

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 408 (#19) Neerabup Road

Suburb: Clarkson

State: WA

P/code: 6030

Local government area: City of Wanneroo

Description of the planning proposal: Development Application

BMP Plan / Reference Number: 60414/135,631

Version: R01 Rev 1

Date of Issue: 13/09/2021

Client / Business Name: Woolworths 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 Zac Cockerill	Accreditation Level Level 2	Accreditation No. BPAD 37803	Accreditation Expiry 31/08/2022
Company Strategen-JBS&G		Contact No. (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 13/09/2021

Woolworths Group
Bushfire Management Plan
(Development Application)

Woolworths Mindarie
Lot 408 (#19) Neerabup Road, Clarkson

13 September 2021

60414/135,631 (Rev 1)

JBS&G Australia Pty Ltd T/A Strategen-JBS&G

Table of Contents

1.	Proposal details	1
1.1	Background.....	1
1.2	Site description.....	1
1.3	Purpose.....	2
1.4	Other plans/reports.....	2
2.	Environmental considerations.....	5
2.1	Native vegetation – modification and clearing	5
2.2	Revegetation / Landscape Plans.....	5
3.	Bushfire assessment results	6
3.1	Assessment inputs.....	6
3.1.1	Vegetation classification	6
3.1.2	Effective slope.....	6
3.1.3	Summary of inputs.....	6
3.2	Assessment outputs	7
3.2.1	Bushfire Attack Level (BAL) contour assessment.....	7
4.	Identification of bushfire hazard issues.....	10
4.1	Bushfire context	10
4.2	Bushfire hazard issues	10
5.	Assessment against the bushfire protection criteria.....	11
5.1	Compliance table.....	11
5.2	Additional management strategies	12
5.2.1	Road verge fuel management.....	12
5.2.2	Building construction standards	12
5.2.3	Compliance with annual firebreak notice	12
6.	Responsibilities for implementation and management of the bushfire measures.....	13
7.	References	14
8.	Limitations	15

List of Tables

Table 1:	Summary of environmental values	5
Table 2:	Summary of post-development vegetation classifications, exclusions and effective slope	6
Table 3:	BAL contour assessment results.....	7
Table 4:	Compliance with the bushfire protection criteria of the Guidelines	11
Table 5:	Responsibilities for implementation and management of the bushfire measures .	13

List of Figures

Figure 1: Site plan	3
Figure 2: Site overview.....	4
Figure 3: Vegetation classification and effective slope	8
Figure 4: BAL contour map.....	9

List of plates

Plate 1: Map of Bush Fire Prone Areas (DFES 2019)	2
---	---

Appendices

Appendix A	Landscaping plan
Appendix B	APZ standards (Schedule 1 of the Guidelines)
Appendix C	Vegetation plot photos and description
Appendix D	City of Wanneroo annual firebreak notice

1. Proposal details

1.1 Background

Woolworths Group is seeking to lodge a Development Application (DA) in relation to a proposed shopping centre at Lot 408 (#19) Neerabup Road, Clarkson, located in the City of Wanneroo. Proposed development will retain the majority of the existing building structure, slab and roof currently on site. The site plan (Figure 1) identifies the following building elements as part of proposed development, which are hereon collectively referred to as the project area:

- Woolworths
- loading/fulfillment loading
- liquor
- eight tenancies
- mall
- outdoor dining
- amenity
- BOH/BOO spaces.

1.2 Site description

The project area is situated on the corner of Neerabup Road and Marmion Avenue and is bound by the following (refer to Figure 2):

- existing Ocean Keys Shopping Centre to the north
- Neerabup Road and McAllister Park (Catalina Nature Reserve) to the south
- Key Largo Drive and existing commercial development to the east
- Marmion Avenue, Anchorage Park Public Open Space (POS) and existing residential development to the west.

Commercial and residential development are the predominant land uses within the broader area; however, remnant vegetation within McAllister Park forms part of a broader vegetated corridor with Tamala Park bushland to the south.

The proposed development is partially located within a bushfire prone area, as designated on the *Map of Bush Fire Prone Areas* (DFES 2019; see Plate 1).

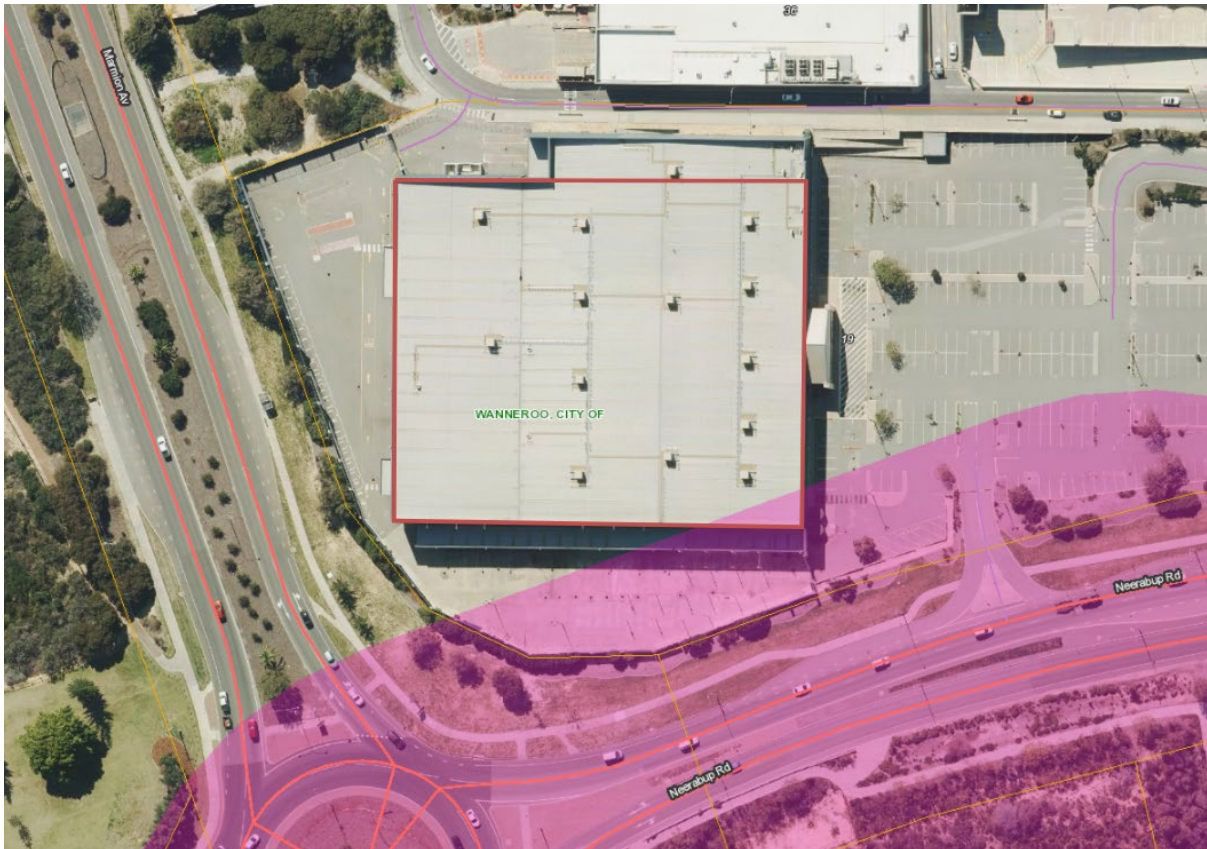


Plate 1: Map of Bush Fire Prone Areas (DFES 2019)

1.3 Purpose

This Bushfire Management Plan (BMP) has been prepared to address requirements under Policy Measure 6.5 of *State Planning Policy 3.7 Planning in Bushfire-Prone Areas* (SPP 3.7; WAPC 2015) and *Guidelines for Planning in Bushfire-Prone Areas* (the Guidelines; WAPC 2017).

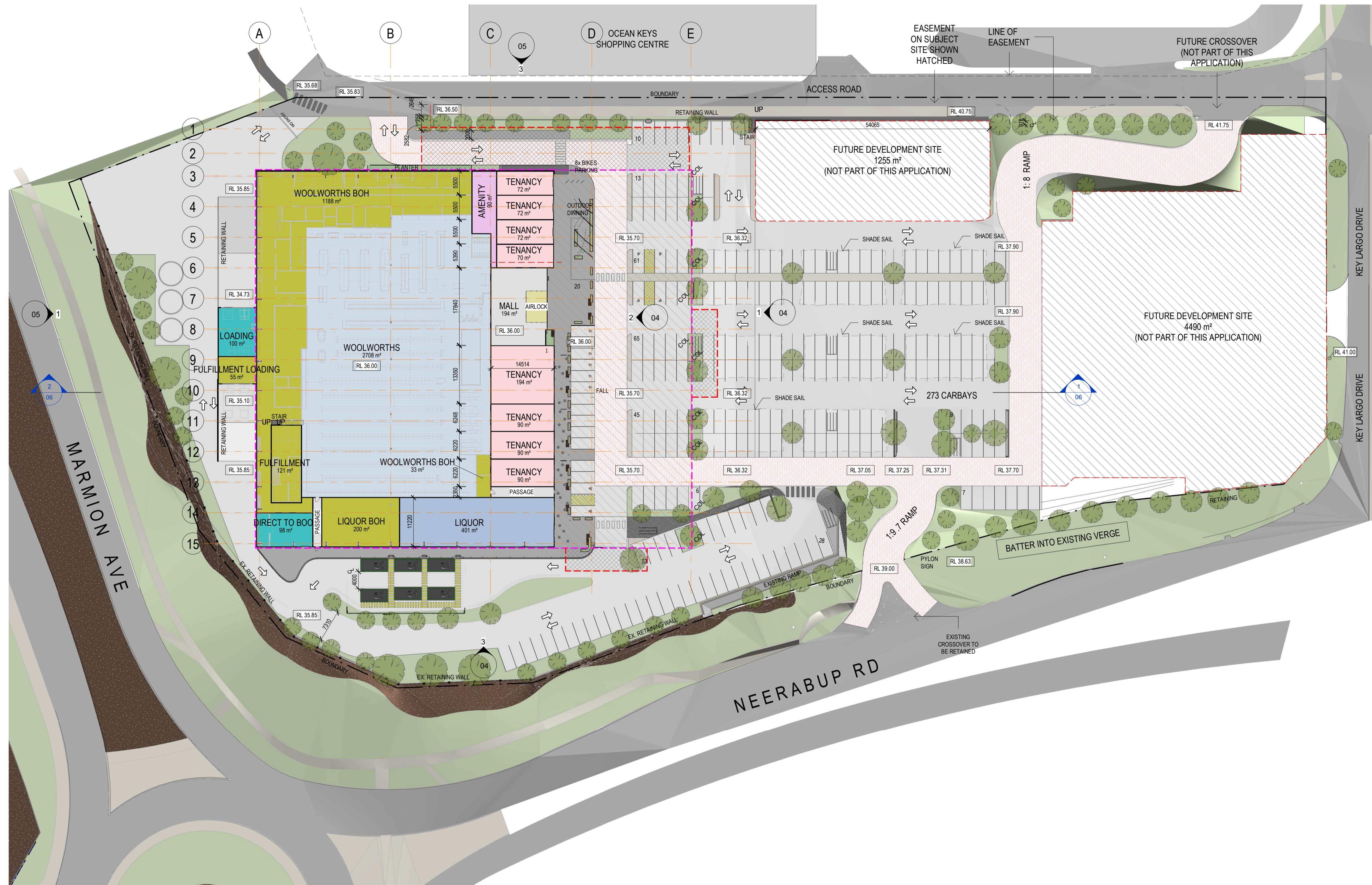
1.4 Other plans/reports

The following reports have been prepared previously for the project area:

- Bushfire Management Plan for Lot 408 Neerabup Road, Clarkson, prepared to support the Clarkson Activity Centre Plan (Strategen 2018).

Results and outcomes from the abovementioned previous BMP have been incorporated into this DA stage BMP where applicable and relevant.

Rev.	Amendment	Date
A	EXISTING BUILDING OVERLAID	27/04/21
B	SHADE SAIL REVISED	19/08/21



NOTES

- DRAWINGS SHALL NOT BE READ IN ISOLATION. REFER TO OTHER DRAWINGS, SCHEDULES & SPECIFICATIONS.
- ALL STRUCTURAL, MECHANICAL, HYDRAULIC & ELECTRICAL INFORMATION IS SHOWN INDICATIVELY ONLY. REFER TO RELEVANT STRUCTURAL & SERVICE DRAWINGS FOR MORE INFORMATION & SIZING.

LEGEND

- G01 GATE TAG. REFER A92 SERIES
- BOL.01 ITEM TAG. REFER FIXTURES & FINISHES SCHEDULE
- LEVEL LEGEND
 - SSL STRUCTURAL SLAB LEVEL
 - RL RELATIVE LEVEL
 - TOW TOP OF WALL LEVEL

LEGEND

SITE PLAN

1:500

- ALTERNATIVE PAVING COLOUR
DEFINES VEHICLE ACCESS ROUTE
- REMOVE EXISTING BUILDING COMPLETELY
- RETAIN EXISTING BUILDING STRUCTURE, SLAB & ROOF

DISCLAIMER: The drawings provided herein shall be used for the purposes for which it was provided. The electronic data files for all or part of the drawings carry no guarantee whatsoever as to their accuracy, content or lack of same. The use of electronic data files are at the requesters or any other third party user's risk. They cannot be used for any contractual purposes. The user of these files must verify the electronic data files against the hard copy or pdf file provided.

BROWN FALCONER

9/300 Rokeby Road, Subiaco, Western Australia 6004
Telephone: 08 6382 0303 ABN 65 007 846 586
brownfalconer.com.au

WOOLWORTHS GROUP LIMITED

WOOLWORTHS CLARKSON

SITE PLAN

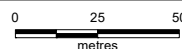
Scale As
Drawn BF/icated Checked BF
Date 19/08/21
Job No. 2020045
Dwg No. 3348 03 Rev: B A1 SHEET



Legend

- Project area
- 100m assessment area
- 150m assessment area
- Roads (MRWA)

Scale 1:2,300 at A4



Coord. Sys. GDA 1994 MGA Zone 50



Job No: 60414

Client: Woolworths

Version: A

Date: 13-Sep-2021

Drawn By: jcrute

Checked By: CT

**Lot 408 Neerabup Road,
Clarkson, WA**

SITE OVERVIEW

FIGURE 2



2. Environmental considerations

2.1 Native vegetation – modification and clearing

As the project area is non-vegetated, the proposal will not result in clearing of any significant native vegetation, nor any potential impacts to significant environmental values. Notwithstanding, Table 1 presents a summary of publicly available environmental information to address standard BMP information requirements with regards to environmental considerations.

Table 1: Summary of environmental values

Environmental value	Not mapped as occurring within or adjacent to the project area	Mapped as occurring within or adjacent to the project area		Description
		Within	Adjacent	
Environmentally Sensitive Area			✓	The project area is approximately 800 m northeast from the nearest environmentally sensitive area associated with the coastal foreshore reserve.
Swan Bioplan Regionally Significant Natural Area	✓			N/A
Ecological linkages	✓			N/A
Wetlands	✓			N/A
Waterways	✓			N/A
Threatened Ecological Communities listed under the EPBC Act		✓		Potential Tuart woodlands and Banksia woodlands of the Swan Coastal Plain are situated adjacent to the project area to the east and south; however, since the site is non-vegetated, no TECs will be impacted.
Threatened and priority flora		✓	✓	Mapping layer not available.
Fauna habitat listed under the EPBC Act			✓	Potential Black Cockatoo foraging and breeding habitat is situated to the east and south of the project area; however, since the site is non-vegetated, no significant fauna habitat will be impacted.
Threatened and priority fauna			✓	Mapping layer not available.
Bush Forever Site	✓			N/A
DBCA managed lands and waters (includes legislated lands and waters and lands of interest)	✓			N/A
Conservation covenants	✓			None known.

2.2 Revegetation / Landscape Plans

No revegetation is proposed as part of the proposal. Minor areas of low threat landscaping will be established as per the landscaping plan provided in Appendix A, which will not result in the introduction of any classified vegetation nor significant bushfire threat. Proposed landscaping will consist of low threat managed gardens and shade areas in accordance with AS 3959—2018 Clause 2.2.3.2 (f) and Schedule 1 of the Guidelines (refer to Appendix B).

3. Bushfire assessment results

3.1 Assessment inputs

3.1.1 Vegetation classification

Strategen-JBS&G assessed classified vegetation and exclusions within the 150 m assessment area through on-ground verification on 10 February 2021 and 20 February 2021 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 and a description of the vegetation classifications and exclusions are contained in Appendix C and depicted in Figure 3. A summary of the assessed vegetation plots is contained in Table 2.

3.1.2 Effective slope

Strategen-JBS&G assessed effective slope under classified vegetation within the 150 m assessment area through on-ground verification on 10 February 2021 in accordance with AS 3959. Results were cross-referenced with DPIRD 2m contour data and are depicted in Figure 3.

Site observations indicate that the effective slope under all classifiable vegetation within the 150 m assessment area is predominantly flat or upslope, except for a small section of Class D scrub to the east, which is subject to a downslope of 0–5 degrees in association with a drainage basin.

3.1.3 Summary of inputs

Figure 3 illustrates the anticipated post-development vegetation classifications and exclusions within the 150 m assessment area. The post-development vegetation classifications/exclusions and effective slope are summarised in Table 2.

Table 2: Summary of post-development vegetation classifications, exclusions and effective slope

Vegetation plot	Vegetation classification	Effective slope	Comments
1	Class D Scrub	Downslope >0–5°	Scrub vegetation associated with the existing drainage basin to the west.
2	Class D Scrub	Flat/upslope (0°)	Scrub vegetation within McAllister Park to the south and Anchorage Park to the west, as well as road verge vegetation within Marmion Avenue and Neerabup Road.
3	Excluded – Clause 2.2.3.2 [d]	N/A	Road verge vegetation less than 20 m wide and more than 20 m from the project area and other classified vegetation.
4	Excluded – Clause 2.2.3.2 [c]	N/A	Multiple areas of vegetation <0.25ha and more than 20 m from the project area and other classified vegetation.
5	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	Includes existing managed low threat landscaping and non-vegetated elements such as roads, paving, infrastructure, managed POS within Anchorage Park and managed road verges.

3.2 Assessment outputs

3.2.1 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. 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 future development and subsequently informs the standard of building construction and/or setbacks required for proposed habitable development to potentially withstand such impacts and/or deliver compliant separation to achieve BAL-29 or lower as per bushfire protection criteria requirements.

The BAL contours are based on the vegetation classifications and effective slope observed at the time of inspection, as well as consideration of proposed landscaping and on-site works achieved in line with the Site Plan.

Results of the BAL contour assessment are detailed in Table 3 and illustrated in Figure 4. The highest BAL applicable to the proposed development is **BAL-12.5**.

Table 3: BAL contour assessment results

Plot	Vegetation classification	Effective slope	Separation distance (to nearest elevation of buildings)	BAL
1	Class D Scrub	Downslope >0-5°	>100 m	BAL-Low
2	Class D Scrub	Flat/upslope (0°)	60 m	BAL-12.5
3	Excluded – Clause 2.2.3.2 [d]	N/A	N/A	N/A
4	Excluded – Clause 2.2.3.2 [c]	N/A	N/A	N/A
5	Excluded – Non-vegetated and Low threat (Clause 2.2.3.2 [e] and [f])	N/A	N/A	N/A



Legend

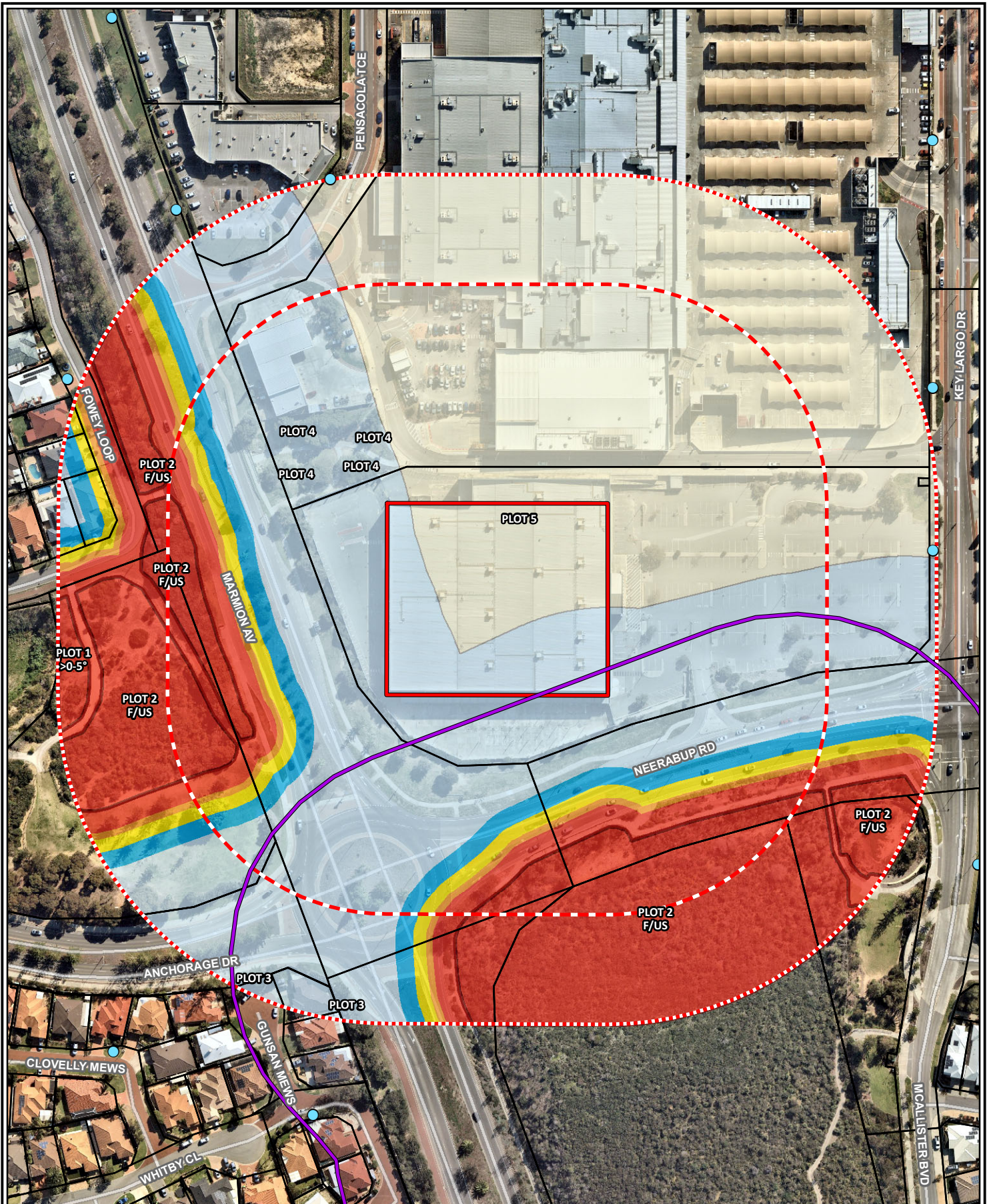
- Project area
- 100m assessment area
- 150m assessment area
- Cadastral boundary
- Photo point directions
- Topographic contours (mAHd)
- Class D Scrub
- Clause 2.2.3.2 (c)
- Clause 2.2.3.2 (d)
- Clause 2.2.3.2 (e) & (f)
- Roads (MRWA)

Scale 1:2,300 at A4		
Coord. Sys. GDA 1994 MGA Zone 50		
Job No: 60414		
Client: Woolworths		
Version: A	Date: 13-Sep-2021	
Drawn By: jcrute	Checked By: CT	

**Lot 408 Neerabup Road,
Clarkson, WA**

**VEGETATION CLASSIFICATION
AND EFFECTIVE SLOPE**

FIGURE 3



Legend

- Project area
- 100m assessment area
- 150m assessment area
- Cadastral boundary
- Bushfire prone areas
- Classified vegetation
- Roads (MRWA)
- Water hydrant
- BAL contours**
- BAL FZ
- BAL 40
- BAL 29
- BAL 19
- BAL 12.5
- BAL Low

Scale 1:2,300 at A4		
Coord. Sys. GDA 1994 MGA Zone 50		
Job No: 60414		
Client: Woolworths		
Version: A	Date: 13-Sep-2021	
Drawn By: jcrute	Checked By: CT	

**Lot 408 Neerabup Road,
Clarkson, WA**

BAL CONTOUR MAP

FIGURE 4

4. Identification of bushfire hazard issues

4.1 Bushfire context

The proposed development will be immediately surrounded by existing built form, main arterial neighbourhood connector roads, large carparking areas and managed landscaping. These elements will provide a significant buffer to the predominant bushfire threat in McAllister Park to the south, resulting in a significant reduction in the site's bushfire risk exposure.

This predominant vegetation hazard comprises typical coastal banksia/acacia scrub forming a corridor from Neerabup Road through to Tamala Park Rubbish Disposal Site further to the south. Under predominant afternoon bushfire weather conditions for the Wanneroo area and associated winds from the south/southwest, a bushfire occurring within McAllister Park to the south and/or Anchorage Park to the west is not likely to impact the project area with substantial levels of radiant heat, but possibly some ember attack and smoke.

4.2 Bushfire hazard issues

Aside from the abovementioned potential for the site to be exposed to ember attack and smoke (at a rating of BAL-12.5); Strategen-JBS&G considers the project area and proposed development is not otherwise unreasonably constrained by bushfire hazard issues and that compliance with all bushfire protection criteria of the Guidelines is readily achievable due to the existing legacy compliant conditions of the site (refer to Section 5).

5. Assessment against the bushfire protection criteria

5.1 Compliance table

An acceptable solutions assessment against the bushfire protection criteria is provided in Table 4.

Table 4: Compliance with the bushfire protection criteria of the Guidelines

Bushfire protection criteria	Method of compliance	Proposed bushfire management strategies
	Acceptable solutions	
Element 1: Location	A1.1 Development location	The BAL contour assessment (refer to Figure 4 and Table 3) confirms that the project area will be subject to a maximum rating of BAL-12.5. In this regard, the proposed development complies with Acceptable Solution A1.1.
Element 2: Siting and design	A2.1 Asset Protection Zone	The proposed development is located within an existing urban precinct comprising built form, carparking areas, roads and managed land. This existing low threat/non-vegetated environment provides a significant, well established Asset Protection Zone (APZ) for the proposed development sufficient for the project area to achieve BAL-12.5. In this regard, the proposed development complies with Acceptable Solution A2.1 without any additional APZ requirements. The pre-existing low threat areas as well as all proposed landscaping (as per the landscaping plan in Appendix A) are to be maintained in accordance with Schedule 1 of the Guidelines (Appendix B).
Element 3: Vehicular access	A3.1 Two access routes	The proposed development will be provided the option for occupants to travel to more than two different destinations via the existing internal and external compliant public road network and driveway connections to Neerabup Road to the south, Marmion Avenue to the northwest and Key Largo Drive to the east. In this regard, the proposed development is provided with more than two access routes, which meets the requirements of Acceptable Solution A3.1.
	A3.2 Public road	N/A – no public roads are proposed as part of the development. The existing public road network servicing the development is compliant with technical standards for public roads under the Guidelines.
	A3.3 Cul-de-sac (including a dead-end-road)	N/A – no cul-de-sacs are proposed as part of the development and the project area is not serviced by an existing cul-de-sac.
	A3.4 Battle-axe	N/A – no battle-axes are proposed as part of the development and the project area is not serviced by an existing battle-axe.
	A3.5 Private driveway longer than 50 m	N/A – the proposed development is within 50m of a public road.
	A3.6 Emergency access way	N/A – the proposed development does not require Emergency Access Ways (EAWs) to provide through access to a public road.
	A3.7 Fire service access routes (perimeter roads)	N/A – the proposed development does not require fire service access routes (FSARs) to achieve access within and around the perimeter of the project area.
	A3.8 Firebreak width	N/A – on completion of development the project area will be fully developed with paved surfaces and low threat landscaping. Therefore, firebreaks are not considered to be required.
Element 4: Water	A4.1 Reticulated areas	The proposed development will be serviced by the existing compliant reticulated water supply and street hydrant network, which provides hydrants at regular intervals along Marmion Avenue and Neerabup Road.
	A4.2 Non-reticulated areas	N/A – the proposed development is located within an existing reticulated area (A4.1 applies).
	A4.3 Individual lots within non-reticulated areas (Only for use if creating 1 additional lot and cannot be applied cumulatively)	N/A – the proposed development is located within an existing reticulated area (A4.1 applies).

5.2 Additional management strategies

5.2.1 Road verge fuel management

Existing road verges that have been excluded as low threat are to be managed to ensure the understorey and surface fuels remain in a low threat, minimal fuel condition in accordance with Clause 2.2.3.2 (f) of AS 3959. Ongoing road verge management is the responsibility of the City of Wanneroo, which will require continuation of the existing verge management regime.

5.2.2 Building construction standards

The proposed development does not include any Class 1, 2, 3 or associated 10a buildings, and as such, there is no statutory requirement for proposed buildings to meet the construction requirements of AS 3959. However, it is recommended that where practical, non-residential habitable buildings voluntarily adopt the bushfire construction measures relevant to the assessed BAL, such as ember protection measures.

5.2.3 Compliance with annual firebreak notice

The developer is to continue to comply with the current City of Wanneroo annual firebreak notice as amended (refer to Appendix D), which prescribes the following relevant clauses in relation to proposed development:

- 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.

6. Responsibilities for implementation and management of the bushfire measures

Implementation of the BMP applies to the developer, prospective owners/managers of the proposed facility and the City to ensure bushfire management measures are adopted and implemented on an ongoing basis. A bushfire responsibilities table is provided in Table 5 to drive implementation of all bushfire management works associated with this BMP.

Table 5: Responsibilities for implementation and management of the bushfire measures

Implementation/management table	
Developer – prior to occupation of buildings	
No.	Implementation action
1	Establish low threat landscaping across the project area in accordance with the landscaping plan.
Landowner/occupier – ongoing	
No.	Implementation action
1	Maintain the project area and surrounding areas of pre-existing low threat land in a low threat state, as stated in the BMP.
2	Comply with the City of Wanneroo annual firebreak notice as amended.
Local government – ongoing management	
No.	Implementation action
1	Maintain verges in a low threat minimal fuel condition as per Clause 2.2.3.2 (f) of AS 3959.

7. References

Department of Fire and Emergency Services (DFES) 2019, *Map of Bush Fire Prone Areas*, [Online], Government of Western Australia, available from: <https://maps.slip.wa.gov.au/landgate/bushfireprone/>, [13/09/2021].

Department of Planning (DoP) 2016, *Visual guide for bushfire risk assessment in Western Australia*, Department of Planning, Perth.

Standards Australia (SA) 2018, *Australian Standard AS 3959–2018 Construction of Buildings in Bushfire-prone Areas*, Standards Australia, Sydney.

Strategen 2018, *Lot 408 Neerabup Road, Clarkson Bushfire Management Plan (Structure Plan)*, report prepared for Urbis, April 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) 2017, *Guidelines for Planning in Bushfire Prone Areas*, Version 1.3 August 2017, Western Australian Planning Commission, Perth.

8. Limitations

Scope of services

This report ("the report") has been prepared by Strategen-JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen-JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen-JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen-JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen-JBS&G has also not attempted to determine whether any material matter has been omitted from the data. Strategen-JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen-JBS&G. The making of any assumption does not imply that Strategen-JBS&G has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen-JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

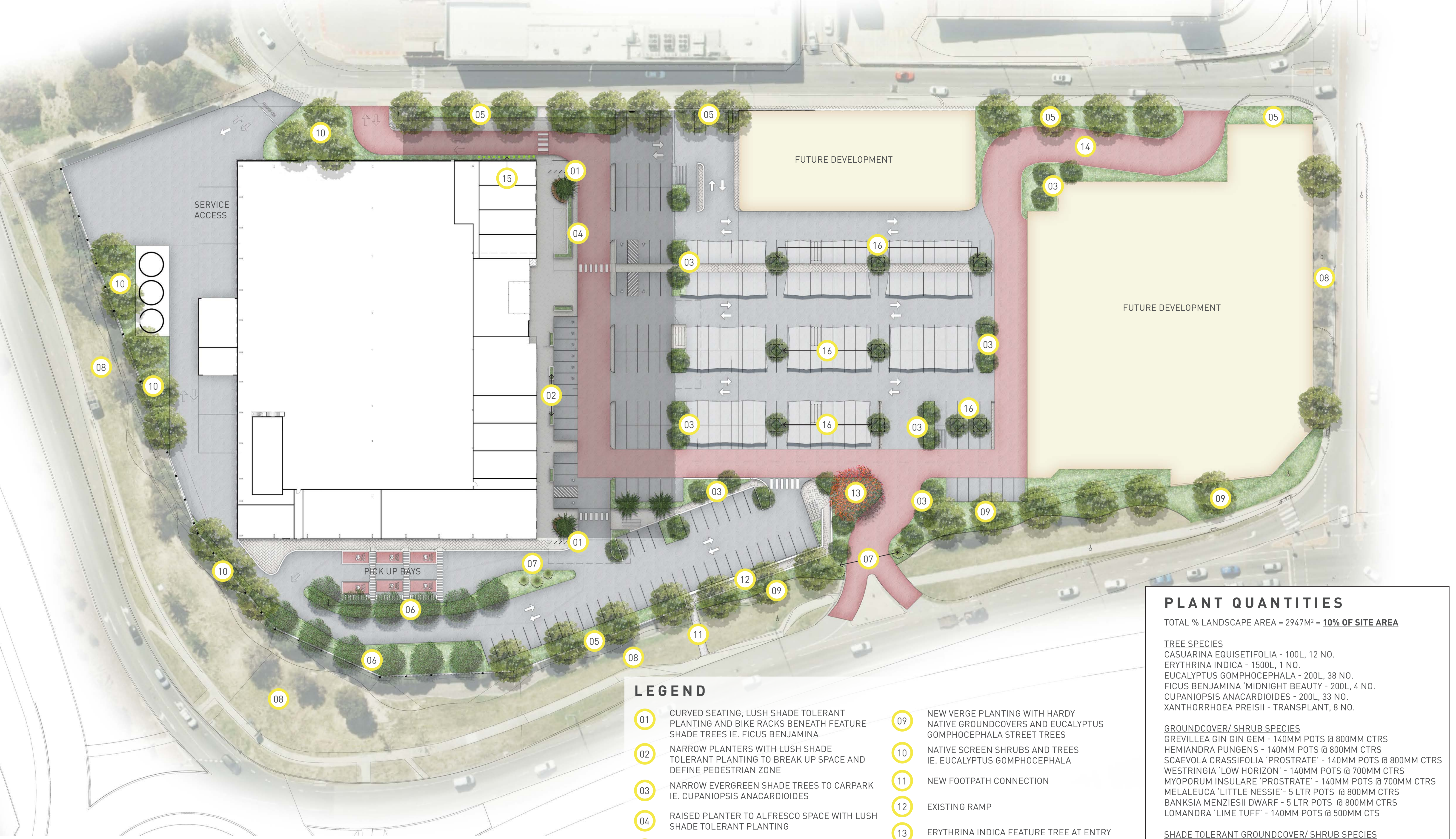
Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

Strategen-JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by Strategen-JBS&G, and should not be relied upon by other parties, who should make their own enquiries.

Appendix A Landscaping plan



PLANT QUANTITIES

TOTAL % LANDSCAPE AREA = 2947M² = **10% OF SITE AREA**

TREE SPECIES

- CASUARINA EQUISETIFOLIA - 100L, 12 NO.
- ERYTHRINA INDICA - 1500L, 1 NO.
- EUCALYPTUS GOMPHOCEPHALA - 200L, 38 NO.
- FICUS BENJAMINA 'MIDNIGHT BEAUTY' - 200L, 4 NO.
- CUPANIOPSIS ANACARDIOIDES - 200L, 33 NO.
- XANTHORRHOEA PREISII - TRANSPLANT, 8 NO.

GROUNDCOVER/ SHRUB SPECIES

- GREVILLEA GIN GIN GEM - 140MM POTS @ 800MM CTRS
- HEMIANDRA PUNGENS - 140MM POTS @ 800MM CTRS
- SCAEVOLA CRASSIFOLIA 'PROSTRATE' - 140MM POTS @ 800MM CTRS
- WESTRINGIA 'LOW HORIZON' - 140MM POTS @ 700MM CTRS
- MYOPORUM INSULARE 'PROSTRATE' - 140MM POTS @ 700MM CTRS
- MELALEUCA 'LITTLE NESSIE' - 5 LTR POTS @ 800MM CTRS
- BANKSIA MENZIESII DWARF - 5 LTR POTS @ 800MM CTRS
- LOMANDRA 'LIME TUFF' - 140MM POTS @ 500MM CTRS

SHADE TOLERANT GROUNDCOVER/ SHRUB SPECIES

- PHILODENDRON XANADU - 140MM @ 500 CTRS
- ASPIDISTRA ELIATOR - 140MM @ 800MM CTRS
- DICHONDRA 'SILVER FALLS' - 140MM @ 1000MM CTRS
- BLECHNUM 'SILVER LADY' - 140MM @ 800 CTRS
- PANDOREA PANDORANA - 140MM POTS @ 1000 CTRS

LEGEND

- 01 CURVED SEATING, LUSH SHADE TOLERANT PLANTING AND BIKE RACKS BENEATH FEATURE SHADE TREES IE. FICUS BENJAMINA
- 02 NARROW PLANTERS WITH LUSH SHADE TOLERANT PLANTING TO BREAK UP SPACE AND DEFINE PEDESTRIAN ZONE
- 03 NARROW EVERGREEN SHADE TREES TO CARPARK IE. CUPANIOPSIS ANACARDIOIDES
- 04 RAISED PLANTER TO ALFRESCO SPACE WITH LUSH SHADE TOLERANT PLANTING
- 05 NATIVE TREES TO CARPARK PERIMETER IE. EUCALYPTUS GOMPHOCEPHALA
- 06 HARDY GROUNDCOVERS AND NATIVE TREES IE. CASUARINA EQUISETIFOLIA
- 07 LOW FEATURE PLANTING AND TRANSPLANTED GRASS TREES
- 08 EXISTING VERGE TREATMENT AND FOOTPATHS TO BE RETAINED
- 09 NEW VERGE PLANTING WITH HARDY NATIVE GROUNDCOVERS AND EUCALYPTUS GOMPHOCEPHALA STREET TREES
- 10 NATIVE SCREEN SHRUBS AND TREES IE. EUCALYPTUS GOMPHOCEPHALA
- 11 NEW FOOTPATH CONNECTION
- 12 EXISTING RAMP
- 13 ERYTHRINA INDICA FEATURE TREE AT ENTRY
- 14 LOOP OF COLOURED ROAD PAVEMENT TO GUIDE VEHICLE TRAFFIC
- 15 GREEN WALL WITH PANDOREA PANDORANA CREEPER GROWING UP RONTSAN STAINLESS STEEL SUPPORT SYSTEM
- 16 3 X 3M STRATA CELL TREE SYSTEM TO TREE WELLS

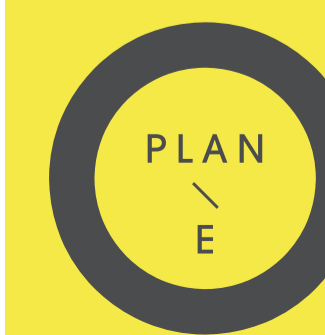
WOOLWORTHS, MINDARIE

LANDSCAPE CONCEPT PLAN
SEPTEMBER 2021

JOB NO. 2100501
1:400 @ A1

C1.101
0 4 8 16 24 40m
REV L

COPYRIGHT THIS DOCUMENT IS AND SHALL REMAIN THE PROPERTY OF PLAN E



LANDSCAPE ARCHITECTS

414 ROKEBY RD SUBIACO WA 6008
T: (08) 9388 9566 E: mail@plane.com.au

VERGE & PERIMETER TREE PLANTING



EUCALYPTUS GOMPHOCEPHALA



CASUARINA EQUISETIFOLIA

CARPARK SHADE TREE PLANTING



CUPANIOPSIS ANACARDIODES



FICUS BENJAMINA (SHADE)

FEATURE PLANTING



ERYTHRINA INDICA
(FEATURE TREE AT ENTRY)



XANTHORRHOEA PREISSII
(ENTRY FEATURE)

GROUNDCOVER / LOW SHRUB PLANTING



GREVILLEA 'GINGIN GEM'



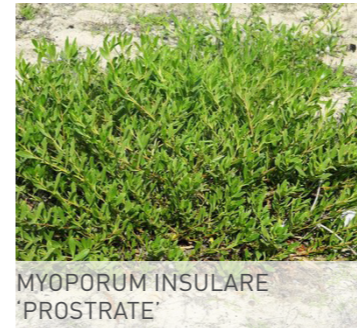
HEMIANDRA PUNGENS



SCAEVOLA CRASSIFOLIA
'PROSTRATE'



WESTRINGIA 'LOW HORIZON'



MYOPORUM INSULARE
'PROSTRATE'

CREEPER



PANDOREA PANDORANA

SHRUB PLANTING



MELALEUCA 'LITTLE NESSIE'



BANKSIA MENZIESII DWARF

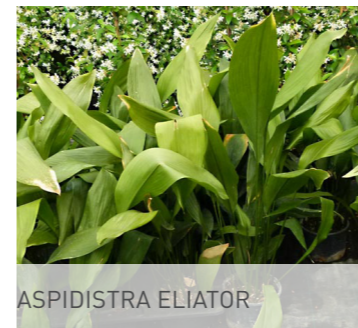


LOMANDRA 'LIME TUFF'

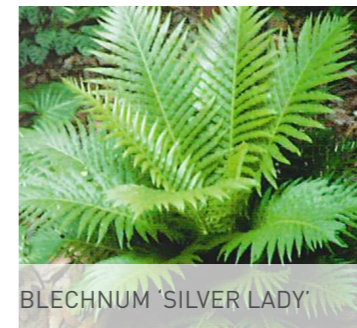
SHADE TOLERANT PLANTING



PHILODENDRON 'XANADU'



ASPIDISTRA ELIATOR



BLECHNUM 'SILVER LADY'



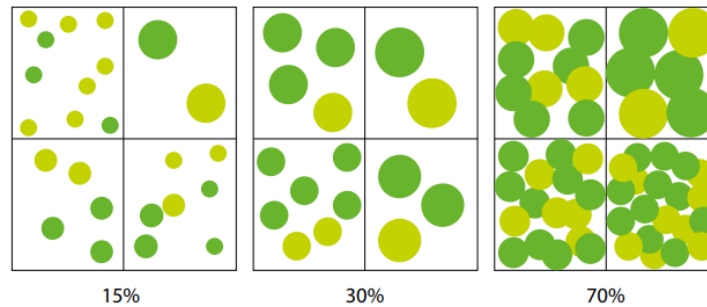
DICHONDRA 'SILVER FALLS'



Appendix B APZ standards (Schedule 1 of the Guidelines)

Schedule 1: Standards for Asset Protection Zones

- **Fences:** within the APZ are constructed from non-combustible materials (e.g. iron, brick, limestone, metal post and wire). It is recommended that solid or slatted non-combustible perimeter fences are used.
- **Objects:** within 10 metres of a building, combustible objects must not be located close to the vulnerable parts of the building i.e. windows and doors.
- **Fine Fuel load:** combustible dead vegetation matter less than 6 millimetres in thickness reduced to and maintained at an average of two tonnes per hectare.
- **Trees (> 5 metres in height):** trunks at maturity should be a minimum distance of 6 metres from all elevations of the building, branches at maturity should not touch or overhang the building, lower branches should be removed to a height of 2 metres above the ground and or surface vegetation, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 metres apart as to not form a continuous canopy.



- **Shrubs (0.5 metres to 5 metres in height):** should not be located under trees or within 3 metres of buildings, should not be planted in clumps greater than 5m² in area, clumps of shrubs should be separated from each other and any exposed window or door by at least 10 metres. Shrubs greater than 5 metres in height are to be treated as trees.
- **Ground covers (<0.5 metres in height):** can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 metres of a structure, but 3 metres from windows or doors if greater than 100 millimetres in height. Ground covers greater than 0.5 metres in height are to be treated as shrubs.
- **Grass:** should be managed to maintain a height of 100 millimetres or less.

Appendix C Vegetation plot photos and description

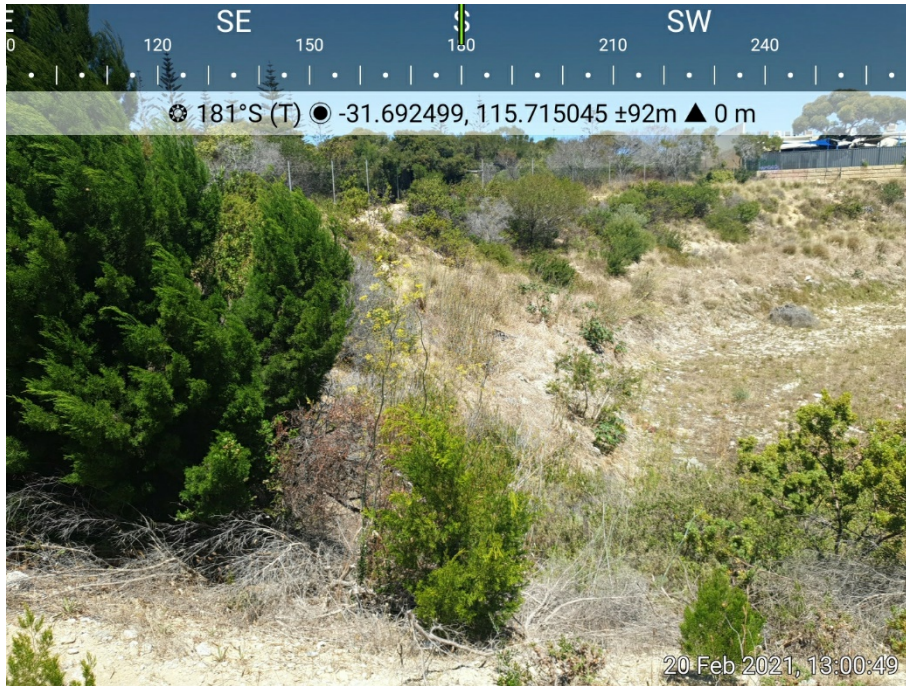


Photo ID: 1a

Plot number		Plot 1
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification		Scrub vegetation with a continuous horizontal fuel profile between 2–6 m.



Photo ID: 2a

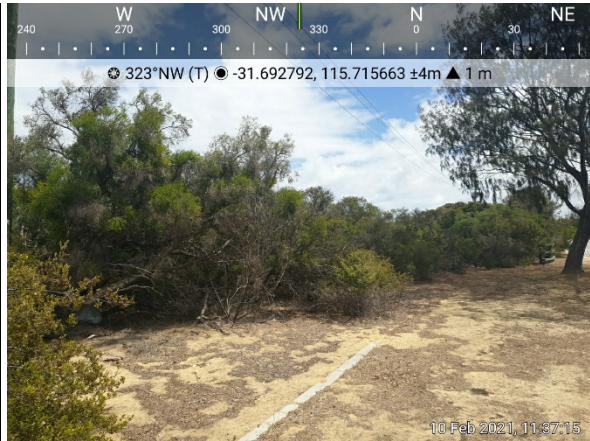


Photo ID: 2b



Photo ID: 2c



Photo ID: 2d



Photo ID: 2e

Plot number	Plot 2	
Vegetation classification	Pre-development	Class D Scrub
	Post-development	Class D Scrub
Description / justification	Scrub vegetation with a continuous horizontal fuel profile between 2–6 m.	

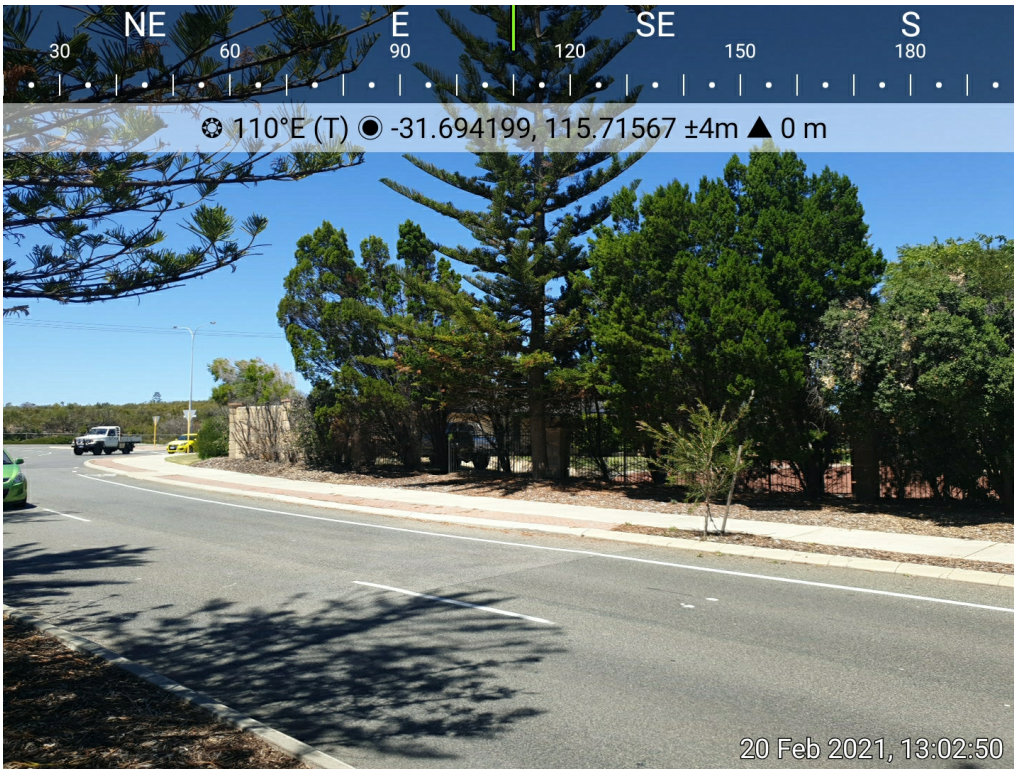


Photo ID: 3a

Plot number		Plot 3
Vegetation classification	Pre-development	Excluded – Clause 2.2.3.2 [d]
	Post-development	Excluded – Clause 2.2.3.2 [d]
Description / justification		Road verge vegetation less than 20 m wide and more than 20 m from the project area and other classified vegetation.



Photo ID: 4a

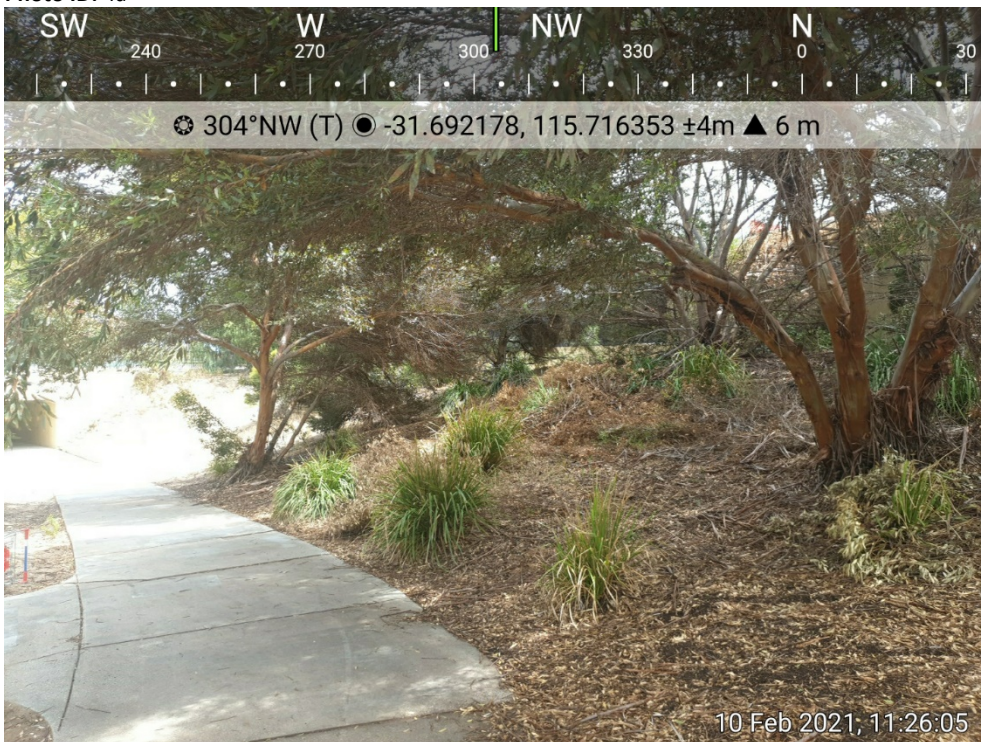


Photo ID: 4b

Plot number		Plot 4
Vegetation classification	Pre-development	Excluded – Clause 2.2.3.2 [c]
	Post-development	Excluded – Clause 2.2.3.2 [c]
Description / justification		Multiple areas of vegetation <0.25ha and more than 20 m from the project area and any classified vegetation.



Photo ID: 5a



Photo ID: 5b



Photo ID: 5c



Photo ID: 5d

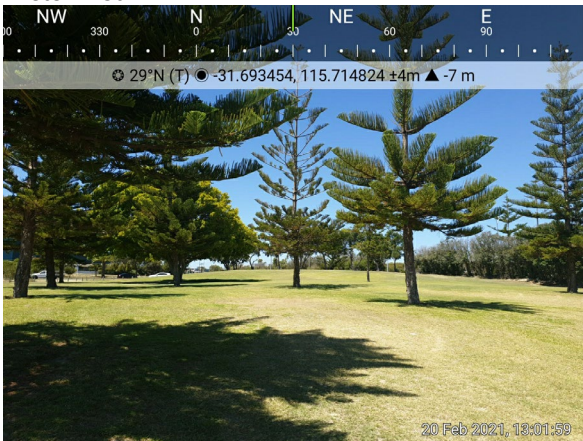


Photo ID: 5e

Plot number		Plot 5
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

Appendix D City of Wanneroo annual 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 \$5000 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 greater than 4000sqm but less than 50,000sqm (5 hectares) all grass on the land must be maintained to a height of less than 50 millimetres.
- 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 let the City know by calling 9405 5000.

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

Firebreak requirements differ depending on your lot size and vegetation levels. If vegetation is unable to be maintained to a height of 50 millimetres or less (living trees exempt), a firebreak must be installed by 1 November. Please refer overleaf for more information.

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/fireinformation 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.

For further information call the City of Wanneroo Community Safety and Emergency Management Team on 9405 5000 or visit wanneroo.wa.gov.au/fireinformation



TO REPORT ALL FIRES
CALL 000

© JBS&G Australia Pty Ltd T/A Strategen-JBS&G

This document is and shall remain the property of Strategen-JBS&G. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Document Status

Report version	Rev No.	Purpose	Author	Reviewed and Approved for Issue	
				Name	Date
Draft Report	Rev A	For client review	Kaitlin Southgate	Zac Cockerill (BPAD 37803, Level 2)	19 February 2021
Final Report	Rev 0	Issued for use: to accompany DA submission	Kaitlin Southgate	Zac Cockerill (BPAD 37803, Level 2)	11 March 2021
Final Report	Rev 1	Issued for use: updated to reflect amended DA and site plan	Zac Cockerill (BPAD 37803, Level 2)	Zac Cockerill (BPAD 37803, Level 2)	13 September 2021

