bays every 200 metres with a minimum length of 20 metres and a minimum additional trafficable width of two metres (i.e. the combined trafficable width of the passing bay and constructed private driveway to be a minimum six metres). 	No battle-axe lots are proposed as part of the subdivision and the project area is not serviced by an existing battle-axe.	N/A
		<p>A3.6 Private driveways There are no private driveway technical requirements where the private driveway is:</p> <ul style="list-style-type: none"> within a lot serviced by reticulated water; no greater than 70 metres in length between the most distant external part of the development site and the public road measured as a hose lay; and accessed by a public road where the road speed limit is not greater than 70 km/h. In circumstances where all of 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:	The proposed subdivision is located within a reticulated area where roads speeds will be lower than 70 km/hr and proposed lots are of size where all future habitable development will be located within 70 m of a public road. In this regard, there are no private driveway compliance requirements for future landowners of the subdivided lots.	N/A

Bushfire protection criteria	Performance Principle	Method of compliance	Statement of development compliance	Compliance achieved
Element 4: Water	No performance principle applies	Acceptable solutions A4.1 Identification of future water supply 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. Where the provision of a strategic water tank(s) is required a suitable area within a road reserve or a dedicated lot the location should be identified, should be identified on the structure plan, to the satisfaction of the local government.	A4.1 is applicable to strategic planning applications only.	N/A
Performance Principle P4 Provide a permanent water supply that is: <ul style="list-style-type: none"> • sufficient and available for firefighting purposes; • constructed from non-combustible materials (e.g. steel), or able to maintain its integrity throughout a bushfire; and • accessible, with legal access for maintenance and re-filling by tankers and emergency service vehicles. 	A4.2 Provision of water for firefighting purposes 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: <ul style="list-style-type: none"> • The provision of a water tank(s), in accordance with the requirements of Schedule 2; and • Where the provision of a strategic water tank(s) is applicable, then the following requirements apply: <ul style="list-style-type: none"> – 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; and – 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.	The proposed development will be connected to reticulated water supply via extension of services from adjacent development in accordance with Water Corporations Design Standard 63 requirements.	✓	

1.5 Responsibilities for implementation and management of the bushfire measures

Implementation of the BMP addendum applies to the developer, prospective landowners and the City to ensure bushfire management measures are adopted and implemented on an ongoing basis. A bushfire responsibilities table is provided in Table 4 to drive implementation of all relevant bushfire management works associated with this BMP addendum.

Table 4: Responsibilities for implementation and management of the bushfire measures

Implementation/management table	
Developer – prior to issue of titles	
No.	Implementation action
1	Construct (or have works bonded) the public roads (including any temporary no-through-roads/emergency access ways required as part of internal staging) to the standards stated in this BMP addendum.
2	Construct (or have works bonded) the reticulated water supply to the standards stated in this BMP addendum.
3	Prepare a POS landscaping plan that demonstrates the expected non-vegetated/low threat exclusions throughout on-site POS areas, in accordance with the requirements of this BMP addendum.
4	Establish the developable footprint and on-site POS reserves for recreation and drainage to a non-vegetated/low threat state in accordance with the requirements of this BMP addendum and abovementioned landscaping plan.
5	Comply with the relevant requirements of the City of Wanneroo annual firebreak notice (refer to Appendix E).
6	Prepare a BMP compliance report to demonstrate the relevant bushfire management measures have been implemented to deliver compliance in accordance with this BMP addendum.
Developer – until sale/transfer of lots	
No.	Implementation action
1	Maintain the developable footprint and on-site POS reserves for recreation and drainage to a non-vegetated/low threat state in accordance with the requirements of this BMP addendum.
2	Comply with the relevant requirements of the City of Wanneroo annual firebreak notice (Appendix E).
Landowner/occupier – prior to building construction and ongoing	
No.	Implementation action
1	Comply with the relevant requirements of the City of Wanneroo annual firebreak notice (Appendix E), including maintenance of cleared/vacant lots in a low threat state.
Local government – ongoing management	
No.	Implementation action
1	Maintain urban road verges in a low threat minimal fuel condition as per Clause 2.2.3.2 (f) of AS 3959.
2	Maintain low threat POS in a low threat minimal fuel condition as per Clause 2.2.3.2 (f) of AS 3959.

1.6 References

- Department of Planning (DoP) 2016, *Visual guide for bushfire risk assessment in Western Australia*, Department of Planning, Perth.
- FirePlan WA 2014, *Fire Management Plan, Lot 2 Pipidiny Road, North Eglinton Estate, City of Wanneroo*, report prepared for Satterley Property Group, August 2014.
- Standards Australia (SA) 2018, *Australian Standard AS 3959–2018 Construction of Buildings in Bushfire-prone Areas*, Standards Australia, Sydney.
- Strategen 2018, *Bushfire Management Plan – Subdivision Application: Stages 7–8 & 10–22 Allara Estate, Eglinton*, report prepared for Satterley Property Group, November 2018.
- Western Australian Planning Commission (WAPC) 2015, *State Planning Policy 3.7 Planning in Bushfire Prone Areas*, Western Australian Planning Commission, Perth.
- Western Australian Planning Commission (WAPC) 2021, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.4 December 2021, Western Australian Planning Commission, Perth.

Appendix A Site photos and description

Plot 1

Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub

Description / justification

Shrub vegetation between 2–6 m high at maturity with a continuous horizontal fuel profile.



Photo ID: 1a



Photo ID: 1b



Photo ID: 1c



Photo ID: 1d



Photo ID: 1e

Plot 2

Vegetation classification	Pre-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])
	Post-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])

Description / justification

Low threat cultivated gardens and maintained lawns within surrounding properties and non-vegetated areas including roads, footpaths, driveways and building footprints



Photo ID: 2a



Photo ID: 2b



Photo ID: 2c

Plot 3

Vegetation classification	Pre-development	Class D Scrub, Class G Grassland
	Post-development	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])

Description / justification

Area to be modified to a low threat state as part of proposed development.



Photo ID: 3a

Appendix B POS Landscape Plan

LEGEND

-  TIMBER PLAYGROUND FENCE
-  CONSERVATION FENCE
-  LOCAL ANIMAL FOOTPRINT
- 01** DOUBLE FLYING FOX
- 02** BIG SANDY TOWERS
- 03** SANDY PLAY COMBO 'A'
- 04** A-FRAME WITH BASKET & SINGLE SWING
- 05** FLOATING LOGS WALK
- 06** SEE SAW
- 07** LOG SCRAMBLE
- 08** LOG
- 09** STEPPING STUMPS

REVEGETATION TO REPLICATE BUSH FOREVER



ALLARA POS 13 & 10B, NORTH EGLINTON
 LANDSCAPE CONCEPT PLAN - NATURE PLAYGROUND



⊕ DWG: NET3 SK-01
 SCALE: 1" = 100'
 DATE: 20.05.22
 THIS DRAWING CAN NOT BE PUBLISHED OR USED WITHOUT THE WRITTEN PERMISSION OF EMERGE ASSOCIATES. FOR INFORMATION PURPOSES ONLY. LANDMARK ALTERATION NOTIFICATION REQUIRED.





RUBBER
SOFTFAL

MATERIAL
PALETTE



DOUBLE FLYING FOX



CUSTOM BIRDS NEST STYLE PLAY STRUCTURE



SANDY PLAY COMBO 'A'

PLAY
EQUIPMENT

FURNITURE
PALETTE



A-FRAME WITH BASKET
& SINGLE SWING



FLOATING LOGS WALK



SEE SAW



LOG SCRAMBLE



LOG



STEPPING STUMPS



SHADE SAIL





Crazy paving and concrete to playground and picnic setting area



Landmark Shelter



Limestone Wall

MATERIAL AND FURNITURE PALETTE



Landmark Picnic Setting



Christie DDA Compliant BBQ



Solar Pole



UAP Channel Drink Fountain



Leda Bike Repair Station



Conservation Fencing



MIMCite Bench Seat



Custom Allara Tree Surrounds



Bike Racks



Local Animal Footprint





Scientific Name:
Agonis flexuosa
Common Name:
WA Peppermint



Scientific Name:
Eucalyptus erythrocorys
Common Name:
Red Cap Gum, Lillyartie



Scientific Name:
Eucalyptus gomphocephala
Common Name:
Tuart



Scientific Name:
Melaleuca quinquenervia
Common Name:
Broad-leaved Paperbark



Scientific Name:
Olea europaea
Common Name:
Swan Hill

TREE
PLANTING

PLANTING
PALETTE

PLANTING
PALETTE

SHRUB
PLANTING



Scientific Name:
Acacia saligna
Common Name:
Golden Wreath Wattle



Scientific Name:
Anigozanthos humilis
Common Name:
Cat's Paw



Scientific Name:
Callistemon 'Little John'



Scientific Name:
Calothamnus quadrifidus
Common Name:
Common Neilbush



Scientific Name:
Carpobrotus virescens
Common Name:
Coastal Pigface



Scientific Name:
Conostylis aculeata



Scientific Name:
Conostylis candidans
Common Name:
Grey Cottonheads



Scientific Name:
Dampiera linearis
Common Name:
Common Dampiera



Scientific Name:
Eremophila glabra
Common Name:
Common Emu-bush,



Scientific Name:
Frankenia pauciflora
Common Name:
Southern Sea-heath



Scientific Name:
Hemlandra purgens 'Alba'
Common Name:
Snake Bush



Scientific Name:
Kennedia prostrata (W. A.)
Common Name:
Scarlet Runner



Scientific Name:
Lomandra longifolia
Common Name:
Spiny-headed Mat-rush



Scientific Name:
Myoporum insulare
Common Name:
Coastal Boobialla



Scientific Name:
Olearia axillaris
Common Name:
Coast Daisy Bush



Scientific Name:
Paterosia occidentalis
Common Name:
Long Purple Flag



Scientific Name:
Ricinocarpos tuberculatus



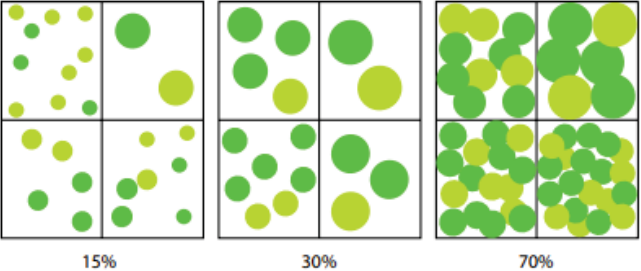
Scientific Name:
Threlkeldia diffusa
Common Name:
Coast Bonefruit



Scientific Name:
Westringia fruticosa
Common Name:
Coastal Rosemary



Appendix C APZ standards (Schedule 1 of the Guidelines)

Schedule 1: Standards for Asset Protection Zones	
Object	Requirement
Fences within the APZ	<ul style="list-style-type: none"> Should be constructed from non-combustible materials (for example, iron, brick, limestone, metal post and wire, or bushfire-resisting timber referenced in Appendix F of AS 3959).
Fine fuel load (Combustible, dead vegetation matter <6 millimetres in thickness)	<ul style="list-style-type: none"> Should be managed and removed on a regular basis to maintain a low threat state. Should be maintained at <2 tonnes per hectare (on average). Mulches should be non-combustible such as stone, gravel or crushed mineral earth or wood mulch >6 millimetres in thickness.
Trees* (>6 metres in height)	<ul style="list-style-type: none"> Trunks at maturity should be a minimum distance of six metres from all elevations of the building. Branches at maturity should not touch or overhang a building or powerline. Lower branches and loose bark should be removed to a height of two metres above the ground and/or surface vegetation. Canopy cover within the APZ should be <15 per cent of the total APZ area. Tree canopies at maturity should be at least five metres apart to avoid forming a continuous canopy. Stands of existing mature trees with interlocking canopies may be treated as an individual canopy provided that the total canopy cover within the APZ will not exceed 15 per cent and are not connected to the tree canopy outside the APZ. <p>Figure 19: Tree canopy cover – ranging from 15 to 70 per cent at maturity</p> 
Shrub* and scrub* (0.5 metres to six metres in height). Shrub and scrub >6 metres in height are to be treated as trees.	<ul style="list-style-type: none"> Should not be located under trees or within three metres of buildings. Should not be planted in clumps >5 square metres in area. Clumps should be separated from each other and any exposed window or door by at least 10 metres.
Ground covers* (<0.5 metres in height. Ground covers >0.5 metres in height are to be treated as shrubs)	<ul style="list-style-type: none"> Can be planted under trees but must be maintained to remove dead plant material, as prescribed in 'Fine fuel load' above. Can be located within two metres of a structure, but three metres from windows or doors if >100 millimetres in height.
Grass	<ul style="list-style-type: none"> Grass should be maintained at a height of 100 millimetres or less, at all times. Wherever possible, perennial grasses should be used and well-hydrated with regular application of wetting agents and efficient irrigation.

Schedule 1: Standards for Asset Protection Zones	
Defendable space	Within three metres of each wall or supporting post of a habitable building, the area is kept free from vegetation, but can include ground covers, grass and non-combustible mulches as prescribed above.
LP Gas Cylinders	<ul style="list-style-type: none"> • Should be located on the side of a building furthest from the likely direction of a bushfire or on the side of a building where surrounding classified vegetation is upslope, at least one metre from vulnerable parts of a building. • The pressure relief valve should point away from the house. • No flammable material within six metres from the front of the valve. • Must sit on a firm, level and non-combustible base and be secured to a solid structure.

Source: *Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)*

Element 2 Explanatory Notes
E2 Landscaping and design of an Asset Protection Zone
<p>Landscaping, design, and maintenance of an APZ in a bushfire prone area can significantly improve the bushfire resilience of a building. An APZ should not be seen as an area entirely cleared of vegetation, but as a strategically designed space that gives holistic consideration to how existing or proposed vegetation or non-combustible features interact with, or affect the building's bushfire resilience.</p> <p>A well designed APZ provides a greater level of vegetation management within the first few metres of a building with, for example, less vegetation or inclusion of non-combustible materials. The vegetation within the remainder of an APZ can increase further away from the building with carefully considered plant selection and landscaping techniques.</p> <p>Strategic landscaping measures can be applied, such as replacing weeds with low flammability vegetation (refer to E2 Plant Flammability) to create horizontal and vertical separations between the retained vegetation. The accumulation of fine fuel load from different plants is an important consideration for ongoing maintenance in accordance with Schedule 1. For example, when planting ground covers under deciduous trees within an APZ, the total fine fuel load prescribed in Schedule 1 will include any dead plant material from ground covers and leaf litter from the trees.</p> <p>Plant density and final structure and form of mature vegetation should be considered in the initial landscaping stages. For example, clumps of sapling shrubs planted at a density without consideration of future growth, may increase the bushfire risk as a clump will quickly grow to exceed 5m². It should be noted that in some cases, a single shrub in a mature state may be so dense as to fill a 5m² clump alone.</p> <p>The location of plants within an APZ is a key design technique. Separation of garden beds with areas of low fuel or non-combustible material, will break up fuel continuity and reduce the likelihood of a bushfire running through an APZ and subjecting a dwelling to radiant heat or direct flame contact. It is important to note, where mature trees are separated from a building by six metres, but the canopy has grown to extend or overhang a building, maintenance and pruning to remove the overhanging branches should be undertaken without the entirety of the tree being removed.</p> <p>Mulches used within the APZ should be non-combustible. The use of stone, gravel, rock and crushed mineral earth is encouraged. Wood mulch >6mm in thickness may be used, however it is recommended that it is used in garden beds or areas where the moisture level is higher by regular irrigation. These materials could be sourced from non-toxic construction and demolition waste giving the added benefit of reducing the environmental impact of any 'hard landscaping' actions.</p> <p>Combustible objects, plants, garden supplies such as mulches, fences made from combustible material, should be avoided within 10 metres of a building. Vines or climbing plants on pergolas, posts or beams, should be located away from vulnerable parts of the building, such as windows and doors. Non-flammable features can be used to provide hazard separation from classified vegetation, such as tennis courts, pools, lawns and driveways or paths that use inorganic mulches (gravel or crushed rock). Consider locating firewood stacks away from trees and habitable buildings.</p> <p>Incorporation of landscaping features, such as masonry feature walls can provide habitable buildings with barriers to wind, radiant heat and embers. These features can include noise walls or wind breaks. Use of Appendix F of AS 3959</p>

Element 2 Explanatory Notes

for bushfire resistant timber selection within areas of 29kW/m² (BAL-29) or below, or the use of non-combustible fencing materials such as iron, brick, limestone, metal post and wire is encouraged.

In addition to regular maintenance of an APZ, further bushfire protection can be provided at any time by:

- ensuring gutters are free from vegetation;
- installing gutter guards or plugs;
- regular cleaning of underfloor spaces, or enclosing them to prevent gaps;
- trimming and removing dead plants or leaf litter;
- pruning climbing vegetation (such as vines) on a trellis, to ensure it does not connect to a building, particularly near windows and doors;
- removing vegetation in close proximity to a water tank to ensure it is not touching the sides of a tank; and/or
- following the requirements of the relevant local government section 33 fire break notice, which may include additional provisions such as locating wood piles more than 10 metres from a building.

Preparation of a property prior to the bushfire season and/or in anticipation of a bushfire is beneficial even if your plan is to evacuate. As embers can travel up to several kilometres from a bushfire and fall into small spaces and crevices or land against the external walls of a building, best practice recommends that objects within the APZ are moved away from the building prior to any bushfire event. Objects may include, but are not limited to:

- door mats;
- outdoor furniture;
- potted plants;
- shade sails or umbrellas;
- plastic garbage bins;
- firewood stacks;
- flammable sculptures; and/or
- playground equipment and children's toys.

E2 Plant flammability

There are certain plant characteristics that are known to influence flammability, such as moisture or oil content and the presence and type of bark. Plants with lower flammability properties may still burn during a bushfire event, but may be more resistant to burning and some may regenerate faster post-bushfire.

There are many terms for plant flammability that should not be confused, including:

- Fire resistant – plant species that survive being burnt and will regrow after a bushfire and therefore may be highly flammable and inappropriate for a garden in areas of high bushfire risk.
- Fire retardant – plants that may not burn readily or may slow the passage of a bushfire.
- Fire wise – plants that have been identified and selected based on their flammability properties and linked to maintenance advice and planting location within a garden.

Although not a requirement of these Guidelines, local governments may develop their own list of fire wise or fire retardant plant species that suit the environmental characteristics of an area. When developing a recommended plant species list, local governments should consult with ecologists, land care officers or environmental authorities to ensure the plants do not present a risk to endangered ecological communities, threatened, or endangered species or their habitat.

When selecting plants, private landholders and developers should aim for plants within the APZ that have the following characteristics:

- grow in a predicted structure, shape and height;
- are open and loose branching with leaves that are thinly spread;
- have a coarse texture and low surface-area-to-volume ratio;
- will not drop large amounts of leaves or limbs, that require regular maintenance;
- have wide, flat, and thick or succulent leaves;
- trees that have bark attached tightly to their trunk or have smooth bark;
- have low amounts of oils, waxes, and resins (which will often have a strong scent when crushed);
- do not produce or hold large amounts of fine dead material in their crowns; and/or
- will not become a weed in the area.

Element 2 Explanatory Notes

Refer to the WAPC Bushfire and Vegetation Fact Sheet for further information on clearing and vegetation management and APZ landscaping, design and plant selection reference material.

Source: *Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)*

Appendix D Vehicular access technical standards of the Guidelines

Acceptable Solution A3.1 – Public Roads

Explanatory Note E3.1

These Guidelines do not prescribe values for the trafficable (carriageway/pavement) width of public roads as they should be in accordance with the class of road as specified in the IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Austroad Standards and/or any applicable standard in the local government area.

The IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Austroad Standards do not prescribe a horizontal clearance. However, it is recommended that a traversable verge is provided to allow for emergency services vehicles to stop and operate on the side of the public road, specifically where the public road may traverse large areas of classified vegetation.

Where local government roads are proposed to be widened by the proponent, they must obtain approval from the local government.

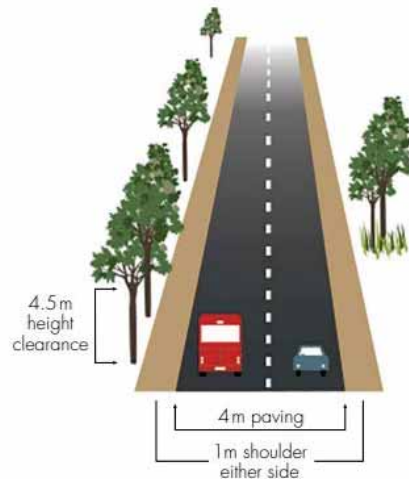


Figure 20: Example of a public road

Source: Guidelines for Planning in Bushfire Prone Areas (WAPC 2021)

Table 6: Vehicular access technical requirements

TECHNICAL REQUIREMENTS	1 Public roads	2 Emergency access way ¹	3 Fire service access route ¹	4 Battle-axe and private driveways ²
Minimum trafficable surface (metres)	In accordance with A3.1	6	6	4
Minimum horizontal clearance (metres)	N/A	6	6	6
Minimum vertical clearance (metres)	4.5			
Minimum weight capacity (tonnes)	15			
Maximum grade unsealed road ³	As outlined in the IPWEA Subdivision Guidelines	1:10 (10%)		
Maximum grade sealed road ³		1:7 (14.3%)		
Maximum average grade sealed road		1:10 (10%)		
Minimum inner radius of road curves (metres)		8.5		

Notes:

¹ To have crossfalls between 3 and 6%.

² Where driveways and battle-axe legs are not required to comply with the widths in A3.5 or A3.6, they are to comply with the Residential Design Codes and Development Control Policy 2.2 Residential Subdivision.

³ Dips must have no more than a 1 in 8 (12.5% -7.1 degree) entry and exit angle.

Acceptable Solution A3.2a – Multiple access routes

Explanatory Note E3.2a

Two-way public road access is public road access from a lot in at least two different directions to two suitable destinations, and provides residents and the community, as well as emergency services, with access and egress from

both the subdivision and individual habitable buildings/development in the event of a bushfire emergency. A single road provides no alternative route if the access becomes congested or is unable to be traversed due to smoke and/or fallen trees during a bushfire.

Two-way public road access applies to access/egress routes leading into a subdivision, as well as those within a subdivision. A road that loops back onto itself does not constitute the option of two different directions.

Two-way public road access should always be the first option. Where the site is not able to achieve two-way access within 200 metres of the lot boundary, due to demonstrated site or environmental constraints, the proponent should identify options for an emergency access way from the subject site to a suitable destination. Where an emergency

access way cannot be provided, the proponent should demonstrate compliance with the performance principle.

Subject sites or proposed lots greater than 200 metres from an intersection, which provides two-way access, do not satisfy the requirement for two-way access unless they meet the provisions which allow for no-through roads greater than 200 metres in A3.2a.

To demonstrate compliance with the performance principle for two-way access, the bushfire planning practitioner may have regard to:

- the extent of the bushfire hazard, location and vegetation classification, the likelihood, potential severity and impact of bushfire to the subject site and the road network;
- time between fire detection and the onset of conditions in comparison to travel time for the community to evacuate to a suitable destination;
- available access route(s) travelling towards a suitable destination; and
- turn-around area for a fire appliance for no-through roads.



Figure 21: Example of compliant and non-compliant two-way

Source: *Guidelines for Planning in Bushfire Prone Areas* (WAPC 2021)

Acceptable Solution A3.3 – Through roads

Explanatory Note E3.3

In bushfire prone areas, a proposed structure plan or subdivision that incorporates no-through roads should be avoided because they do not provide a connected and legible design that allows for easy access and egress by the community, residents and emergency services in the event of a bushfire. No-through roads also reduce the options available for access and egress in the event of a bushfire emergency.

There will however be situations where a subject site is accessed via an existing or proposed no-through road and alternative access cannot be provided. In these situations, the proponent should demonstrate to the decision-maker, that all efforts have been made with the local government and/or adjoining landowners to secure alternative public road access or an emergency access way and that a redesign has been explored. The bushfire planning practitioner may need to develop a performance principle-based solution or address the non-compliance and demonstrate to the decisionmaker why discretion should be exercised in accordance with section 2.6 of these Guidelines.

No-through roads will only be considered an acceptable solution where it is demonstrated by the proponent, to the satisfaction of the decision maker, that a no through-road cannot be avoided due to site constraints. For example, the internal road design of a structure plan or subdivision where site constraints, such as a water body or Bush Forever, prevent the ability to create a through-road and a no through road may be a more appropriate road layout.

No-through roads should be a maximum of 200 metres from the lot(s) boundary to an intersection where two-way access is provided and may only exceed 200 metres if it meets the provisions which allow for no-through roads greater than 200 metres in A3.2a.

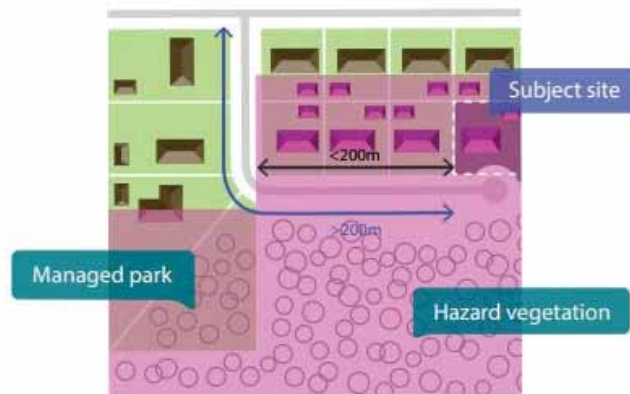


Figure 23: Example of a site on a no-through road greater than 200 metres from the intersection, but within 200 metres of BAL-LOW

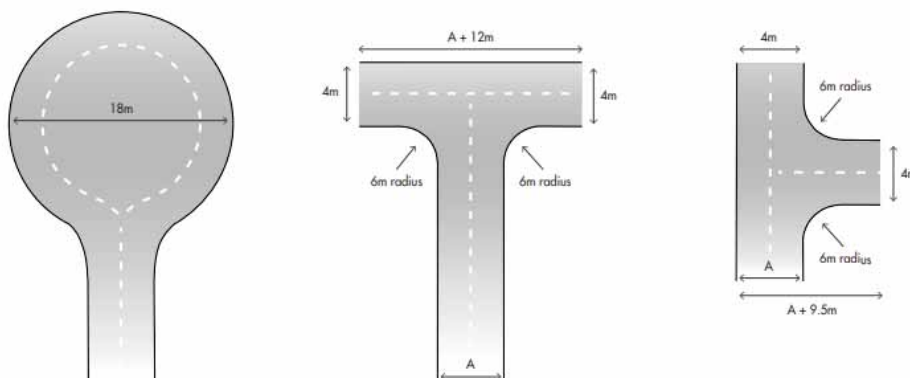


Figure 24: Turn-around area dimensions for a no-through road

Source: *Guidelines for Planning in Bushfire Prone Areas* (WAPC 2021)

Acceptable Solution A3.4a – Perimeter roads

Explanatory Note E3.4a

Where a planning proposal includes the creation of 10 or more lots adjacent to each other, which adjoin classified vegetation under AS 3959 with the exception of Class G Grassland, as part of a greenfield development or large urban infill site, hazard separation and defendable space should be provided in the form of a perimeter road. Greenfield is 'undeveloped or minimally developed areas that have been identified for urban development'; and urban infill is 'the redevelopment of existing urban areas at a higher density than currently exists'. The creation of 10 or more lots includes cumulative subdivision applications where the subdivision application may be part of a staged subdivision.

A perimeter road should be in accordance with the class of road as specified in the IPWEA Subdivision Guidelines, Liveable Neighbourhoods, Austroad Standards and/or any applicable standard in the local government area as per the requirements of a public road in Table 6, Column 1.

As the road is likely to function as a key neighbourhood distributor, or similar, consideration should be given to the provision of additional width to allow for emergency services vehicles to stop and operate on the side of the perimeter road, whilst simultaneously providing for the evacuation of the community (Figure 20).

When designing a strategic planning proposal and/or subdivision, creating a large setback between classified vegetation and proposed lots with a perimeter road, and orientating habitable buildings to front onto (rather than back onto) areas of vegetation has many benefits, including:

- passive surveillance;
- defendable space for firefighting and emergency management purposes;
- reducing the potential radiant heat that may impact a habitable building in a bushfire event;
- reducing the need for battle-axe lots; and
- unconstrained public access/egress for the community in the event of a bushfire.

In developments where no perimeter road exists, property defence in a bushfire event is difficult and can be impossible. Where proposed lots have frontage to an existing public road and abut the hazard at the rear or side, it may be an undesirable planning outcome to create lots which front the existing public road and back onto a perimeter road. In this instance, consideration should be given to a fire service access route. Refer to E3.4b.

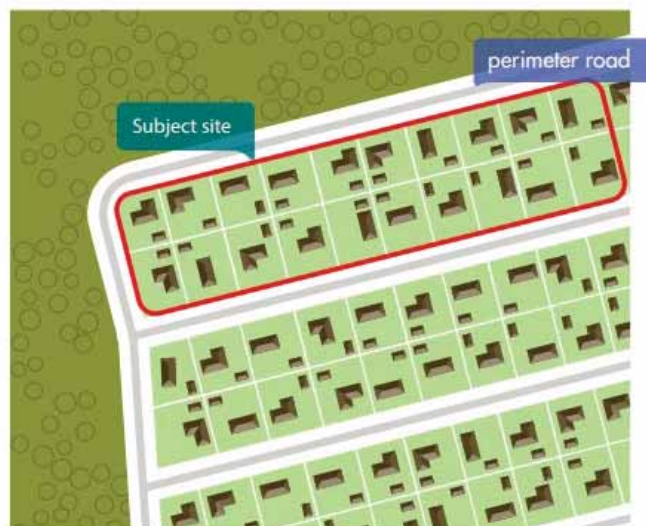


Figure 25: Example of a perimeter road

Source: *Guidelines for Planning in Bushfire Prone Areas* (WAPC 2021)

E3.2b Emergency access way

An emergency access way is not a preferred alternative to through public road access and should only be considered acceptable where it has been demonstrated that it will provide the safety and performance needs of emergency services and the community, including consideration for future needs, and that public road access to satisfy A3.2a cannot be achieved due to site constraints, such as an established road network with no opportunity to provide a public road for secondary access. Acceptance of an emergency access way should also consider the ability to accommodate reasonable worst-case vehicle volumes.

The principle function of the emergency access way is to provide a contingency (second) community evacuation route and simultaneously provide access for emergency services, in the event of a bushfire emergency. Where an emergency access way traverses classified vegetation, which has the potential to create a bushfire hazard, an emergency access way performs the secondary function of providing access by emergency services to this vegetation.

Emergency access ways should connect to a public road to allow alternative two-way through access. An emergency access way should not exceed 500 metres in length as they may not be as safe for road-use due to not being designed or constructed to the full requirements of a public road and may present uncertainties to emergency service personnel and the public as they are not part of the daily road network and not identified on Maps.

Permanent public emergency access way

An emergency access way can be provided as either a public easement in gross or a right-of-way. In both approaches, the management of the emergency access way is by the local government as the grantee of the easement or management body of the right-of-way. The proponent must obtain written consent from the local government that the local government will accept care, control and management of the easement or right-of-way; this must be provided to the decision-maker prior to granting planning approval. The approach taken is at the discretion of the decision-maker and/or the local government and is also dependent on whether the land is to remain in private ownership or be ceded to the Crown. Consultation with Land Use Management at the Department of Planning, Lands and Heritage should also be considered if the land is to be ceded to the Crown or if the local government is uncertain of which approach to take.

If the emergency access way is provided as an easement, it should be provided as a public easement in gross under sections 195 and 196 of the *Land Administration Act 1997* in favour of the local government and/or public authority, to ensure accessibility for emergency services and the public at all times. To be provided as a right-of-way the emergency access way should be vested in the Crown under section 152 of the *Planning and Development Act 2005* as a right-of-way and such land to be ceded free of cost and without any payment or compensation by the Crown. If gates are used to control traffic flow during non-emergency periods, these will be managed by the local government and must not be locked. Gates should be double gates wide enough to access the full pavement width and accommodate Type 3.4 fire appliances with the design and construction to be approved by the relevant local government.

Temporary public emergency access way

A temporary emergency access way may be proposed to facilitate the staging arrangements of a subdivision. The provision of two public roads may not be possible in the first stage of the subdivision and an emergency access way can be provided as an interim access route until the second public road is developed and gazetted in a subsequent stage of the subdivision (see figure 22). The emergency access way should be provided in the same manner as a permanent emergency access way, but it should be removed from the certificate of title once the public road is developed and gazetted. Where an emergency access way is proposed as an alternative to a public road, the Bushfire Management Plan should provide thorough justification for its use.

Restricted public emergency access way

There may be some instances where a restricted emergency access way is proposed as a performance principle-based solution where access is only available to the public in the event of a bushfire emergency. This option can only be considered where the local government or Main Roads WA have advised that vehicular access on the emergency access way is not allowed during non-emergency periods, as it provides an additional thoroughfare and entry point on a local or State road. In this scenario, the emergency access way can be provided as an easement under section 195 of the *Land Administration Act 1997*, as public access in the event of a bushfire emergency or vested in the Crown as a reserve under section 152 of the *Planning and Development Act 2005*. Such land is to be ceded free of cost without any payment or compensation by the Crown. The proponent must obtain written consent from the local government that

EXPLANATORY NOTES

the local government will accept care, control and management of the proposed reserve and agree to the terms of the Management Order Conditions (if applicable); this must be provided to the decision-maker prior to granting planning approval.

The purpose of the reserve should be for a public purpose specified in the condition related to the subdivision, for example for emergency access only, or for emergency access and recreation. A reserve for emergency access and recreation can optimise the land-use as a dual purpose where it provides vehicular access in the event of a bushfire emergency, but can be accessed by the public (on foot) on a day-to-day basis as a recreation link. Appropriate signage can ensure the general public is aware of the purpose of the reserve. The approach taken is at the discretion of the decision-maker and/or local government.

Right-of-carriageway emergency access way

There may be some instances where a right-of-carriageway easement is proposed as a performance principle-based solution. This may be where particular landowner(s) and emergency services, but not the public, require access over a neighbouring lot(s). A right-of-carriageway easement should be provided under section 195 of the *Land Administration Act 1997*. The easement is to provide alternative access for the particular landowner(s) in the event of a bushfire emergency and not for use by the public. In this scenario, support will be necessary from the adjoining lot owner(s). The easement is to be granted to the local government and it is to agree with the landowner on the arrangements of the management of the easement area by deed. These management arrangements will be at the discretion of the local government. If gated, the easement area can be locked to restrict day-to-day vehicular access.

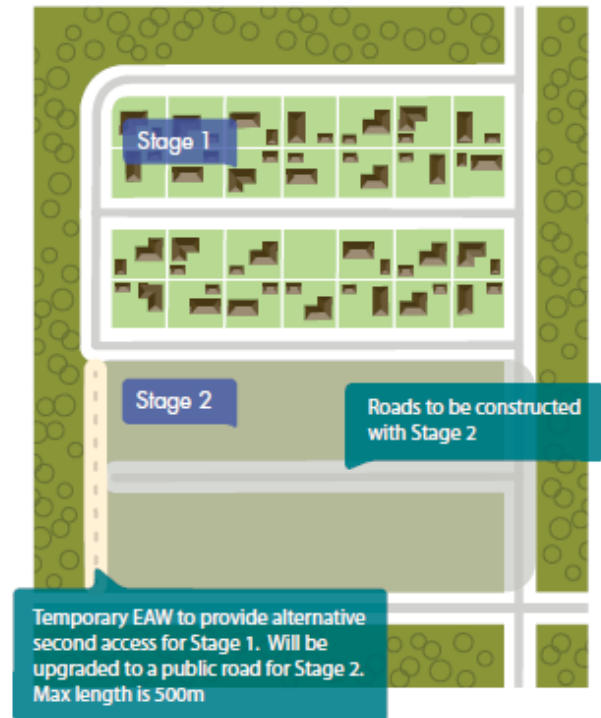


Figure 22: Example of an emergency access way

Appendix E City of Wanneroo Firebreak Notice

IMPORTANT FIRE MITIGATION NOTICE

**FIRE MITIGATION MEASURES MUST BE IN PLACE BY
1 NOVEMBER AND MAINTAINED UNTIL 30 APRIL EACH YEAR.**

This is a requirement under the Bush Fires Act 1954 Section 33.

Failure to comply with this Notice may incur penalties of up to \$5,000 and the works required by this Notice will be carried out at the expense of the owner/occupier.

FIRE MANAGEMENT REQUIREMENTS FOR LAND LESS THAN 4000sqm

- Maintain grasses and inflammable materials with the exception of living trees on the entire property to a height of no more than 50 millimetres. The entire property is required to be maintained below 50 millimetres from 1 November each year until 30 April the following year.
- OR
- A 3 metre wide trafficable firebreak as close as possible to all external boundaries of the property must be installed by 1 November each year and maintained until 30 April the following year.
 - If it is not possible to install the firebreak adjacent to the external boundary of the property due to naturally occurring obstacles, it is acceptable to install the firebreak around the obstacle. If this requires the firebreak to be greater than 5 metres away from the external boundary, a firebreak variation is required.
 - Ensure a minimum vertical clearance of 4 metres is maintained along the firebreaks to enable vehicles to drive along the firebreaks without access being obstructed.
 - Where a property is affected by an approved bushfire management plan, property owners must still comply with all requirements in this Notice and with any additional requirements outlined within that plan.

FIRE MANAGEMENT REQUIREMENTS FOR LAND GREATER THAN 4000sqm

- A 3 metre wide trafficable firebreak as close as possible to all external boundaries of the property must be installed by 1 November each year and maintained until 30 April the following year.
- If it is not possible to install the firebreak adjacent to the external boundary of the property due to naturally occurring obstacles, it is acceptable to install the firebreak around the obstacle. If this requires the firebreak to be greater than 5 metres away from the external boundary, a firebreak variation is required.
- Ensure a minimum vertical clearance of 4 metres is maintained along the firebreaks to enable vehicles to drive along the firebreaks without access being obstructed.
- Install and maintain a 20 metre bare earth area around all hay stacks and/or fuel dumps.
- Where a property is affected by an approved bushfire management plan, property owners must still comply with all requirements in this Notice and with any additional requirements outlined within that plan.

ALL VACANT LAND **GREATER THAN 4000sqm**

- A 3 metre wide trafficable firebreak as close as possible to all external boundaries of the property must be installed by 1 November each year and maintained until 30 April the following year.
- Ensure a minimum vertical clearance of 4 metres is maintained along the firebreaks to ensure vehicles can drive along the firebreaks without being impeded by tree branches.
- If the land is an area of 50,000sqm (5 hectares) or greater, the grass must be maintained on the land to a height no greater than 50 millimetres for a distance of 10 metres from any firebreak.

Frequently Asked Questions

I live in a residential area, does this notice apply to me?

Yes. All City of Wanneroo property owners must comply with the Bush Fires Act 1954.

Please refer overleaf for fire management requirements to be in place by 1 November to ensure your property is compliant.

Most properties under 1000sqm will automatically comply if gardens are maintained.

Do I need a Bushfire Survival Plan?

If you live in, on or near bushland, you are at risk from a bushfire and developing a bushfire survival plan is critical. Visit the Department of Fire and Emergency Services website for information on how to develop a plan for your property dfes.wa.gov.au

I am concerned my neighbour's property is not compliant, what can I do?

All properties are required to be compliant by 1 November. If you think your neighbour's property does not comply with the requirements as outlined in this Notice, please contact the Community Safety and Emergency Management team on 9405 5297.

I own a vacant lot, do I need a firebreak?

A 3 metre wide trafficable firebreak as close as possible to all external boundaries of the property must be installed by 1 November each year and maintained until 30 April the following year.

I am unable to meet the requirements outlined, what should I do?

If it is considered impracticable for any reason to implement any of the requirements of this Notice, an application for a firebreak variation must be made to the City of Wanneroo by no later than 18 October of each year. If permission is not granted, the requirements of this Notice must be complied with.

Visit the City's website wanneroo.wa.gov.au/firebreakvariation to apply for a variation.

Where can I learn more about this Notice and bushfire management?

Visit the City's website wanneroo.wa.gov.au/fireinformation to learn more.

Please note, in addition to the requirements of this Notice, if a City of Wanneroo Fire Control Officer considers further works are necessary to reduce the risk of bushfire, Landowners will be notified via letter to the address shown on the City of Wanneroo rates record for the relevant land.