



**DISTRICT
PLANNING
SCHEME No. 2**

Amendment No. 202

Planning and Development Act 2005

**RESOLUTION TO PREPARE AMENDMENT TO
LOCAL PLANNING SCHEME**

CITY OF WANNEROO

DISTRICT PLANNING SCHEME NO. 2 – AMENDMENT NO. 202

RESOLVED that the local government pursuant to section 75 of the *Planning and Development Act 2005*, amend the above local planning scheme by:

1. Rezoning the following land from 'Industrial Development' to 'General Industrial', to the extent shown on the Scheme (Amendment) Map:
 - Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
 - Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
 - Portion Lot 1031 (24) Hemisphere Street, Neerabup (on DP: 405727);
 - Portion Lot 1030 (18) Greenwich Parade, Neerabup (on DP: 405727);
 - Portion Lot 1029 (22) Greenwich Parade, Neerabup (on DP: 405727);
 - Portion Lot 1019 (26) Greenwich Parade, Neerabup (on DP: 61212);
 - Portion Lot 1018 (30) Greenwich Parade, Neerabup (on DP: 61212);
 - Portion Lot 800 (34) Greenwich Parade, Neerabup (on DP: 415111);
 - Lot 1024 (15) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 1023 (11) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 1026 (7) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 1022 (20) Hemisphere Street, Neerabup (on DP: 409191);
 - Lot 1035 (12) Hemisphere Street, Neerabup (on DP: 409191);
 - Lot 1034 (6) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 1033 (12) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 40 (26) Mather Drive, Neerabup (on D: 78186);
 - Lot 9100 (60) Mather Drive, Neerabup (on DP: 411322);
 - Lot 44 (64) Mather Drive, Neerabup (on D: 83582);
 - Lot 2004 (69) Mather Drive, Neerabup (on DP: 70103);
 - Lot 9003 (85) Mather Drive, Neerabup (on DP: 70103);
 - Lot 2001 (240) Pederick Road, Neerabup (on DP: 60745);
 - Lot 1001 (220) Pederick Road, Neerabup (on DP: 37249);
 - Lot 1000 (190) Pederick Road, Neerabup (on DP: 37249);
 - Lot 100 (45) Trandos Road, Neerabup (on DP: 63371);
 - Lot 9000 (140) Pederick Road, Neerabup (on DP: 63371);
 - Lot 1506 (1) Trandos Road, Neerabup (on DP: 407752);
 - Lot 101 (141) Pederick Road, Neerabup (on DP: 413173);
 - Lot 102 (123) Pederick Road, Neerabup (on DP: 413173);
 - Lot 103 (125) Pederick Road, Neerabup (on DP: 413173);
 - Lot 104 (127) Pederick Road, Neerabup (on DP: 413173);
 - Lot 801 (109) Pederick Road, Neerabup (on DP: 57533);
 - Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
 - Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843); and
 - Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).
2. Rezoning portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704) from 'General Industrial' to 'Service Industrial', to the extent shown on the Scheme (Amendment) Map.
3. Rezoning the following land from 'Industrial Development' to 'Service Industrial', to the extent shown on the Scheme (Amendment) Map:

- Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
 - Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
 - Lot 1000 (45) Hemisphere Street, Neerabup (DP: 423704);
 - Portion Lot 1001 (11) Greenwich Parade, Neerabup (on DP: 61212);
 - Portion Lot 1021 (10) Greenwich Parade, Neerabup (on DP: 61212);
 - Lot 2 (19) Hemisphere Street, Neerabup (on DP: 413473);
 - Lot 1 (13) Hemisphere Street, Neerabup (on DP: 413473);
 - Lot 1057 (5) Ring Street, Neerabup (on DP: 420872);
 - Lot 1058 (11) Ring Street, Neerabup (on DP: 420872);
 - Lot 1060 (11) Pinnacle Drive, Neerabup (on DP: 420872);
 - Portion Lot 1059 (1) Pinnacle Drive, Neerabup (on DP: 420872);
 - Portion Lot 1064 (2) Pinnacle Drive, Neerabup (on DP: 420872);
 - Lot 1063 (10) Pinnacle Drive, Neerabup (on DP: 420872);
 - Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
 - Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843);
 - Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).
4. Reclassifying Lot 8002 (270) Flynn Drive, Neerabup (on DP: 411322) from the 'Industrial Development' zone to 'Local Scheme Reserve – Public Use', as shown on the Scheme (Amendment) Map.
 5. Reclassifying Lot 8001 (250) Flynn Drive, Neerabup (on DP: 411322) from the 'Industrial Development' zone to 'Local Scheme Reserve – Conservation', as shown on the Scheme (Amendment) Map.
 6. Applying the Additional Uses (A50) designation to various land parcels in the Neerabup locality, as shown on the Scheme (Amendment) Map.
 7. Amending Schedule 2 – Section 1 of the Scheme text to insert the following:

NO		STREET/ LOCALITY	PARTICULARS OF LAND	ADDITIONAL USE AND CONDITIONS (WHERE APPLICABLE)
A50	1-50	Neerabup locality	Multiple land parcels zoned General Industrial.	<ul style="list-style-type: none"> • Intensive Agriculture • Data Storage Premises • Education Establishment • Research and Development Centre <p>Conditions:</p> <ol style="list-style-type: none"> 1. All the 'Additional Uses' shall be dealt with as "D" uses, pursuant to Clause 6.2.2. 2. Land uses referred to above, but which are not defined in Schedule 1, are defined below: <p>Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.</p>

				<p>Research and Development Centre – means land and buildings used to undertake scientific and industrial research and the development, testing, training and education, production and assembly involved with that research and development. It may include administration, promotion, conference, office, meeting rooms, display, laboratory, assembly, laydown, and manufacturing areas.</p> <p>3. Conditions and parameters for the carrying out of land uses listed above are provided for below:</p> <p>Education Establishment: Activities shall only be limited to providing persons with training of skills needed to operate heavy vehicles, earthmoving equipment or other industrial equipment or machinery.</p> <p>Intensive Agriculture: The cultivation and harvesting of produce shall only occur within a building, enclosed by walls and a roof (excluding greenhouses). Cultivation of produce shall not occur where exposed to the open natural environment.</p> <p>4. The number of on-site parking bays to be provided for the Additional Uses shall be as provided below:</p> <p>Data Storage Premises – 1 per 400m² GFA</p> <p>Intensive Agriculture – 1 per 50m² GFA</p> <p>Research and Development Centre – 1 per 50m² GFA (excluding ancillary office space) and 1 per 30m² NLA for ancillary office</p>
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8. Applying the Additional Uses (A51) designation to the following land parcels, as shown on the Scheme (Amendment) Map:

- Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
- Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
- Lot 1000 (45) Hemisphere Street, Neerabup (DP: 423704);

- Lot 2 (19) Hemisphere Street, Neerabup (on DP: 413473);
- Lot 1 (13) Hemisphere Street, Neerabup (on DP: 413473);
- Lot 1057 (5) Ring Street, Neerabup (on DP: 420872);
- Lot 1058 (11) Ring Street, Neerabup (on DP: 420872);
- Lot 1060 (11) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 1059 (1) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 1064 (2) Pinnacle Drive, Neerabup (on DP: 420872);
- Lot 1063 (10) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
- Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843); and
- Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).

9. Amending Schedule 2 – Section 1 of the Scheme text to insert the following:

NO		STREET/ LOCALITY	PARTICULARS OF LAND	ADDITIONAL USE AND CONDITIONS (WHERE APPLICABLE)
A51	1-51	<ul style="list-style-type: none"> • 410 Flynn Drive • 370 Flynn Drive • 45 Hemisphere Street • 19 Hemisphere Street • 13 Hemisphere Street • 5 Ring Street • 11 Ring Street • 11 Pinnacle Drive • 1 Pinnacle Drive • 2 Pinnacle Drive • 10 Pinnacle Drive • 190 Flynn Drive • 170 Flynn Drive • 150 Flynn Drive <p>All in the Neerabup locality.</p>	<ul style="list-style-type: none"> • Portion Lot 801 (on DP: 415725); • Portions of Lot 9009 (on DP: 423704); • Lot 1000 (on DP: 423704); • Lot 2 (on DP: 413473); • Lot 1 (on DP: 413473); • Lot 1057 (on DP: 420872); • Lot 1058 (on DP: 420872); • Lot 1060 (on DP: 420872); • Portion Lot 1059 (on DP: 420872); • Portion Lot 1064 (on DP: 420872); • Lot 1063 (on DP: 420872); • Portion Lot 5 (on D: 91435); • Portion Lot 900 (on DP: 50843); • Portion Lot 901 (on DP: 50843) 	<ul style="list-style-type: none"> • Data Storage Premises • Industry – Extractive • Research and Development Centre <p><u>Conditions:</u></p> <ol style="list-style-type: none"> 1. All the 'Additional Uses' shall be dealt with as "D" uses, pursuant to Clause 6.2.2. 2. Land uses as referred to above, but which are not defined in Schedule 1, are defined below: <p>Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.</p> <p>Research and Development Centre – means land and buildings used to undertake scientific and industrial research and the development, testing, training and education, production and assembly involved with that research and development. It may include administration, promotion, conference, office, meeting rooms, display, laboratory, assembly, laydown, and manufacturing areas.</p> 3. The number of on-site parking bays to be provided for the

				<p>'Additional Uses' listed shall be in accordance with the below:</p> <p>Data Storage Premises – 1 per 400m² GFA</p> <p>Industry - Extractive – 1 per staff member, but not less than 5</p> <p>Research and Development Centre – 1 per 50m² GFA (excluding ancillary office space) and 1 per 30m² NLA for ancillary office</p>
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10. Amending the Scheme Map by applying the Additional Uses (A52) designation to the following land parcels, as shown on the Scheme (Amendment) Map:

- Portion Lot 1001 (11) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 1021 (10) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435); and
- Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843).

11. Amending Schedule 2 – Section 1 of the Scheme text to insert the following:

NO		STREET/ LOCALITY	PARTICULARS OF LAND	ADDITIONAL USE AND CONDITIONS (WHERE APPLICABLE)
A52	1-52	<ul style="list-style-type: none"> • 11 Greenwich Parade • 10 Greenwich Parade • 190 Flynn Drive • 170 Flynn Drive <p>All in the Neerabup locality.</p>	<ul style="list-style-type: none"> • Portion Lot 1001 (on DP: 61212); • Portion Lot 1021 (on DP: 61212); • Portion Lot 5 (on D: 91435); • Portion Lot 900 (on DP: 50843) 	<ul style="list-style-type: none"> • Data Storage Premises • Industry – Extractive • Medical Centre • Office • Research and Development Centre • Restaurant • Shop • Take-Away Food Outlet <p><u>Conditions:</u></p> <ol style="list-style-type: none"> 1. In addition to Conditions 2-6 below, all the conditions that are specified for Additional Use area A51 also apply to A52. 2. All the 'Additional Uses' shall be dealt with as "D" uses, pursuant to Clause 6.2.2. 3. The maximum floorspace for the 'Office' land use is limited to no more than: <ul style="list-style-type: none"> a) 700m² net lettable area (NLA) across both subject portions of Lots 1001 and 1021; and

			<p>b) 700m² NLA across both subject portions of Lot 5 and Lot 900.</p> <p>4. The maximum floorspace for the 'Restaurant' and 'Take-Away Food Outlet' land uses are limited to no more than:</p> <p>a) 1,000m² NLA across both subject portions of Lots 1001 and 1021; and</p> <p>b) 1,000m² NLA across both subject portions of Lot 5 and Lot 900; and</p> <p>Individual premises shall not exceed 500m².</p> <p>5. The 'Medical Centre' land use is limited to the following restrictions:</p> <p>a) No more than four health practitioners and one ancillary dispensary premise to be located across both subject portions of Lot 1001 and Lot 1021 at any one time;</p> <p>b) No more than four health practitioners and one ancillary dispensary premise to be located across both subject portions of Lot 5 and Lot 900 at any one time;</p> <p>c) The dispensary shall be ancillary to a medical centre, and only sell goods of a personal and medical nature;</p> <p>d) Dispensary premises shall not exceed 150m² NLA; and</p> <p>e) The Car parking standard for Medical Centre shall be 5 bays per practitioner plus 1 bay per 30m² NLA of the dispensary.</p> <p>6. The 'Shop' land use is limited to premises that offer only the following:</p> <ul style="list-style-type: none"> • The service and/or retail of mail distribution/ collection; • Baked goods; • Hardware/trade supplies; • Costumes sales and hire; • Banking services; and • Dry cleaning. <p>The offering of services or goods by retail sale or hire for purposes</p>
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				unrelated to those listed above, is not permitted.
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12. Amending Table 1 (Clause 3.2 – The Zoning Table) by:

- a) Depicting the land use permissibility for the 'Showroom' and 'Vehicle Sales/Hire Premises' in the Service Industrial Zone as 'P*'; and
- b) Adding a notation at the end of Table 1 as follows:

Notes:

* Refer to provisions contained in Clause 3.12.3

13. Introducing the following as a new Clause 3.12.3, relative to the Service Industrial Zone:

3.12.3 Notwithstanding the provisions of Table 1, the 'Showroom' and 'Vehicle Sales/Hire Premises' use classes shall be dealt with as "P" uses pursuant to Clause 6.2.2; except in the Neerabup locality where these use classes are dealt with as "D" uses.

Should Amendment No. 202 to District Planning Scheme No. 2 be approved and take effect, the City of Wanneroo's Neerabup Industrial Area Agreed Local Structure Plan No. 17 is to be amended to remove zoning and land use permissibility provisions. These amendments (among others) are occurring through Amendment No. 7 to the Neerabup Industrial Area Agreed Local Structure Plan No. 17, which was prepared by the City of Wanneroo to correlate with this local planning scheme amendment.

The Amendment is complex under the provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* for the following reason(s):

An amendment that is not addressed by any local planning strategy

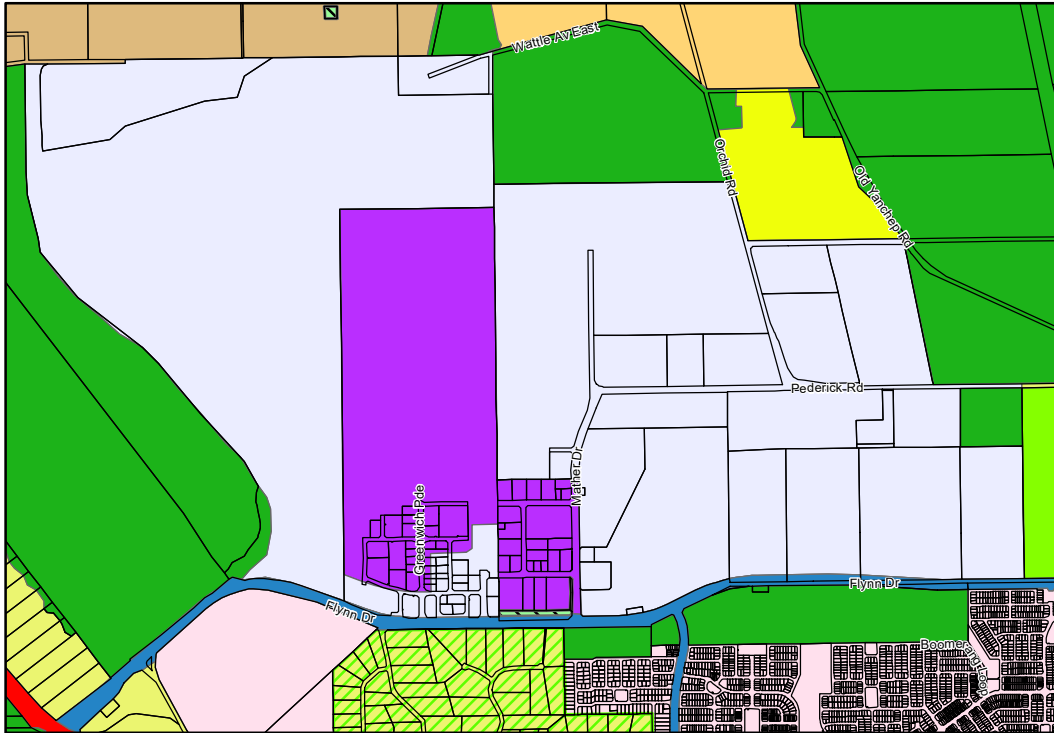
Date of Council Resolution: 12 July 2022



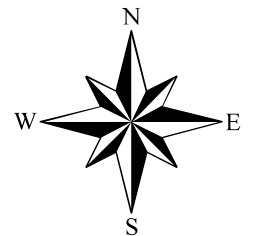
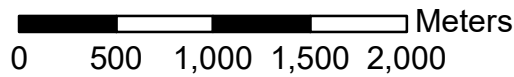
 M Chief Executive Officer)

Dated this 29 day of JULY 2022

CITY OF WANNEROO DISTRICT PLANNING SCHEME No. 2 AMENDMENT NO. 202



EXISTING ZONE



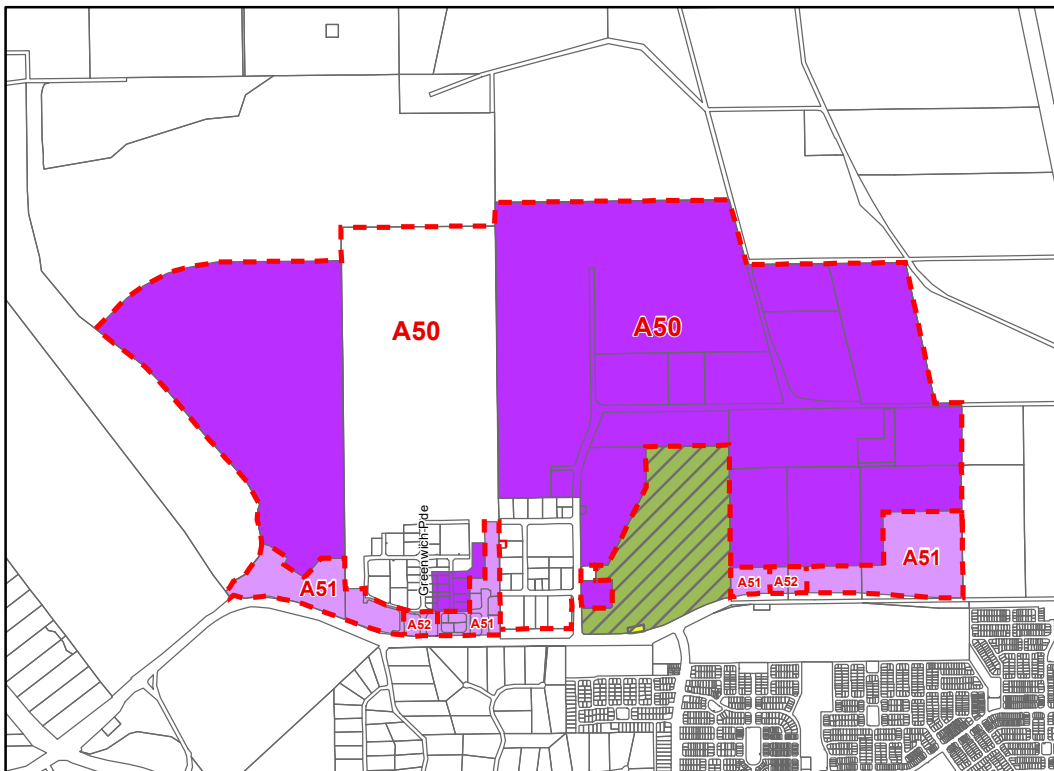
LEGEND

DPS2 ZONES & RESERVES

- GENERAL INDUSTRIAL
- GENERAL RURAL
- INDUSTRIAL DEVELOPMENT
- PARKS & RECREATION
- PRIVATE CLUBS & RECREATION
- RURAL RESOURCE
- SPECIAL RURAL
- URBAN DEVELOPMENT

MRS RESERVES

- OTHER REGIONAL ROADS
- PRIMARY REGIONAL ROADS
- PUBLIC PURPOSES
- REGIONAL PARKS & RECREATION
- STATE FOREST



SCHEME (AMENDMENT) MAP 1

LEGEND

A50 ADDITIONAL USE

DPS2 ZONES

- GENERAL INDUSTRIAL
- SERVICE INDUSTRIAL

LOCAL SCHEME RESERVES

- CONSERVATION
- PUBLIC USE

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EXPLANATORY REPORT

**AMENDMENT NO. 202
TO DISTRICT PLANNING SCHEME
NO. 2**

TABLE OF CONTENTS

1.0 Introduction	1
1.1 Land Affected by Amendment No. 202	1
1.2 Current Activities Occurring within the NIA	1
1.3 Current Zoning of the NIA	7
1.4 Rationale for Scheme Amendment	7
1.5 Council Initiation and WAPC Consideration	8
2.0 Detail of Amendment	9
2.1 Summary of Changes Proposed through Amendment No. 202	9
2.2 Regulation 35A Statement	14
2.3 DPS 2 Amendment Type	14
3.0 Consultation	15
4.0 Planning Comment on the Proposal	16
4.1 Strategic Planning Considerations	16
4.2 Consideration of Proposed Amendment No. 172	16
4.2.1 <i>Amendment No. 172 Proposal</i>	16
4.2.2 <i>Current and Proposed Amendment No. 172 Industrial Zoning Objectives</i>	17
4.2.3 <i>Achieving Outcomes not Proposed Solely through Amendment No. 172</i>	19
4.2.4 <i>Modifications to Amendment No. 202 Following Approval of Amendment No. 172</i>	19
4.3 Need for Supporting Structure Plan	20
4.4 Rationale for Proposed Zoning Configuration	20
4.5 Application for Additional Uses and Conditions Provisions	21
4.6 Service Hubs	24
4.6.1 <i>Service Hub Rationale</i>	24
4.6.2 <i>Service Hub Land Uses</i>	24
4.6.3 <i>Considerations against State Planning Policy 4.2</i>	25
4.6.4 <i>Planning Response for Future Service Hubs</i>	26
4.7 Permissibility Variances Proposed in NIA Service Industrial Zone	26
4.8 Conservation Area	27
4.9 Drainage Sites	27
4.10 Environmental Considerations	28
4.11 Bushfire Management Considerations	28
4.12 MRS Amendment 1379/57	28
5.0 Conclusion	30
APPENDIX 1	Extent of modifications to Amendment No. 202 required following approval of Amendment No. 172
APPENDIX 2	Environmental Assessment
APPENDIX 3	Bushfire Management Plan

LIST OF TABLES AND FIGURES

Table 1:	Additional Uses and conditions proposed through Amendment No. 202 – General Industrial Zone	9
Table 2:	Additional Uses and conditions proposed through Amendment No. 202 – Service Industrial Zone	10
Table 3:	Additional Uses and conditions proposed through Amendment No. 202 – Service Hubs	10-11
Table 4:	Comparison of objectives – existing General Industrial Zone and General Industry Zone proposed through Amendment No. 172	18
Table 5:	Comparison of objectives – existing Service Industrial Zone and Light Industry Zone proposed through Amendment No. 172	18
Table 6:	Additional Uses to be introduced through Amendment No. 172 and Amendment No. 202 to DPS 2	19
Table 7:	Planning discussion and justification on Additional Uses and conditions	22-23
Table 8:	Additional uses and conditions currently prescribed in ASP 17 for Service Hubs	25
Figure 1:	Map showing location of the Neerabup Industrial Area	2
Figure 2:	Map showing location of existing activities occurring in the Neerabup Industrial Area	3
Figure 3 Series: Existing Planning Framework Maps for land within and surrounding the Neerabup Industrial Area		
Figure 3a:	Metropolitan Region Scheme mapping	4
Figure 3b:	Current District Planning Scheme No. 2 mapping	5
Figure 3c:	Plan 1 of Neerabup Industrial Area Agreed Local Structure Plan No. 17	6
Figure 4:	Extent of modifications to Scheme Map proposed in Amendment No. 202	13

1.0 Introduction

1.1 Land Affected by Amendment No. 202

Amendment No. 202 to District Planning Scheme No. 2 (**DPS 2**), hereafter referred to as '**Amendment No. 202**' has been prepared by the City of Wanneroo (the **City**) to affect land within the Neerabup Industrial Area (**NIA**).

The NIA is situated:

- Approximately 30 kilometres north of the Perth Central Business District and approximately seven kilometres north of Joondalup City Centre;
- Wholly within the City of Wanneroo, and within the Neerabup locality;
- East of Wanneroo Road and the Mitchell Freeway;
- With road access being provided from the west by Flynn Drive, from the south by Pinjar Road and from the east by Old Yanchep Road; and
- In the vicinity of existing and future residential and rural-residential development to the south; as well as rural, recreational uses and bushland to the west, north and east.

A map showing the location of the NIA is provided for as **Figure 1**.

The NIA is the largest single industrial-zoned area in the northern part of the Perth Metropolitan Region. The emergence of industrial development provides a rare opportunity for the NIA to act as an investment destination for industrial companies looking to secure and build their portfolio in the medium to long term.

1.2 Current Activities Occurring within the NIA

Industrial development first occurred in the NIA within a 25-hectare area, now subdivided and located to the west of Mather Drive. Subdivision and development in this area commenced in the late 1970's, and occurred slowly from that point over a 40-year period. In 2007, Landcorp (now DevelopmentWA) commenced its 'Meridian Park' subdivision further west, and to date has subdivided approximately 45 hectares of industrial land.

Outside the areas subject to industrial subdivision referred to above, the following industrial land uses are noteworthy as occurring within the NIA:

- An array of various industrial activities on multiple leaseholds situated on Lot 5 (190) Flynn Drive;
- The recent and ongoing establishment of the Australian Automation and Robotics Precinct (**AARP**), situated on the northern portion of Lot 9009 (370) Flynn Drive;
- The Wesbeam laminated vaneer lumber plant, situated on Lot 1000 (190) Pederick Road;
- The NewGen gas-fired power station, situated on Lot 100 (45) Trandos Road; and
- The Mindarie Regional Council resource recovery facility, situated on Lot 801 (109) Pederick Road.

There are currently three existing basic raw material extraction areas in the western, central and south-eastern extents in the NIA; as well as agricultural activities occurring in the north-east.

A plan showing the location of existing activities occurring in the NIA is provided as **Figure 2**.

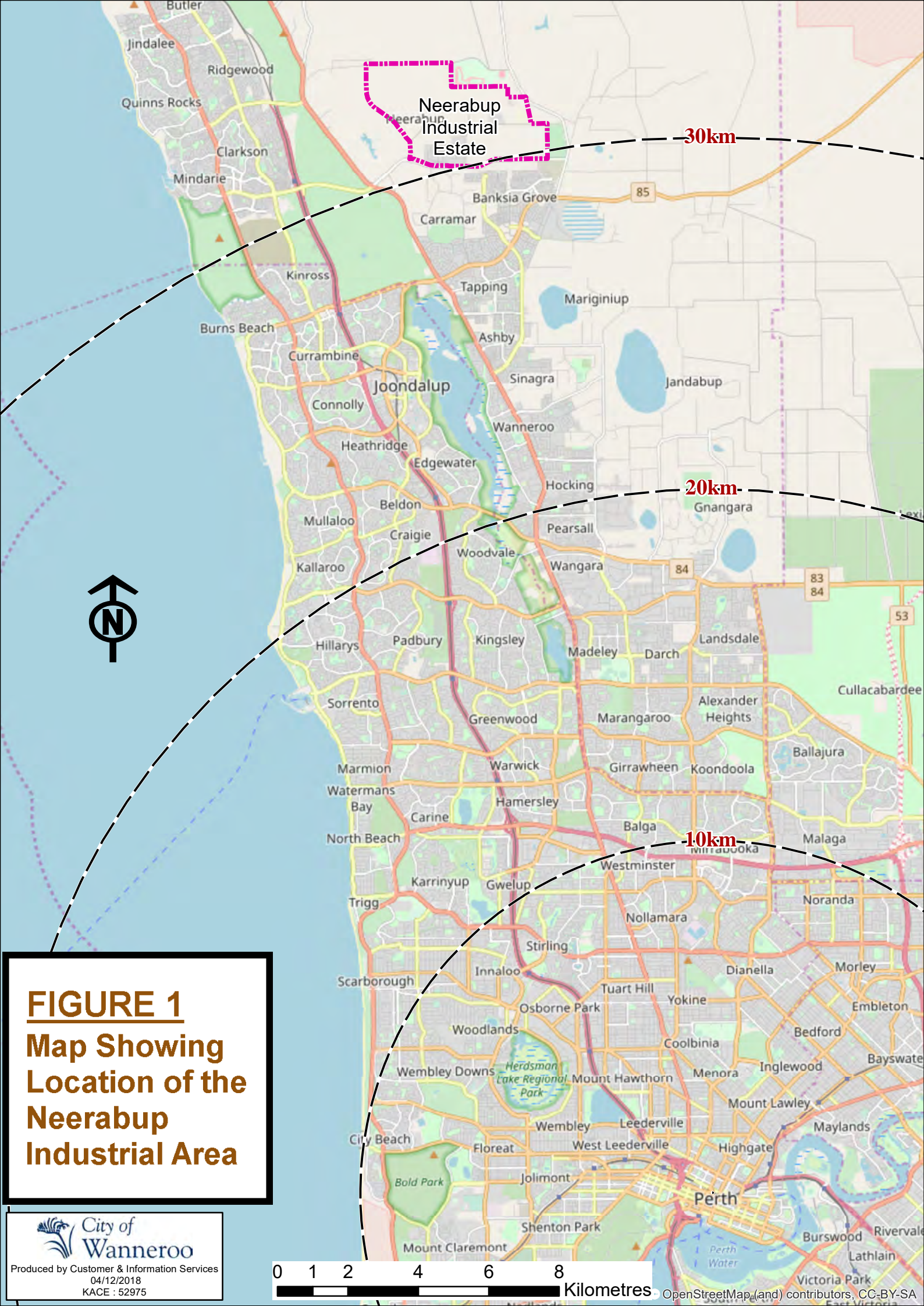
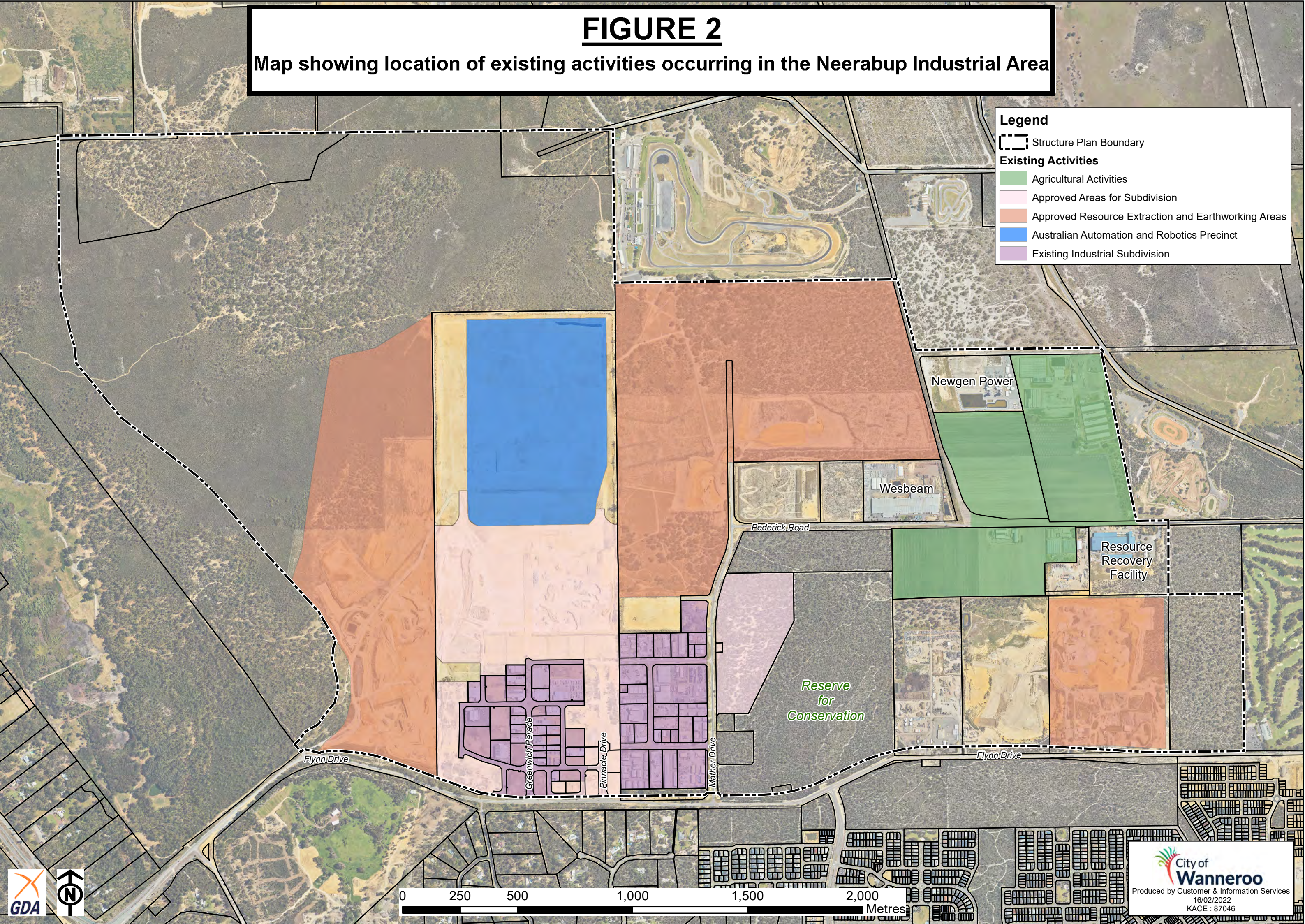


FIGURE 1
Map Showing
Location of the
Neerabup
Industrial Area

FIGURE 2

Map showing location of existing activities occurring in the Neerabup Industrial Area



Legend

- Structure Plan Boundary
- Existing Activities**
 - Agricultural Activities
 - Approved Areas for Subdivision
 - Approved Resource Extraction and Earthworking Areas
 - Australian Automation and Robotics Precinct
 - Existing Industrial Subdivision

Newgen Power

Wesbeam

Resource Recovery Facility

Reserve for Conservation

Flynn Drive

Pederick Road

Flynn Drive

Greenwich Parade

Pinnacle Drive

Mather Drive

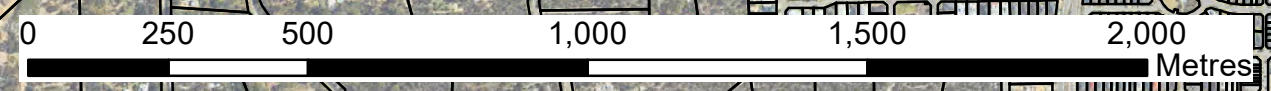
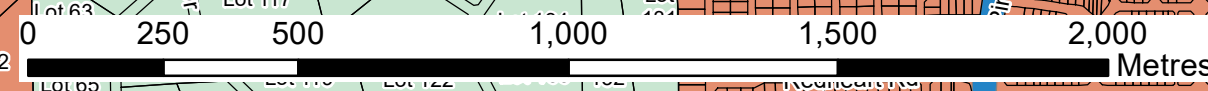
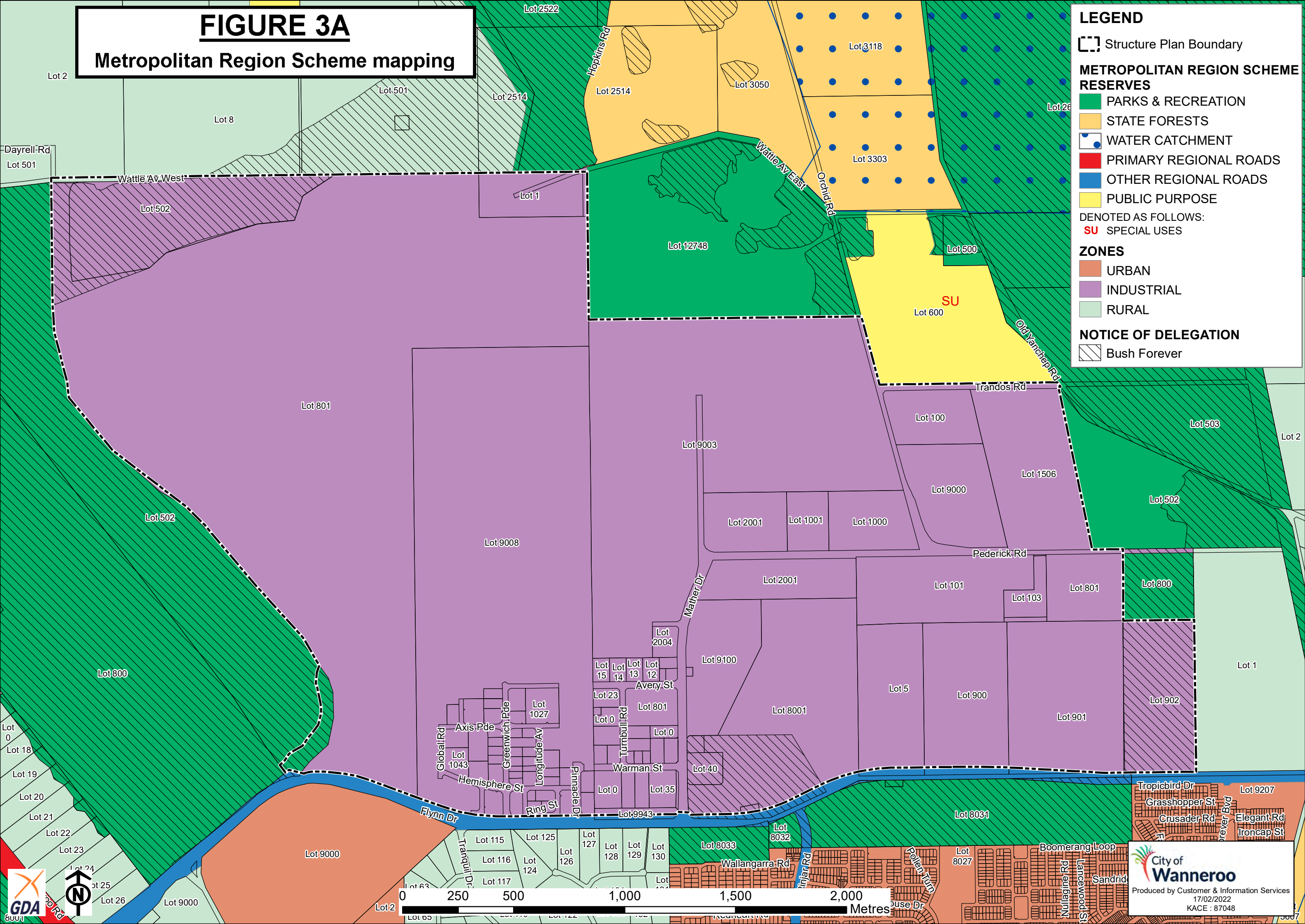


FIGURE 3A

Metropolitan Region Scheme mapping

LEGEND

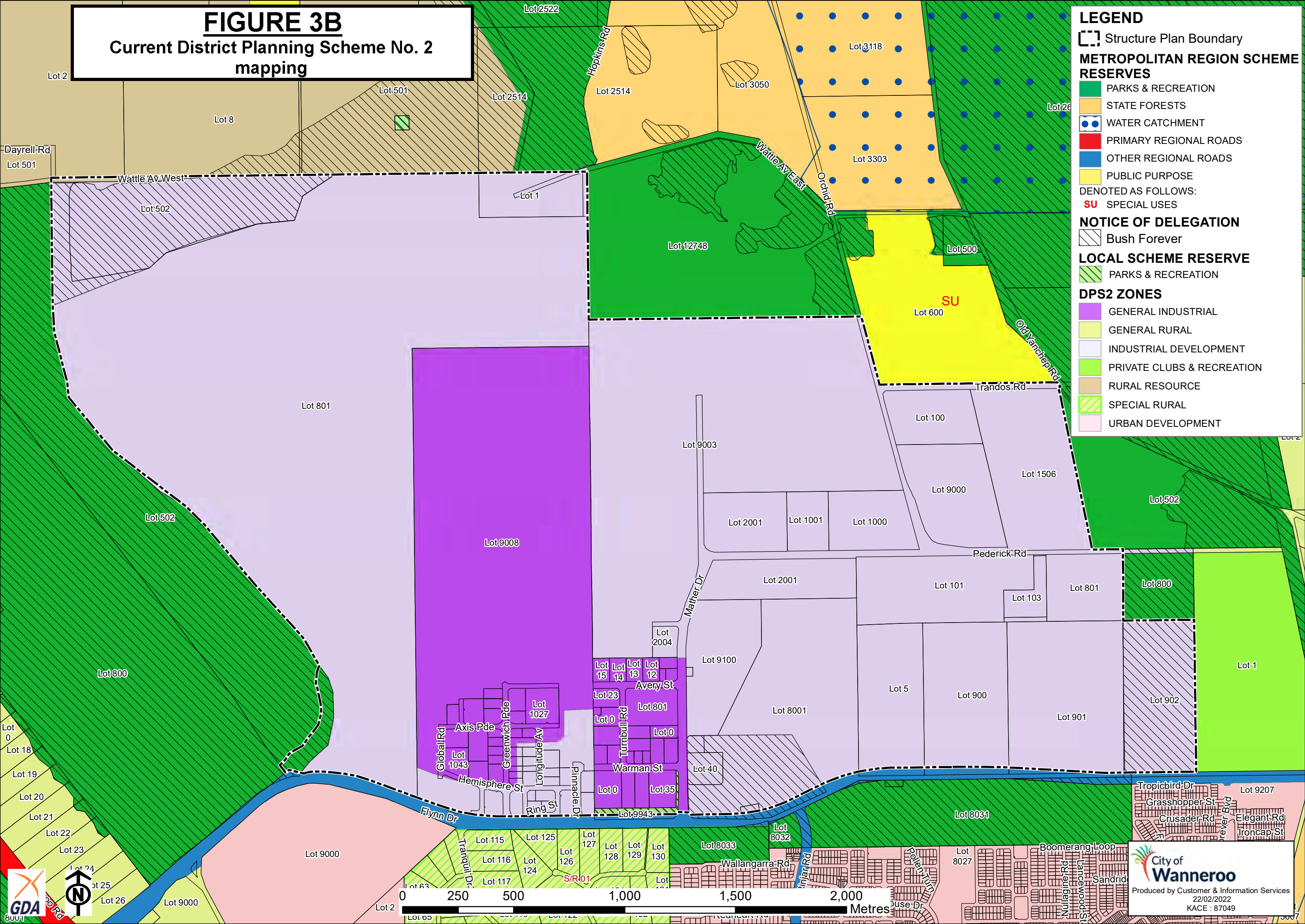
- Structure Plan Boundary
- METROPOLITAN REGION SCHEME RESERVES**
 - PARKS & RECREATION
 - STATE FORESTS
 - WATER CATCHMENT
 - PRIMARY REGIONAL ROADS
 - OTHER REGIONAL ROADS
 - PUBLIC PURPOSE
- DENOTED AS FOLLOWS:
 - SU SPECIAL USES
- ZONES**
 - URBAN
 - INDUSTRIAL
 - RURAL
- NOTICE OF DELEGATION**
 - Bush Forever



City of Wanneroo
Produced by Customer & Information Services
17/02/2022
KACE : 87048

FIGURE 3B

Current District Planning Scheme No. 2 mapping



LEGEND

- Structure Plan Boundary
- METROPOLITAN REGION SCHEME RESERVES**
 - PARKS & RECREATION
 - STATE FORESTS
 - WATER CATCHMENT
 - PRIMARY REGIONAL ROADS
 - OTHER REGIONAL ROADS
 - PUBLIC PURPOSE
- DENOTED AS FOLLOWS:
 - SU SPECIAL USES
- NOTICE OF DELEGATION**
 - Bush Forever
- LOCAL SCHEME RESERVE**
 - PARKS & RECREATION
- DPS2 ZONES**
 - GENERAL INDUSTRIAL
 - GENERAL RURAL
 - INDUSTRIAL DEVELOPMENT
 - PRIVATE CLUBS & RECREATION
 - RURAL RESOURCE
 - SPECIAL RURAL
 - URBAN DEVELOPMENT



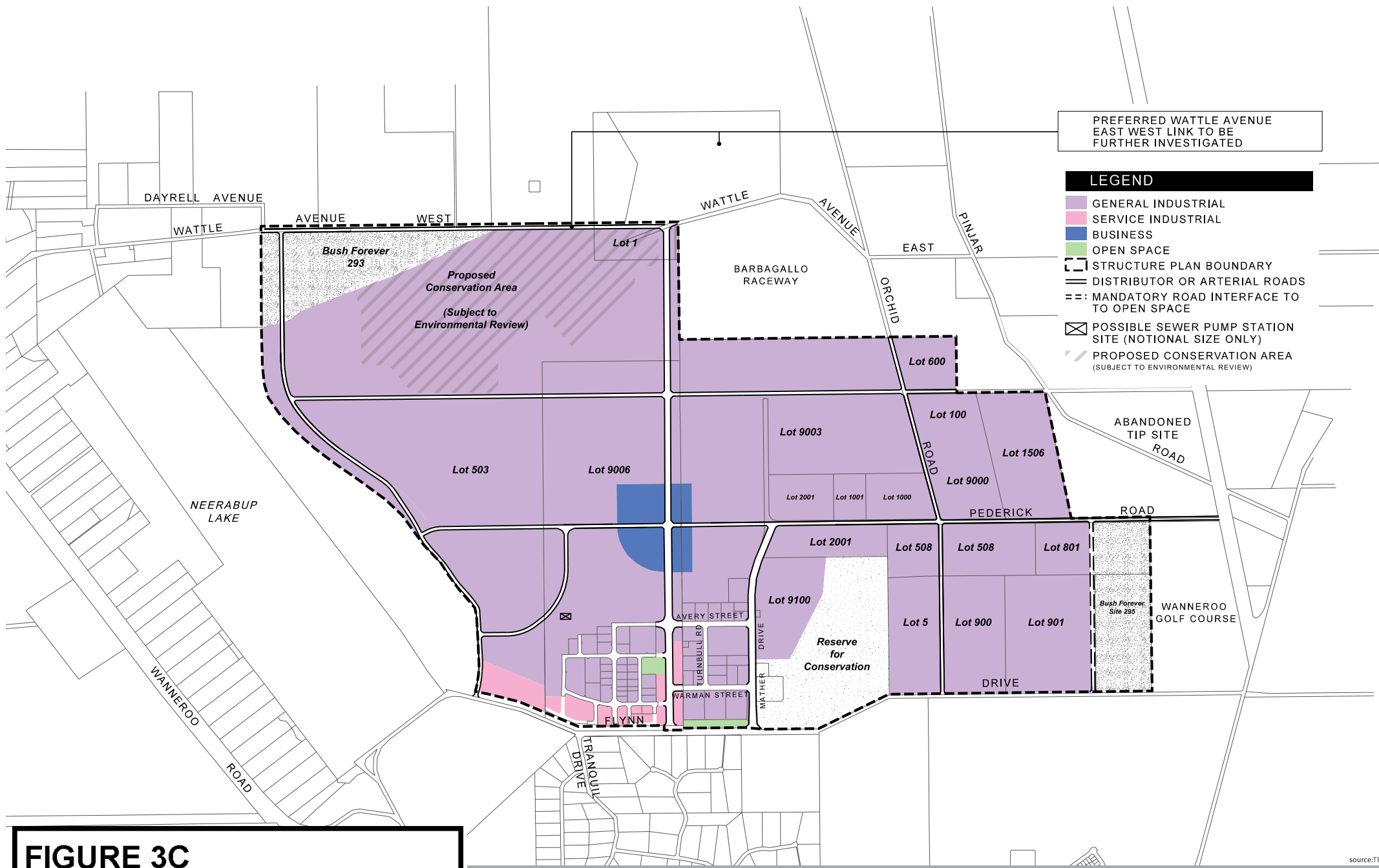


FIGURE 3C

Plan 1 - Local Structure Plan Neerabup Industrial Area

Date: 15 Sep 2020
 Scale: 1:20k @ A3
 Drawing No. 715-341 CP-1 A
 Staff: MR_GW



source:TBB

1.3 Current Zoning of the NIA

Land affected by Amendment No. 202 is largely zoned Industrial under the Metropolitan Region Scheme (**MRS**). The south-western portion of Lot 801 (410) Flynn Drive, Neerabup is, however, reserved for the purpose of 'Parks and Recreation' and subject to MRS Amendment 1379/57 (refer Section 4.13 below).

The land in the NIA is largely zoned Industrial Development under DPS 2; with exception of an approximately 174 hectare portion of land located centrally in the NIA which is zoned General Industrial.

The predominant planning instrument currently affecting the NIA is the City of Wanneroo's Neerabup Industrial Area Agreed Local Structure Plan No. 17 (**ASP 17**). ASP 17 has been in effect since it was initially approved by the Western Australian Planning Commission (**WAPC**) on 11 January 2005. As the land is largely zoned Industrial Development under DPS 2, it is ASP 17 that designates General Industrial, Service Industrial and Business zones over the land within the NIA.

Plans showing the MRS and DPS 2 zonings of land in the NIA – and the zoning designations currently imposed in ASP 17 – are included in **Figures 3a – 3c**.

1.4 Rationale for Scheme Amendment

Although ASP 17 has been subject to five amendments since 2005, the City considers that ASP 17 is in need of review, as it is becoming outdated and inconsistent with the City's aspirations for the NIA.

For a four-year period from 2018 to 2022, the City undertook significant background work and stakeholder consultation as part of a major planning framework review of the NIA. The planning framework review allowed the City to progress toward the preparation of:

- Amendment No. 202, the subject of this Report.

The City's officers engaged with staff at the Department of Planning, Lands and Heritage (DPLH) throughout the planning framework review. Through that engagement, it was established that it was necessary for development of the NIA to be controlled by a planning framework that had sufficiently robust planning controls for zoning and land use permissibility. It was considered that zoning and land use permissibility controls needed to be imposed through DPS 2 (which the City is bound by); rather than through ASP 17 which the City only needs to have 'due regard' to under planning legislation. As such, Amendment No. 202 proposes modifications to DPS 2 as detailed in Section 2 of this Report.

- Amendment No. 7 to ASP 17; a separate planning proposal affecting the structure plan over the NIA. Amendment No. 7 to ASP 17 has been prepared, and will be processed, in parallel with Amendment No. 202.

Particularly relevant to Amendment No. 202, Amendment No. 7 to ASP 17 proposes to remove the zoning and land use permissibility requirements from that structure plan. As a result, ASP 17 will become a document that will provide updated planning provisions that will coordinate the future subdivision and development of the NIA.

At the time this Report was being prepared, the City was also in the (separate) process of processing Amendment No. 172 to DPS 2 (**Amendment No. 172**). Amendment No. 172 is a local planning scheme amendment with the intention of aligning DPS 2 with the model provisions for local planning schemes (**Model Provisions**) contained in Schedule 1 of the *Planning and Development*

(Local Planning Schemes) Regulations 2015 (**Regulations**). As explained in detail later in this Report, Amendment No. 172 has an impact on how Amendment No. 202 was prepared, and will also impact on land use planning controls for the NIA into the future.

The City's work to date has been undertaken to ultimately refresh the planning framework for the NIA, so that the following planning outcomes could be delivered:

- A more innovative array of land uses being permissible, yet capable and compatible in an industrial setting. An enhanced array of land uses will respond to emerging and projected trends of industrial development and land use activities which may become more commonplace in industrial areas. Controls to make permissible an additional mix of land uses are proposed to be introduced into DPS 2 through Amendment No. 202 – as well as through Amendment No. 172 as discussed later in this Report;
- The planning of places in select and easily accessible locations that provide for a level of service for employees, business owners and visitors to the NIA. Services the City considers are needed – to be located in 'Service Hubs' – include restaurants/take away food outlets, offices and convenience-type stores. As discussed in this Report, Amendment No. 202 proposes to introduce controls into DPS 2 to make these land uses permissible in the appropriate locations;
- To more closely align ASP 17 with the Regulations, as well as the WAPC's Structure Plan Framework (2015). This will occur through Amendment No. 7 to ASP 17; and
- More careful consideration on planning controls which would assist the delivery of desired subdivision design and built form outcomes. This will also occur through Amendment No. 7 to ASP 17.

1.5 Council Initiation and WAPC Consideration

The City of Wanneroo's Council resolved at its 12 July 2022 Meeting (PS03-07/22) to:

- Prepare (or initiate) Amendment No. 202, pursuant to Section 75 of the *Planning and Development Act 2005* (the **Act**). What Council had resolved to prepare is outlined in the resolution detail at the beginning of this document – and in the Council Minutes available for public viewing on the City's website;
- Submit two copies of the Amendment No. 202 document to the WAPC for initial consideration, pursuant to r. 37(2) of the Regulations. The WAPC would then examine the documents pursuant to r. 37(4); and
- Subject to the satisfaction of the WAPC, advertise Amendment No. 202.

As part of the WAPC's consideration referred to above, officers of the Department of Planning, Lands and Heritage (**DPLH**) presented a report to the Statutory Planning Committee (**SPC**) of the WAPC on 6 December 2022. In deliberating on Amendment No. 202, the SPC (on behalf of the WAPC) resolved that prior to the proceeding with advertising, modifications to the proposal were recommended to address inconsistencies with Model Provisions and streamline the appropriate use of scheme provisions supplemented by ASP 17.

As it would be satisfactory for the WAPC (refer Council resolution detail above), Amendment No. 202 has been modified in a manner consistent with the WAPC recommendations. The modified Amendment No. 202 proposal is detailed in the 'amendment resolution' pages toward the back of this document. Similarly, this Scheme Amendment Report has been updated to coincide with Amendment No. 202 proposal as modified.

2.0 Detail of Amendment

2.1 Summary of Changes Proposed through Amendment No. 202

Amendment No. 202 proposes the following, affecting the NIA:

- The rezoning of land, so that the land capable of industrial activity becomes zoned Service Industrial and General Industrial. The land in the NIA is predominantly zoned Industrial Development currently, with a central portion of approximately 174 hectares already zoned General Industrial (refer **Figure 3b**).
- The Scheme (Amendment) Map outlines the extent of the rezoning proposed under Amendment No. 202, with a clearer plan outlining the proposed extent of modifications to the Scheme Map provided in **Figure 4**.
- The insertion of a provision into Part 4 of DPS 2 to prescribe that subdivision and development of the NIA being in accordance with an approved structure plan (being ASP 17).
- The creation of an 'Additional Use' area (A50) over the entire extent of General Industrial zoned land that will result from the amendment. The Additional Uses proposed for the General Industrial Zone, and the conditions proposed to be associated with each Additional Use are as follows:

Additional Use	Additional Use Conditions
Intensive Agriculture	To be dealt with as a 'D' use. The cultivation and harvesting of produce shall only occur within a building, enclosed by walls and a roof (excluding greenhouses). Cultivation of produce shall not occur where exposed to the open natural environment.
Data Storage Premises	To be dealt with as a 'D' use. To be defined as follows: Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.
Education Establishment	To be dealt with as a 'D' use. Activities shall only be limited to establishments that provide education or training relating to activities consistent with Clause 3.11.2 – objectives of the General Industrial Zone.

Table 1: Additional Uses and conditions proposed through Amendment No. 202 – General Industrial Zone

Modifications to the Scheme Map are also proposed to outline the location of Additional Use area A50 – as shown on the Scheme (Amendment) Map and in **Figure 4**.

The following was also included in Amendment No. 202 as prepared by Council; however has since been removed or modified on recommendation of the WAPC:

- The deletion of a bespoke Research and Development land use being listed as an Additional Use, including a definition for this use and car parking standards;
- Car parking standards for the Data Storage Premises and Intensive Agriculture land uses; and

- A revision of the conditions limiting the activities that can be carried out within the Education Establishment land use.
- The creation of an 'Additional Use' area (A51) over the proposed extent of Service Industrial zoned land (except for the Service Hub locations as detailed further below). The Additional Uses proposed for the A51 area, and the conditions proposed to be associated with each Additional Use, are as follows:

Additional Use	Additional Use Conditions
Data Storage Premises	To be dealt with as a 'D' use. To be defined as follows: Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.
Industry - Extractive	To be dealt with as a 'A' use.

Table 2: Additional Uses and conditions proposed through Amendment No. 202 – Service Industrial Zone

Modifications to the Scheme Map are also proposed to outline the location of Additional Use area A51 – as shown on the Scheme (Amendment) Map and in **Figure 4**.

The following was also included in Amendment No. 202 as prepared by Council; however has since been removed on recommendation of the WAPC:

- The deletion of a bespoke Research and Development land use being listed as an Additional Use, including a definition for this use and car parking standards; and
- Car parking standards for the Data Storage Premises land use.
- The planning of places in two easily accessible locations along Flynn Drive (Service Hubs) that will provide for a level of service for employees, business owners and visitors to the NIA. One Service Hub location will be over portions of Lot 1001 and Lot 1021 Greenwich Parade – and the other located over portions of Lot 5 and Lot 900 Flynn Drive.

These Service Hubs will be set as their own Additional Use area within the proposed Service Industrial zone (A52). The Additional Uses proposed for Additional Use area (A52) – and the conditions proposed to be associated with each Additional Use – are as follows:

Additional Use	Additional Use Conditions
Data Storage Premises	To be dealt with as a 'D' use. To be defined as follows: Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.
Office	To be dealt with as a 'D' use. The maximum floorspace for the 'Office' land use is limited to no more than: <ul style="list-style-type: none"> ● 700m² NLA across both subject portions of Lots 1001 and 1021; and ● 700m² NLA across both subject portions of Lot 5 and Lot 900.

Additional Use	Additional Use Conditions
Restaurant	To be dealt with as 'D' uses.
Take-Away Food Outlet	The maximum floorspace for the 'Restaurant' and 'Take-Away Food Outlet' land uses are limited to no more than: <ul style="list-style-type: none"> • 1,000m² NLA across both subject portions of Lots 1001 and 1021; and • 1,000m² NLA across both subject portions of Lot 5 and Lot 900; and • Individual premises shall not exceed 500m².
Shop	To be dealt with as a 'D' use. <p>The maximum floorspace for the 'Shop' land use are limited to no more than:</p> <p>a) 750m² NLA across both subject portions of Lot 1001 and Lot 1021;</p> <p>b) 750m² NLA across both subject portions of Lot 5 and Lot 900; and</p> <p>Individual premises shall not exceed 300m² NLA.</p>

Table 3: Additional Uses and conditions proposed through Amendment No. 202 – Service Hubs

Modifications to the Scheme Map are also proposed to outline the location of Additional Use area A52 – as shown on the Scheme (Amendment) Map and in **Figure 4**.

The following was also included in Amendment No. 202 as prepared by Council; however has since been removed or modified on recommendation of the WAPC:

- The deletion of a bespoke Research and Development land use being listed as an Additional Use, including a definition for this use and car parking standards;
 - The deletion of the Industry – Extractive and Medical Centre as Additional Uses; and
 - A revision of the conditions limiting the activities that can be carried out within the Shop land use – based on floor area rather than activity.
- Minor amendments to the DPS 2 text (including the Zoning Table), to prescribe that the 'Showroom' and 'Vehicle Sales/Hire Premises' are to be dealt with as discretionary (or 'D') uses in the NIA Service Industrial Zone – and not as permitted (or 'P') uses as they are typically dealt with in that zone.

What is proposed is the following:

- An asterisk (*) to be inserted next to the 'P' designations in the DPS 2 Zoning Table (Table 1) – for the 'Showroom' and 'Vehicle Sales/Hire Premises' Use Classes and the 'Service Industrial' Zone;
- A notation to be added as a footer to the Zoning Table to specify the asterisk refers to provisions contained in a new Clause 3.12.3 of the DPS 2 text; and
- The introduction of a new Clause 3.12.3 into the DPS 2 text, to specify the following:

3.12.3 Notwithstanding the provisions of Table 1, the 'Showroom' and 'Vehicle Sales/Hire Premises' use classes shall be dealt with as "P" uses pursuant to Section 6.2.2; except in the Neerabup locality where these use classes are dealt with as "D" uses.

- The reclassifying of Lot 8001 (240) Flynn Drive, Neerabup from the Industrial Development Zone to 'Local Scheme Reserve – Conservation'. This is shown on the Scheme (Amendment) Map and in **Figure 4**. Lot 8001 is already a Crown Land parcel for the purpose of Conservation.
- The reclassifying of a drainage Crown Land parcel adjoining Lot 8001 (being Lot 8002 (270) Flynn Drive), from the Industrial Development Zone to 'Local Scheme Reserve – Public Use'. This is shown on the Scheme (Amendment) Map and in **Figure 4**.

Also as shown on the Scheme (Amendment) Map and **Figure 4**, Amendment No. 202 is not proposing to change the current zoning of 'Industrial Development' over the following areas:

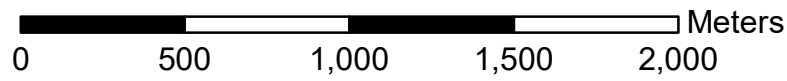
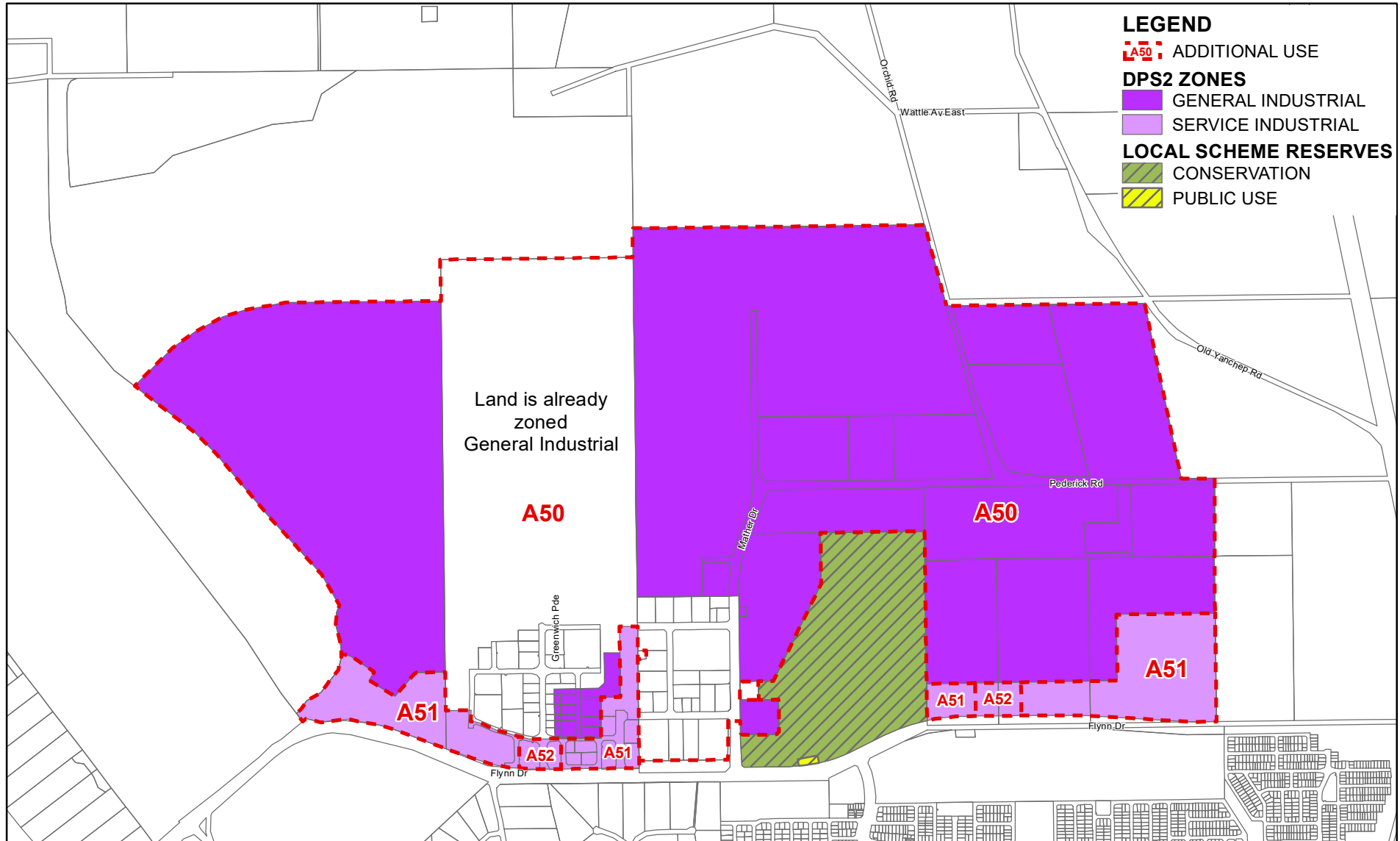
- The north-western extent of the NIA, being portions of Lot 801 and Lot 502 Flynn Drive – as well as Lot 1 Wattle Avenue; and
- The easternmost extent of the NIA, being Lot 902 Flynn Drive.

The areas listed above are noted as being heavily vegetated and could potentially have notable environmental attributes. The City considers that further investigations and/or actions are needed by the landowners to determine whether this land is suitable for industrial purposes, or whether these areas require environmental protection through the planning framework.

As discussed later in this Report, Amendment No. 202 has been prepared to minimise conflict with Amendment No. 172 – which at the time that this version of the Report was prepared, had undergone advertising. Amendment No. 172 proposes modifications to DPS 2 that will affect land use and permissibility in the NIA. Amendment No. 202 has been prepared to impose zoning and land use controls that are not in DPS 2 currently – or are proposed as modifications to DPS 2 through Amendment No. 172.

FIGURE 4

Extent of modifications to Scheme Map proposed in Amendment No. 202



2.2 Regulation 35A Statement

Currently it is ASP 17, and not DPS 2, that primarily designates zonings of land in the NIA. ASP 17 also contains provisions pertaining to land use permissibility, particularly for Service Hub land. The designation of zonings and land use permissibility provisions contained in ASP 17 will be redundant should Amendment No. 202 be approved. As a result, and once Amendment No. 202 has progressed, ASP 17 should be amended to remove these provisions.

As outlined in Section 1.4 of this Report, the City has also prepared Amendment No. 7 to ASP 17 in parallel to Amendment No. 202. The modifications proposed in the structure plan amendment are extensive, as it is responsive to the planning framework review undertaken by the City. One aspect of Amendment No. 7 to ASP 17 is the removal of zoning designations and land use permissibility provisions, given Amendment No. 202 has been prepared.

Regulation 35A of the Regulations prescribes that if an amendment to a local planning scheme affects the area to which a structure plan relates, the amendment is to include a statement that when it takes effect:

- (a) the approval of the structure plan is to be revoked;
- (b) the structure plan is to be amended in accordance with the statement; or
- (c) the approval of the structure plan is not affected.

Amendment No. 202 proposes to include a statement, pursuant to (b) above, as there is an identified need for the structure plan to be amended as a result of Amendment No. 202. ASP 17 cannot be revoked, as it is still needed to guide subdivision and development in the NIA. The statement prepared as part of this amendment specifically refers to Amendment No. 7 to ASP 17, and reads as follows:

Should Amendment No. 202 to District Planning Scheme No. 2 be approved and take effect, the City of Wanneroo's Neerabup Industrial Area Agreed Local Structure Plan No. 17 is to be amended to remove zoning and land use permissibility provisions. These amendments (among others) are occurring through Amendment No. 7 to the Neerabup Industrial Area Agreed Local Structure Plan No. 17, which was prepared by the City of Wanneroo to correlate with this local planning scheme amendment.

2.3 DPS 2 Amendment Type

Separate to the work that has led to the preparation of Amendment No. 202, the City is also preparing its Local Planning Strategy. It is intended that the Local Planning Strategy would provide the strategic information needed to formulate and support a new local planning scheme (Local Planning Scheme No. 3), which will eventually replace DPS 2. The Local Planning Strategy will set out the City's objectives for land in the scheme area; as well as addressing the social, environmental, resource management and economic factors that affect, and are in turn affected by land use and development.

As the Local Planning Strategy is yet to be approved by the WAPC, the City has concluded that Amendment No. 202 to is a 'Complex' amendment, as prescribed in r. 34 of the Regulations and as follows:

Complex amendment means any of the following amendments to a local planning scheme:

...

- (b) an amendment that is not addressed by any local planning strategy.*

3.0 Consultation

Following Council's resolution to 'prepare' Amendment No. 202 pursuant to Section 75 of the Act, this 'complex amendment' was referred to the WAPC pursuant to r. 37(2) of the Regulations. The WAPC has undertaken an assessment under the Regulations and determined that the amendment was suitable to be advertised, subject to modifications (refer to further discussion in Sections 1.5 and 2.1).

The amendment was also referred to the Environmental Protection Authority (**EPA**) pursuant to Section 81 and Section 82 of the Act; to assess the environmental impacts of the proposal. The EPA determined that no formal assessment is necessary.

Following the above referrals, Amendment No. 202 was then advertised for public comment for a period of 60 days. Advertising of the amendment will occur pursuant to r. 38 and 76A of the Regulations, in the following manner:

- Having the amendment documentation available for inspection at the City's Civic Centre;
- Uploading the amendment documentation onto the City's website;
- Providing a notice to each public authority likely to be affected by the amendment; and
- Publishing a notice published in a newspaper circulating in the scheme area (Perth Now – Wanneroo).

The Regulations also allow the City to advertise a 'complex' amendment in "*any other way the local government considers appropriate*". In this instance, the City also considers it appropriate to:

- Give notice by letter to landowners and occupiers of land potentially affected by proposed Amendment No. 202. This includes all landowners and occupiers within the NIA – and outside the NIA within a 400 metre radius; and
- Install multiple signs at prominent locations giving notice of proposed Amendment No. 202.

Submissions received during the advertising period will be considered by the City pursuant to r. 41 of the Regulations. A schedule of submissions will later be forwarded to the WAPC pursuant to r. 44(1)(a).

4.0 Planning Comment on the Proposal

4.1 Strategic Planning Considerations

In undertaking the planning framework review for the NIA, and in preparing Amendment No. 202, the City has taken into account the content of relevant strategic documents.

The City's former Economic Development Strategy and Action Plan 2016-2021 (**Economic Strategy**) includes the NIA as a focus area; and having the potential to provide 20,000 jobs. GHD's 'Neerabup Industrial Area Economic and Employment Strategy Report (2020)', prepared to support the planning framework review of the NIA, outlines how the NIA could reach an ultimate job number total of 28,692 by 2064, based on a moderate growth trajectory. GHD's document a technical appendix proposed to be introduced into ASP 17 through Amendment No. 7 to that structure plan.

The former Economic Strategy also focuses on the development of advanced manufacturing and engineering, clean technologies, renewable energy, and agribusiness within the City of Wanneroo. The City's planning framework review achieves zoning and land use permissibility to support development relating to all these focus areas in the NIA.

Since the City's Council initiated Amendment No. 202, it also adopted a new Economic Development Strategy 2022-2032. This updated strategy continues to highlight the importance of the NIA from an economic and employment perspective.

The North-West Sub-Regional Planning Framework (the **Framework**) has been prepared as a framework for the North-West Sub-Region of the Perth Metropolitan Area (**sub-region**). The Framework identifies that the NIA is in the early stages of development; with a significant quantity of undeveloped industrial zoned land available that can meet industrial land demand in the sub-region in the short to medium term. The projected demand for non-strategic industrial land in the sub-region is based on the draft framework scenario average demand of 49.2 hectares (gross) per annum, for a period of time to 2050. Therefore, as the land supply in the Wangara Industrial Area becomes more limited, and land within Industrial Investigation Areas not ready to meet demand, the NIA is placed meet industrial land demands in the sub-region in the coming decades.

As outlined previously in this Report, it is intended that the Local Planning Strategy would provide the strategic information needed to formulate a new local planning scheme to replace DPS 2. Preparation of the Local Planning Strategy is a lengthy process that the City is anticipating will still take some time to complete.

In light of the content of the abovementioned strategic documents, it is considered particularly important that the planning framework in place for the NIA (which includes Amendment No. 202) support land uses being carried out to support the projected job numbers the City is aspiring for in the NIA.

4.2 Considerations of Proposed Amendment No. 172

4.2.1 Amendment No. 172 Proposal

Separate to Amendment No. 202, the City of Wanneroo's Council resolved at its 17 November 2020 meeting to prepare Amendment No. 172 – and for that amendment to be 'complex' in the context of the Regulations. Under the Regulations, 'complex' amendments require a preliminary review and consideration by the WAPC prior to advertising. This consideration became more extensive over the course of 2021, before Amendment No. 172 was advertised from 28 February to 29 April 2022.

The objective of Amendment No. 172 is to align DPS 2 with the Model Provisions as much as possible. This will have a significant impact on how DPS 2 is currently presented; and impacts on zoning names, zoning objectives, the Zoning Table, land use definitions, land use permissibility in the zones – as well as how the zonings and local scheme reserves are laid out on the Scheme Map.

Relevant to zoning and land use planning for the NIA, Amendment No. 172 proposes the following modifications relating to the Scheme Text:

- The reclassification of the 'General Industrial' zone to 'General Industry' zone, and a realignment of objectives to coincide with the Model Provisions (refer Section 4.2.2 below);
- The reclassification of the 'Service Industrial' zone to 'Light Industry' zone, and a realignment of objectives to coincide with the Model Provisions (refer Section 4.2.2 below);
- Deletion, amendment or inclusion of land use classes (including use class references and definitions), so that they align better with those found in the Model Provisions; and
- Modifications to the Zoning Table affecting land use permissibility in the industrial zones, to coincide with the modified land use classes as mentioned above.

In addition, Amendment No. 172 is proposing only minor modifications to the Scheme Map affecting the NIA, to the extent as outlined below:

- Rezoning of the extent of land zoned 'General Industrial' in DPS 2 currently, to 'General Industry';
- Retaining the extent of land zoned 'Industrial Development' across the majority of the NIA;
- The removal of zonings from road reserves;
- The introduction a new local scheme reserve for the purpose of 'drainage';
- The proposal to reclassify Lot 38 (25K) Turnbull Road, Neerabup from 'General Industrial' zone to 'Local Scheme Reserve – Drainage'; and
- A proposal to reclassify Lot 41 (34) Mather Drive, Neerabup from 'Industrial Development' zone to 'Local Scheme Reserve – Drainage'.

Any changes that are well beyond the City's objective to align DPS 2 with the Model Provisions – were not proposed through Amendment No. 172. In preparing Amendment No. 172, the City envisaged that more substantial land use planning changes will be considered either through separate amendments to DPS 2 (such as Amendment No. 202) or through the future preparation of Local Planning Scheme No. 3.

4.2.2 Current and Proposed Amendment No. 172 Industrial Zoning Objectives

Amendment No. 172 proposes limited differences between existing 'General Industrial' zone and proposed 'General Industry' zone objectives as outlined below:

Current Intent/Objectives for 'General Industrial' Zone in DPS 2	Proposed Objectives for 'General Industry' Zone in Amendment No. 172
<p>3.11.1 <i>The General Industrial Zone is intended to provide for industrial development which the Council considers would be obtrusive in or detrimental to the amenity of the Service Industrial Zone.</i></p> <p>3.11.2 <i>The objectives of the General Industrial Zone are to:</i></p> <p>(a) <i>accommodate a wide range of industrial activities, including those generally involving production, processing, storage, wholesaling or distribution processes;</i></p> <p>(b) <i>minimise adverse visual and environmental effects of industrial uses on surrounding areas.</i></p>	<ul style="list-style-type: none"> • <i>To provide for a broad range of industrial, service and storage activities which, by the nature of their operations, should be isolated from residential and other sensitive land uses.</i> • <i>To accommodate industry that would not otherwise comply with the performance standards of light industry.</i> • <i>Seek to manage impacts such as noise, dust and odour within the zone.</i>

Table 4: Comparison of objectives – existing General Industrial Zone and General Industry Zone proposed through Amendment No. 172

The difference between the existing objectives for the Service Industrial Zone in DPS 2 and the proposed 'Light Industry' objectives proposed in Amendment No. 172 is outlined below:

Current Intent/Objectives for 'Service Industrial' Zone in DPS 2	Proposed Objectives for 'Light Industry' Zone in Amendment No. 172
<p>3.12.1 <i>The Service Industrial Zone is intended to provide for a wide range of business, industrial and recreational developments which the Council may consider would be inappropriate in Commercial, Business and General Industrial Zones and which are capable of being conducted in a manner which will prevent them being obtrusive, or detrimental to the local amenity.</i></p> <p>3.12.2 <i>The objectives of the Service Industrial Zone are to:</i></p> <p>(a) <i>accommodate a range of light industries, showrooms and warehouses, entertainment and recreational activities, and complementary business services which, by their nature, would not detrimentally affect the amenity of surrounding areas;</i></p> <p>(b) <i>ensure that development within this zone creates an attractive façade to the street for the visual amenity of surrounding areas.</i></p>	<ul style="list-style-type: none"> • <i>To provide for a range of industrial uses and service industries generally compatible with urban areas.</i> • <i>To ensure that where any development adjoins zoned or developed residential properties, the development is suitably set back, screened or otherwise treated so as not to detract from the residential amenity.</i>

Table 5: Comparison of objectives – existing Service Industrial Zone and Light Industry Zone proposed through Amendment No. 172

The existing Service Industrial Zone objectives are substantially different to those for the 'Light Industry' zone proposed through Amendment No. 172. For example, the current objectives of the Service Industrial Zone prescribes that the zone provides for a wide range of non-industrial activities; by specifically mentioning showrooms, entertainment and recreational uses. The proposed objectives for the 'Light Industry' zone only prescribes that the zone is to be provide a range of industrial uses and service industries.

The City had considered undertaking significant modifications to land use permissibility in the Service Industrial Zone through Amendment No. 202, to ensure permissibility aligned with the 'Light Industry' Zone objectives proposed in Amendment No. 202. Through the planning framework review for the NIA, it was identified that the DPS 2 Service Industrial Zone made numerous land uses permissible that were inconsistent with the proposed Light Industry Zone objectives. Modifications to address this through Amendment No. 202 were contemplated but not undertaken as it would have added an unnecessary level of complexity to the amendment for both the City and WAPC.

Notwithstanding the above, Amendment No. 202 does however propose to change in land use permissibility from 'P' to 'D' for the 'Showroom' and 'Vehicle Sales/Hire Premises' land uses in the Service Industrial Zone, as discussed in Section 4.7 below.

4.2.3 Achieving Outcomes not Proposed Solely through Amendment No. 172

The City has identified an extensive list of land uses that are not currently permitted in the DPS 2 industrial zones – but could be desirable within the NIA.

Amendment No. 172, as advertised, seeks to make permissible some land uses the City considers desirable in the NIA (but are currently not permitted). Amendment No. 202, therefore, has been prepared to only make desirable land uses permissible that are not permitted under DPS 2 currently – and not proposed to be made permissible in Amendment No. 172. This is further outlined in the table below:

Additional Use Area	Made Permissible through Amendment No. 172	Made Permissible through Amendment No. 202
General Industrial Zone (A50)	Brewery (D) Civic Use (D) Industry – Cottage (D) Renewable Energy Facility (D) Resource Recovery Centre (D) Trade Supplies (D) Waste Disposal Facility (D) Waste Storage Facility (D)	Intensive Agriculture (D) Data Storage Premises (D) Education Establishment (D)
Service Industrial Zone (A51)	Brewery (D) Civic Use (D) Renewable Energy Facility (D) Resource Recovery Centre (A)	Data Storage Premises (D) Industry – Extractive (A)
Service Hubs (A52)	Trade Supplies (D) Vehicle Wrecking (D)	Data Storage Premises (D) Office (D) Restaurant (D) Shop (D) Take-Away Food Outlet (D)

Table 6: Additional Uses to be introduced through Amendment No. 172 and Amendment No. 202 to DPS 2

4.2.4 Modifications to Amendment No. 202 Following Approval of Amendment No. 172

It is likely that Amendment No. 172 will be approved by the Minister for Planning (**Minister**), whilst the assessment of Amendment No. 202 is ongoing.

The City notes that the approval of Amendment No. 172 will change the naming terms for industrial zoning, reservation types and land uses in DPS 2, including those referred in the Amendment No. 202 proposal. Therefore, Amendment No. 202 is then expected to be subject to modifications during the assessment process, to incorporate the naming terms that will be introduced into DPS 2 through an approved Amendment No. 172.

Appendix 1 of this Report provides an example on how the Amendment No. 202 proposal could be modified, should Amendment No. 172 be approved by the Minister as advertised. The modifications to the Amendment No. 202 proposal could occur at the following points in the assessment process – but after the approval of Amendment No. 172:

- In the event that Amendment No. 172 is approved during the advertising of Amendment No. 202 – and this is noted through the submissions – the City’s Council could potentially support Amendment No. 202 subject to modifications to align it with Amendment No. 172. This could occur pursuant to r. 41(3)(b) of the Regulations; or
- The Minister can require the City to modify the Amendment No. 202 proposal pursuant to Section 87(2)(b) of the *Planning and Development Act 2005* – following the advertising, Council consideration and WAPC’s assessment of the amendment proposal.

4.3 Need for Supporting Structure Plan

Notwithstanding that Amendment No. 202 proposes to impose General Industrial and Service Industrial zones over land in the NIA, the City agrees that there is a need to retain ASP 17 (albeit subject to amendments). This position has been formed through guidance received from senior DPLH officers prior to the preparation of Amendment No. 202.

Land zoned General Industrial and Service Industrial does not specifically require a structure plan to guide further subdivision and development. However, pursuant to Clause 15(c) of the deemed provisions for local planning schemes contained in Schedule 2 of the Regulations, a structure plan is required in this instance for the purposes of orderly and proper planning – and in particular, to guide desired subdivision and development outcomes.

In accordance with a recommendation from the WAPC, modifications to Amendment No. 202 introduced a provision into Part 4 of DPS 2, outlining that subdivision and development of the NIA being in accordance with an approved structure plan (being ASP 17).

4.4 Rationale for Proposed Zoning Configuration

Amendment No. 202 proposes that industrial land in the NIA be largely zoned General Industrial, with the southern peripheries of the NIA to be zoned Service Industrial. The proposed zonings of the NIA are intended to be consistent with the underlying ‘Industrial’ zone under the MRS.

It is expected that the General Industrial and Service Industrial zones in the NIA will eventually be modified to become ‘General Industry’ and ‘Light Industry’ zones, following the approval of Amendment No. 172, as discussed in Section 4.2.4 above.

The extent of Service Industrial zoned land proposed is minimal in comparison to the expanse of the proposed General Industrial Zone. This is in response to the strategic planning considerations discussed in Section 4.1 above, and acknowledgement of the ‘Industrial’ MRS zoning of the land.

The Service Industrial Zone, as proposed, will be capable of providing a range of service industries that would support the remainder of the industrial area, and the general population of the sub-region. The setting out of the Service Industrial Zone is also intended to act as a buffer from heavier

industries expected within the General Industrial Zone, to sensitive land uses located in existing and emerging residential and rural-residential areas south of Flynn Drive.

Service Industrial zoned land is proposed in the eastern portion of the NIA to provide a 500 metre buffer from the Banksia Grove residential development to the south. A 500 metre buffer was considered in light of the content within the Environmental Protection Authority's 'Guidance for the Assessment of Environmental Factors: Separation Distances between Industrial and Sensitive Land Uses No. 3' (**EPA Guidance**). The purpose of the EPA Guidance is to provide advice on the use of generic separation distances between industrial and sensitive land uses (e.g. residential development) to avoid potential land use conflicts. The City considers that most of the industrial land uses likely to be carried out in the NIA require a buffer distance of 500 metres or less under this EPA Guidance.

On the western portion of the NIA however, it is not possible to reasonably provide the same 500-metre separation distance from the General Industrial Zone and sensitive land uses. Separation distances were then instead considered in respect to the following:

- The extent of existing General Industrial Zone in DPS 2 of land to the west of Mather Drive (e.g. on Warman Street) being retained, so that it does not encroach any closer to:
 - The rural-residential development to the south of Flynn Drive on Greenhaven Glade and Panorama Place, Carramar (zoned Special Rural); and
 - Residential development on Wallangarra Road, Carramar; and
- Land in DevelopmentWA's Meridian Park Industrial Estate being zoned 'General Industrial', to a similar extent as the General Industrial zoning designation currently outlined in ASP 17. Amendment No. 202 does not propose that the General Industrial Zone encroach significantly closer to the following existing or future developments, than what ASP 17 currently allows for:
 - Existing rural-residential development to the south of Flynn Drive on Panorama Place, Tranquil Drive and Sublime Glade, Carramar; and
 - Future residential development to the south-west, that is subject to WAPC's subdivision approval 152176.
 - Zoning boundaries that coincide with road layout and lot boundaries outlined in concept subdivision designs received from DevelopmentWA.

The Service Industrial and General Industrial zoning configuration was also informed by the content of the Neerabup Industrial Area Economic and Employment Strategy Report (GHD, 2020); which was prepared during the planning framework review for the NIA. Appendix A of that document breaks down floorspace to be occupied by various industry sectors, per year until 2070. This document has been included as a technical appendix to ASP 17 through Amendment No. 7 to that structure plan.

The Service Hubs proposed are also to be located on the southern peripheries of the NIA, and will also have an underlying Service Industrial zoning – but with a limited range of extra land uses to be permissible as outlined in Section 4.6 below. An 'industrial' DPS 2 zoning of the land is nominated for the Service Hubs (rather than a non-industrial zone such as Business or Service Commercial) in recognition of the underlying 'Industrial' MRS zoning of the land.

4.5 Application of Additional Uses and Conditions Provisions

Amendment No. 202 proposes to make a number of land uses permissible in the NIA as Additional Uses. The Additional Uses detailed below are currently not permitted in the DPS 2 industrial zones – or are not proposed to be permitted in the industrial zones under Amendment No. 172. Further detail and justifications for the Additional Uses proposed in Amendment No. 202 are provided in the table below:

Land Use (Proposed Permissibility)	Justification for Proposed Permissibility
Data Storage Premises (D)	<p>'Data Storage Premises' is proposed as a bespoke land use created through Amendment No. 202 to support premises used to house computer servers and other devices that store electronic data.</p> <p>The City is seeing growing interest from its stakeholders for these facilities to be established. Given the space, built form and infrastructure needed to service these facilities, the Service Industrial and General Industrial zones are considered to be the most appropriate zones for this use to be carried out.</p> <p>Although there are some similarities to the 'Warehouse' land use in DPS 2 (or 'Warehouse/Storage' proposed in Amendment No. 172), the key difference is that 'Data Storage Premises' provide storage of data and electronically-stored information, which is not a 'good, equipment, plant or material' as referred to in the Model Provision definition for 'Warehouse/Storage'.</p> <p>Data storage premises also have different infrastructure demands to that of a typical warehouse (e.g. with electricity, running fans etc), and may pose a greater amenity impact on surrounding land.</p> <p>Amendment No. 202 proposes that 'Data Storage Premises' be listed as a discretionary Additional Use in both the NIA General Industrial and Service Industrial zones. The Additional Use conditions would also provide the following land use definition:</p> <p style="text-align: center;">Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and office.</p>
Industry – Extractive (A) (Service Industrial, excluding Service Hubs)	<p>'Industry – Extractive' is currently a land use that is only permissible in the General Industrial Zone – and not in the Service Industrial Zone under DPS 2. Similarly, Amendment No. 172 is not proposing to make this land use permissible in the proposed Light Industry Zone.</p> <p>However through Amendment No. 202, the City is proposing to list 'Industry – Extractive' as a discretionary (or 'A') Additional use for the NIA Service Industrial Zone (excluding Service Hubs). The proposed permissibility for Industry – Extractive is proposed for the following reasons:</p> <ul style="list-style-type: none"> • So that limestone and sand resource that exists in much of the proposed Service Industrial Zone of the NIA can be extracted, as it can under DPS 2 in the adjoining General Industrial Zone; • In response to much of the proposed Service Industrial Zone land in the NIA being identified as either an area of 'Significant Geological Supplies' and 'Extraction Sites' on GeoVIEW.WA mapping referred to in State Planning Policy 2.4: Planning for Basic Raw Materials (SPP 2.4). In response to the provisions of SPP 2.4, it is noted that: <ul style="list-style-type: none"> ○ Areas of Significant Geological Supplies are identified as highest priority for the extraction of BRM, and extraction in these areas should not be compromised; and ○ Local planning schemes (or this an amendment to DPS 2) should not compromise the extraction of resources from areas identified as an Extraction Site; and • Extraction of basic raw material will assist in achieving the final surface contour levels, which ASP 17 requires in order to support further subdivision and development of land in the NIA.

Land Use (Proposed Permissibility)	Justification for Proposed Permissibility
<p>Education Establishment (D) (General Industrial only)</p>	<p>The City has identified a need for the planning framework to better support the establishment of facilities that offer training to persons working in industry – such as training to operate heavy machinery, earthmoving equipment or other industrial equipment such as forklifts.</p> <p>Facilities offering such training currently fall under the land use of ‘Education Establishment’, as defined in DPS 2 and as below:</p> <p><i>education establishment</i> : means a school, college, university, technical institute, academy or other educational centre, training centre or a lecture hall, but does not include premises intended or used to accommodate or deal with offenders or persons undergoing punishment.</p> <p>The ‘Education Establishment’ definition above is very broad, and accommodates an array of educational facilities. The City agrees that most of the educational facilities described in the definition are not considered appropriate in the General Industrial Zone. Similarly, it would be inappropriate for heavy machinery, earthmoving equipment or other industrial equipment training to be carried out in the other zones where ‘Education Establishment’ is currently permissible.</p> <p>To still provide a planning response to support education and training to persons working in industry, Amendment No. 202 proposes to list ‘Education Establishment’ as a discretionary (‘D’) Additional Use in the General Industrial Zone of the NIA. This will be accompanied by the following Additional Use condition which would also be included in the same schedule, to support desirable forms of Education Establishments from establishing:</p> <p>Education Establishment: Activities shall be limited to establishments that provide education and training relating to activities consistent with Clause 3.11.2 – objectives of the General Industrial Zone.</p> <p>Education Establishment is already a discretionary (‘D’) use in the Service Industrial Zone – and ‘Educational Establishment’ is proposed to be a ‘D’ use in the Light Industry Zone through Amendment No. 172.</p>
<p>Intensive Agriculture (D) (General Industrial only)</p>	<p>The City has observed a growing interest in ‘food cultivation’ practices in artificial internal environments, such as vertical farming, hydroponics and aquaculture. The City considers that there is merit in allowing such activities to occur in industrial premises, particularly as such activities could co-exist with processing and packing activities on the same site. The built form needed to support such activities would be less compatible in a rural setting, and more compatible with built form types found in the General Industrial Zone.</p> <p>The City therefore is proposing to list ‘Intensive Agriculture’ as a discretionary Additional Use for the General Industrial Zone of the NIA. Permissibility will be accompanied by a condition restricting these activities to the interior of buildings only, which will significantly limit how this land use can be carried out.</p> <p>Amendment No. 172 proposes to rename the ‘Intensive Agriculture’ land use to ‘Agriculture – Intensive’. The ‘Agriculture – Intensive’ land use will also encompass activities falling under the current DPS 2 ‘Aquaculture’ definition.</p> <p>What is proposed as outlined above should not interfere with existing intensive agriculture (e.g. market gardening) activities occurring in the NIA, as these will be considered as non-conforming uses.</p>

Table 7: Planning discussion and justification on Additional Uses and conditions

4.6 Service Hubs

4.6.1 Service Hub Rationale

ASP 17 currently provides for one large centrally-located Business zone, intended to be a future core for the NIA. The extent of this current Business Zone is identified in Plan 1 of ASP 17, which is provided previously in **Figure 3c**. This location was nominated in recognition of its strategic location at the centre of the structure plan area and to encourage development of support uses such as banks, local shops and newsagents to service the wider NIA.

The City intends that the Service Hubs should:

- Provide for land uses that are ancillary and subordinate to the surrounding industrial area, as discussed in Section 4.6.2 below;
- Provide some amenities and facilities which may not be found in many other industrial areas, which would in turn be a catalyst and attractor for businesses to locate in the NIA;
- Provide for land uses that will not detract from the function and viability of nearby Activity Centres (such as the Banksia Grove District Centre); and
- Be of an appropriate scale, and provide for a vibrant and acceptable built form.

Currently, the Business-zoned core identified in ASP 17 does not immediately adjoin existing industrial development; but rather located on land that is approved for an Automated and Robotics Precinct and extractive industry. It is therefore unrealistic for the central part of the NIA to support a Service Hub – at least in the short to medium term.

Two smaller Service Hubs located on the periphery of the NIA are envisaged through Amendment No. 202, where shown as the A52 designation on the Scheme (Amendment) Map (and in **Figure 4**). It is intended that Service Hubs in these locations will:

- Improve proximity and access to services for business owners, employees and visitors of the NIA;
- Allows a more immediate establishment of the Service Hubs when they are needed; and
- Will be located away from heavier industrial land uses, which may have caused land use conflicts.

4.6.2 Service Hub Land Uses

ASP 17 already provides a planning framework to support 'Service Hub' development on portions of Lot 1001 and Lot 1021 Greenwich Parade, Neerabup. This was established through Amendment No. 5 to ASP 17, and approved by the WAPC in December 2019.

ASP 17 prescribes additional uses and land use conditions applicable for the Service Hub site at Greenwich Parade, and designates this land as having an underlying Service Industrial zone. The additional land uses and conditions are set out in the table below:

Land Use	Permissibility	Development Standard
Office	D	Limited to no more than 700m ² net lettable area (NLA) across both Lots 1001 and 1021 Greenwich Parade.
Restaurant/Café	D	Limited to a combined total of 1,000m ² NLA across both Lots 1001 and 1021 Greenwich Parade. Individual premises are not to exceed 500m ² gross floor area per lot.
Take Away Food Outlet	D	
Medical Centre	D	Limited to no more than 4 health practitioners, and ancillary dispensary premise used to sell goods by retail of a personal and medical nature. The dispensary is to be ancillary to the medical centre and be limited to a total floorspace of 150m ² NLA across both Lots 1001 and 1021 Greenwich Parade.
Shop	D	Restricted to premises that offers the service and/or retail of mail distribution/collection (post office), baked goods (bakery), hardware/trade supplies, costume and video hire, hire services, banking services (bank) and dry cleaning (laundry). Is not to offer the sale of goods, by retail or hire, unrelated to these services.

Table 8: Additional uses and conditions currently prescribed in ASP 17 for Service Hubs

In relation to the Service Hub on Greenwich Parade, Amendment No. 202 proposes to create an Additional Use area (A52) – and impose similar land use permissibility and conditions through DPS 2 as are in ASP 17 currently. However, in their preliminary consideration of Amendment No. 202, the WAPC has recommended that the amendment be modified prior to advertising to exclude Medical Centre as an Additional Use capable for approval in the Service Hubs – and for the conditions for the Shop use to be floorspace-based instead of activity-based.

The City has identified a location for a second Service Hub within the southernmost portions of Lot 5 (190) and Lot 900 (170) Flynn Drive, Neerabup, on the future intersection of Flynn Drive and Orchid Road. Portions of Lot 5 and Lot 900 are proposed to be subject to the same land use permissibility and conditions as set out for the Greenwich Parade Service Hub site, and will also be situated in Additional Use area A52.

4.6.3 Considerations against State Planning Policy 4.2

Consideration of Amendment No. 202, particularly the planning for Service Hubs, has had regard to the relevant provisions of State Planning Policy 4.2 – Activity Centres for Perth and Peel (**SPP 4.2**); and in particular Clause 5.6 and Clause 5.6.2 of that Policy. Clause 5.6 and Clause 5.6.2 of SPP 4.2 prescribe as follows:

5.6 Out of centre development

1. *Health, welfare, community services, entertainment, recreation, commercial and cultural facilities likely to attract a significant number of employees or users and/or generate significant vehicle trips should generally be located in, or adjacent to, activity centres.*
2. *Where such uses cannot be accommodated within, or adjacent to, activity centres development should be restricted to established Mixed Business or equivalent zones with good access to public transport, rather than being dispersed.*

5.6.2 Commercial Uses in Industrial Zones

Shops and office development should only be permitted on land zoned industrial under region and local planning schemes where:

- o *shops provide a local convenience service predominantly for people employed in the locality and are confined to a local centre; and*

- *Offices are ancillary to the predominant industrial use of the premises or are confined to a local or small-scale centre that services industrial developments.*

The NIA is not located in the immediate vicinity of designated Activity Centres. The nearest Activity Centres – being Carramar Village, Banksia Grove District Centre and Clarkson Train Station precinct are all located at least two kilometres from the NIA. As these existing centres are not in close proximity, they cannot readily provide supporting land uses for industrial development to the NIA. By designating specific Additional Use areas over the two Service Hubs (A52), Amendment No. 202 allows the creation of out-of-centre development to occur in the context of Clause 5.6(2) of SPP 4.2.

The Service Hubs will also be the only spaces in the NIA that are proposed to support 'office' as a predominant use. There will also be floorspace caps for Shop in the Service Hub; so that collectively across the two Service Hubs, the total floorspace for 'Shop' (being 1,500m²) does not exceed that found in a local centre. Therefore, the Service Hubs proposed will be consistent with the provisions of Section 5.6.2 of SPP 4.2.

Based on the provisions extracted from SPP 4.2 above, the City considers that there are reasonable grounds for two Service Hubs to be established within the NIA, as proposed in Amendment No. 202. The two Service Hubs will be situated on land totalling less than four hectares, within an area of which over 600 hectares will be developed for industrial purposes. This will provide for sufficient levels of amenity for both the western and eastern sides of the NIA, whilst not being of a size that would detract from the viability and attractiveness of existing Activity Centres.

4.6.4 Planning Response for Future Service Hubs

Following the approval of Amendment No. 202, and as the NIA is further developed, it is possible that there could be demand for additional Service Hubs. Given planning for two Service Hubs is being undertaken for the southern periphery of the NIA through Amendment No. 202, future additional Service Hubs may locate elsewhere within the NIA.

Designation of additional 'Service Hub' sites through the planning framework will need to be undertaken in the future if such demand exists. At that time, the City and/or DPLH may also require a proponent to provide additional supporting information to demonstrate that additional Service Hubs will not detract from Activity Centres, meet the policy provisions of SPP 4.2 and will be suitably located in respect to surrounding industrial uses.

4.7 Permissibility Variances Proposed in NIA Service Industrial Zone

Amendment No. 202 proposes to change the land use permissibility for the 'Showroom' and 'Vehicle Sales/Hire Premises' land uses in the Service Industrial Zone from 'P' to 'D' within the NIA.

This will occur through the following proposed changes to the DPS 2 text:

- The inclusion of an asterisk (*) next to the 'P' designations in the DPS 2 Zoning Table (Table 1) – for the 'Showroom' and 'Vehicle Sales/Hire Premises' Use Classes rows and for the 'Service Industrial' zone column;
- A notation to be added as a footer to the Zoning Table to specify the asterisk refers to provisions contained in a new Clause 3.12.3 of the DPS 2 text; and
- The introduction of a new Clause 3.12.3 into the DPS 2 text, to specify the following:

3.12.3 Notwithstanding the provisions of Table 1, the 'Showroom' and 'Vehicle Sales/Hire Premises' use classes shall be dealt with as "P" uses pursuant to Clause 6.2.2; except in the Neerabup locality where these use classes are dealt with as "D" uses.

This is proposed as a means to control the proliferation of these uses in the Service Industrial Zone. If uncontrolled, the proliferation of these uses could have unintended consequences on the dominance of industrial land uses that the City is attempting to achieve in the NIA Service Industrial Zone.

Other non-industrial land uses, such as recreation centres and places of worship, are also discretionary ('D') in the Service Industrial Zone. As discussed in Section 4.2.2 above, changing the land use permissibility for these industrial uses was initially contemplated by the City, but not pursued as part of this amendment. The current permissibility set for these uses ('D') provides sufficient controls to ensure these uses do not dominate the Service Industrial Zoned land.

4.8 Conservation Area

There is currently a 50-hectare conservation reserve in the NIA, situated on Lot 8001 (240) Flynn Drive, Neerabup. Lot 8001 is a Crown Land parcel reserved for the purpose of Conservation. The southwestern portion of Lot 8001 (approximately 15 hectares) is also designated Bush Forever 295 by the WAPC.

Lot 8001 is currently zoned Industrial Development under DPS 2, and is designated as a 'Reserve for Conservation' under ASP 17. Prior to Amendment No. 4 to ASP 17 (approved by the WAPC in August 2017), the land (excluding the area identified as Bush Forever Site 295) had a General Industrial zoning designation under ASP 17.

Amendment No. 202 proposes to reclassify Lot 8001 from 'Industrial Development' zone to 'Local Scheme Reserve – Conservation', so that the City's planning framework also reflects Lot 8001 being reserved for Conservation.

4.9 Drainage Sites

Amendment No. 202 affects Lot 8002 (270) Flynn Drive, Neerabup, which is a Crown Land parcel set aside for drainage purposes. The amendment proposes to reclassify this land parcel from the General Industrial Zone to 'Local Scheme Reserve – Public Use'.

Amendment No. 172 proposes to reclassify two other drainage sites (Lot 38 Turnbull Road and Lot 41 Mather Drive) to 'Local Scheme Reserve – Drainage' – which is a new DPS 2 local scheme reserve type proposed under that amendment. Therefore, Amendment No. 202 does not propose any changes affecting Lot 38 and Lot 41.

It is expected that Lot 8002 will also eventually be designated as a 'Local Scheme Reserve – Drainage' under DPS 2, once both Amendment No. 172 and Amendment No. 202 are approved.

The City has also identified other existing and emerging drainage sites that are currently in the ownership of DevelopmentWA. These sites will be zoned General Industrial through Amendment No. 202 so as to avoid the potential for compensation claims pursuant to Part 11, Division 2 of the *Planning and Development Act 2005*. These sites may be classified 'Local Scheme Reserve' as part of a future local planning scheme amendment at the appropriate time in the future, and once respective land parcels are ceded to the Crown.

4.10 Environmental Considerations

The planning framework review for the NIA is supported by an Environmental Assessment, which is provided as **Appendix 2** of this Report.

As outlined above, the City has identified areas of vegetation within the land defined as the NIA. Key vegetation areas include the north-western corner (portions of Lot 801 and Lot 502 Flynn Drive – as well as Lot 1 Wattle Avenue) and the eastern extent of the NIA (on Lot 902). Further structure planning and/or amendments to DPS 2 are required prior to any industrial subdivision and development in these areas.

Amendment No. 202 also proposes to set aside a 50-hectare heavily vegetated land parcel for the purpose of Conservation under DPS 2, as outlined in Section 4.8 above. This will ensure that no industrial development occurs in this area.

It should be noted that the outcomes of the planning framework review for the NIA (being Amendment No. 202 and Amendment No. 7 to ASP 17) make provision for a reduced area of land to be subdivided or developed – compared to the current provisions of ASP 17. Therefore, the City

considers that Amendment No. 202 could potentially pose a reduced impact on the natural environment, compared to the current planning framework

4.11 Bushfire Management Considerations

With the exception of areas already cleared of vegetation for resource extraction, industrial or agricultural uses, much of the NIA is designated as ‘bushfire prone’ by the Fire and Emergency Services Commissioner under the *Fire and Emergency Services Act 1998*.

As part of the planning framework review for the NIA, the City obtained a Bushfire Management Plan (**BMP**) prepared by Bushfire Prone Planning (2021). The BMP prepared by Bushfire Prone Planning will be introduced as a technical appendix of the structure plan through Amendment No. 7 to ASP 17. This BMP will replace a previous BMP prepared by Stragen in 2017, which is currently contained within ASP 17. The BMP is provided as **Appendix 3** of this Report

4.12 MRS Amendment 1379/57

At the time Amendment No. 202 was being prepared, the City was aware of MRS omnibus amendment 1379/57, and its advertising from September to November 2021. That MRS omnibus amendment was to propose modifications affecting various locations in the North-West and North-East Districts of the Perth Metropolitan Region.

One location that this MRS omnibus amendment affects, relevant to Amendment No. 202, is a portion of Lot 801 (410) Flynn Drive, Neerabup. At the time this Report was prepared, the south-western corner of Lot 801 was reserved for the purpose of ‘Parks and Recreation under the MRS, with a Bush Forever designation over this land. The MRS amendment proposes to rezone this land to Industrial under the MRS and remove the Bush Forever designation.

The City made its submission to the WAPC on the MRS amendment 1379/57 on 15 November 2021, with a comment of ‘no objection’ to the rezoning of the affected portion of Lot 801.

Given that the MRS amendment has progressed significantly, it is anticipated that it will be determined well before Amendment No. 202 is determined by the Minister. Section 124(2)(b) of the *Planning and Development Act 2005*, states the following in respect to changes to the MRS that occur through amendments:

- (2) *If a region planning scheme is inconsistent with a local planning scheme, the local government of the district in which the land directly affected is situated is to, not later than 90 days after the day on which the region planning scheme has effect, resolve to prepare—*
- ...
- (b) *an amendment to the local planning scheme which renders the local planning scheme consistent with the region planning scheme and which does not contain or removes, as the case requires, any provision which would be likely to impede the implementation of the region planning scheme.*

In part, Amendment No. 202 responds to this provision. Amendment No. 202 proposes a General Industrial and Service Industrial zoning in DPS 2 over the portion of Lot 801 that MRS amendment 1379/57 is proposing to zone Industrial under the MRS. If the MRS amendment is not resolved before the Minister's consideration of Amendment No. 202, the City understands that the Minister may require modification to this DPS 2 amendment to exclude rezoning of land affected by the MRS amendment.

5.0 Conclusion

Amendment No. 202 will significantly change the zoning and land use permissibility of the Neerabup Industrial Area. Amendment No. 202, coupled with Amendment No. 172 to DPS 2 and Amendment No. 7 to ASP 17 will facilitate subdivision, development and land use activities within the Neerabup Industrial Area which will be more closely aligned to the City and State Government aspirations.

The City will advertise and process Amendment No. 202 to DPS 2, and will then forward it to the WAPC for consideration. The City requests a swift and favourable consideration by the WAPC, as it assesses the amendment pursuant to the *Planning and Development (Local Planning Schemes) Regulations 2015*.

DOCUMENT VERSIONS

No.	Date Prepared	Version Prepared For	City Ref.
1	6/7/2022	Council initiation	22/254908
2	7/12/2022	For advertising, following recommendation of WAPC following examination of amendment pursuant to r. 37	22/470539



APPENDIX 1

Suggested modifications to Amendment
No. 202 to DPS 2

Should Amendment No. 172 to DPS 2 be
approved as advertised

**APPENDIX 1 - Revised Extent of Amendments for WAPC Consideration
Should Amendment No. 172 to DPS 2 be Approved as Advertised**

1. Rezoning the following land from 'Industrial Development' to 'General **Industry**', to the extent shown on the Scheme (Amendment) Map **(map needs revising)**:

- Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
- Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
- Portion Lot 1031 (24) Hemisphere Street, Neerabup (on DP: 405727);
- Portion Lot 1030 (18) Greenwich Parade, Neerabup (on DP: 405727);
- Portion Lot 1029 (22) Greenwich Parade, Neerabup (on DP: 405727);
- Portion Lot 1019 (26) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 1018 (30) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 800 (34) Greenwich Parade, Neerabup (on DP: 415111);
- Lot 1024 (15) Longitude Avenue, Neerabup (on DP: 409191);
- Lot 1023 (11) Longitude Avenue, Neerabup (on DP: 409191);
- Lot 1026 (7) Longitude Avenue, Neerabup (on DP: 409191);
- Lot 1022 (20) Hemisphere Street, Neerabup (on DP: 409191);
- Lot 1035 (12) Hemisphere Street, Neerabup (on DP: 409191);
- Lot 1034 (6) Longitude Avenue, Neerabup (on DP: 409191);
- Lot 1033 (12) Longitude Avenue, Neerabup (on DP: 409191);
- Lot 40 (26) Mather Drive, Neerabup (on D: 78186);
- Lot 9100 (60) Mather Drive, Neerabup (on DP: 411322);
- Lot 44 (64) Mather Drive, Neerabup (on D: 83582);
- Lot 2004 (69) Mather Drive, Neerabup (on DP: 70103);
- Lot 9003 (85) Mather Drive, Neerabup (on DP: 70103);
- Lot 2001 (240) Pederick Road, Neerabup (on DP: 60745);
- Lot 1001 (220) Pederick Road, Neerabup (on DP: 37249);
- Lot 1000 (190) Pederick Road, Neerabup (on DP: 37249);
- Lot 100 (45) Trandos Road, Neerabup (on DP: 63371);
- Lot 9000 (140) Pederick Road, Neerabup (on DP: 63371);
- Lot 1506 (1) Trandos Road, Neerabup (on DP: 407752);
- Lot 101 (141) Pederick Road, Neerabup (on DP: 413173);
- Lot 102 (123) Pederick Road, Neerabup (on DP: 413173);
- Lot 103 (125) Pederick Road, Neerabup (on DP: 413173);
- Lot 104 (127) Pederick Road, Neerabup (on DP: 413173);
- Lot 801 (109) Pederick Road, Neerabup (on DP: 57533);
- Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
- Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843); and
- Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).

(list of land parcels may need adjusting should new lots be created or lot numbers change)

2. Rezoning portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704) from 'General **Industry**' to '**Light Industry**', to the extent shown on the Scheme (Amendment) Map **(map needs revising)** **(reference to Lot 9009 may need adjusting should new lots be created or the lot number changes)**.

3. Rezoning the following land from 'Industrial Development' to '**Light Industry**', to the extent shown on the Scheme (Amendment) Map **(map needs revising)**:

- Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
- Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
- Lot 1000 (45) Hemisphere Street, Neerabup (DP: 423704);
- Portion Lot 1001 (11) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 1021 (10) Greenwich Parade, Neerabup (on DP: 61212);
- Lot 2 (19) Hemisphere Street, Neerabup (on DP: 413473);
- Lot 1 (13) Hemisphere Street, Neerabup (on DP: 413473);

**APPENDIX 1 - Revised Extent of Amendments for WAPC Consideration
Should Amendment No. 172 to DPS 2 be Approved as Advertised**

- Lot 1057 (5) Ring Street, Neerabup (on DP: 420872);
- Lot 1058 (11) Ring Street, Neerabup (on DP: 420872);
- Lot 1060 (11) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 1059 (1) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 1064 (2) Pinnacle Drive, Neerabup (on DP: 420872);
- Lot 1063 (10) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
- Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843);
- Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).

(list of land parcels may need adjusting should new lots be created or lot numbers change)

4. Reclassifying Lot 8002 (270) Flynn Drive, Neerabup (on DP: 411322) from the 'Industrial Development' zone to 'Local Scheme Reserve – Drainage/Waterways', as shown on the Scheme (Amendment) Map *(map needs revising)*.
5. Reclassifying Lot 8001 (250) Flynn Drive, Neerabup (on DP: 411322) from the 'Industrial Development' zone to 'Local Scheme Reserve – Environmental Conservation', as shown on the Scheme (Amendment) Map.
6. Insert the following **into Schedule 17** of the Scheme:

NO.	DESCRIPTION OF LAND	REQUIREMENT
1	<i>Neerabup Industrial Area Bound by Lot 801 on DP 415725, Lot 502 on DP 409677, Lot 1 on D 12751, Lot 9003 on DP 70103, Lot 100 on DP 63371, Lot 1506 on DP 407752, Lot 801 on DP 57533, Lot 902 on DP 50843 and Flynn Drive</i>	<i>Subdivision and development of the subject land shall be in accordance with an approved structure plan.</i>

7. Applying the Additional Uses (A50) designation to various land parcels in the Neerabup locality, as shown on the Scheme (Amendment) Map. *(the A50 reference number may need revision – on the Scheme Amendment Map and text – to accord with the number of Additional Use areas in DPS 2 at the point of approval of Amendment No. 202)*.
8. Amending **Schedule 2** of the Scheme text to insert the following:

No	Description of land	Additional use	Conditions
A50	Multiple land parcels zoned General Industry in the Neerabup locality	<ul style="list-style-type: none"> • Agriculture – Intensive • Data Storage Premises • Educational Establishment 	<ol style="list-style-type: none"> 1. All the 'Additional Uses' shall be dealt with as "D" uses, pursuant to Clause 3.3 (2). 2. Land uses referred to above, but which are not defined in Clause 6.2, are defined below: <i>Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.</i> 3. Conditions and parameters for the carrying out of land uses

**APPENDIX 1 - Revised Extent of Amendments for WAPC Consideration
Should Amendment No. 172 to DPS 2 be Approved as Advertised**

			<p>listed above are provided for below:</p> <p>Agriculture – Intensive: The cultivation and harvesting of produce shall only occur within a building, enclosed by walls and a roof (excluding greenhouses). Cultivation of produce shall not occur where exposed to the open natural environment.</p> <p>Educational Establishment: Activities shall be limited to establishments that provide education or training relating to activities consistent with Table 2 in Clause 3.1 – objectives of the General Industry Zone.</p>
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9. Applying the Additional Uses (A51) designation to the following land parcels, as shown on the Scheme (Amendment) Map *(the A51 reference number may need revision – on the Scheme Amendment Map and text – to accord with the number of Additional Use areas in DPS 2 at the point of approval of Amendment No. 202)*:

- Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
- Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
- Lot 1000 (45) Hemisphere Street, Neerabup (DP: 423704);
- Lot 2 (19) Hemisphere Street, Neerabup (on DP: 413473);
- Lot 1 (13) Hemisphere Street, Neerabup (on DP: 413473);
- Lot 1057 (5) Ring Street, Neerabup (on DP: 420872);
- Lot 1058 (11) Ring Street, Neerabup (on DP: 420872);
- Lot 1060 (11) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 1059 (1) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 1064 (2) Pinnacle Drive, Neerabup (on DP: 420872);
- Lot 1063 (10) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
- Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843); and
- Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).

(list of land parcels may need adjusting should new lots be created or lot numbers change)

10. Amending **Schedule 2** of the Scheme text to insert the following:

No	Description of land	Additional use	Conditions
A51	<ul style="list-style-type: none"> • Portion Lot 801 (410) Flynn Drive (on DP: 415725); • Portions of Lot 9009 (370) Flynn Drive (on DP: 423704); • Lot 1000 (45) Hemisphere Street (on DP: 423704); • Lot 2 (19) Hemisphere Street (on DP: 413473); • Lot 1 (13) Hemisphere Street (on DP: 413473); • Lot 1057 (5) Ring Street (on DP: 420872); 	<ul style="list-style-type: none"> • Data Storage Premises • Industry – Extractive 	<p>1. Data Storage Premises shall be dealt with as a “D” use and Industry – Extractive as an “A” use pursuant to Clause 3.3 (2).</p> <p>2. Land uses as referred to above, but which are not defined in Clause 6.2, are defined below:</p>

Blue highlight – extent of changes needed to Amendment No. 202, to respond to approval of Amendment No. 172 (as advertised)

**APPENDIX 1 - Revised Extent of Amendments for WAPC Consideration
Should Amendment No. 172 to DPS 2 be Approved as Advertised**

	<ul style="list-style-type: none"> • Lot 1058 (11) Ring Street (on DP: 420872); • Lot 1060 (11) Pinnacle Drive (on DP: 420872); • Portion Lot 1059 (1) Pinnacle Drive (on DP: 420872); • Portion Lot 1064 (2) Pinnacle Drive (on DP: 420872); • Lot 1063 (10) Pinnacle Drive (on DP: 420872); • Portion Lot 5 (190) Flynn Drive (on D: 91435); • Portion Lot 900 (170) Flynn Drive (on DP: 50843); • Portion Lot 901 (150) Flynn Drive (on DP: 50843) <p>All in the Neerabup locality.</p> <p><i>(list of land parcels may need adjusting should new lots be created or lot numbers change)</i></p>		<p>Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.</p>
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11. Amending the Scheme Map by applying the Additional Uses (A52) designation to the following land parcels, as shown on the Scheme (Amendment) Map *(the A52 reference number may need revision – on the Scheme Amendment Map and text – to accord with the number of Additional Use areas in DPS 2 at the point of approval of Amendment No. 202)*:

- Portion Lot 1001 (11) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 1021 (10) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435); and
- Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843).

(list of land parcels may need adjusting should new lots be created or lot numbers change)

12. Amending **Schedule 2** of the Scheme text to insert the following:

No	Description of land	Additional use	Conditions
A52	<ul style="list-style-type: none"> • Portion Lot 1001 (11) Greenwich Parade (on DP: 61212); • Portion Lot 1021 (10) Greenwich Parade (on DP: 61212); • Portion Lot 5 (190) Flynn Drive (on D: 91435); • Portion Lot 900 (170) Flynn Drive (on DP: 50843) <p>All in the Neerabup locality.</p> <p><i>(list of land parcels may need adjusting should new lots be created or lot numbers change)</i></p>	<ul style="list-style-type: none"> • Data Storage Premises • Office • Restaurant/Cafe • Shop • Fast Food Outlet 	<ol style="list-style-type: none"> 1. In addition to Conditions 2-5 below, all the relevant conditions that are specified for Additional Use area A51 also apply to A52. 2. All the 'Additional Uses' shall be dealt with as "D" uses, pursuant to Clause 3.3 (2). 3. The maximum floorspace for the 'Office' land use is limited to no more than: <ol style="list-style-type: none"> a) 700m² net lettable area (NLA) across both subject portions of Lots 1001 and 1021; and

**APPENDIX 1 - Revised Extent of Amendments for WAPC Consideration
Should Amendment No. 172 to DPS 2 be Approved as Advertised**

			<p>b) 700m² NLA across both subject portions of Lot 5 and Lot 900.</p> <p>4. The maximum floorspace for the 'Restaurant/Cafe' and 'Fast Food Outlet' land uses are limited to no more than:</p> <p>a) 1,000m² NLA across both subject portions of Lots 1001 and 1021; and</p> <p>b) 1,000m² NLA across both subject portions of Lot 5 and Lot 900; and</p> <p>Individual premises shall not exceed 500m².</p> <p>5. The maximum floorspace for the 'Shop' land use are limited to no more than</p> <p>a) 750m² NLA across both subject portions of Lots 1001 and 1021; and</p> <p>b) 750m² NLA across both subject portions of Lot 5 and Lot 900; and</p> <p>Individual premises shall not exceed 300m² NLA.</p>
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13. Amending Schedule 1 – Zoning Table by:

- a) Depicting the land use permissibility for the 'Bulky Goods Showroom' and 'Motor Vehicle, Boat or Caravan Sales' in the Light Industry Zone as 'P⁴'; and
- b) Adding a notation at the end of Schedule 1 – Zoning Table as follows:

Notes:

4. Refer to provisions contained in Schedule 6 (No. 24).

14. Introducing the following into Schedule 6 of the Scheme Text:

No.	Description of Land	Requirement
24	Light Industry Zone in the Neerabup locality	Notwithstanding the provisions of Schedule 1 – Zoning Table, the 'Bulky Goods Showroom' and 'Motor Vehicle, Boat or Caravan Sales' use classes shall be dealt with as "P" uses pursuant to Clause 3.3 (2); except in the Neerabup locality where these use classes are dealt with as "D" uses.



APPENDIX 2

Environmental Assessment
Neerabup Industrial Area
Prepared by GHD



City of Wanneroo
Neerabup District Planning
Environmental Assessment

April 2020

Table of contents

1.	Introduction	1
1.1	Overview	1
1.2	Legislative Framework	1
1.3	Scope and limitations	4
2.	Literature Review	5
2.1	Flora, Vegetation and Vertebrate Fauna Assessment Lot 4, Part of Lots 1002 and 2692, Neerabup (ATA Environmental, 2007)	1
2.2	Spring Flora and Vegetation Survey, Part Lot 600 Orchid Road, Neerabup (Coffey Environments, 2008)	1
2.3	Ground Truthing of Environmental Values for Lot 4 Flynn Drive, Neerabup (Ecological Australia, 2012)	1
2.4	Level 2 Flora and Vegetation Assessment of Conservation Offset Areas (Terratree, 2016)	2
2.5	Mather Reserve Kangaroo Population Survey (Ecoscape 2019)	3
2.6	Flynn Drive – Lot 9000 Neerabup, Fauna Survey (Animal Pest Management Services, 2016)	3
2.7	Comprehensive Phytophthora Dieback Assessment of Conservation and Development Areas-Neerabup Project (Terratree, 2016)	3
2.8	Black Cockatoo Habitat Survey (Terrestrial Ecosystems, 2018)	3
2.9	Weed Mapping Report, Lot 9000 Flynn Drive (Natural Area Consulting, 2017)	4
2.10	Memorandum: Neerabup Industrial Area – Environmental Input to City of Wanneroo Review of NIA ASP17 (Ecological Australia, 2019)	4
3.	Environmental Assessment	5
3.1	Vegetation	5
3.2	Fauna	10
3.3	Pests and diseases	12
3.4	Wetlands	13
3.5	Hydrology and hydrogeology	13
3.6	Caves and Karsts	14
3.7	Acid Sulfate Soils	16
3.8	Contaminated Sites	16
4.	Environmental Management	18
4.1	Flora and Vegetation Management	18
4.2	Fauna Management	19
4.3	Wetland Management	19
4.4	Caves and Karst	20
4.5	Contaminated Sites	20
5.	References	21

Figure index

Figure 1	Site Location Map	1
Figure 2	Land parcels and ownership within the NIA (City of Wanneroo, 2019)	1
Figure 3	Vegetation Types within City of Wanneroo landholdings	2
Figure 4	Vegetation complexes (DBCA-046).....	6
Figure 5	Clearing Instruments Activities (Areas Approved to Clear) (DWER-076).....	6
Figure 6	Clearing Instruments Conditions (Areas subject to Conditions) (DWER-075)	7
Figure 7	Bush Forever Sites (PlanWA).....	9
Figure 8	Geomorphic wetland classifications.....	13
Figure 9	Cave and karst risk, City of Wanneroo	15
Figure 10	Contaminated sites within the NIA (Contaminated	16

Appendices

Appendix A - NatureMap Species Report and Map

1. Introduction

1.1 Overview

The Neerabup Industrial Area (NIA) is located in the suburb of Neerabup within the City of Wanneroo. To the southeast of the NIA, there is significant current and future residential development within Banksia Grove. Residential estates along the coastal strip of the North West Corridor (including the suburbs of Clarkson, Merriwa, Kinross, Mindarie) are currently developing approximately 3 km to the west of the NIA (Figure 1).

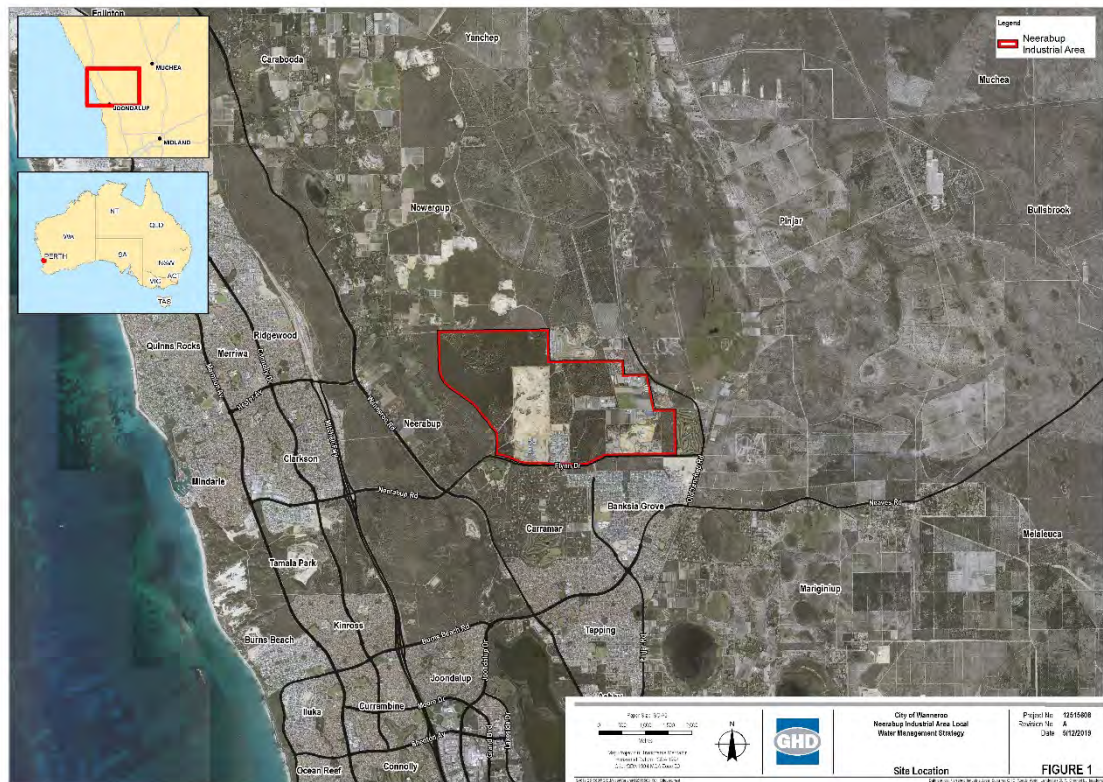


Figure 1 Site Location Map

Council first adopted the NIA Agreed Structure Plan 17 (ASP 17) on 11 January 2005. The environmental features of the site were assessed as part of the rezoning of the land for industrial use, to support the development of ASP 17 and continue to be monitored as part of the ongoing development of the site.

This environmental study provides an overview of the environmental features of the site and continued consideration of the environment as the site is developed for industrial use. It will be used to provide the background information for Part 2 of the revised structure plan and inform provisions included in Part 1.

1.2 Legislative Framework

1.2.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Australian Government's key piece of environmental legislation, providing a national scheme of environment and heritage protection and biodiversity conservation. The EPBC Act:

- Protects matters of national environmental significance

- Conserves biodiversity
- Provides the national environmental approvals process
- Enhances protection and management of important natural and cultural places
- Controls the international movement of plants and animals (wildlife), wildlife specimens and products made or derived from wildlife
- Promotes ecologically sustainable development
- Recognises the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity
- Promotes the use of Indigenous peoples' knowledge of biodiversity

The EPBC Act is administered by the Department of the Environment and Energy (DotEE).

Sections 3.1.1 and 3.1.2 provide information on species and ecological communities listed under the EPBC Act.

1.2.2 Biodiversity Conservation Act 2016 and Biodiversity Conservation Regulations 2018

On 1 January 2019, the *Biodiversity Conservation Act 2016* (BC Act) and *Biodiversity Conservation Regulations 2018* replaced both the *Wildlife Conservation Act 1950* and the *Sandalwood Act 1929* and their associated regulations. The BC Act and Regulations provide greater protection for the Western Australian biodiversity, particularly threatened species and threatened ecological communities.

Part 2 of the BC Act provides for the listing of Threatened, Extinct and Specially Protected species. Categories of Threatened, Extinct and Specially Protected fauna and flora are:

- Threatened
- Critically endangered
- Endangered
- Vulnerable
- Extinct
- Extinct in the wild
- Migratory
- Species of special conservation interest
- Other specially protected species
- Priority species
 - Priority 1
 - Priority 2
 - Priority 3
 - Priority 4

The BC Act and associated Regulations are administered by the Department of Biodiversity Conservation and Attractions (DBCA).

Sections 2.1.1 and 2.1.2 provide information on species and ecological communities listed under the BC Act.

1.2.3 Environmental Protection Act 1986

The purpose of the *Environmental Protection Act 1986* (EP Act) is to protect the State's environment. The application of the act must have regard to a number of principles including the principle of the conservation of biological diversity and ecological integrity. Clearing native vegetation is an offence under the EP Act, unless done under a clearing permit or the clearing is for an exempt purpose. The Department of Water and Environmental Regulation (DWER) administers the clearing provisions of the EP Act.

1.2.4 Biosecurity and Agriculture Management Act 2007

The *Biosecurity and Agriculture Management Act 2007* (BAM Act) and its regulations prevent new animal and plant pests entering Western Australia, manage the impact and spread of pests already present, safely manage the use of agricultural and veterinary chemicals and control sale of agricultural chemicals containing volatile chemical residues. The City is responsible for controlling declared pests and weeds of national significance on land owned or vested in the City for management.

The BAM Act and associated Regulations are administered by the Department of Primary Industries and Regional Development (DPIRD).

1.2.5 Planning and Development Act 2005

The *Planning and Development Act 2005* (PD Act) establishes the Western Australian Planning Commission and provides for an efficient and effective land use planning system which promotes sustainable use and development of land. State Planning Policies are prepared under Part 3 of the PD Act and can have regard to matters such as conservation of natural resources for environmental or ecological purposes.

1.2.5.1 State Planning Policies

State Planning Policies relevant to environmental matters and the development of the NIA include:

- State Planning Policy 2.0: Environment and natural resources policy
- State Planning Policy 2.4: Basic raw materials
- State Planning Policy 2.8: Bushland Policy for the Perth Metropolitan Region
- State Planning Policy 2.9: Water resources
- State Planning Policy 3.7: Planning in Bushfire Prone Areas.
- State Planning Policy 4.1: State industrial interface
- State Planning Policy 7.0: Design of the Built Environment

1.2.6 Local Planning

The *Planning and Development (Local Planning Schemes) Regulations 2015* sets out the procedure for making local planning policies under the Local Planning Scheme. District Planning Scheme No.2 (DPS2) is the local planning scheme for the City of Wanneroo (the City). DPS2 specifies where specific land uses are permitted and sets standards for development.

Local Planning Policies, adopted by Council, provide guidance as to how the provisions within DPS2 are considered. Local Planning Policies relevant to environmental matters and the development of the NIA include:

- Local Planning Policy 1.1: Conservation Reserves
- Local Planning Policy 3.3: Fauna Management

- Local Planning Policy 4.1: Wetlands
- Local Planning Policy 4.3: Public Open Space
- Local Planning Policy 4.4: Urban Water Management
- Local Planning Policy 4.8: Tree Preservation
- Local Planning Policy 4.13: Caves and Karstic Features
- Local Planning Policy 4.18: Earthworks and Sand Drift

In addition to the above, the City has developed a number of strategic documents to guide decision making and Council operations. Documents relevant to environmental matters and the continued development of the NIA include:

- Local Biodiversity Plan
- Local Environmental Strategy
- Conservation Area Management Plan
- Environmental Management Plan guidelines

1.3 Scope and limitations

This report has been prepared by GHD for City of Wanneroo and may only be used and relied on by City of Wanneroo for the purpose agreed between GHD and the City of Wanneroo as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than City of Wanneroo arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

GHD has prepared this report on the basis of information provided by City of Wanneroo and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2. Literature Review

A number of environmental investigations have been undertaken over various parcels of land in the NIA over the years. The documents provided are discussed in more detail below. Figure 2 is provided to help describe which land parcels specific documents relate to.

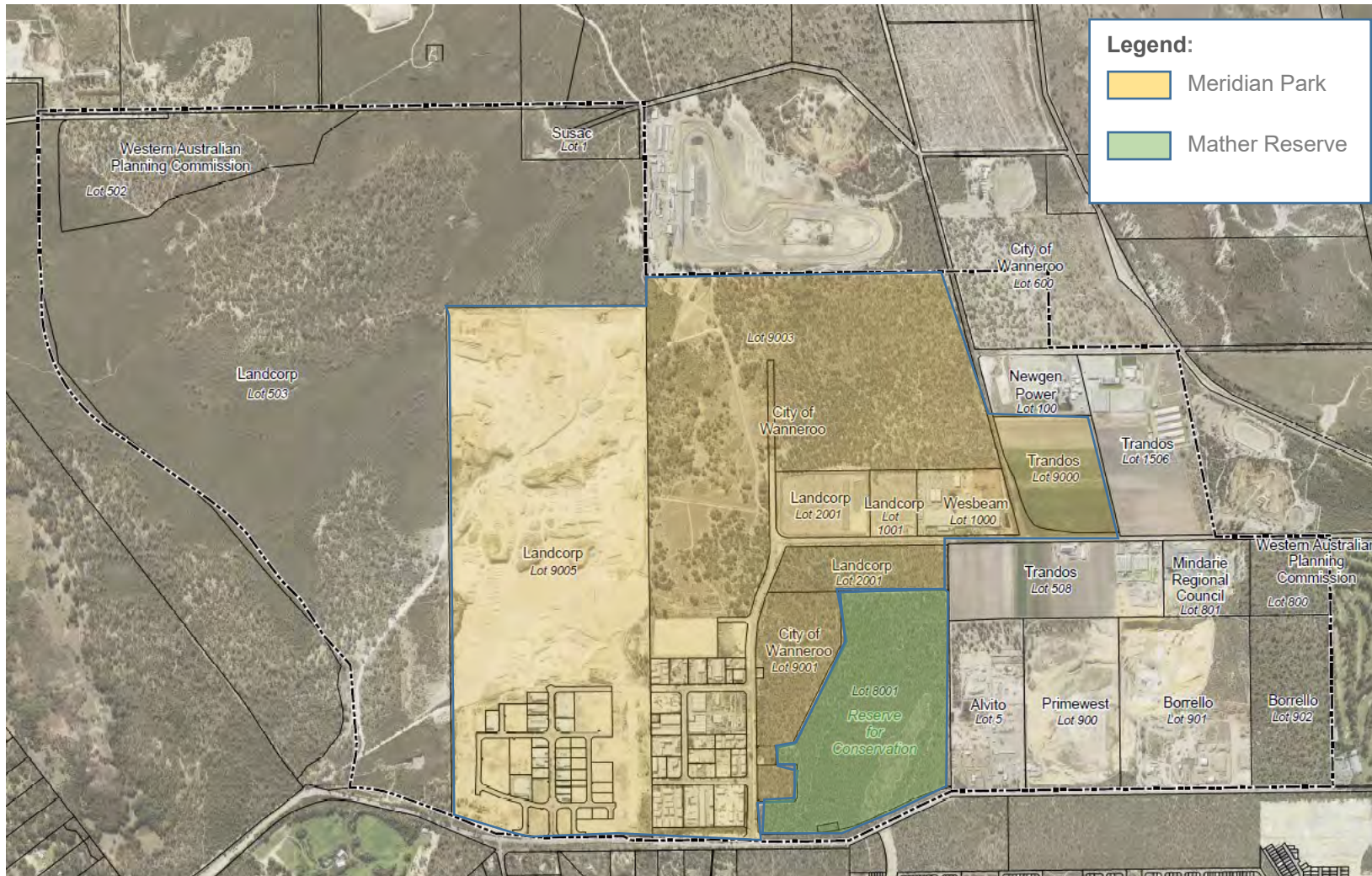


Figure 2 Land parcels and ownership within the NIA (City of Wanneroo, 2019)

2.1 Flora, Vegetation and Vertebrate Fauna Assessment Lot 4, Part of Lots 1002 and 2692, Neerabup (ATA Environmental, 2007)

A comprehensive Level 2 flora and vegetation survey and Level 2 vertebrate survey were undertaken to support application for clearing permits and progress with the agreed structure plan for the lots specified above. The vegetation survey was undertaken for the lots which are now Lot 9003, Lot 9100, Lot 8001, Lot 2001 and part of Lot 600. The fauna survey also included Lot 5, Lot 900 and Lot 901 (refer to Figure 2).

The purpose of this report was to:

- Accurately describe flora, floristic community types (FCT) and vegetation units and condition
- Confirm the presence or absence of rare and threatened species and communities
- Produce vegetation mapping
- Accurately describe fauna habitat types
- Confirm the presence of specially protected fauna

This study did not locate any threatened or priority flora species, however, did confirm an area of almost 30 hectares of Threatened Ecological Community (FCT 20a) which is now almost entirely contained within Lot 8001 (refer to Figure 2 and Figure 3).

2.2 Spring Flora and Vegetation Survey, Part Lot 600 Orchid Road, Neerabup (Coffey Environments, 2008)

A survey, additional to the abovementioned surveys, was subsequently conducted to confirm the vegetation types and conditions on the portion of Lot 600 which was excluded from the initial survey. No vegetation or species of conservation significance was found at this location. The vegetation was recorded as in good or degraded condition.

2.3 Ground Truthing of Environmental Values for Lot 4 Flynn Drive, Neerabup (Ecological Australia, 2012)

Ecological Australia was engaged by the City of Wanneroo to confirm the environmental values of its landholdings within the NIA in 2012 (now Lots 8001, 9001, 9003). This report included a verification of vegetation communities, vegetation conditions, a visual dieback assessment and Black Cockatoo habitat potential.

The vegetation descriptions, including the Floristic Community Type 20a, which is a Threatened Ecological Community, were considered largely accurate (Figure 3). Small changes were made relating to species composition where appropriate. In general, vegetation condition remained consistent with previous mapping.

A dieback visual assessment indicated vegetation death may be a result of changes to hydrology and/or declining rainfall rather than dieback, however further sampling and testing was recommended.

The vegetation was confirmed as foraging habitat for Black Cockatoos. An additional 28 potential breeding trees were identified (in addition to the 16 identified in 2007 by ATA Environmental). A further systematic search for potential breeding trees was recommended.

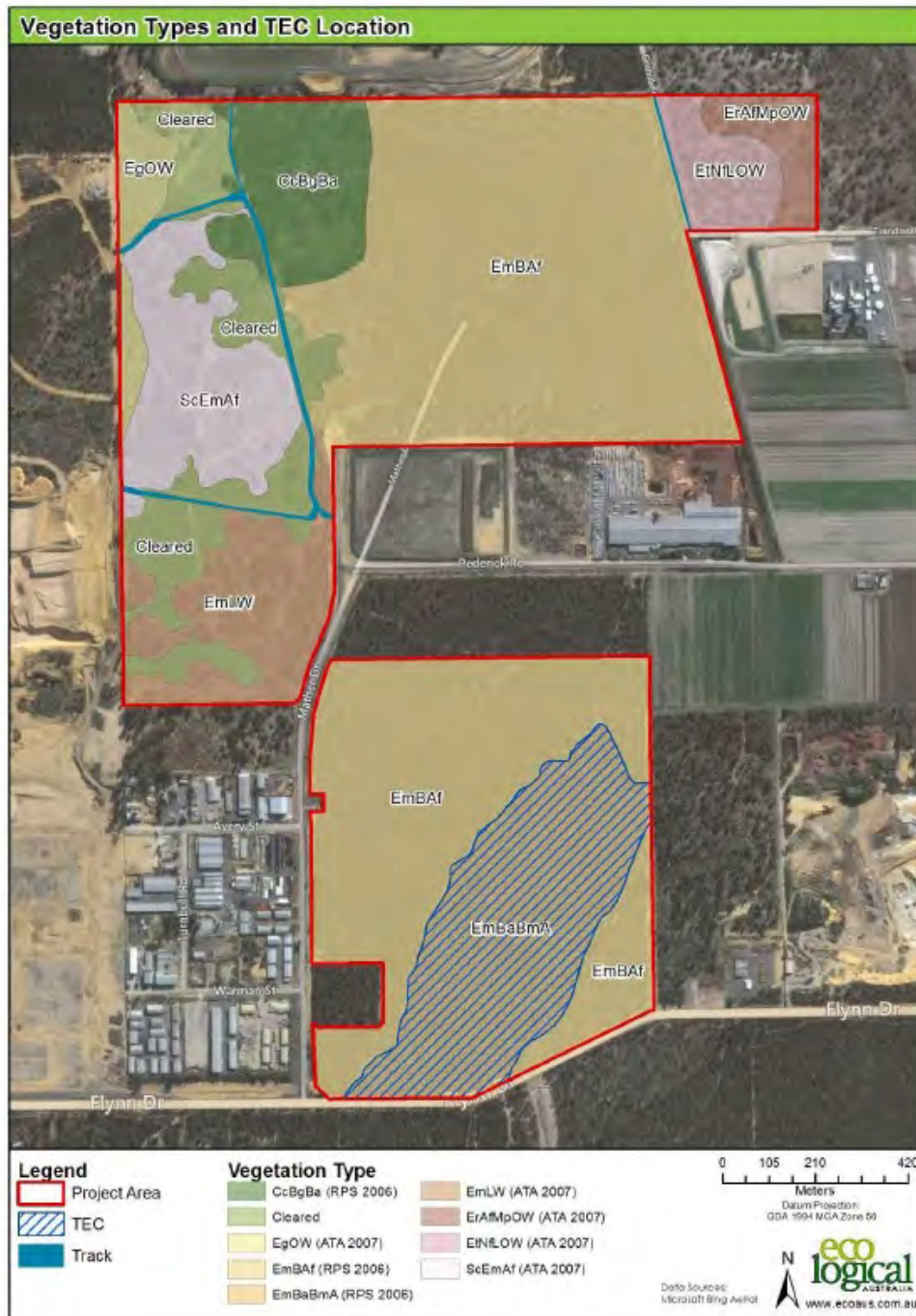


Figure 3 Vegetation Types within City of Wanneroo landholdings

2.4 Level 2 Flora and Vegetation Assessment of Conservation Offset Areas (Terratree, 2016)

This report includes a Level 2 assessment of Lot 8001. The report confirmed the presence of the Threatened *Banksia attenuata* woodlands over species rich dense shrublands which is protected under State and Federal legislation. No Threatened flora were recorded during the survey, however, two priority species were recorded:

- *Acacia benthamii* (Priority 2)
- *Stylidium maritimum* (Priority 3)

The survey assessed Lot 9000 as containing high value foraging habitat for Black Cockatoo species and identified 157 significant habitat trees, with 23 containing potential breeding hollows.

2.5 Mather Reserve Kangaroo Population Survey (Ecoscape 2019)

Lot 8001 Flynn Drive (Mather Reserve) forms part of an offset agreement for the development of the Meridian Business Park (within the NIA). Protection of Mather Reserve included the installation of a perimeter fence, which led to an increase in the population of Western Grey Kangaroos. A subsequent opening in the fence now provides better movement of the species to adjacent natural areas, however, as the NIA develops the availability of these areas to the kangaroos will be reduced until Mather Reserve is an island habitat.

The City recognised the potential impact of increased kangaroo numbers in reducing the other environmental values of Mather Reserve. Accordingly, a subsequent survey was commissioned to identify the carrying capacity of Mather Reserve. The survey recorded 16 Western Grey Kangaroos and one Western Brush Wallaby within Mather Reserve. In the short term, the reserve is considered to be capable of supporting the current kangaroo population. In the medium to long term, kangaroo numbers and vegetation should continue to be monitored to ensure the vegetation is not under unnecessary stress from increased animal numbers.

2.6 Flynn Drive – Lot 9000 Neerabup, Fauna Survey (Animal Pest Management Services, 2016)

This report was produced to provide a base level of fauna information for Lot 8001 Flynn Drive, Neerabup. The results of the survey indicate the presence of kangaroo, foxes and bandicoots. The report recommended the control of foxes at the site.

2.7 Comprehensive Phytophthora Dieback Assessment of Conservation and Development Areas-Neerabup Project (Terratree, 2016)

Terratree were engaged to conduct a comprehensive dieback survey for the City of Wanneroo undeveloped landholdings and conservation offset areas associated with the NIA. The objective of this report is to manage spread of the disease during development and prevent spread into conservation areas.

Some of the areas included in the area were categorised as not yet resolved due to unfavourable soil temperatures, however, a follow-up visit indicates that dieback is not currently present within the City of Wanneroo landholdings or conservation areas.

Rubbish dumping, which can act as a disease vector was noted at the site. This is a risk to the introduction of disease and should be managed.

2.8 Black Cockatoo Habitat Survey (Terrestrial Ecosystems, 2018)

A Black Cockatoo habitat survey was completed for the City of Wanneroo landholdings and offset site within the NIA in 2018 by Terrestrial Ecosystems. The report identified 28 trees containing hollows that may be suitable for Black Cockatoos within the NIA and Mather Reserve. However, Terrestrial Ecosystems recommended the installation of Cockatubes in bushland reserves as a preference to salvaging these trees. This is due to a number of considerations, including:

- Often selected by Cockatoos as a preference
- Cheaper to erect
- Often last longer than salvaged hollows.

It is also recommended that Cockatubes be installed at known breeding sites rather than within the NIA as this is more likely to improve breeding success.

The recommendations of this report also include targeted feral animal control. A control program should target foxes, cats and rabbits.

2.9 Weed Mapping Report, Lot 9000 Flynn Drive (Natural Area Consulting, 2017)

Natural Area Consulting Management Services was engaged by the City of Wanneroo to undertake targeted weed mapping of Lot 80 Flynn Drive in 2017. This area has largely become Mather Reserve (Lot 8001). The report mapped the four target weed species, provided a weed treatment program for targeted species and described presence of low priority weeds (with no mapping). It is important to undertake weed control in the area to protect the conservation values of Mather Reserve.

2.10 Memorandum: Neerabup Industrial Area – Environmental Input to City of Wanneroo Review of NIA ASP17 (Ecological Australia, 2019)

Ecological Australia provided a review of the environmental inputs relating to the development of Lot 503 Flynn Drive, which is owned by DevelopmentWA. A number of flora, vegetation and fauna surveys have been undertaken historically for this site to support development.

Vegetation contained within Lot 503 is broadly described as Banksia dominated woodlands and Jarrah (*Eucalyptus marginata*) dominated woodlands. The Limestone Ridges Threatened Ecological Community (TEC) was also previously mapped in the area. Vegetation condition ranged from Completely Degraded to Excellent. The area was also considered to provide habitat for Carnaby's Cockatoo (*Calyptrorhynchus latirostris*), listed as Endangered under the EPBC Act.

Previous negotiations relating to environmental approvals, earmarked an area in the northwest corner of the site as a potential offset, and it was shown in ASP17 as a 'proposed conservation area'. There is no formal protection of this area, however, DevelopmentWA has no current plans for its development. Further environmental and clearing of native vegetation approvals will require further flora surveys.

3. Environmental Assessment

3.1 Vegetation

Native vegetation covers approximately 600 hectares of the area identified for industrial development within the NIA. Native vegetation is an important part of local biodiversity including providing food, shelter and habitat to native fauna and microorganisms.

3.1.1 Vegetation complexes

The City of Wanneroo is located on the Swan Coastal Plain, which comprises fifteen vegetation complexes as mapped by Hedde *et al* in 1980. Of these 15 vegetation complexes, two are mapped within the NIA:

- Cottesloe Complex-Central and South
- Karrakatta Complex-Central and South

The State Government acknowledges that 30 percent representation of the original pre-European extent of each vegetation type is regarded as the threshold level below which species loss appears to accelerate exponentially at an ecosystem level, and 10 percent representation of the original extent of each vegetation type is regarded as the level representing 'endangered' (WAPC, 2011).

The City's Local Biodiversity Plan 2018/19-2023/24 (LBP) identifies that the Cottesloe Complex-Central and South vegetation currently remains within the City at 32.4 percent of the original pre-European extent across the City, with 17.5 percent considered to be protected. This vegetation is a medium priority for increased protection.

The City's LBP identifies that the Karrakatta Complex-Central and South currently remains within the City at 10.9 percent of the original pre-European extent across the City, with 5.6 percent considered to be protected. This vegetation complex is a critical priority for increased protection.

The LBP identifies goals for increased protection of vegetation complexes remaining within the City, including:

“Protect all Critical and High-Critical vegetation complexes remaining within the City of Wanneroo as far as reasonably practicable”

Local Natural Areas within the NIA are not included as part of the City's priority for protection, however, where increased protection is possible, should be supported. The protection of Mather Reserve will contribute to the achievement of the City's biodiversity protection goals.

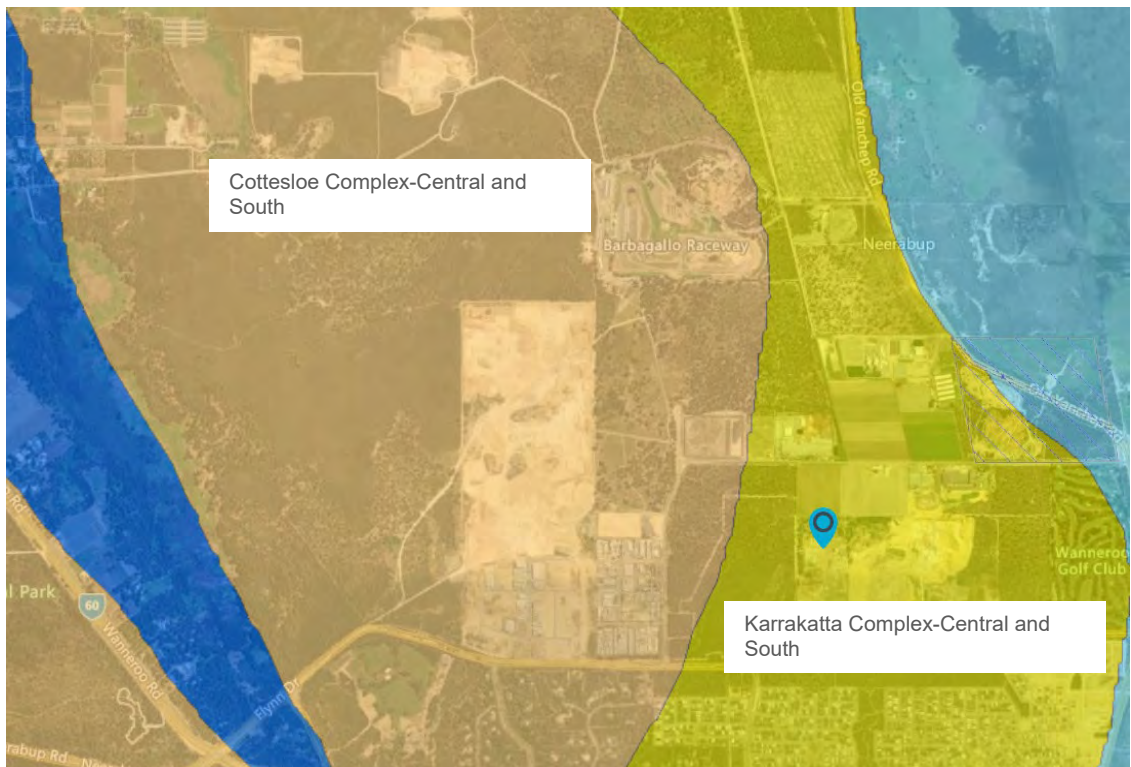


Figure 4 Vegetation complexes (DBCA-046)

3.1.2 Approved clearing of native vegetation

As shown in Figure 5, two clearing permits within the NIA have been issued by the Department of Water and Environmental Regulation:

- 2515/2
- 6359/1

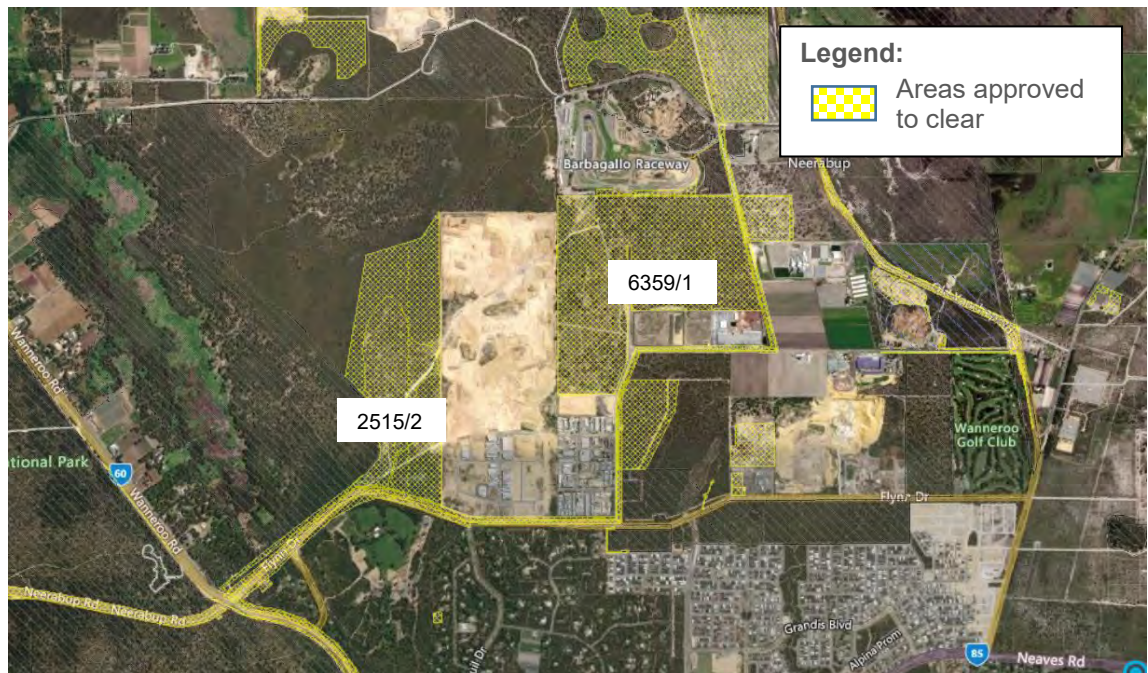


Figure 5 Clearing Instruments Activities (Areas Approved to Clear) (DWER-076)

DWER records indicate that other permits to clear native vegetation have been applied for, however have either been refused or withdrawn. One area (Mather Reserve) within the NIA (encompassing 50 hectares) is included as an offset to obtain a clearing permit and its retention and management is required in perpetuity (Figure 6). There is an additional site adjacent to the northern boundary of the NIA that is also protected as part of clearing permit conditions (Figure 6).



Figure 6 Clearing Instruments Conditions (Areas subject to Conditions) (DWER-075)

The clearing of native vegetation outside of the permitted areas will require further approval as resources are extracted and/or the NIA is developed for industrial purposes. Further studies will be required to support this development to confirm the vegetation types and presence of rare and threatened species. The protection of additional conservations areas may be required to obtain further approvals. The structure plan should be updated to reflect current conservation areas and any additional areas if/as they are required.

3.1.3 Bush Forever

Bush Forever sites were originally identified by the Government of Western Australia in 2000. These sites are a key component of the environmental infrastructure within the Perth Metropolitan Area and are a key element in moving towards achieving an ecologically sustainable city. Bush Forever sites 295 and 293 are located within the NIA with additional Bush Forever sites adjacent (Figure 7).

State Planning Policy 2.8: Bushland Policy for the Perth Metropolitan Region provides policy measures relating to areas identified as Bush Forever. Regionally significant vegetation should be protected where possible when balancing requirements for resource extraction and release of industrial land.

Bush Forever sites are classified as Environmentally Sensitive Areas under Regulation 5 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* and therefore there

are no exemptions to clearing permits requirements. Clearing permits should be obtained prior to removal of vegetation in Bush Forever Areas.

Retention and protection of the Bush Forever sites (or alternative regionally significant vegetation) should be considered as part of the ongoing planning and development for the NIA. Part of Bush Forever Site 295 within the NIA is protected through the conditions of clearing instrument 6359/1. The reservation of this area (now Mather Reserve) should be updated as part of the structure planning process and any subsequent amendment to the local planning scheme (currently zoned Industrial under the Metropolitan Region Scheme and Industrial development under District Planning Scheme No.2).

Bush Forever Site 295 also includes Lot 902. The retention and protection Lot 800 was negotiated as part of previous subdivision approvals. Further protection and reservation of this site is part of an ongoing negotiated planning solution between the owner and the WAPC. Updates should be reflected through the planning process where possible and may ultimately require an amendment to the local planning scheme, however, as negotiations have not concluded, it is unlikely that it will form part of the review of ASP 17.

The portion of Bush Forever Site 293 located in the northwest corner of the NIA on Lot 502, is owned by WAPC. Given the Bush Forever status of this lot, it should be reserved as part of the structure planning process and any subsequent amendment to the local planning scheme (currently zoned Industrial under the Metropolitan Region Scheme and Industrial Development under District Planning Scheme No.2). The ongoing management of this lot should also be determined.

3.1.4 Threatened species habitat

The vegetation within the NIA is known to contain foraging habitat for the Carnaby's and Forest Red-tailed Black Cockatoos (Terrestrial Ecosystems, 2018 and Ecological Australia, 2019). Both species are protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Biodiversity Conservation Act 2016* (BC Act). The City's Conservation Area Management Plan also suggests there are trees with the potential to provide breeding habitat for the Black Cockatoos due to the presence of hollows.

Bush Forever Site 295 is also known to contain habitat for the rare bee *Hyalaeus globuliferus* (ASP 17, Part 2).

3.1.5 Threatened and priority ecological communities

The vegetation within the NIA is known to contain areas of Banksia Woodlands of the Swan Coastal Plain which is listed as endangered under the EPBC Act. This includes an area retained for conservation as part of the clearing permit approval 6359/2 which is also largely identified as Threatened Ecological Community (TEC) 20a under the BC Act. A survey conducted by ATA Environmental in 2007 within the City of Wanneroo owned portion of the NIA also identified Floristic Community Types 21c and 24. These floristic community types have been classified as Priority 3 under the BC Act.

Lot 503 Flynn Drive has also previously been mapped as containing areas of TEC. This and other sites to be developed as part of the NIA, where clearing permits are yet to be issued are likely to be required to confirm the presence or absence of threatened and priority ecological communities prior to obtaining approval to clear native vegetation.

3.1.6 Flora

A search of the DBCA NatureMap database indicates the presence of 84 plant species within the NIA (including native and invasive species). The search indicated the following conservation significant flora species within the NIA:

- Two threatened species:
 - *Eucalyptus argutifolia* (listed as Vulnerable under EPBC Act and BC Act)
 - *Melaleuca sp.* Wanneroo (listed as Endangered under the BC Act)
- Three priority species:
 - *Stylidium maritimum* (Priority 3)
 - *Jacksonia sericea* (Priority 4)
 - *Templetonia retusa* (Priority 4)

These species have not been located as part of the flora surveys conducted within the City of Wanneroo owned land parcels within the NIA. These species may be present within other areas of the NIA; this should be investigated as part of ongoing environmental and development approvals.

The NatureMap Species Report and Map are provided in Appendix A (NatureMap, October 2019).

3.2 Fauna

A search of the DBCA NatureMap suggests there are 78 fauna species in the NIA (including native and non-native species).

A survey conducted by ATA Environmental in 2007 confirmed the presence of:

- 25 vertebrate fauna species through trapping, including:
 - 20 reptiles species
 - 3 amphibious species, and
 - 2 mammal species.
- 42 bird species through direct observation
- Other species such as feral cats, foxes, Western Grey Kangaroos and bats through observation and/or scats and tracks or audio recordings.

The ATA Survey information only relates to the City of Wanneroo managed land parcels but, due to the mobile nature of fauna species, can be assumed to be indicative of the entire NIA.

The Black Cockatoo Habitat Survey conducted by Terrestrial Ecosystems in 2018 indicates the presence of Quenda within the NIA.

The presence of the rare bee species *Hylaeus globuliferus* is confirmed by the NatureMap search results. Habitat for *Hylaeus globuliferus* has been protected within Mather Reserve.

The NatureMap Species Report and Map are provided in Appendix A (NatureMap, October 2019).

3.2.1.1 Conservation significant fauna

As mentioned in Section 3.1.4, Carnaby's and Forest Red-tailed Black Cockatoos are known to forage within the NIA. The Carnaby's Black Cockatoo is listed as endangered under both the Federal EPBC Act and the State BC Act. The Forest Red-tailed Black Cockatoo is listed as vulnerable under both the Federal EPBC Act and the State BC Act. These cockatoo species are dependent on vegetation on the Swan Coastal Plain and reduced habitat is a significant threat that requires management across the Perth Metropolitan Region.

Also known to the site is the Peregrine Falcon which listed as other specially protected fauna under the BC Act. This species while uncommon, is widespread across Australia and clearing within the NIA is unlikely to significantly impact this species (ATA, 2007).

A small population of the Southwestern Brown Bandicoot (Quenda) is known to occur in the NIA. This species is listed as a Priority 4 species under the BC Act as it is considered to be near threatened (having been adequately surveyed and being close to qualifying for vulnerable but not listed as Conservation Dependent).

A search of the DBCA NatureMap also indicates the presence of the Western Brush Wallaby (Priority 4) and Graceful Sun Moth (Priority 4). The presence of the Western Brush Wallaby is confirmed by the Mather Reserve Kangaroo Population Survey undertaken in 2018. The 2007 Flora and Fauna survey suggests that direction from the State Government on the potential presence of the Western Brush Possum be sought from the State Government (ATA, 2007).

The City of Wanneroo has in the past conducted surveys to confirm the presence of the Graceful Sun Moth. Surveys conducted did not locate this species within the NIA. It has also been delisted from the EPBC Act following extensive surveys across the southwest of WA and increases in known populations. It remains as a Priority 4 species and is considered to be near threatened. Impacts on this species should continue to be considered as part of the environmental and development approvals process.

Part 2 of ASP 17 indicates the presence of the native bee *Hylaeus globuliferus*, and its presence is also indicated by the NatureMap search results. *Hylaeus globuliferus* is a Priority 3

species. Priority 3 species are not considered to be under imminent threat, however, are in need of further survey.

Development of the NIA will result in loss of habitat for all conservation significant species. Removal of Black Cockatoo habitat is likely to require assessment and approval under the EPBC Act and can be managed through that process. Removal of habitat for the remaining species is unlikely to trigger environmental approval requirements, although species categorisation may change before the entire NIA is developed.

3.3 Pests and diseases

3.3.1.1 Weeds

Twenty two weed species were identified in Mather Reserve in 2018 as part of the Level 2 Flora and Vegetation Assessment conducted by Terratree, representing 15.5% of total floristic diversity. Commonly represented were species of the Asteraceae, Fabaceae and Poaceae families.

No Weeds of National Significance were identified within the survey area. However, **Watsonia meriana var. bulbifera* has been nominated for inclusion, and therefore may be listed in the future.

No Declared Pests for the City of Wanneroo local government area, in accordance with the BAM Act 2007, were identified within the survey area (Terratree, 2018).

Weed species occurred at low densities throughout the majority of Lot 9000, generally consisting of nonaggressive species such as **Briza maxima* and **Gladiolus caryophyllaceus*. The aggressive weed species **Arctotheca calendula* (Cape Weed) was observed to be emerging from introduced soil dumps, but was not considered by Terratree to have spread beyond these areas. **Leptospermum laevigatum* (Victorian Tea Tree) was not observed within the survey area, but occurs in roadside vegetation adjacent to the survey area.

3.3.1.2 Feral animals

A number of introduced feral animals are known to occur within the NIA, including:

- Mice
- Cats
- Foxes
- Rabbits

(NatureMap search, Department of Biodiversity, Conservation and Attractions, October 2019).

Feral animals can compete with and/or predate upon native animals. To ensure the success of conservation areas within the NIA, it will be important to manage the presence of feral animals.

3.3.1.3 Dieback

The City of Wanneroo landholdings have been categorised as uninfested by *Phytophthora* Dieback disease (Terraree, 2017). Given the presence of Excellent condition vegetation, TECs and Black Cockatoo foraging habitat protected in a conservation reserve, it is important to ensure that dieback is not introduced to the area.

The presence of dieback in the remaining NIA is unknown.

Canker infestation was also found within the Neerabup conservation area. This in combination with prolonged drought is a threat to the conservation area.

3.4 Wetlands

There are two wetlands mapped within the vicinity of the NIA, Lake Neerabup and Lake Pinjar. Wetlands on the Swan Coastal Plain are classified as either conservation category, resource enhancement or multiple use (Figure 8).

Lake Neerabup is classified as Resource Enhancement. Lake Pinjar is classified as both Conservation Category and Multiple Use. State Planning Policy 2.9: Water Resources (SPP 2.9) includes policy measures to protect the environmental attributes, functions and values of conservation category wetlands and manage, conserve and where possible restore ecological function of resource enhancement wetlands.

The nearby wetlands are largely protected within the Parks and Recreation reservation under the Metropolitan Region Scheme, however, it is important that development within the NIA is managed to ensure there are no impacts on these wetlands (guided by SPP 2.9). This is done through the preparation of a Local Water Management Strategy (to be developed as part of the structure planning) and subsequent Urban Water Management Plans (prepared through the subdivision and development approvals process).

This is especially important to Lake Neerabup, which is maintained by groundwater flow and will be sensitive receptor to works effecting groundwater infiltration in the vicinity of the NIA (Strategen 2008).



Figure 8 Geomorphic wetland classifications

3.5 Hydrology and hydrogeology

3.5.1 Surface water

The NIA is located within the Swan Avon, Lower Swan Catchment within the Swan Coastal river basin. However, due to the high transmissivity of the soils there are no defined surface water drainage features.

3.5.2 Groundwater

The NIA is located within the Gnangara Groundwater System, and locally within the Wanneroo groundwater subarea.

Groundwater within the area is managed in accordance with the *Gnangara groundwater areas allocation plan* (DoW 2009a). The plan is currently being revised including setting of new aquifer allocation limits to ensure sustainable groundwater supply and management of environmental values, however, current allocation limits have been reached for all groundwater sources in the Neerabup area.

The availability of water should be considered if industries are proposing to utilise groundwater as part of proposed activities, however, the provision of groundwater licences and water trading is managed by the Department of Water.

Groundwater levels and flow

The predominant regional groundwater flow direction is generally considered to be westerly beneath the NIA.

The proposed change in land use, including removal of vegetation and development of industrial land, is predicted to result in localised increase in groundwater recharge, and potential groundwater level rise (Peritas 2018).

Groundwater quality

Local groundwater investigations have identified elevated concentrations of contaminants in the vicinity of the NIA. These include the leachate plume associated with the former landfill site to the north-east of the NIA. Coffey Environments Australia completed a groundwater delineation investigation of the former Pinjar Landfill site (Coffey 2016), the results of which indicated elevated nutrients and metals beneath the former landfill site, however a significant decline in down-gradient bores towards the NIA boundary (Section 3.8).

Significantly elevated nitrate concentrations have also been reported in the Lake Neerabup area (maximum nitrate concentration of 280 mg/L), which have been attributed to the intensive irrigated horticultural area along the western boundary of the wetland (Yesertener 2010).

It is considered that in parts of the NIA the change in land use from horticulture to industrial, business and service has the potential to reduce leaching of nutrients and other agricultural chemicals (e.g. herbicides and pesticides) to groundwater and water dependent ecosystems.

3.6 Caves and Karsts

The City is known to contain significant cave and karstic features, with the most well-known being located in Yanchep National Park. The area associated with Lake Neerabup is mapped as high risk of karst, and there is a medium risk that spreads from Lake Neerabup into western parts of the NIA (Figure 9). The remainder of the NIA is considered to be low risk (Local Planning Policy 4.13: Caves and Karstic Features, City of Wanneroo)

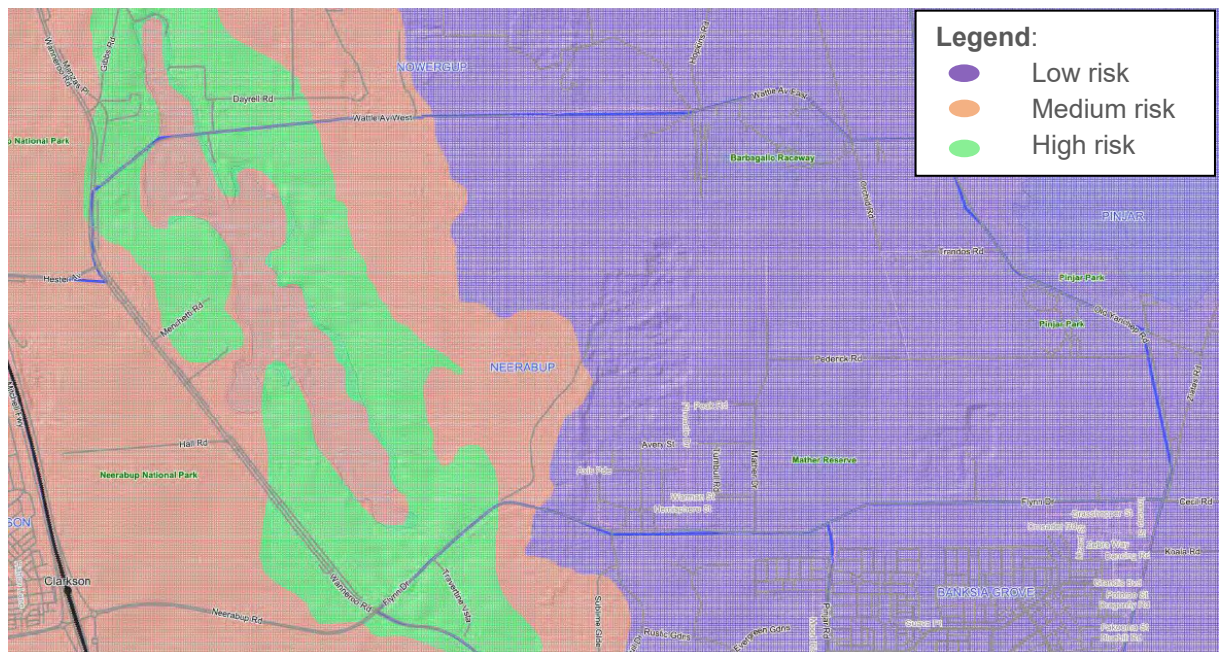


Figure 9 Cave and karst risk, City of Wanneroo

During investigations for a mining licence application at Lot 503 Flynn Drive, the Peritas Civil Pty Ltd (Peritas 2018) identified no signs of karstic features in existing excavations undertaken in the limestone quarry (owned by WA Limestone to the east in Lot 9005). The investigation also noted there was no evidence of karst features in the limestone exposed on the faces of the existing quarry (in Lot 9005).

Groundwater dependent ecosystems (GDE) are often associated with karstic environments as aquatic and terrestrial ecosystems can form from subterranean cave systems. There are no aquatic GDE's in the NIA with the closest being Lake Pinjar to the north east and Neerabup Lake to the west.

The policy provisions 2.5 and 2.6 of the City of Wanneroo's Local Planning Policy 4.13: Caves and Karstic Features (LPP 4.13) state respectively: *"Where there are two or more different karst risk levels across a subject site, the highest risk level will apply."* and *"Where a property is located within 400 metres of a higher karst risk level, the higher risk level will be used when determining the requirements for karst assessment."*

Table 1 in LPP 4.13 details the requirements of each phase of planning (Local Structure Plan, Subdivision and Development Application) depending on the karstic risk of the area. During the local structure planning stage it is stated a "Desktop Karst Survey" shall be prepared. The outcomes of this desktop assessment will determine whether a "Geotechnical Report" and/or "Karstic Features Management Plan" is required as a condition of subdivision (COW LPP 4.13).

Schedule 1 in the LPP 4.13 outlines the minimum requirements of Desktop Karst Surveys, Geotechnical Reports and Karstic Feature Management Plans which may be required prior to development application.

Based on the location of the NIA in relation to the karst risk zones (low to medium risk, east to west) further investigation should be considered prior to subdivision in the western section of the NIA. If Provision 2.5 of the LPP 4.13 is to be followed, the entire NIA should be considered for further investigation. Initial geotechnical investigations should be considered prior to a geophysical survey once surface material has been removed. A ground penetrating radar (GPR) assessment should be considered following the removal of surface material to maximise its effectiveness due to the limitations associated with GPR and the depth of potential karsts.

The structure plan should specify the requirements relating to karst investigation and when more detailed investigations are required. A review of the LPP 4.13 may also be beneficial in improving clarity and future application of the policy.

3.7 Acid Sulfate Soils

Department of Water and Environmental and Regulation (DWER) Acid Sulphate Soil (ASS) risk mapping indicates no known risk of ASS within the NIA. The soils of Lake Neerabup and Lake Pinjar, located to the west and north-east respectively, are classified as a high to moderate risk of ASS.

3.8 Contaminated Sites

A search of the DWER Contaminated Sites Database identifies the former landfill site located at 1851 Old Yanchep Road (Lots 501 and Lot 502), Pinjar, is classified as *Contaminated – restricted use*.



Figure 10 Contaminated sites within the NIA (Contaminated Sites Database, DWER)

The Basic Summary of Records Search Response for the site notes the following:

The groundwater impact is present as a leachate plume that extends at least 60m west off-site and 270m south-west off-site beneath 100 Pederick Road, Neerabup, which has been classified separately under the Act.

With respect to the former landfill site the NIA ASP 17 (TBB *et al.* 2017) identifies the following:

There is an abandoned putrescible landfill site located immediately east of Pinjar Road below which a plume of leachate is spreading west towards the NIA (City of Wanneroo, pers. comm.). The landfill was previously operated by the City of Wanneroo and has been closed since the mid-eighties. Sampling of groundwater quality has been undertaken, and it is estimated that the leachate plume may extend as far west as Orchid Road (City of Wanneroo, pers. comm.). The presence of the plume should not prevent most industries from operating within the NIA, as the estate should be serviced with reticulated water, however it does present an issue of future liability for the future industries. This liability will need to be fully disclosed between the industries, landowners/developers and the City of Wanneroo.

A groundwater delineation investigation was conducted by Coffey Environments Australia for the City of Wanneroo at the former Pinjar Landfill site (Coffey 2016). Results indicated heavy metals and nutrients present within the groundwater beneath the former landfill site and to the western boundary of the site where present in elevated concentrations. Monitoring locations down gradient of the source presented a half order decrease in the magnitude of the measurable concentrations of nutrients. Given the down gradient concentrations, Coffey stated that it would be unlikely that the nutrient rich water would extend beyond sample locations that are located down gradient (Coffey 2016).

It is unclear from the investigation whether the heavy metals found to be present are attenuated and also decrease in concentration.

The ASP 17 notes that land identified as being affected by the Pinjar Tip Site shall have conditions imposed on any development approval, and recommended on any subdivision application to ensure prospective purchasers of land or development are appropriately informed of the potential impacts of the plume.

It is important the prospective purchasers are informed of the plume and this requirement should continue. When assessing development proposals, the assessment should consider the contamination on a case-by-case basis to determine appropriate conditions. For example, consideration of the leachate plume would be important if groundwater affected by the plume is proposed to be used as part of any industrial development.

4. Environmental Management

Following analysis of the existing available environmental reports and data, it is recognised that it is important to manage the ongoing impact to the environment from the industrial development.

4.1 Flora and Vegetation Management

The NIA is known to contain large areas of conservation significant vegetation. The City of Wanneroo has comprehensively assessed these values within its own landholdings and agreed offset, management and rehabilitation measures that will allow development to proceed (in the areas included within clearing instrument 6359/1).

The City of Wanneroo is unlikely to require further flora and vegetation studies to proceed with development on its landholdings (where development is permitted). The City should ensure that DPS2 is updated to reflect Mather Reserve as a local reserve for conservation.

It is also important that the City manage development within the NIA to minimise impact on the conservation values of Mather Reserve and any other conservation reserves created as development proceeds. It is also important that if dieback is suspected, it is not spread outside the area. Measures could include:

- Development/subdivision conditions requiring:
 - Dieback management plans (to assess the likelihood that dieback is present in the development area, limit spread of disease and reduce likelihood of introduction). Exact requirements such as utilisation of clean materials, vehicle containment and hygiene practices should be included in the plan and can be adjusted depending on the likelihood that dieback is present and the objective of the management plan (protection of existing vegetation/limiting the spread of disease within and outside the NIA).
 - Fauna management plans (to determine how impacts on fauna will be managed prior to clearing)
 - Dust management (to limit spread of disease)
 - Weed control following earthworks and construction activities to limit the spread of weeds into conservation areas
 - Construction management plan (which may include elements from above)
 - Landscaping plans (require species that occur in the reserve and/or will not introduce weeds)
- Ongoing management of Mather Reserve to address:
 - Rubbish dumping
 - Weed control
 - Feral and pest animal control
 - Fire management
 - Fencing
 - (if required) Revegetation/rehabilitation
- Ongoing monitoring of Mather Reserve, to ensure vegetation condition and composition is maintained

Other landholdings where the vegetation is less well known and/or clearing permits are yet to be obtained, will require up to date flora and vegetation surveys (likely to be Level 2 flora surveys required) to confirm the presence of flora species and describe the vegetation, prior to subdivision and/or development. This information will be used to support environmental approvals and ongoing development. Ongoing updates to the structure plan should reflect any additional conservation areas.

Weed management on road verges may be required to prevent encroachment into Mather Reserve and will be required if species of Weeds of National Significance are identified.

4.2 Fauna Management

There are a number of fauna species known to occur within the NIA. These species will utilise natural areas and the habitat they provide until development occurs. Level 2 Fauna Surveys are likely to be required to obtain environmental approvals to develop the area for industrial use. When development occurs, it is important that clearing occurs in a sensitive manner in accordance with LPP 3.3.

Species such as the Black Cockatoos that currently utilise the NIA for foraging are also known to use roadside trees as food sources. A requirement for landscaping plans that utilise species known to be used by the Black Cockatoos could be considered to help support these birds. To obtain environmental approvals, it may also be appropriate to require Cockatube installations in known breeding sites nearby to counter the loss of hollow bearing trees within the NIA and it is likely that this will form part of ongoing assessment to obtain environmental approvals.

Mather Reserve is known to contain Western Grey Kangaroos, Quenda and Western Brush Wallaby's. As the reserve becomes more isolated, management plans specifically developed to support these species will be required. Management plans should be developed in accordance with LPP 3.3 and as a condition of development approval or subdivision. Management plans should consider containment, options for trapping and relocation, population control and staged/directional clearing (for smaller fauna only) (City of Wanneroo, 2018). Opportunities to relocate populations will be dependent on finding suitable relocation sites – the City may wish to consider which, if any, of its own conservation reserves may be suitable and what other actions may be required to make potential relocations successful, such as pest animal control.

To protect native species within the NIA, especially as it develops and conservation areas become important fauna refuges, it will be important to control feral animals to decrease predation and competition for diminishing resources. This should form part of the management strategies in Vegetation and Fauna Management Plans required as part of development and subdivision approvals (in accordance with LPP 3.3).

Management plans should also include monitoring requirements.

Ongoing negotiations for the remaining area of Bush Forever site 295 should consider *Hylaeus globuliferus* and whether the habitat protected within Mather Reserve is adequate for the ongoing persistence of this species.

4.3 Wetland Management

Wetlands are located to the north east and west of the NIA. It is important that industrial development be managed to ensure the impacts of development do not reduce the environmental values and functions of these wetlands.

This can be managed through the development of a Local Water Management Strategy as part of the revised Local Structure Plan and through the development of Urban Water Management Plans as a condition of subdivision. Nutrient Irrigation Management Plans may also be

beneficial depending on the type of industry proposed and should be considered on a case-by-case basis.

4.4 Groundwater

Groundwater within the area is managed in accordance with the *Gnangara groundwater areas allocation plan* (DoW 2009a). The availability of water should be considered as part of the assessment of development proposals that propose the utilisation of groundwater. The allocation of groundwater, licensing and water trading is managed by the Department of Water, affected development proposals may therefore need to be referred for agency comment or a note added to the approval advising of requirements.

4.5 Caves and Karst

The revised structure plan should detail the requirements relating to karst investigation. This will ensure consistent consideration of LPP 4.13, not unduly burden development and protect development from karst risk.

4.6 Contaminated Sites

There is known contamination at the former landfill site located at Lot 501 and 502 Old Yanchep Road, Pinjar, which affects part of the NIA. It is important that this is considered in the assessment of impacted development proposals. This is especially important where affected groundwater is proposed to be utilised as part of industrial development. Industries that use significant volumes of water include metal, paper and plastics processing, such as recycling.

5. References

ATA Environmental (2007) Flora, Vegetation and Vertebrate Fauna Assessment Lot 4, Part of Lots 1002 and 2692, Neerabup, prepared for the City of Wanneroo and Landcorp

Stratagen (2008), Lot 22 Flynn Drive, Neerabup Drainage, Nutrient and Water Management Plan

Coffey Environments (2008) Spring Flora and Vegetation Survey, Part Lot 600 Orchid Road, Neerabup, prepared for the City of Wanneroo

Ecological Australia (2012) Ground Truthing of Environmental Values for Lot 4 Flynn Drive, Neerabup prepared for the City of Wanneroo

Terratree (2016) Level 2 Flora and Vegetation Assessment of Conservation Offset Areas prepared for the City of Wanneroo

Ecoscape (2019) Mather Reserve Kangaroo Population Survey (2019) prepared for the City of Wanneroo

Animal Pest Management Services (2016) Flynn Drive – Lot 9000 Neerabup, Fauna Survey prepared for the City of Wanneroo

Terratree (2016) Comprehensive Phytophthora Dieback Assessment of Conservation and Development Areas-Neerabup Project prepared for the City of Wanneroo

Terrestrial Ecosystems (2018) Black Cockatoo Habitat Survey prepared for the City of Wanneroo

Natural Area Consulting (2017) Weed Mapping Report, Lot 9000 Flynn Drive prepared for the City of Wanneroo

Ecological Australia (2019) Memorandum: Neerabup Industrial Area – Environmental Input to City of Wanneroo Review of NIA ASP17 prepared for the City of Wanneroo

City of Wanneroo (2018) Environmental Management Plan Guidelines

360 Environmental (2018) Local Biodiversity Plan prepared for the City of Wanneroo

City of Wanneroo (2018) Local Planning Policy 3.3: Fauna Management

City of Wanneroo (2018) Local Planning Policy 4.13: Caves and Karstic Features

Appendices

Appendix A - NatureMap Species Report and Map

NatureMap Species Report

Created By Guest user on 30/10/2019

Current Names Only Yes

Core Datasets Only Yes

Method 'By Circle'

Centre 115° 46' 57" E, 31° 40' 19" S

Buffer 3km

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1.	3409 <i>Acacia lasiocarpa</i> (Panjang)			
2.	30032 <i>Acacia saligna</i> subsp. <i>saligna</i>			
3.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
4.	24560 <i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
5.	24282 <i>Accipiter fasciatus</i> subsp. <i>fasciatus</i> (Brown Goshawk)			
6.	184 <i>Aira caryophylla</i> (Silvery Hairgrass)	Y		
7.	1728 <i>Allocasuarina fraseriana</i> (Sheoak, Kondil)			
8.	6311 <i>Andersonia heterophylla</i>			
9.	24561 <i>Anthochaera carunculata</i> (Red Wattlebird)			
10.	24562 <i>Anthochaera lunulata</i> (Western Little Wattlebird)			
11.	6331 <i>Astroloma microcalyx</i> (Native Cranberry)			
12.	<i>Austracantha minax</i>			
13.	231 <i>Avellinia michelii</i>	Y		
14.	<i>Barnardius zonarius</i>			
15.	7046 <i>Bellardia trixago</i> (Bellardia)	Y		
16.	3710 <i>Bossiaea eriocarpa</i> (Common Brown Pea)			
17.	42381 <i>Brachyurophis semifasciatus</i> (Southern Shovel-nosed Snake)			
18.	244 <i>Briza maxima</i> (Blowfly Grass)	Y		
19.	25715 <i>Cacatua roseicapilla</i> (Galah)			
20.	24727 <i>Cacatua sanguinea</i> subsp. <i>westralensis</i> (Little Corella)			
21.	11038 <i>Caladenia bicalliata</i>			
22.	1595 <i>Caladenia hirta</i> (Sugar Candy Orchid)			
23.	24734 <i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)		T	
24.	2957 <i>Cassytha racemosa</i> (Dodder Laurel)			
25.	2889 <i>Cerastium glomeratum</i> (Mouse Ear Chickweed)	Y		
26.	24980 <i>Christinus marmoratus</i> (Marbled Gecko)			
27.	25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
28.	24613 <i>Colluricincla harmonica</i> subsp. <i>rufiventris</i> (Grey Shrike-thrush)			
29.	4552 <i>Comesperma confertum</i>			
30.	1885 <i>Conospermum triplinervium</i> (Tree Smokebush)			
31.	1418 <i>Conostylis aculeata</i> (Prickly Conostylis)			
32.	11826 <i>Conostylis aculeata</i> subsp. <i>aculeata</i>			
33.	25568 <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
34.	25592 <i>Corvus coronoides</i> (Australian Raven)			
35.	24417 <i>Corvus coronoides</i> subsp. <i>perplexus</i> (Australian Raven)			
36.	17104 <i>Corymbia calophylla</i> (Marri)			
37.	25595 <i>Cracticus tibicen</i> (Australian Magpie)			
38.	24422 <i>Cracticus tibicen</i> subsp. <i>dorsalis</i> (White-backed Magpie)			
39.	25596 <i>Cracticus torquatus</i> (Grey Butcherbird)			
40.	24424 <i>Cracticus torquatus</i> subsp. <i>torquatus</i> (Grey Butcherbird)			
41.	24918 <i>Crenadactylus ocellatus</i> subsp. <i>ocellatus</i> (Clawless Gecko)			
42.	30893 <i>Cryptoblepharus buchananii</i>			
43.	30899 <i>Ctenophorus adelaidensis</i> (Southern Heath Dragon, Western Heath Dragon)			
44.	25027 <i>Ctenotus australis</i>			
45.	25039 <i>Ctenotus fallens</i>			
46.	10916 <i>Cyrtostylis huegelii</i>			
47.	30901 <i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
48.	6218 <i>Daucus glochidiatus</i> (Australian Carrot)			
49.	24999 <i>Delma grayii</i>			
50.	25296 <i>Demansia psammophis</i> subsp. <i>reticulata</i> (Yellow-faced Whipsnake)			
51.	4746 <i>Diplopeltis huegelii</i>			
52.	3095 <i>Drosera erythrorhiza</i> (Red Ink Sundew)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
53.	3118 <i>Drosera pallida</i> (Pale Rainbow)			
54.	<i>Eolophus roseicapillus</i>			
55.	1646 <i>Eriochilus dilatatus</i> (White Bunny Orchid)			
56.	13091 <i>Eucalyptus argutifolia</i> (Wabling Hill Mallee)		T	
57.	5615 <i>Eucalyptus decipiens</i> (Limestone Marlock, Moit)			
58.	20808 <i>Eucalyptus petiolaris</i>	Y		
59.	13541 <i>Eucalyptus petrensis</i>			
60.	24368 <i>Eurostopodus argus</i> (Spotted Nightjar)			
61.	25623 <i>Falco longipennis</i> (Australian Hobby)			
62.	24041 <i>Felis catus</i> (Cat)	Y		
63.	7323 <i>Galium murale</i> (Small Goosegrass)	Y		
64.	25530 <i>Gerygone fusca</i> (Western Gerygone)			
65.	1520 <i>Gladiolus caryophyllaceus</i> (Wild Gladiolus)	Y		
66.	6143 <i>Glischrocaryon aureum</i> (Common Popflower)			
67.	24443 <i>Grallina cyanoleuca</i> (Magpie-lark)			
68.	2175 <i>Hakea lissocarpha</i> (Honey Bush)			
69.	2214 <i>Hakea trifurcata</i> (Two-leaf Hakea)			
70.	3961 <i>Hardenbergia comptoniana</i> (Native Wisteria)			
71.	25410 <i>Heleioporus eyrei</i> (Moaning Frog)			
72.	3016 <i>Heliophila pusilla</i>	Y		
73.	25119 <i>Hemiergis quadrilineata</i>			
74.	5135 <i>Hibbertia hypericoides</i> (Yellow Buttercups)			
75.	45534 <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>			
76.	5162 <i>Hibbertia racemosa</i> (Stalked Guinea Flower)			
77.	24491 <i>Hirundo neoxena</i> (Welcome Swallow)			
78.	6222 <i>Homalosciadium homalocarpum</i>			
79.	12859 <i>Hovea trisperma</i> var. <i>trisperma</i>			
80.	6232 <i>Hydrocotyle hispidula</i>			
81.	33977 <i>Hylaeus globuliferus</i> (woolybush bee)		P3	
82.	8086 <i>Hypochaeris glabra</i> (Smooth Catsear)	Y		
83.	48588 <i>Isodon fusciventer</i> (Quenda, southwestern brown bandicoot)		P4	
84.	4027 <i>Jacksonia sericea</i> (Waldjumi)		P4	
85.	4044 <i>Kennedia prostrata</i> (Scarlet Runner)			
86.	467 <i>Lagurus ovatus</i> (Hare's Tail Grass)	Y		
87.	925 <i>Lepidosperma angustatum</i>			
88.	945 <i>Lepidosperma squamatum</i>			
89.	5850 <i>Leptospermum laevigatum</i> (Coast Teatree)	Y		
90.	25133 <i>Lerista elegans</i>			
91.	25165 <i>Lerista praepedita</i>			
92.	6427 <i>Leucopogon parviflorus</i> (Coast Beard-heath)			
93.	25005 <i>Lialis burtonis</i>			
94.	25661 <i>Lichmera indistincta</i> (Brown Honeyeater)			
95.	25415 <i>Limnodynastes dorsalis</i> (Western Banjo Frog)			
96.	1228 <i>Lomandra hermaphrodita</i>			
97.	1231 <i>Lomandra maritima</i>			
98.	6456 <i>Lysinema ciliatum</i> (Curry Flower)			
99.	24132 <i>Macropus fuliginosus</i> (Western Grey Kangaroo)			
100.	25654 <i>Malurus splendens</i> (Splendid Fairy-wren)			
101.	24552 <i>Malurus splendens</i> subsp. <i>splendens</i> (Splendid Fairy-wren)			
102.	24583 <i>Manorina flavigula</i> (Yellow-throated Miner)			
103.	5920 <i>Melaleuca huegelii</i> (Chenille Honeymyrtle)			
104.	33022 <i>Melaleuca</i> sp. <i>Wanneroo</i> (G.J. Keighery 16705)		T	
105.	18598 <i>Melaleuca systema</i>			
106.	25663 <i>Melithreptus brevirostris</i> (Brown-headed Honeyeater)			
107.	25184 <i>Menetia greyii</i>			
108.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)			
109.	8106 <i>Millotia tenuifolia</i> (Soft Millotia)			
110.	25192 <i>Morethia obscura</i>			
111.	24223 <i>Mus musculus</i> (House Mouse)	Y		
112.	25420 <i>Myobatrachus gouldii</i> (Turtle Frog)			
113.	48022 <i>Notamacropus irma</i> (Western Brush Wallaby)		P4	
114.	<i>Ommatoiulus moreletii</i>			
115.	<i>Oratemnus curtus</i>			
116.	24085 <i>Oryctolagus cuniculus</i> (Rabbit)	Y		
117.	24624 <i>Pachycephala rufiventris</i> subsp. <i>rufiventris</i> (Rufous Whistler)			
118.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
119.	2309 <i>Petrophile serruriae</i>			
120.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
121.	24596 <i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
122.	4675 <i>Phyllanthus calycinus</i> (False Boronia)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
123.	<i>Phytophthora cinnamomi</i>			
124.	5243 <i>Pimelea ferruginea</i>			
125.	25720 <i>Platycercus icterotis</i> (Western Rosella)			
126.	24750 <i>Platycercus zonarius</i> subsp. <i>semitorquatus</i> (Twenty-eight Parrot)			
127.	8177 <i>Podolepis lessonii</i>			
128.	25511 <i>Pseudonaja affinis</i> (Dugite)			
129.	25259 <i>Pseudonaja affinis</i> subsp. <i>affinis</i> (Dugite)			
130.	<i>Pterostylis</i> aff. <i>nana</i>			
131.	17267 <i>Pterostylis brevisepala</i>			
132.	12217 <i>Pterostylis sanguinea</i>			
133.	<i>Purpureicephalus spurius</i>			
134.	25008 <i>Pygopus lepidopodus</i> (Common Scaly Foot)			
135.	48096 <i>Rhipidura albiscapa</i> (Grey Fantail)			
136.	25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)			
137.	1556 <i>Romulea rosea</i> (Guildford Grass)	Y		
138.	982 <i>Schoenus clandestinus</i>			
139.	992 <i>Schoenus grandiflorus</i> (Large Flowered Bogrush)			
140.	30948 <i>Smicronis brevirostris</i> (Weebill)			
141.	8231 <i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
142.	4207 <i>Sphaerolobium medium</i>			
143.	4733 <i>Stackhousia monogyna</i>			
144.	2918 <i>Stellaria media</i> (Chickweed)	Y		
145.	25589 <i>Streptopelia chinensis</i> (Spotted Turtle-Dove)	Y		
146.	24943 <i>Strophurus spinigerus</i> subsp. <i>inornatus</i>			
147.	7745 <i>Stylidium junceum</i> (Reed Triggerplant)			
148.	13127 <i>Stylidium maritimum</i>		P3	
149.	33992 <i>Synemon gratiosa</i> (Graceful Sunmoth)		P4	
150.	4256 <i>Templetonia retusa</i> (Cockies Tongues)			
151.	1036 <i>Tetraria octandra</i>			
152.	5105 <i>Thomasia triphylla</i>			
153.	1338 <i>Thysanotus manglesianus</i> (Fringed Lily)			
154.	25207 <i>Tiliqua rugosa</i> subsp. <i>rugosa</i>			
155.	6280 <i>Trachymene pilosa</i> (Native Parsnip)			
156.	25723 <i>Trichoglossus haematodus</i> (Rainbow Lorikeet)			
157.	1361 <i>Tricoryne elatior</i> (Yellow Autumn Lily)			
158.	4292 <i>Trifolium campestre</i> (Hop Clover)	Y		
159.	8254 <i>Urospermum picroides</i> (False Hawkbit)	Y		
160.	8255 <i>Ursinia anthemoides</i> (Ursinia)	Y		
161.	724 <i>Vulpia myuros</i> (Rat's Tail Fescue)	Y		
162.	1256 <i>Xanthorrhoea preissii</i> (Grass tree, Palga)			
163.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			

Conservation Codes

- T - Rare or likely to become extinct
- X - Presumed extinct
- IA - Protected under international agreement
- S - Other specially protected fauna
- 1 - Priority 1
- 2 - Priority 2
- 3 - Priority 3
- 4 - Priority 4
- 5 - Priority 5

¹ For NatureMap's purposes, species flagged as endemic are those whose records are wholly contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

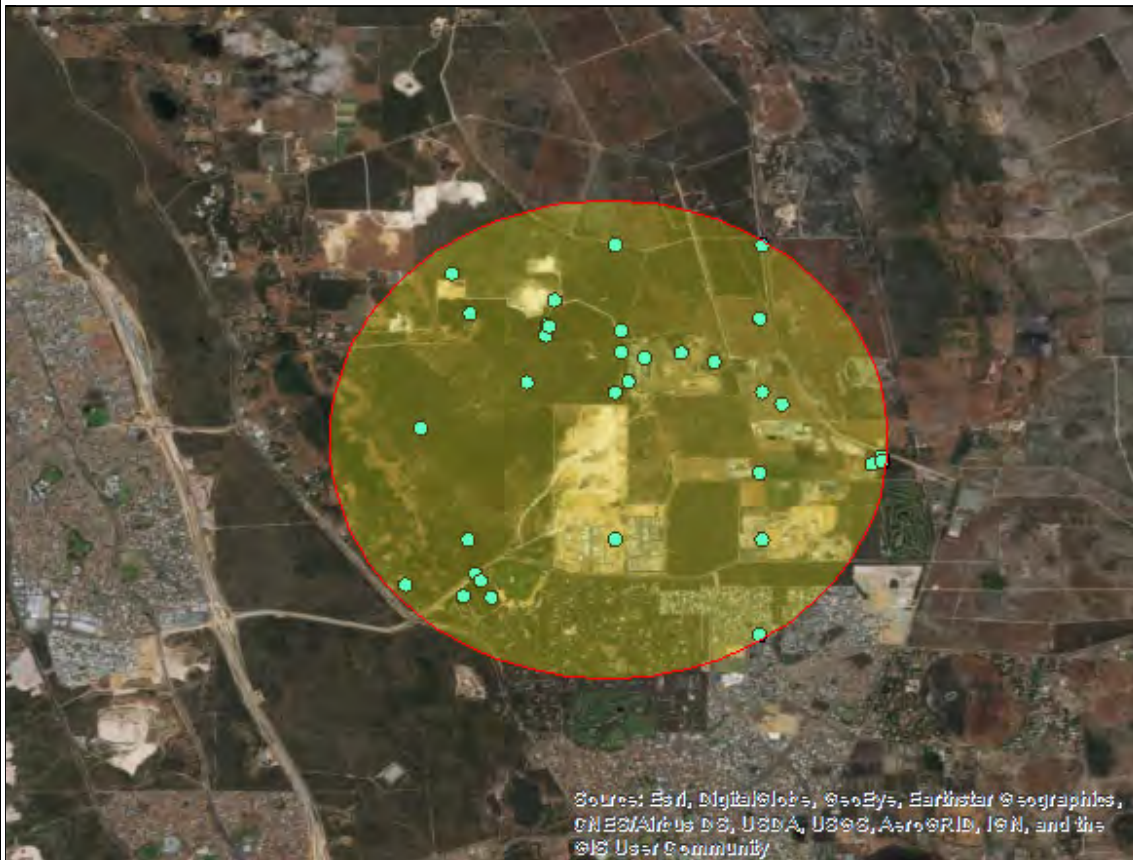
NatureMap

Mapping Western Australia's biodiversity

Neerabup Industrial Area - Nature Map Search Area

Printed by Guest user on 30/10/2019

Query details : Current Names Only=Yes; Core Datasets Only=Yes; Method='By Circle'; Centre=115° 46' 57" E,31° 40' 19" S; Buffer=3km;



Search Results

Selected

- Selected Species

All Results

- Default
- Confirmed
- Corrected
- Reported

Reference Layers

Major WA Towns

Major WA Towns

Major WA Towns

State Borders



Department of Biodiversity, Conservation and Attractions



NatureMap is a collaborative project of the Department of Biodiversity, Conservation and Attractions, Western Australia, and the Western Australian Museum.

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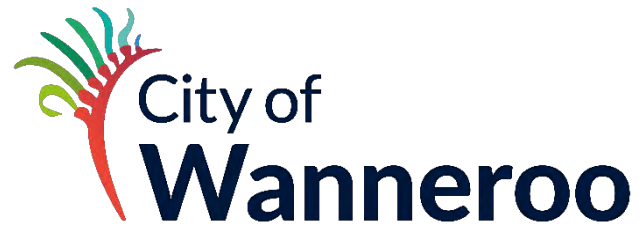
24DJSZNHUEPC-1850682920-13/Document2

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
A	N Hoey	K Petani	On file	K Petani	On file	21 November 2019
B	N Hoey	K Petani	On file	K Petani	On file	
0	N Hoey	K Petani		K Petani		24 April 2020

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APPENDIX 3

Bushfire Management Plan

Neerabup Industrial Area

Prepared by Bushfire Prone Planning

Bushfire management plan/Statement addressing the Bushfire Protection Criteria coversheet

Site address:

Site visit: Yes No

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

Report author or reviewer:

WA BPAD accreditation level (please circle):

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

If accredited please provide the following.

BPAD accreditation number: Accreditation expiry: Month Year

Bushfire management plan version number:

Bushfire management plan date: Day Month Year

Client/business name:

	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)?		X
Have any of the bushfire protection criteria elements been addressed through the use of a performance principle (tick no if only acceptable solutions have been used to address all of the bushfire protection criteria elements)?		X

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

	Yes	No
Unavoidable development (in BAL-40 or BAL-FZ)		X
Strategic planning proposal (including rezoning applications)	X	
High risk land-use		X
Vulnerable land-use		X

None of the above

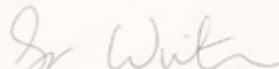
Note: Only if one (or more) of the above answers in the tables is yes should the decision maker (e.g. local government or the WAPC) refer the proposal to DFES for comment.

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

Master Plan for an Industrial Area that may in the future comprise High Risk land uses within the boundaries of the development site.

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

Signature of report author
or reviewer



Date



Bushfire Management Plan

Neerabup Industrial Area

Flynn Drive Neerabup

City of Wanneroo

Planning Stage: Strategic Proposal - Local Structure/Master Plan

Planning Development Type: Change or Addition to a Land Use

Job Number: 190235

Assessment Date: 13 November 2020

Report Date: 15 December 2020

BPP Group Pty Ltd t/a Bushfire Prone Planning
 ACN: 39 166 551 784 | ABN: 39 166 551 784

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DOCUMENT CONTROL

PREPARATION				
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Co-Author:				
Review/Authorise:	Kathy Nastov (BPAD Level 3 - No. 27794)	<i>K. Nastov</i>		
VERSION HISTORY				
Version	Version Details			Date
1.0	Draft for client review			16 December 2020
1.1	Updated version responding to City of Wanneroo comments			19 February 2021
BMP (Standard DA-Non-Tourism) Template v8.5				
DISTRIBUTION				
Destination	Version	No. Copies	Hard Copy	Electronic Copy
Person/Business: Email:			<input type="checkbox"/>	<input checked="" type="checkbox"/>
Person/Business: Email:			<input type="checkbox"/>	<input type="checkbox"/>
<p>Limitation of Liability: The measures contained in this Bushfire Management Plan, are considered to be minimum requirements and they do not guarantee that a building will not be damaged in a bushfire, persons injured, or fatalities occur either on the subject site or off the site while evacuating. This is substantially due to the unpredictable nature and behaviour of fire and fire weather conditions. Additionally, the correct implementation of the required bushfire protection measures will depend upon, among other things, the ongoing actions of the landowners and/or operators over which Bushfire Prone Planning has no control.</p> <p>All surveys, forecasts, projections and recommendations made in this report associated with the proposed development are made in good faith based on information available to Bushfire Prone Planning at the time. All maps included herein are indicative in nature and are not to be used for accurate calculations.</p> <p>Notwithstanding anything contained therein, Bushfire Prone Planning will not, except as the law may require, be liable for any loss or other consequences whether or not due to the negligence of their consultants, their servants or agents, arising out of the services provided by their consultants.</p> <p>Copyright ©2020 BPP Group Pty Ltd: All intellectual property rights, including copyright, in format and proprietary content contained in documents created by Bushfire Prone Planning, remain the property of BPP Group Pty Ltd. Any use made of such format or content without the prior written approval of Bushfire Prone Planning, will constitute an infringement on the rights of the Company which reserves all legal rights and remedies in respect of any such infringement.</p>				

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
1 PROPOSAL DETAILS	3
1.1 DESCRIPTION AND ASSOCIATED PLANS AND MAPS.....	3
1.2 EXISTING DOCUMENTATION RELEVANT TO THE CONSTRUCTION OF THIS PLAN	7
2 ENVIRONMENTAL CONSIDERATIONS	8
2.1 NATIVE VEGETATION – RESTRICTIONS TO MODIFICATION AND/OR CLEARING	8
2.2 RETAINED VEGETATION / RE-VEGETATION / LANDSCAPE PLANS (INCLUDING POS)	9
3 POTENTIAL BUSHFIRE IMPACT ASSESSMENT	10
3.1 ASSESSMENT INPUT	10
3.1.1 Fire Danger Index (FDI) Applied	10
3.1.2 Vegetation Classification and Effective Slope	10
3.1.3 Vegetation Separation Distance	23
3.2 ASSESSMENT OUTPUT	24
3.2.1 Bushfire Attack Level Results - BAL Contour Map Format	25
3.2.2 Bushfire Attack Level Results - Derived from The BAL Contour Map	26
4 IDENTIFICATION OF BUSHFIRE HAZARD ISSUES	28
5 ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA ESTABLISHED BY THE GUIDELINES	30
5.1 LOCAL GOVERNMENT VARIATIONS TO APPLY	30
5.2 SUMMARY OF ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA	31
5.3 ASSESSMENT DETAIL	32
Element 1: Location	32
Element 2: Siting and Design of Development.....	34
Element 3: Vehicular Access.....	36
Element 4: Water	37
6 RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE PROTECTION MEASURES	38
6.1 LANDOWNER (DEVELOPER) - PRIOR TO DEVELOPMENT.....	38
6.2 LANDOWNER/OCCUPIER - ONGOING	39
6.3 LOCAL GOVERNMENT - ONGOING	39
APPENDIX 1: TECHNICAL REQUIREMENTS FOR ONSITE VEGETATION MANAGEMENT	40
APPENDIX 2: TECHNICAL REQUIREMENTS FOR VEHICULAR ACCESS	43
APPENDIX 3: TECHNICAL REQUIREMENTS FOR FIREFIGHTING WATER	45

LIST OF FIGURES

Figure 1.1: Proposed Draft Masterplan.....	4
Figure 1.2: Location Map	5
Figure 1.3: Map of Bushfire Prone Areas (DFES)	6
Figure 3.1: Vegetation classification and topography map.....	21
Figure 3.1.1: Vegetation classification and topography map (Post Development)	22
Figure 3.2: BAL Contour Map.....	27

EXECUTIVE SUMMARY

This Bushfire Management Plan (BMP) will accompany a new structure plan, which will be produced by GHD as part of the planning framework review of the Neerabup Industrial Area. Bushfire Prone Planning's BMP will form a Technical Appendix to that new structure plan document. Its purpose is to demonstrate that bushfire risk has been assessed at a strategic level.

It demonstrates that bushfire risk can be mitigated for the whole development area, rather than for individual lots or stages of that potential development. The Master Plan included as part of this BMP should be considered indicative only – it is included here to demonstrate that it is possible to undertake this development while achieving compliance with the Bushfire Protection Criteria (BPC).

The development area entails a number of environmental issues, which are considered in Section 2 of this BMP. The Master Plan for this proposed site will maintain areas of threatened bushland. The implementation of bushfire protection measures will not adversely affect environmental and biodiversity values.

The development area sits in a broad landscape of bushfire risk, and has been subject to major bushfires in the past. Twelve broad areas of classified vegetation were identified as part of this assessment, using Method 1 of AS3959-2018 *Construction of Buildings in Bushfire Prone Areas*. The results of this assessment are slightly different to those outlined in the previous BMP prepared by Strategen in 2016, and these are largely due to changes in interpretation in regulatory documents including AS3959 and the *Guidelines for Planning In Bushfire Prone Areas*.

This BMP demonstrates that it is possible to achieve the acceptable solutions of the Bushfire Protection Criteria for the entire development of the Neerabup Industrial Area. Once completed the vast majority of the Industrial Area will be subject to a BAL-LOW bushfire exposure. The implementation of a new road network, and installation of a system of fire hydrants, will significantly increase bushfire safety for the development, and for surrounding areas.

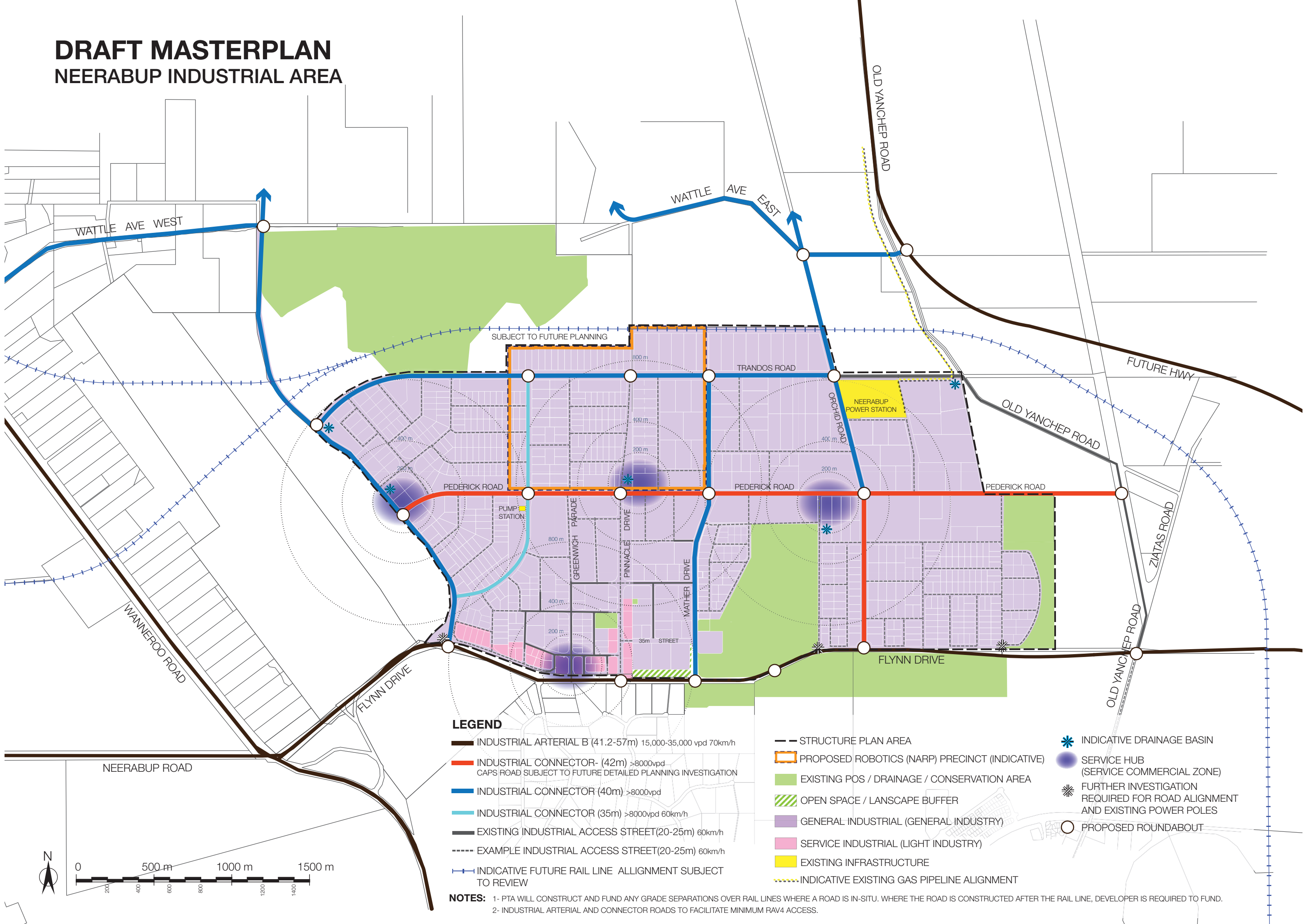
1 PROPOSAL DETAILS

1.1 Description and Associated Plans and Maps

Landowner / Proponent:	City of Wanneroo
Bushfire Prone Planning Commissioned to Produce the Bushfire Management Plan (BMP) By:	GHD – Hide Shigeyoshi
For Submission To:	WA Planning Commission (WAPC)
Purpose of the BMP:	To support a strategic planning assessment
'Development' Site Total Area:	Approximately 828 hectares
No. of Existing/Proposed Lots:	Existing lot(s) = 85 / Proposed lot(s) = approximately 1200. Indicative only, final lot layout not known, may be between 300 and 1500 lots
Description of the Proposed Development/Use:	
<p>This BMP will accompany a new structure plan, which will be produced by GHD as part of the planning framework review of the Neerabup Industrial Area. Bushfire Prone Planning's BMP will form a Technical Appendix to that new structure plan document.</p> <p>The intention of this BMP is to prove that the bushfire risk can be managed for the development.</p>	
Staged Development and Management of Potential Bushfire Hazard Issues	
N/A at this stage	

DRAFT MASTERPLAN

NEERABUP INDUSTRIAL AREA



LEGEND

- INDUSTRIAL ARTERIAL B (41.2-57m) 15,000-35,000 vpd 70km/h
- INDUSTRIAL CONNECTOR- (42m) >8000vpd
CAPS ROAD SUBJECT TO FUTURE DETAILED PLANNING INVESTIGATION
- INDUSTRIAL CONNECTOR (40m) >8000vpd
- INDUSTRIAL CONNECTOR (35m) >8000vpd 60km/h
- EXISTING INDUSTRIAL ACCESS STREET(20-25m) 60km/h
- EXAMPLE INDUSTRIAL ACCESS STREET(20-25m) 60km/h
- INDICATIVE FUTURE RAIL LINE ALIGNMENT SUBJECT TO REVIEW

- STRUCTURE PLAN AREA
- PROPOSED ROBOTICS (NARP) PRECINCT (INDICATIVE)
- EXISTING POS / DRAINAGE / CONSERVATION AREA
- OPEN SPACE / LANDSCAPE BUFFER
- GENERAL INDUSTRIAL (GENERAL INDUSTRY)
- SERVICE INDUSTRIAL (LIGHT INDUSTRY)
- EXISTING INFRASTRUCTURE
- INDICATIVE EXISTING GAS PIPELINE ALIGNMENT

- INDICATIVE DRAINAGE BASIN
- SERVICE HUB (SERVICE COMMERCIAL ZONE)
- FURTHER INVESTIGATION REQUIRED FOR ROAD ALIGNMENT AND EXISTING POWER POLES
- PROPOSED ROUNDABOUT

NOTES: 1- PTA WILL CONSTRUCT AND FUND ANY GRADE SEPARATIONS OVER RAIL LINES WHERE A ROAD IS IN-SITU. WHERE THE ROAD IS CONSTRUCTED AFTER THE RAIL LINE, DEVELOPER IS REQUIRED TO FUND.
2- INDUSTRIAL ARTERIAL AND CONNECTOR ROADS TO FACILITATE MINIMUM RAV4 ACCESS.

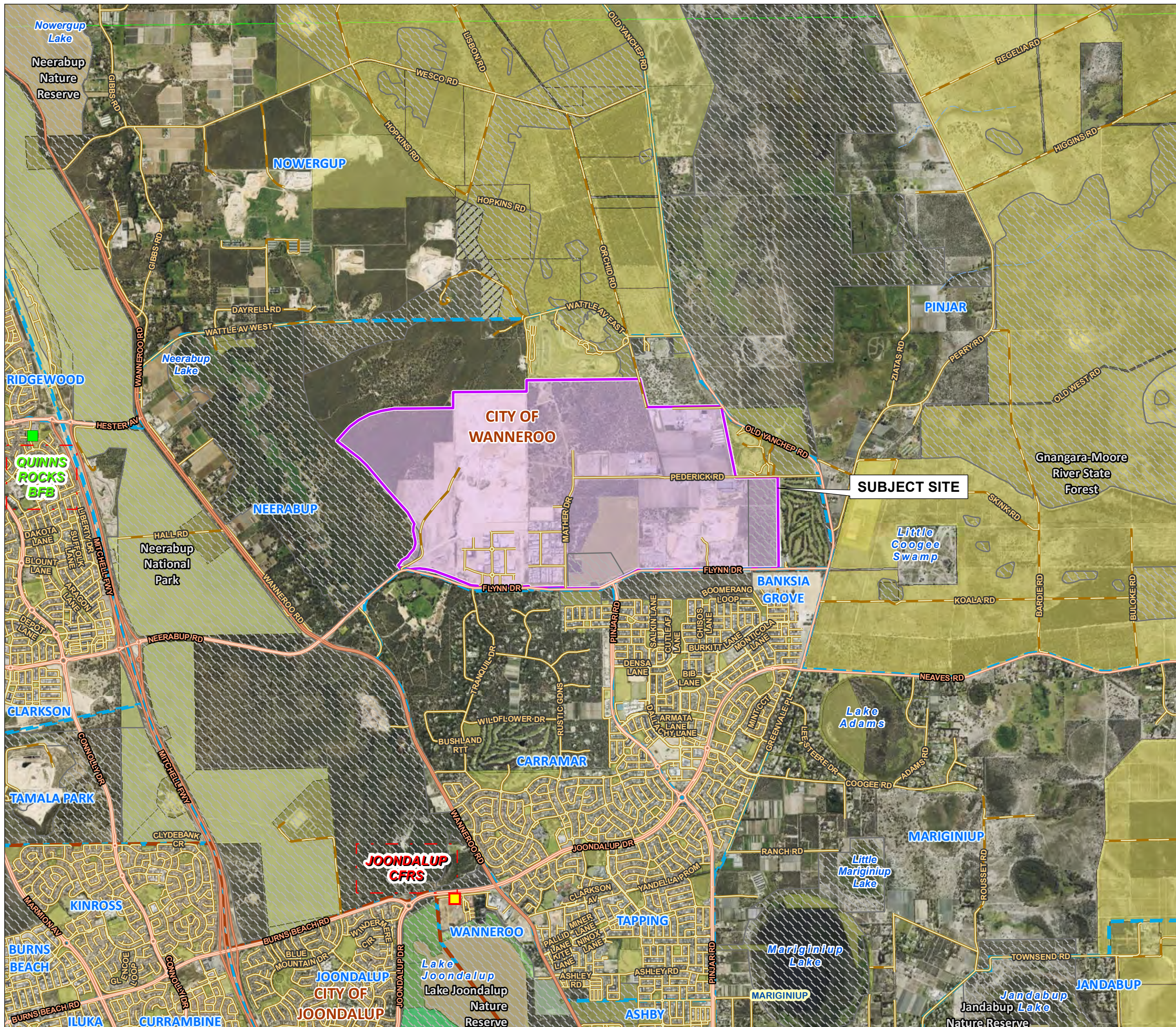


Figure 1.2
Location Plan

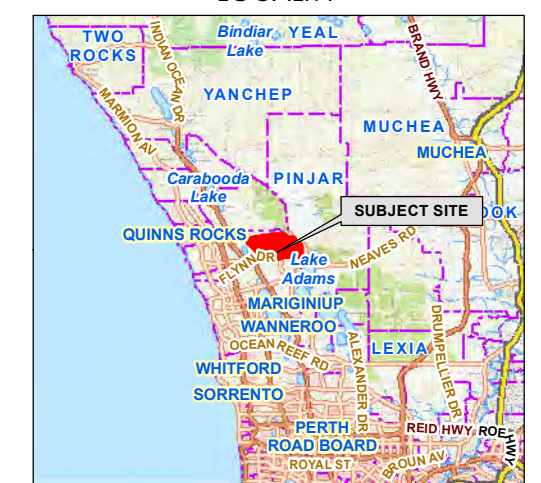
Neerabup Industrial Area
NEERABUP
CITY OF WANNEROO

----- LEGEND -----

- Subject Site
- Local Government Authority
- Locality / Suburb
- Bush Fire Brigade
- Career Fire & Rescue Service
- Reserves
- Legislated Lands and Waters**
- Crown Freehold - DBCA Managed
- Nature Reserve
- Conservation Park
- National Park
- Section 5(1)(h) Reserve
- State Forest
- DBCA Lands of Interest**
- UCL - Dept Interest
- Bush Forever



----- LOCALITY -----



Aerial Imagery : Landgate/SLIP
Image Date : October 2020

Coordinate System : GDA 1994 MGA Zone 50
Projection : Universal Transverse Mercator Units : Metre
Map compiled by : Ian Ross 16/12/2020
Map updated by : Ian Ross 16/12/2020

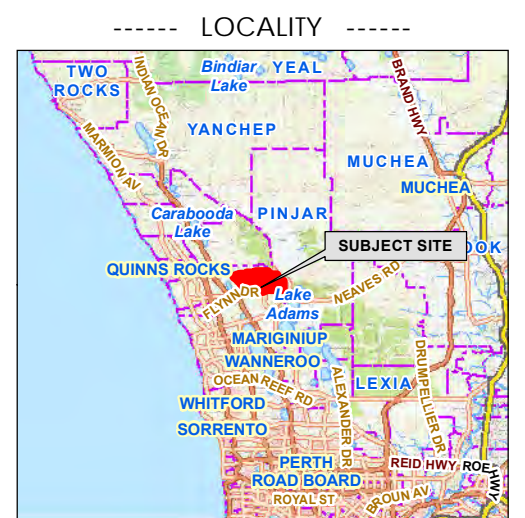
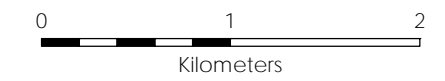
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Map Document Path / Name: K:\Projects\Jobs 2019\190235 - Wanneroo RFO Neerabup Industrial Area - 14 May 2019 due\Mapping\MXD\190235_Fig1-2_LOC_Neerabup Industrial.mxd

Figure 1.3
Bushfire Prone Area

Neerabup Industrial Area
NEERABUP
CITY OF WANNEROO



- LEGEND -----
- Subject Site
 - Local Government Authority
 - Locality / Suburb
 - Industrial Development
 - Bush Fire Brigade
 - Career Fire & Rescue Service
 - Bushfire Prone Areas (2019)



Aerial Imagery : Landgate/SLIP
Image Date : October 2020

Coordinate System : GDA 1994 MGA Zone 50
Projection : Universal Transverse Mercator Units : Metre
Map compiled by : Ian Ross 16/12/2020
Map updated by : Ian Ross 16/12/2020

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Map Document Path / Name: K:\Projects\Jobs 2019\190235 - Wanneroo RFO Neerabup Industrial Area - 14 May 2019 due\Mapping\MXD\190235_Fig1-3_BPA_Neerabup Industrial.mxd

1.2 Existing Documentation Relevant to the Construction of this Plan

This section acknowledges any known reports or plans that have been prepared for previous planning stages, that refer to the subject area and that may or will impact upon the assessment of bushfire risk and/or the implementation of bushfire protection measures and will be referenced in this Bushfire Management Plan.

Table 1.1: Existing relevant documentation.

RELEVANT EXISTING DOCUMENTS		
Existing Document	Copy Provided by Client	Title
Structure Plan	No	<i>Neerabup Industrial Area Agreed Local Structure Plan No. 17' (ASP 17)</i>
Environmental Report	Yes	<i>City of Wanneroo, Neerabup District Planning Environmental Assessment 2020</i>
Landscaping (Revegetation) Plan	N/A	
Bushfire Risk Assessments	No	<i>Bushfire Management Plan - Neerabup Industrial Area 2016</i>

The land identified for development is the Neerabup Industrial Area is zoned as "General Industrial" land and "Industrial Development" land in the *District Planning Scheme 2*. There are no zone impediments to this development.

This BMP is intended to inform the preparation of a new structure plan, which will supersede ASP 17 as shown in table 1.1.

The Environmental assessment identified a range of environmental issues including Bush Forever sites, and areas with protected flora and fauna (including TEC) in which clearing permits have previously been refused. The development design responds to that by identifying and retaining areas of native vegetation within the Neerabup Industrial Area. The Environmental Assessment states that "the City of Wanneroo is unlikely to require further flora and vegetation studies to proceed with development on its landholdings (where development is permitted)" (pg 24). The bushfire measures outlined in the BMP are not predicated on clearing of native vegetation other than what would be included as part of the development design for the expansion of the Industrial Area.

This BMP supersedes the 2016 one prepared by Strategen and listed above. Vegetation classifications in that document were based on AS3959-2009. This BMP updates vegetation classifications listed in the 2016 document to reflect changes in regulation, and the adoption of AS3959-2018.

2 ENVIRONMENTAL CONSIDERATIONS

2.1 Native Vegetation – Restrictions to Modification and/or Clearing

Many bushfire prone areas also have high biodiversity values. SPP 3.7 policy objective 5.4 recognises the need to consider bushfire risk management measures alongside environmental, biodiversity and conservation values (Guidelines s2.3).

There is a requirement to identify any need for onsite modification and/or clearing of native vegetation and whether this may trigger potential environmental impact/referral requirements under State and Federal environmental legislation. Confirmation that any proposed native vegetation modification and/or clearing is acceptable, should be received from the relevant agencies by the proponent and provided to the bushfire consultant for inclusion in the Bushfire Management Plan if it will influence the required bushfire planning assessments and outcomes. The following table details any potential environmental restrictions of which the author of this report is aware.

Table 2.2: Native vegetation and potential environmental considerations and restrictions.

NATIVE VEGETATION MODIFICATION / CLEARING - POTENTIAL ENVIRONMENTAL RESTRICTIONS IDENTIFIED				
Environmental Considerations / Features	Potential Mapping Data Source (SLIP / Local Planning)	Relevant to Proposed Development	Data Applied	Action Required
Onsite clearing of native vegetation is required.		Yes		
Environmental impact/referral requirements under State and Federal environmental legislation may be triggered.		Yes		
National Park / Nature Reserve	DBCA-011	Yes-Confirmed by Proponent	Evidence Submitted by Proponent	Proponent to Seek Advice
Conservation Covenant	DPIRD-023	No-Confirmed by Proponent	N/A	N/A
Bush Forever Site	DPLH-019	Yes-Confirmed by Proponent	Evidence Submitted by Proponent	None
RAMSAR Wetland	DBCA-010	No-Confirmed by Proponent	Evidence Submitted by Proponent	N/A
Geomorphic and Other Wetland	DBCA-011-019, 040, 043, 044	No-Confirmed by Proponent	Evidence Submitted by Proponent	N/A
Threatened and Priority Ecological Communities (TECs or PECs)	DBCA-038	Yes-Confirmed by Proponent	Evidence Submitted by Proponent	Proponent to Seek Advice
Threatened and Priority Flora including Declared Rare Flora (DRFs)	DBCA-036	Yes-Confirmed by Proponent	Evidence Submitted by Proponent	Proponent to Seek Advice
Statement of how the identified environmental feature(s) is dealt with in this Bushfire Management Plan (and the location of relevant information):				
The assessments and bushfire protection measures detailed the BMP, assume that environmental approval will be achieved or clearing permit exemptions will apply.				
It is advised that the proponent seek further advice from an Environmental Consultant or the WA Department of Biodiversity Conservation and Attractions for further information on the condition and species contained within the proposed development area and the requirement for referral of the proposal.				

Development Design Considerations

Establishing development in bushfire prone areas can adversely affect the retention of native vegetation through clearing associated with the creation of lots and/or asset protection zones. Where loss of vegetation is not acceptable or causes conflict with landscape or environmental objectives, it will be necessary to consider available design options to minimise the removal of native vegetation.

Table 2.3: Development design.

MINIMISE THE REMOVAL OF NATIVE VEGETATION	
Design Option	Assessment / Action
Reduction of lot yield	N/A
Cluster development	N/A
Construct building to a standard corresponding to a higher BAL as per BCA (AS 3959:2018 and/or NASH Standard)	N/A
Modify the development location	Considered and development location has been modified. See comments below.
Protected native vegetation areas within the boundaries of the development have been identified and will be retained. The development design allows for a BAL-29 or less exposure to be achieved for all lots.	
IMPACT ON ADJOINING LAND	
Is this planning proposal able to implement the required bushfire protection measures within the boundaries of the land being developed so as not to impact on the bushfire and environmental management of neighbouring reserves, properties or conservation covenants?	Yes
All bushfire protection measures can be achieved within the bounds of the development without impacting on adjoining land.	

2.2 Retained Vegetation / Re-vegetation / Landscape Plans (including POS)

Riparian zones, wetland/foreshore buffers, road verges and public open space may have plans to re-vegetate or retain vegetation as part of the proposed development. Vegetation corridors may be created between offsite and onsite vegetation and provide a route for fire to enter a development area.

All retained/planned vegetation and its management will be considered in the development of this Bushfire Management Plan.

Is re-vegetation of riparian zones and/or wetland or foreshore buffers and/or public open space a part of this Proposal?	Yes
Is the requirement for ongoing maintenance of existing vegetation in riparian zones and/or wetland or foreshore buffers and/or public open space a part of this Proposal?	Yes

Some areas of native vegetation (see Figure 1.1) will be retained within the greater Industrial area and these will require ongoing management to maintain separation distances.

3 POTENTIAL BUSHFIRE IMPACT ASSESSMENT

3.1 Assessment Input

3.1.1 Fire Danger Index (FDI) Applied

AS 3959:2018 Table 2.1 specifies the fire danger index values to apply for different regions. The values used in the model calculations are for the Forest Fire Danger Index (FFDI) and for which equivalent representative values of the Grassland Fire Danger Index (GFDI) are applied as per Appendix B. The values can be modified if appropriately justified.

Table 3.1: Applied FDI Value

FDI VALUE			
Vegetation Areas	As per AS 3959:2018 Table 2.1	As per DFES for the Location	Value Applied
1-13	80	N/A	80

3.1.2 Vegetation Classification and Effective Slope

Classification: Bushfire prone vegetation identification and classification has been conducted in accordance with AS 3959:2018 s2.2.3 and the Visual Guide for Bushfire Risk Assessment in WA (DoP February 2016).

When more than one vegetation type is present, each type is identified separately, and the applied classification considers the potential bushfire intensity and behaviour from the vegetation types present and ensures the worst case scenario is accounted for – this may not be from the predominant vegetation type.

The vegetation structure has been assessed as it will be in its mature state (rather than what might be observed on the day). Areas of modified vegetation are assessed as they will be in their natural unmodified state (unless maintained in a permanently low threat, minimal fuel condition, satisfying AS 3959:2018 s2.2.3.2(f) and asset protection zone standards). Vegetation destroyed or damaged by a bushfire or other natural disaster has been assessed on its revegetated mature state.

Effective Slope: Refers to the ground slope under each area of classified vegetation and is described in the direction relative to the view from the building or proposed development site. Effective slope is not the same as 'average slope', rather it is the slope which most significantly influences fire behaviour. This slope has a direct and significant influence on a bushfire's rate of spread and intensity.

Where there is a significant change in effective slope under an area of classified vegetation, that will cause a change in fire behaviour, separate vegetation areas will be identified to enable the correct assessment.

When the effective slope, under a given area of bushfire prone vegetation, will be different relative to multiple proposed development sites, then the effective slopes corresponding to the different locations, are separately identified.

Planned Re-vegetation/Landscaping Considerations/Public Open Space Management

The development includes the retention of some areas of native vegetation within its boundaries. These areas will require ongoing management, and the maintenance of any separation distances to support existing BAL ratings for lots and constructed buildings.

Excluded Bushfire Prone Vegetation

The landowner has the ability to manage all onsite vegetation to a minimal fuel, low threat state. Consequently, the potential bushfire impact is determined by bushfire prone vegetation over which the existing/future landowner has no control.

Table 3.2: Vegetation classification and effective slope.

ALL VEGETATION WITHIN 150 METRES OF THE PROPOSED DEVELOPMENT				
Vegetation Area	Identified Vegetation Types ¹ or Description if 'Excluded'	Applied Vegetation Classification ¹	Effective Slope (degrees) ² (AS 3959:2018 Method 1)	
			Assessed	Applied Range
1	Low open forest A-04	Class A Forest	3	downslope >0-5
2	Tussock grassland G-22	Class G Grassland	0	upslope or flat
3	Low open forest A-04	Class A Forest	0	upslope or flat
4	Low open forest A-04	Class A Forest	0	upslope or flat
5	Low open forest A-04	Class A Forest	3	downslope >0-5
6	Woodland B-05	Class B Woodland	0	upslope or flat
7	Low open forest A-04	Class A Forest	0	upslope or flat
8	Low open forest A-04	Class A Forest	0	upslope or flat
9	Low woodland B-07	Class B Woodland	0	upslope or flat
10	Low open forest A-04	Class A Forest	0	upslope or flat
11	Open forest A-03	Class A Forest	0	upslope or flat
12	Low woodland B-07	Class B Woodland	4	upslope or flat
13	N/A	Excluded as per Section 2.2.3.2 (f) Low Threat	N/A	N/A
Representative photos of each vegetation area, descriptions and classification justification, are presented on the following pages. The areas of classified vegetation are defined, and the photo locations identified on Figure 3.1, the vegetation and topography map.				
Note ¹ : Described and classified as per AS 3959:2018 Table 2.3 and Figures 2.3 and 2.4 (A)-(H)				
Note ² : Effective slope measured as per AS 3959:2018 Section 2.2.5 and Appendix B Part B4				

Additional Supporting Information

The subject landform is gently undulating with shallow slopes throughout. Slope determinations as provided in Table 3.2 above are determined based on the possibility of a fire travelling through classified vegetation towards the development site. As such many of the classified areas of vegetation are assessed as being flat or upslope as a fire travelling towards the development boundaries would be travelling downslope, thus retarding fire behaviour.

Vegetation throughout the development area, and surrounding it, generally comprises undeveloped areas of Banksia Woodland (Vegetation Areas 1, 3, 4, 5, 7 and 10), previously cleared areas that have been revegetated with a combination of native species and weed grasses (Vegetation Areas 2, 8, 9 and 12), and rural residential blocks and other land uses (e.g. golf courses and race tracks) that comprise a range of native and introduced vegetation (Vegetation Areas 6 and 11).

There are also large areas of cleared land within and surrounding the boundaries of the development that are used for industrial purposes, market gardens, and high density residential subdivisions. These have been grouped as Area 13, as all meet the definition of Low Threat as per c.2.2.3.2(f) of AS3959-2018.

VEGETATION AREA 1

AS 3959:2018 Vegetation Classification Applied:	Class A Forest
Vegetation Types Present:	Low open forest A-04
Description/Justification:	Typical mixed jarrah banksia woodland, occasional tuart, marri, <i>allocasuarina</i> and acacia throughout. Middle story of <i>xanthorrhoea</i> , immature trees and other woody shrubs. Understory of native and introduced grasses and low shrubs. Clear tiered vegetation structure. Variable canopy and understory density throughout, but contiguous vegetation type across a wide area.
Post Dev. Assumptions:	Parts of Area 1 will be cleared for the development, but the majority will be maintained after development.



Photo ID: 1a





Photo ID: 1b



Photo ID: 1c

VEGETATION AREA 2	
AS 3959:2018 Vegetation Classification Applied:	Class G Grassland
Vegetation Types Present:	Tussock grassland G-22
Description/Justification:	Tussock grassland in a sump and adjacent cleared area. Weed grasses to 75 cm that cure in summer. Occasional low shrubs but <10% foliage cover.
Post Dev. Assumptions:	Will be cleared and subdivided for development.
<div style="display: flex; justify-content: space-around;">   </div>	
Photo ID: 2a	Photo ID: 2b

VEGETATION AREA 3	
AS 3959:2018 Vegetation Classification Applied:	Class A Forest
Vegetation Types Present:	Low open forest A-04
Description/Justification:	Typical jarrah dominant banksia woodland, occasional tuart, marri, <i>allocasuarina</i> and acacia throughout. Middle story of <i>xanthorrhoea</i> , immature trees and other woody shrubs. Understory of native and introduced grasses and low shrubs. Clear tiered vegetation structure. Variable canopy and understory density throughout, but contiguous vegetation type across a wide area.
Post Dev. Assumptions:	Part of Vegetation Area 3 will be cleared (north and west) but the majority will be maintained as remnant vegetation within the boundaries of the subdivisions.
<div style="display: flex; justify-content: space-around;">   </div>	
Photo ID: 3a	Photo ID: 3b

VEGETATION AREA 3



Photo ID: 3c

VEGETATION AREA 4


AS 3959:2018 Vegetation Classification Applied:	Class A Forest
Vegetation Types Present:	Low open forest A-04
Description/Justification:	Typical jarrah dominant banksia woodland, occasional tuart, marri, <i>allocasuarina</i> and acacia throughout. Middle story of <i>xanthorrhoea</i> , immature trees and other woody shrubs. Understory of native and introduced grasses and low shrubs. Clear tiered vegetation structure. Variable canopy and understory density throughout, but contiguous vegetation type across a wide area.
Post Dev. Assumptions:	The entire area of Vegetation Area 4 is located outside the development boundaries and will be retained unaltered.






Photo ID: 4a





Photo ID: 4b



VEGETATION AREA 5	
AS 3959:2018 Vegetation Classification Applied:	Class A Forest
Vegetation Types Present:	Low open forest A-04
Description/Justification:	Typical jarrah dominant banksia woodland, occasional tuart, marri, <i>allocasuarina</i> and acacia throughout. Middle story of <i>xanthorrhoea</i> , immature trees and other woody shrubs. Understory of native and introduced grasses and low shrubs. Clear tiered vegetation structure. Variable canopy and understory density throughout, but contiguous vegetation type across a wide area.
Post Dev. Assumptions:	Part of Vegetation Area 5 will be cleared (south west) but the majority will be maintained as remnant vegetation within the boundaries of the subdivisions.
<div style="display: flex; justify-content: space-around;">   </div>	
Photo ID: 5a	Photo ID: 5b



VEGETATION AREA 6	
AS 3959:2018 Vegetation Classification Applied:	Class B Woodland
Vegetation Types Present:	Woodland B-05
Description/Justification:	Golf course with areas of low grass in fairways that approximate Low Threat Vegetation as per 2.2.3.2(f), but significant amounts of native vegetation and unmanaged weed grasses in rough between fairways and throughout. Taken as a whole it approximates Class B Woodland.
Post Dev. Assumptions:	Will be maintained after development.
<div style="display: flex; justify-content: space-around;">   </div>	
Photo ID: 6a	Photo ID: 6b

VEGETATION AREA 7	
AS 3959:2018 Vegetation Classification Applied:	Class A Forest
Vegetation Types Present:	Low open forest A-04
Description/Justification:	Typical jarrah dominant banksia woodland, occasional tuart, marri, <i>allocasuarina</i> and acacia throughout. Middle story of <i>xanthorrhoea</i> , immature trees and other woody shrubs. Understory of native and introduced grasses and low shrubs. Clear tiered vegetation structure. Variable canopy and understory density throughout, but contiguous vegetation type across a wide area.
Post Dev. Assumptions:	Will be maintained after development.
	
Photo ID: 7a	Photo ID: 7b
	
Photo ID: 7c	



VEGETATION AREA 8	
AS 3959:2018 Vegetation Classification Applied:	Class A Forest
Vegetation Types Present:	Low open forest A-04
Description/Justification:	Jarrah dominant banksia woodland, edges heavily infested with weed grasses. Impacted by bushfire in 2015 that has killed or damaged some mature trees, but at maturity will represent Class A Forest.
Post Dev. Assumptions:	Will be maintained as is after completion of the development.
	
Photo ID: 8a	



VEGETATION AREA 9	
AS 3959:2018 Vegetation Classification Applied:	Class B Woodland
Vegetation Types Present:	Low woodland B-07
Description/Justification:	Previously cleared area with regrowth vegetation of some mature trees over weed grasses. Approximately 25% canopy cover throughout. No significant native understorey or middle story.
Post Dev. Assumptions:	This land parcel is owned by the City of Wanneroo in Freehold. The City is investigating possible future uses of this site, including a waste-to-energy facility or solar plant. While it is unlikely that the land will be maintained as is in the long term there is no set time frame for the development of this land area and as such this BMP has assessed this area as comprising a bushfire risk.
	
Photo ID: 9a	Photo ID: 9b

VEGETATION AREA 10	
AS 3959:2018 Vegetation Classification Applied:	Class A Forest
Vegetation Types Present:	Low open forest A-04
Description/Justification:	Typical jarrah dominant banksia woodland, occasional tuart, marri, <i>allocasuarina</i> and acacia throughout. Middle story of <i>xanthorrhoea</i> , immature trees and other woody shrubs. Understory of native and introduced grasses and low shrubs. Clear tiered vegetation structure. Variable canopy and understory density throughout, but contiguous vegetation type across a wide area.
Post Dev. Assumptions:	The majority Vegetation Area 10 will be cleared and subdivided, but an area to the east of Barbagallo Raceway be maintained after the completion of the development.
	
Photo ID: 10a	Photo ID: 10b

VEGETATION AREA 11	
AS 3959:2018 Vegetation Classification Applied:	Class A Forest
Vegetation Types Present:	Open forest A-03
Description/Justification:	Subdivided area of large rural-residential wooded blocks, with significant areas of Class A vegetation. The majority of blocks have overstory of tuart and jarrah, with middle story of banksia and xanthorrhoea, and native understory of native shrubs and grasses. Clear tiered vegetation structure. Numerous cleared areas throughout in APZs but for the purpose of this assessment approximates Class A vegetation.
Post Dev. Assumptions:	Will be maintained as is after completion of the development.
	

VEGETATION AREA 11	
Photo ID: 11a	Photo ID: 11b

VEGETATION AREA 12	
AS 3959:2018 Vegetation Classification Applied:	Class B Woodland
Vegetation Types Present:	Open woodland B-06
Description/Justification:	Previously cleared area with regrowth vegetation of some mature trees over weed grasses. Approximately 25% canopy cover throughout. No significant native understorey or middle story.
Post Dev. Assumptions:	Will be completely cleared and removed as part of this development.
	
Photo ID: 12a	Photo ID: b

VEGETATION AREA 13	
AS 3959:2018 Vegetation Classification Applied:	Excluded as per Section 2.2.3.2 (f) Low Threat Vegetation
Vegetation Types Present:	N/A
Description/Justification:	Multiple land uses, including industrial, agricultural, residential and recreational, that meet the definition of Low Threat as defined by c.2.2.3.2(f) of AS3959-2018.
Post Dev. Assumptions:	These areas will be maintained in a Low Threat state, or converted to other uses that maintain that state in perpetuity.
	

VEGETATION AREA 13

Photo ID: 13a



Photo ID: 13b



Photo ID: 13c



Photo ID: 13d



Photo ID: 13e



Photo ID: 13f

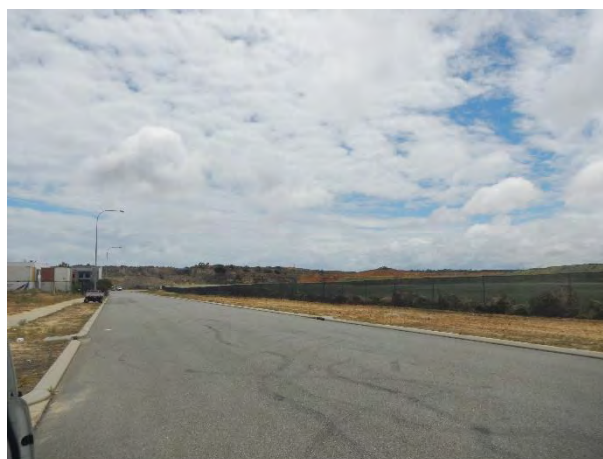


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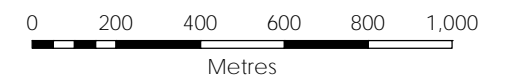
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Figure 3.1
Topography &
Classified Vegetation

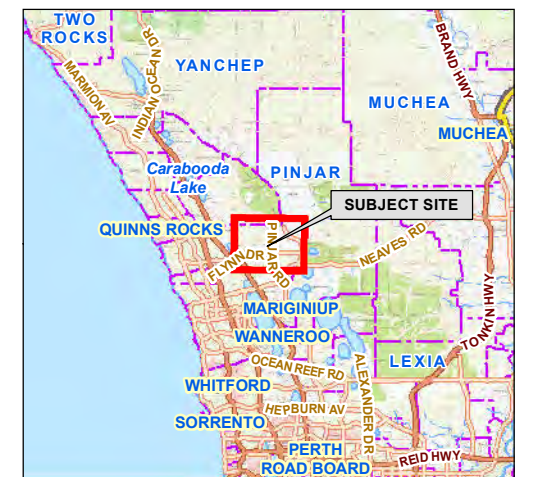
Neerabup Industrial Area
NEERABUP
CITY OF WANNEROO



- LEGEND -----
- Subject Site
 - Locality / Suburb
 - Photo & Direction
 - Industrial Development
 - Hydrant
- Vegetation Assessment Area
- 150m from Subject Site
- Classified Vegetation
- Class (A) Forest
 - Class (B) Woodland
 - Class (G) Grassland
 - Exclusion 2.2.3.2



----- LOCALITY -----



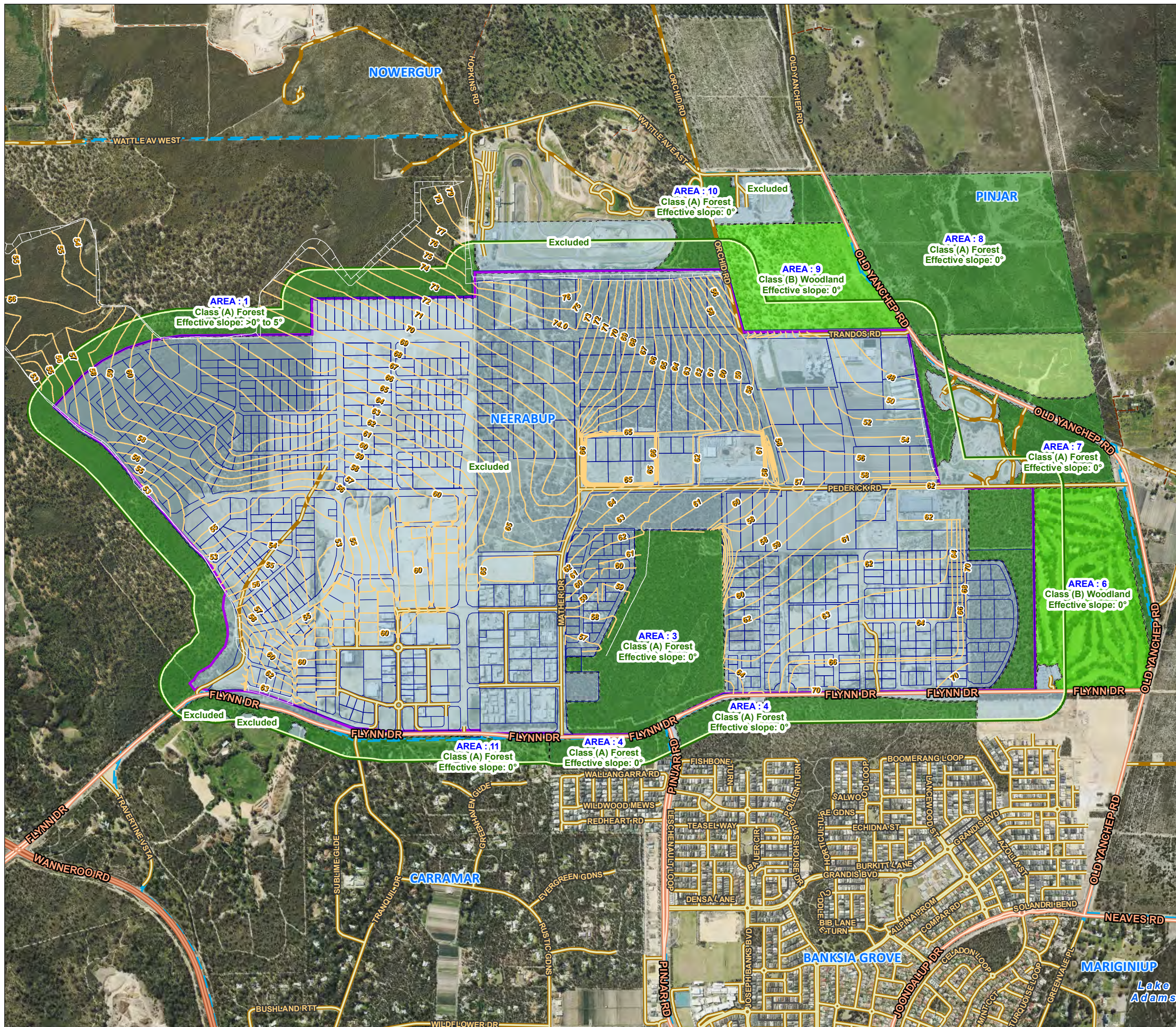
Aerial Imagery : Landgate/SLIP
Image Date : Aug 2020



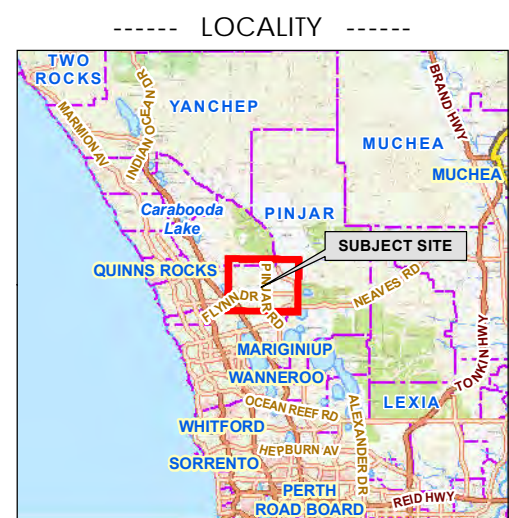
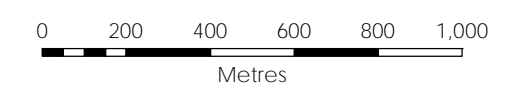
Coordinate System : GDA 1994 MGA Zone 50
Projection : Universal Transverse Mercator Units : Metre
Map compiled by : Ian Ross 17/12/2020
Map updated by : Ian Ross 17/12/2020

Figure 3.1.1
 Topography & Classified
 Vegetation (Post Development)

Neerabup Industrial Area
 NEERABUP
 CITY OF WANNEROO



- LEGEND -----
- Subject Site
 - Locality / Suburb
 - Industrial Development
 - Vegetation Assessment Area
 - 150m from Subject Site
 - Classified Vegetation
 - Class (A) Forest
 - Class (B) Woodland
 - Class (G) Grassland
 - Exclusion 2.2.3.2



Aerial Imagery : Landgate/SLIP
 Image Date : Aug 2020

Coordinate System : GDA 1994 MGA Zone 50
 Projection : Universal Transverse Mercator Units : Metre
 Map compiled by : Ian Ross 23/02/2021
 Map updated by : Ian Ross 23/02/2021

BUSHFIRE PRONE PLANNING

Disclaimer and Limitation: This map has been prepared for bushfire management planning purposes only. All depicted areas, contours and any dimensions shown are subject to survey. Bushfire Prone Planning does not guarantee that this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequence arising from relying on any information depicted.
 Map Document Path / Name: K:\Projects\Jobs 2019\190235 - Wanneroo RFQ Neerabup Industrial Area - 14 May 2019 due\Mapping\MXD\190235_Fig3-1-1_VEG_POST_Neerabup Industrial.mxd

3.1.3 Vegetation Separation Distance

The vegetation separation distance is the horizontal distance measured from the relevant parts of an existing building or a future building's planned location (within a lot), to the determined edge of an area of classified vegetation.

This separation distance applied to determining a Bushfire Attack Level (BAL) can be either:

- The measured distance – for which the location of the building relative to the edge of classified vegetation must be known. This will result in single determined BAL that will apply to a building. (The measured distance is a required calculation input); or
- A calculated minimum and maximum distance (range) that will correspond to each individual BAL. The calculated distances provide an indicative (or achievable) BAL for which the determined BAL will be dependent on the known location of the building relative to the edge of classified vegetation.

The calculated range of distances corresponding to each BAL can be presented in different formats (tables or a BAL contour map), dependent on the form of information that is most appropriate for the proposed development/use. These distance ranges corresponding to BAL(s) will be presented in Section 3.2: 'Assessment Output'.

For the proposed development/use, the applicable vegetation separation distances will be presented within the Bushfire Management Plan in this location:

In Section 3.2 'Assessment Output' as a table containing the calculated ranges of distance corresponding to each BAL and illustrated as a BAL Contour Map.

3.2 Assessment Output

UNDERSTANDING THE RESULTS OF THE BUSHFIRE IMPACT ASSESSMENT

Bushfire Attack Levels (BALs) – Their Application in the Building Environment is Different to the Planning Environment

In the building environment, a *determined BAL* is required for the proposed construction at the building application stage. This is to inform approval considerations and establish the bushfire construction standards that are to apply. An indicative BAL is not acceptable for a building application.

In the planning environment, through the application of SPP 3.7 and associated Guidelines, the deemed to satisfy requirement for a proposed 'development site' or sites (defined by the *Planning and Development (Local Planning Schemes) Regulations 2015*) as "that part of a lot on which a building that is the subject of development stands or is to be constructed"), is that a BAL-29 or lower rating can be achieved once all works associated with the proposal are completed. For planning approval purposes, an *indicative BAL* can provide the required information.

Determined Bushfire Attack Level

A determined BAL is to apply to an existing building or the 'development site' on which the building is to be constructed and not to a lot or building envelope. Its purpose is to state the potential radiant heat flux to which the building will be exposed, thereby determining the construction standard to be applied.

A determined BAL cannot be given for a future building whose design and position on the lot are unknown or the vegetation separation distance has not been established. It is not until these variables have been fixed that a determined BAL can be stated, and a BAL Certificate can be issued.

The one exception is when a building of any dimension can be positioned anywhere on a proposed lot or within a defined building envelope, and always remain subject to the same BAL, regardless of the retention of any existing classified vegetation either onsite or offsite.

Indicative Bushfire Attack Level

If a BAL is not able to achieve 'determined' status it will be an indicative BAL. It indicates the BAL that can be achieved by the proposed development/use. However, it is conditional upon an assessment variable(s) being confirmed at a later stage (e.g. the building location is established/changed, or vegetation is modified/removed to establish the vegetation separation distance).

A BAL certificate cannot be issued for an indicative BAL – unless that BAL cannot vary (refer to 'Determined BAL' above).

In table form, a single or a range of indicative BAL(s) may be presented. If a single indicative BAL is stated for a defined area (i.e. the lot or building envelope), this will be the highest indicative BAL impacting the defined area.

In BAL contour map form (refer to Section 3.2.1), the illustrated BAL contours visually identify areas of land for which if any part of an existing or proposed building is located on that land and within the BAL contours, then the highest BAL affecting that building (or part of the land on which the building will be constructed), will be the indicative BAL that is to apply.

The BAL can only become a determined BAL once the actual location of that building on the land is known and/or the required minimum vegetation separation distance corresponding to the relevant BAL contour is established (refer to Table 3.3).

3.2.1 Bushfire Attack Level Results - BAL Contour Map Format

INTERPRETATION OF THE BUSHFIRE ATTACK LEVEL (BAL) CONTOUR MAP

The contour map will present different coloured contour intervals extending from the areas of classified bushfire prone vegetation. These represent the different bushfire attack levels that will exist at varying distances away from the classified vegetation in the event of a bushfire in that vegetation.

The areas of classified vegetation to be considered in developing the BAL contours, are those that will remain as the intended end state of the subject development once earthworks, clearing and/or landscaping and re-vegetation have been completed (or each stage completed).

Each bushfire attack level corresponds to a set range of radiant heat flux that is generated by a bushfire. That range is defined by the AS 3959:2018 BAL determination methodology.

The width of each shaded BAL contour is a diagrammatic representation of the separation distances from the classified vegetation that correspond to each BAL for each separately identified area of classified vegetation. They have been calculated by the application of the unique site variables including vegetation types and structure, ground slope and applied fire weather.

(Refer to Section 3.2 'Understanding the Results of the Bushfire Impact Assessment' for the explanation of how BAL(s) for buildings will be assessed from the BAL Contour Map).

Construction of the BAL Contours

VEGETATION AREAS APPLIED TO THE DEVELOPMENT OF THE BAL CONTOUR MAP

All identified areas of classified vegetation have been applied with the following exceptions:

For Figure 3.2, all classified vegetation within the boundaries of the proposed development, except that which will be retained, is excluded and the BAL contours are constructed into the lot from any classified vegetation outside the boundaries of the development.

This approach is applied to indicate the achievable bushfire attack levels within the specified development and the resultant area of developable land (i.e. subject to BAL-29 or less). It is based on the following assumptions:

1. Any classified vegetation within each lot can potentially be managed by the landowner to meet asset protection zone standards and dimensions corresponding to an indicated BAL; and
2. Each lot must be considered independent of what development may or may not take place on the adjoining lot.

Table 3.3 does not include Vegetation Areas 2 and 12, as the assumption is that they will be completely cleared as a part of the development works, and will be maintained as Low Threat in perpetuity. (Refer Figure 3.1.1 Topography & Classified Vegetation - Post Development Map).

VEGETATION SEPARATION DISTANCES APPLIED

The distances that have been applied to illustrating the width of each BAL contour shown in Figure 3.2 are stated in Table 3.3. These correspond to each Bushfire Attack Level and are specific to the proposed development site.

Table 3.3: Vegetation separation distances applied to construct the BAL contours.

BAL CONTOUR MAP – APPLIED VEGETATION SEPARATION DISTANCES								
Derived from the Application of Method 1 BAL Determination Methodology (AS 3959:2018 Section 2, Table 2.5) ¹								
Vegetation Area	Vegetation Classification	Effective Slope (degree range)	BAL and Corresponding Separation Distance (m)					
			BAL-FZ	BAL-40	BAL-29	BAL-19	BAL12.5	BAL-LOW
1	Class A Forest	downslope >0-5	<20	20-<27	27-<37	37-<50	50-<100	>100
3	Class A Forest	upslope or flat	<16	16-<21	21-<31	31-<42	42-<100	>100
4	Class A Forest	upslope or flat	<16	16-<21	21-<31	31-<42	42-<100	>100
5	Class A Forest	downslope >0-5	<20	20-<27	27-<37	37-<50	50-<100	>100
6	Class B Woodland	upslope or flat	<10	10-<13	13-<19	19-<27	27-<100	>100
7	Class A Forest	upslope or flat	<16	16-<21	21-<31	31-<42	42-<100	>100
8	Class A Forest	upslope or flat	<16	16-<21	21-<31	31-<42	42-<100	>100
9	Class B Woodland	upslope or flat	<10	10-<13	13-<19	19-<27	27-<100	>100
10	Class A Forest	upslope or flat	<16	16-<21	21-<31	31-<42	42-<100	>100
11	Class A Forest	upslope or flat	<16	16-<21	21-<31	31-<42	42-<100	>100

3.2.2 Bushfire Attack Level Results - Derived from The BAL Contour Map

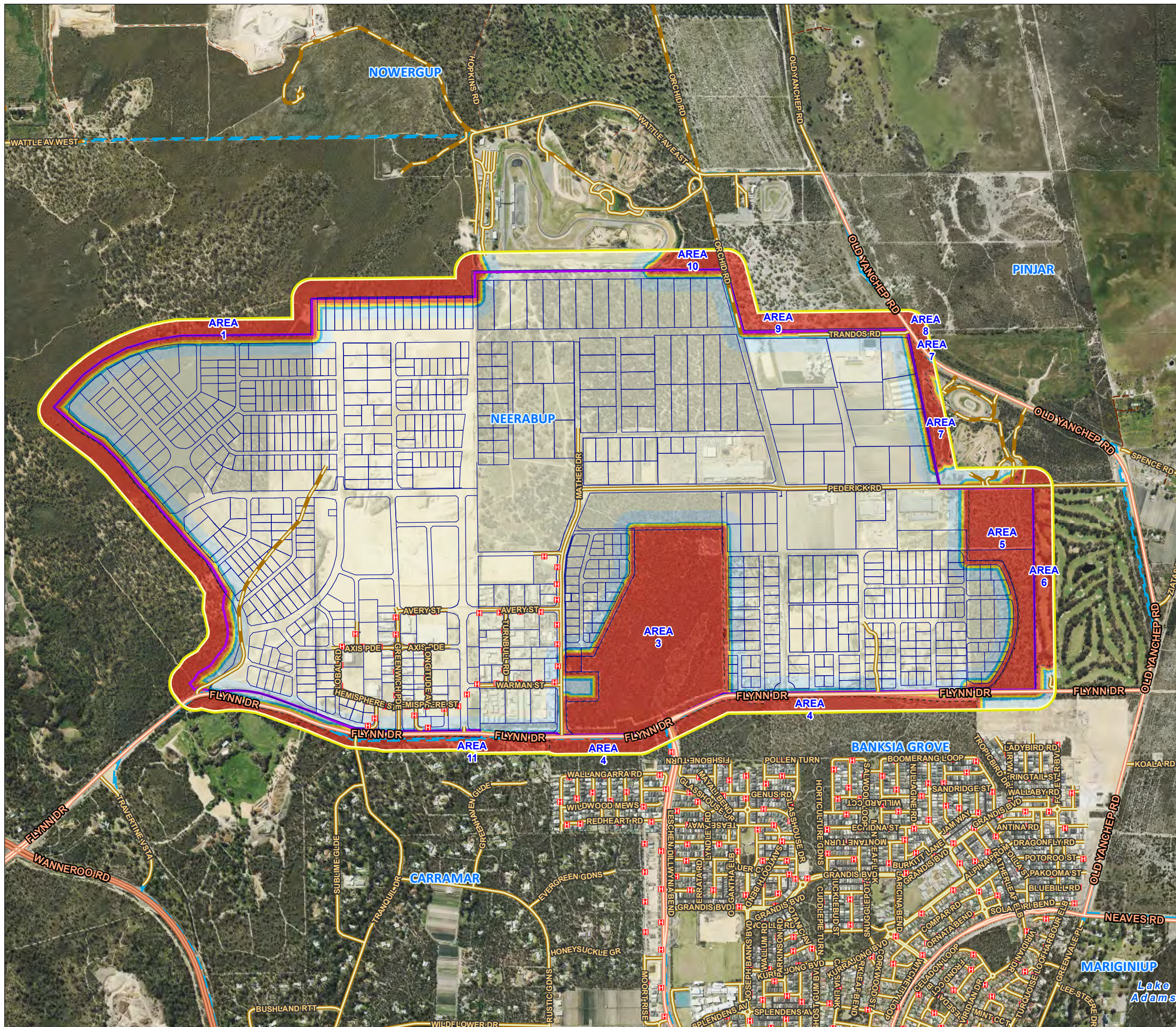
As shown by the contour plan, the vast majority of the subject development area will be subject to a BAL-Low bushfire exposure. The size of the development means that most lots will be greater than 100 m from classified vegetation at the completion of the development. As shown on Figure 3.1 much of the development site has already been cleared and is considered Lot Threat as per c.2.2.3.2(f) of AS3959-2018, and the development process will significantly increase the land excluded from classification as a bushfire threat.

Only lots around the boundaries of the development, and adjacent to the remnant vegetation that will be retained in Vegetation Areas 3 and 5, are subject to bushfire exposure as indicated by a BAL contour. This exposure can be easily mitigated by wide road verges (as in the existing Industrial Area) increasing separation distances, the position of buildings on lots, and the use of APZs.

Every lot within the development can achieve a BAL-29 APZ (or less). There will be no lots with BAL-40 or BAL-FZ exposure.

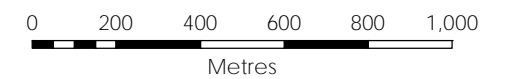
Figure 3.2
BAL Contour Map

Neerabup Industrial Area
NEERABUP
CITY OF WANNEROO

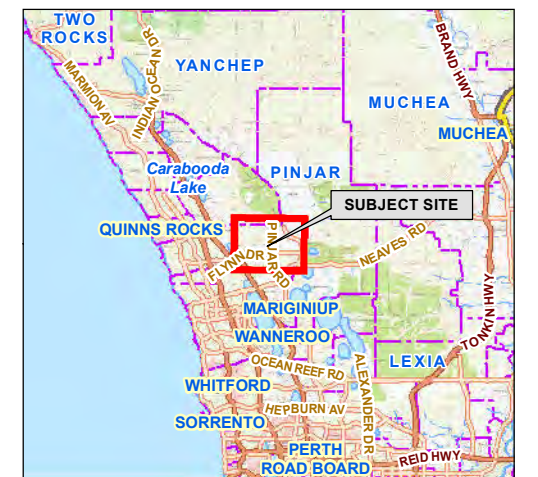


----- LEGEND -----

- Subject Site
- Locality / Suburb
- Industrial Development
- Hydrant
- Vegetation Assessment Area**
- 100m from Subject Site
- Classified Vegetation Boundary
- Indicative Bushfire Attack Levels**
- BAL FZ
- BAL 40
- BAL 29
- BAL 19
- BAL 12.5
- BAL LOW



----- LOCALITY -----



Aerial Imagery : Landgate/SLIP
Image Date : Aug 2020



Coordinate System : GDA 1994 MGA Zone 50
Projection : Universal Transverse Mercator Units : Metre
Map compiled by : Ian Ross 16/12/2020
Map updated by : Ian Ross 16/12/2020

4 IDENTIFICATION OF BUSHFIRE HAZARD ISSUES

In response to the Bushfire Management Plan requirements established by Appendix 5 of the Guidelines for Planning in Bushfire Prone Areas (WAPC 2017 v1.3), the following statements are made to assist in the understanding of whether the proposal is likely to be able to comply with the bushfire protection criteria now or in subsequent planning stages.

Spatial Context - Broader Landscape Considerations	
Wider road network and access constraints	The proposed road network for the development exceeds requirements for access, providing multiple points of access and egress, and an internal road network that allows easy movement throughout. There are no cul-de-sacs or other bottlenecks within the development footprint, and every lot will have front on access to a two-way road.
Proximity of settlements and emergency services	This development is an expansion of the existing Neerabup Industrial Area and sits in a landscape of fairly rapid development through the northern urban corridor. The landscape to the south is largely densely developed residential suburbs. The Industrial Area is located within the Gazetted Fire District, meaning any bushfire will be responded to by Fire and Rescue Service Career Stations from Butler and Joondalup.
Bushfire prone vegetation types and extent (including conserved vegetation)	The Neerabup Industrial Area is located in a landscape of bushfire prone vegetation to the west, north and east. This comprises a mix of banksia woodland zoned as Regional and National Park and unlikely to be developed, agricultural and resources land of varying zoning, and previously cleared but now revegetated areas. The majority of this land classifies as Class A Forest, Class B Woodland, or Class G Grassland.
Topography and fire behaviour interactions.	The topography is gently undulating with much of the land being considered "flat" with some slopes of between zero to five degrees. Bushfire rates of spread can double for every ten degrees of upslope while downslopes will slow the rate of spread. The area has been subject to a number of major bushfires in the past decade, including the Bullsbrook fire of 2015 which was contained to the east, and the Nowergup Fire, also of 2015, which was contained to the north. Both these fires were fast moving and burned on a strong easterly wind.
Potential for extreme fire behaviour and pyro convective events.	Possible but limited likelihood due to the fragmentation of areas of bushfire prone vegetation due to cleared areas, pastured areas, fuel load management by landowners and the availability of emergency services (including being a part of the greater Perth metropolitan area). Fires tend to run from east to west driven by an easterly wind, or from southwest to northeast, driven by the sea breeze. However, other wind directions are possible, and the impact of climate change may affect existing prevailing summer weather patterns.
Environmental Considerations	
Constraints to implementing required and/or additional bushfire protection measures	While environmental considerations exist, the master plan for the site has provided provisions for them (see Section 2).
Provision of Access Within the Subject Site	
Potential constraints	No constraints to establishing the required access will exist.
Potential Bushfire Impacts	
Flame and radiant heat and ability to establish an APZ	At completion of the development the vast majority of lots within its boundaries will be able to achieve BAL-Low. Around the margins of the development the proposed lot sizes will allow a BAL-29 dimensioned APZ to be established within each lot. This will prevent flame contact from the classified vegetation. Application of the BAL-29 bushfire construction standard will mitigate the risks from radiant heat impact to what is considered an acceptable level.

Embers/firebrands, smoke and fire-driven wind	For the vast majority of the development area wind blown embers will be the only bushfire threat. The surrounding vegetation contains high numbers of stringy bark trees (jarrah) which generate high volumes of embers. The appropriate protection measures of building construction and strict management of any APZs will mitigate the risk to what is considered an acceptable level.
Issues to be Considered at Subsequent Planning Stages (additional assessments/documents)	
Specific land uses to be addressed	As an industrial area, there may be numerous High Risk land uses within the boundaries of the development. These should be assessed and considered on a case by case basis as they are proposed. There is no bushfire impediment to the implementation of these land uses for this development.
Additional assessments	Lots with a bushfire exposure as indicated by a BAL contour on Figure 3.2 will require a BAL assessment once lot layout is known, to ensure buildings are positioned in parts of the lot with a bushfire exposure of BAL-29 or less.
Additional documents	This BMP is a strategic level document that indicates that the bushfire risks for this particular development have been mitigated at a strategic level. Further BMPs may be required at a sub-division level, particularly if the development is to be staged.
Discretionary Decision Making and the Precautionary Principle (SPP 3.7 and Guidelines)	
Does the bushfire consultant consider there are issues that need to be addressed in this space?	There is no significant impediment to this development as a result of bushfire risk. All risks are able to be mitigated through the application of the BPC (see Section 5)

5 ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA ESTABLISHED BY THE GUIDELINES

For a development application that is not a 'Tourism Land Use' to be considered compliant with SPP 3.7, it must satisfy (achieve) the intent of each of the four elements of the bushfire protection criteria. These criteria are established by the *Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3*). Compliance can be achieved by either:

- Meeting all applicable acceptable solutions corresponding to each element (i.e. the minimum bushfire protection measures that are deemed to satisfy planning requirements); or
- Where an acceptable solution cannot be met, by developing a performance solution that satisfies the established requirements.

5.1 Local Government Variations to Apply

Local governments may add to or modify the acceptable solutions of the Bushfire Protection Criteria (BPC) and/or apply technical requirements that vary from those specified in the *Guidelines for Planning in Bushfire Prone Areas (WAPC)*. In such instances, this Proposal will be assessed against these variations and/or any specific local government technical requirements for emergency access and water. Refer to Appendices 2 and 3 for relevant technical requirements.

Will local or regional variations (endorsed by WAPC / DFES) to the applicable acceptable solutions established by the <i>Guidelines</i> or the <i>Position Statement: Tourism land uses in bushfire prone areas WAPC October 2019</i> , apply to this Proposal?	No
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5.2 Summary of Assessment Against the Bushfire Protection Criteria

SUMMARISED OUTCOME OF THE ASSESSMENT AGAINST THE BUSHFIRE PROTECTION CRITERIA					
Element of the Bushfire Protection Criteria	Basis for the Proposal Achieving Full Compliance with SPP 3.7			The Proposal Cannot Achieve Full Compliance with SPP 3.7	
	Acceptable Solutions Met	Achieves the Intent of the Element		Bushfire planning development type that may not require full compliance is applied	An improvement in bushfire performance compared to the existing development is detailed (refer Note 4)
	All applicable solutions are fully met	All applicable solutions are not fully met. A merit based assessment and/or a bushfire performance comparison of the proposals residual risk with that of the residual risk of the acceptable solution is conducted (refer Note 4)	A performance principle-based solution is applied		
1. Location	✓			N/A	
2. Siting and Design of Development	✓				
3. Vehicular Access	✓				
4. Water	✓				
<p>Note: The development proposal has been assessed:</p> <ol style="list-style-type: none"> Against the requirements established in Appendix 4 of the <i>Guidelines for Planning in Bushfire Prone Areas, WAPC 2017 v1.3 (Guidelines)</i>. The Guidelines are found at https://www.planning.wa.gov.au/8194.aspx; and Applying the interpretation guidance provided in <i>Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design (WAPC Nov 2019)</i>. Applying any endorsed variations to the Guideline's acceptable solutions and associated technical requirements that have been established by the local government. If known and applicable these have been stated in Section 5.1 with the detail included as an appendix if required by the local government. When non-compliant with SPP 3.7 and when appropriate, by utilising additional compliance pathways that include the application of merit based assessment and comparative bushfire performance. The validity of this approach is derived from relevant decisions made by the responsible authorities (refer Appendix 2). 					

5.3 Assessment Detail

Element 1: Location	
Intent: To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.	
Compliance: How the proposed development achieves the intent of Element 1:	By fully meeting all applicable acceptable solutions established by the bushfire protection criteria (Guidelines v1.3 WAPC 2017)
ASSESSMENT (COMPLIANCE) STATEMENTS	
For each applicable acceptable solution, the following statements present the results of the assessment of the proposed development/use against the requirements established by the <i>Guidelines (WAPC 2017 v1.3)</i> and apply the interpretation guidance established by the <i>Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design (WAPC Nov 2019)</i> .	
Acceptable Solution: A1.1: Development Location	
ASSESSMENT AGAINST THE REQUIREMENTS ESTABLISHED BY THE GUIDELINES	
The Master Plan development area is able to fully achieve the requirements of Element 1 by ensuring that the development is located in an Area where, upon completion, it will be subject to a maximum Bushfire exposure represented by a rating of BAL-29 or less.	
The vast majority of the development site will achieve a BAL rating of BAL-Low at the future subdivision stages and completion of the development.	
ASSESSMENT AGAINST THE REQUIREMENTS ESTABLISHED BY THE POSITION STATEMENT	
<p>The position statement establishes that:</p> <ul style="list-style-type: none"> • The source of risk (the hazard) to be considered in Element 1 is the "level of bushfire exposure" from the type and extent of bushfire prone vegetation and the topography of the land on which it exists; and • "Consideration should be given to the site context" which includes the land both "within and adjoining the subject site". The "hazards remaining within the site should not be considered in isolation of the hazards adjoining the site, as the potential impact of a bushfire will be dependent on the wider risk context." <p>The position statement also recognises:</p> <ul style="list-style-type: none"> • That the proposed development site and its surrounding land may be part of an area "identified for development or intensification of land use prior to the release of SPP 3.7"; consequently • Consideration by decision-makers "should also be given to improving bushfire management of the site and surrounding area, thereby reducing the vulnerability of people property and infrastructure to bushfire"; and • The application of mitigation measures to lessen the risk to the broader area would include improvements to the local road network (including emergency access ways), improvements/additions to firefighting water supply and increasing separation distance from the hazard. 	
<p>The Hazard Within the Subject Site</p> <p>The majority of the bushfire hazard within the site will be removed as a result of the development and the majority of lots will have a BAL-Low bushfire exposure. Three areas of classified vegetation will be retained due to environmental considerations. The native vegetation in these areas is classified as Class A Forest. The impact of the slopes under the vegetation will be dependent on a bushfire's direction of travel, but slopes in the range of zero to five degrees exist</p>	

Element 1: Location

for within vegetation Area 5 and bushfire travelling upslope will have increased intensity and rate of spread. Significantly intense bushfire behaviour is possible in this area of remnant vegetation, particularly if vegetation within the lot is ignited by bushfire in the adjoining hazard (Vegetation Areas 4 and 6) and they are involved together.

However, the ability to establish a BAL-29 dimensioned APZ within each lot adjacent to these two vegetation areas removes the threat of greater levels of radiant heat or flame contact upon a future dwelling. The BAL-29 APZ will exist over a significant area of each proposed lot. The risk is further mitigated by an appropriate road network, incorporating wide road verges to significantly increase the separation distance and reduce the bushfire exposure.

The primary bushfire threat from bushfire prone vegetation remaining within the site for the majority of lots will be embers. This threat will be mitigated by the application of appropriate building design, bushfire construction standards and the ongoing maintenance of the APZ to ensure the buildings will not be impacted by consequential fire within combustible materials used, stored or accumulated within the APZ.

The Hazard Adjoining the Subject Site

Bushfire prone vegetation within adjacent lands exists as native vegetation classified as Class A Forest, Class B Woodland, and Class G Grassland. There are also large areas of Low Threat vegetation directly adjacent to the development site.

The impact of the slope under the vegetation is negligible for most surrounding vegetation, with the exception of Vegetation Area 1. The impact of a fire in this area will be dependent on a bushfire's direction of travel, but slopes in the range of zero to five degrees downslope from the proposed lots do exist. Bushfire travelling upslope will have increased intensity and rate of spread.

Consequently, the potential exists for intense bushfire behaviour to occur within these areas of bushfire prone vegetation. The potential bushfire impact on persons and property within the majority of proposed lots will be to increase the level of ember attack in the event of a bushfire.

This ember threat will be mitigated by the application of appropriate building design, bushfire construction standards and the ongoing maintenance of the BAL-29 dimensioned APZ, to ensure the buildings will not be impacted by consequential fire within combustible materials used, stored or accumulated within the APZ.

To the south the development site, on the south side of Vegetation Area 4, is an existing high density built out residential area. This limits the ability of a large scale landscape style fire coming from this direction.

The Potential to Reduce Bushfire Risk to Existing Land Use

When considered in the broader context of existing land use within the surrounding area, the proposed subdivision can potentially contribute to reducing the level of risk from bushfire to existing landowners.

This can be achieved in various ways and the following assessment points are made for the proposed subdivision:

- Once developed, the subject site will create a significant zone of low threat land within which industry can operate largely free from bushfire risk other than ember attack;
- This development will benefit residential areas to the south, creating a buffer zone that precludes the impact of a landscape scope fire occurring for those residential sub-divisions. While fires can still occur in Vegetation Area 4, the limited north-south width of this vegetation means a fire will not have the capacity to develop to its full intensity before it impacts on houses to the south or the industrial area to the north;
- The implementation of the road network associated with the development will also increase access and egress options for surrounding areas.

When the potential positive impact on the surrounding area is considered, there is significant merit in the broader impact of the proposed subdivision that it is appropriate to consider.

Element 2: Siting and Design of Development

Intent: To ensure that the siting and design of development (note: not building/construction design) minimises the level of bushfire impact.

Compliance: How the proposed development achieves the intent of Element 2:

By fully meeting all applicable acceptable solutions established by the bushfire protection criteria (Guidelines v1.3 WAPC 2017)

ASSESSMENT (COMPLIANCE) STATEMENTS

For each applicable acceptable solution, the following statements present the results of the assessment of the proposed development/use against the requirements established by the *Guidelines (WAPC 2017 v1.3)* and apply the interpretation guidance established by the *Position Statement: Planning in bushfire prone areas – Demonstrating Element 1: Location and Element 2: Siting and design (WAPC Nov 2019)*.

Acceptable Solution: A2.1: Asset Protection Zone

The development is able to achieve a minimum BAL-29 APZ for all lots within the boundary of the development. As shown in Figure 3.2 the vast majority of lots will achieve a rating of BAL-LOW. Only lots adjacent to the external parts of the development will be subject to a BAL rating above BAL-Low. The size of lots allows the siting of buildings to achieve a minimum BAL-29.

The external and internal road network for the development is used to increase separation between classified vegetation and reduce the potential bushfire impact. All lots adjacent to classified vegetation will have a road and wide road verges between them and that vegetation.

THE APZ - DEVELOPMENT SITING AND DESIGN PLANNING REQUIREMENTS

The necessary outcome of bushfire planning for development siting and design, is to ensure that a building can be located within the developable portion of any lot (i.e. outside those parts of the lot that form the required building setbacks, or any other excluded area), and be subject to potential radiant heat from a bushfire not exceeding 29 kW/m² (i.e. a maximum BAL of BAL-29).

This will be achieved when the size of the “low fuel area immediately surrounding a building”, the asset protection zone (APZ), is large enough. This requires a certain separation distance to exist between the building and areas of classified vegetation. These are the BAL-29 APZ dimensions and they will vary dependent on site specific parameters.

The APZ should be contained solely within the boundaries of each lot, except in instances where the neighbouring lot(s) or adjacent public land will be managed in a low-fuel state on an ongoing basis, in perpetuity.

Where possible, planning for siting and design should incorporate elements that include non-vegetated areas (e.g. roads/parking/drainage) and/or formally managed areas of vegetation (public open space/recreation areas/services installed in a common section of land), as either part of the required APZ dimensions or to additionally increase separation distances to provide greater protection. These elements create robust and easier managed asset protection zones.

THE ASSESSMENT

Future buildings on the lot(s) of the proposed subdivision can be surrounded by an APZ that will ensure the potential radiant heat impact of a bushfire does not exceed 29 kW/m² (BAL-29). The required APZ specifications of width, location and management can be achieved.

APZ Width: The required APZ dimensions to ensure buildings are subject to a maximum BAL of BAL-29 (measured from any external wall or supporting post or column to the edge of the classified vegetation), has been determined in Section 3.2 of this BMP and are:

Element 2: Siting and Design of Development

BAL-29 APZ Dimensions		
Separation distance Applicable to Lots adjacent to Classified Vegetation:	Building to Vegetation Area 1	Minimum 27 metres
	Building to Vegetation Area 3	Minimum 21 metres
	Building to Vegetation Area 4	Minimum 21 metres
	Building to Vegetation Area 5	Minimum 27 metres
	Building to Vegetation Area 6	Minimum 13 metres
	Building to Vegetation Area 7	Minimum 21 metres
	Building to Vegetation Area 8	Minimum 21 metres
	Building to Vegetation Area 9	Minimum 13 metres
	Building to Vegetation Area 10	Minimum 21 metres
	Building to Vegetation Area 11	Minimum 21 metres

APZ Location: Asset protection zones of the widths stated above can be contained solely within the boundaries of each lot. Onsite vegetation will be required to be modified/removed, the authority for which will need to be received from the local government.

APZ Management: All vegetation that will require modification/removal and future management is onsite and therefore under the control of the landowner.

Retained vegetation will be managed in accordance with the technical requirements established by the Schedule 1: 'Standards for Asset Protection Zones (Guidelines)'. The APZ specifications are also detailed in Appendix 1.

THE APZ – REQUIRED DIMENSIONS TO SATISFY FUTURE BUILDING (AND ONGOING MANAGEMENT)

It is important for the landowner to be aware that the APZ dimensions that will be required to be physically established and maintained on each lot surrounding relevant future buildings, may be different to those stated above for the BAL-29 APZ - which is the minimum dimension a planning proposal needs to show can be established to comply with SPP 3.7.

The actual APZ dimensions to be physically established and maintained, will be based on which of the following establishes the larger APZ dimension:

- The dimensions corresponding to the determined BAL of a building (refer to Section 3.2 for explanation of the 'planning' versus 'building' requirements and 'indicative' versus 'determined' BAL); or
- The APZ dimensions established by the local government's Firebreak Notice.

Element 3: Vehicular Access

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

Compliance: How the proposed development achieves the intent of Element 3:

By fully meeting all applicable acceptable solutions established by the bushfire protection criteria (Guidelines v1.3 WAPC 2017)

ASSESSMENT (COMPLIANCE) STATEMENTS

For each applicable acceptable solution, the following statements present the results of the assessment of the proposed development/use against the requirements established by the *Guidelines* (WAPC 2017 v1.3).

Acceptable Solution: A3.1: Two Access Routes

Multiple roads provide safe access and egress to at least six different destinations via local road networks. The road network for the development will connect to major roads including Old Yanchep Road, Flynn Drive and Pinjar Road. A new connection will be installed in the northwest to connect to Wattle Avenue West. As sealed public roads, these are available to all residents and the public at all times and under all weather conditions.

This will provide the capacity for access and egress options on all sides of the development.

The construction technical requirements established by the Guidelines and/or the local government can and will be complied with.

Acceptable Solution: A3.2: Public Road

A range of new roads, both major and minor, will be constructed as part of the development and will fully meet the acceptable solution. The construction technical requirements established by the Guidelines and/or the local government can and will be complied with.

Acceptable Solution: A3.3: Cul-de-sacs (including a dead-end road)

No cul-de-sacs or dead end roads will be included as part of the development design. A number of existing dead end roads will be extended and connected to other roads reducing the bushfire risk.

Acceptable Solution: A3.4: Battle-axe

No battle axe blocks (Lots) will be included as part of the development design.

Acceptable Solution: A3.5: Private Driveways

The construction technical requirements established by the Guidelines and/or the local government can and will be complied with. These requirements are set out in Appendix 2.

Acceptable Solution: A3.6: Emergency Access Way

No Emergency Access Ways will be included as part of the development design.

Acceptable Solution: A3.7: Fire Service Access Routes

No Fire Service Access Routes will be included as part of the development design.

Acceptable Solution: A3.8: Firebreak Width

The proposed lots will comply with the requirements of the local government annual firebreak notice issued under s33 of the Bush Fires Act 1954. Firebreaks to be installed prior to future subdivision staging clearances.

Element 4: Water

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

Compliance: How the proposed development achieves the intent of Element 4:

By fully meeting all applicable acceptable solutions established by the bushfire protection criteria (Guidelines v1.3 WAPC 2017)

ASSESSMENT (COMPLIANCE) STATEMENTS

For each applicable acceptable solution, the following statements present the results of the assessment of the proposed development/use against the requirements established by the *Guidelines* (WAPC 2017 v1.3).

Acceptable Solution: A4.1: Reticulated Areas

A reticulated water supply is available to the subject site and a hydrant network will be installed as part of the development. The construction technical requirements established by the Guidelines and/or the local government can and will be complied with.

Acceptable Solution: A4.2: Non-Reticulated Areas

N/A

Acceptable Solution: A4.3: Non-Reticulated Areas – Individual Lots

N/A

6 RESPONSIBILITIES FOR IMPLEMENTATION AND MANAGEMENT OF THE BUSHFIRE PROTECTION MEASURES

6.1: BMP Implementation responsibilities prior to occupancy or building.

Landowner (Developer) - Prior to Development	
No.	Implementation Actions
1	<p>The local government may condition a development application approval with a requirement for the landowner/proponent to register a notification onto the certificate of title and deposited plan.</p> <p>This will be done pursuant to Section 70A <i>Transfer of Land Act 1893 as amended</i> ('Factors affecting use and enjoyment of land, notification on title'). This is to give notice of the bushfire hazard and any restrictions and/or protective measures required to be maintained at the owner's cost.</p> <p>This condition ensures that:</p> <ol style="list-style-type: none"> 1. Landowners/proponents are aware their lot is in a designated bushfire prone area and of their obligations to apply the stated bushfire risk management measures; and 2. Potential purchasers are alerted to the Bushfire Management Plan so that future landowners/proponents can continue to apply the bushfire risk management measures that have been established in the Plan.
2	<p>Prior to sale and post planning approval, BMPs will need to be written for relevant individual sites. The entity responsible for having the BMP prepared should ensure that anyone listed as having responsibility under the Plan has endorsed it and is provided with a copy for their information and informed that it contains their responsibilities. This includes the landowners/proponents (including future landowners where the Plan was prepared as part of a subdivision approval), local government and any other authorities or referral agencies ('Guidelines' s4.6.3).</p>
3	<p>Finalise a sub-division design that ensures that all lots can achieve an APZ meeting the separation distance requirements at least BAL-29 or less.</p>
4	<p>Finalise a sub-division design that meets the access and water provision requirements as set out in Section 5 of this plan.</p>
5	<p>If the sub-division is to be staged ensure that Bushfire Protection measures are included at all stages of the development.</p>
6	<p>Establish the Asset Protection Zone (APZ) surrounding any buildings within 100m of classified vegetation to the largest dimension as determined by either:</p> <ul style="list-style-type: none"> • The dimensions corresponding to the determined BAL of a building (refer to Section 3.2 for explanation of the 'planning' versus 'building' requirements and 'indicative' versus 'determined' BAL); or • The dimensions corresponding to the local government's Firebreak Notice. <p>Establish the APZ to the above dimensions and to the standards established by the Guidelines (refer to Appendix 1) or as varied by the local government through their Firebreak Notice (refer to the following responsibility).</p> <p>This is the responsibility of the developer.</p>
7	<p>Prior to sale of the subject lots, each individual lot is to be compliant with the City of Wanneroo Fire Break Notice issued under s33 of the Bushfires Act 1954.</p> <p>This may include specifications for asset protection zones that differ from the Guideline's APZ Standards, with the intent to better satisfy local conditions. When these are more stringent than those created by the</p>

	Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with. Refer to Appendix 1.
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6.2: Ongoing management responsibilities for the Landowner/Occupier.

6.2 Landowner/Occupier - Ongoing	
No.	Ongoing Management Actions
1	<p>Maintain the Asset Protection Zone (APZ) surrounding any buildings to the largest dimension as determined by either:</p> <ul style="list-style-type: none"> • The dimensions corresponding to the determined BAL of a building (refer to Section 3.2 for explanation of the 'planning' versus 'building' requirements and 'indicative' versus 'determined' BAL); or • The dimensions corresponding to the local government's Firebreak Notice. <p>Maintain the APZ to the above dimensions and to the standards established by the Guidelines (refer to Appendix 1) or as varied by the local government through their Firebreak Notice (refer to the following responsibility).</p>
2	<p>Comply with the City of Wanneroo Fire Break Notice issued under s33 of the Bush Fires Act 1954.</p> <p>This may include specifications for asset protection zones that differ from the Guideline's APZ Standards, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with. Refer to Appendix 1.</p>
3	<p>Maintain vehicular access routes within the lot to the required surface condition and clearances as stated in the BMP.</p>
4	<p>Ensure that any builders (of future structures on the lot) are aware of the existence of this Bushfire Management Plan and the responsibilities it contains regarding the application of construction standards corresponding to a determined BAL.</p>
5	<p>Ensure all future buildings the landowner has responsibility for, are designed and constructed in full compliance with:</p> <ol style="list-style-type: none"> 1. the requirements of the WA Building Act 2011 and the bushfire provisions of the Building Code of Australia (BCA); and 2. with any identified additional requirements established by this BMP or the local government.

6.3: Ongoing management responsibilities for the Local Government.

6.3 Local Government - Ongoing	
No.	Ongoing Management Actions
1	<p>Monitor landowner compliance with the Bushfire Management Plan and the annual City of Wanneroo Fire Break Notice.</p>
2	<p>Ensure sub-division designs meet the requirements of this BMP prior to development approval being granted.</p>

APPENDIX 1: TECHNICAL REQUIREMENTS FOR ONSITE VEGETATION MANAGEMENT

A1.1 Requirements Established by the Guidelines – Standards for Asset Protection Zones

(Source: *Guidelines for Planning in Bushfire Prone Areas - WAPC 2017 v1.3 Appendix 4, Element 2, Schedule 1 and Explanatory Note E2.1*)

DEFINING THE ASSET PROTECTION ZONE (APZ)

Description: An APZ is an area surrounding a building that is managed to reduce the bushfire hazard to an acceptable level (by reducing fuel loads). The width of the required APZ varies with slope and vegetation and varies corresponding to the BAL rating determined for a building (lower BAL = greater dimensioned APZ).

For planning applications, the minimum sized acceptable APZ is that which is of sufficient size to ensure the potential radiant heat impact of a fire does not exceed 29kW/m² (BAL-29). It will be site specific.

For subdivision planning, design elements and excluded/low threat vegetation adjacent to the lot(s) can be utilised to achieve the required vegetation separation distances and therefore reduce the required dimensions of the APZ within the lot(s).

Defendable Space: The APZ includes a defendable space which is an area adjoining the asset within which firefighting operations can be undertaken to defend the structure. Vegetation within the defendable space should be kept at an absolute minimum and the area should be free from combustible items and obstructions. The width of the defendable space is dependent on the space, which is available on the property, but as a minimum should be 3 metres.

Establishment: The APZ should be contained solely within the boundaries of the lot on which the building is situated, except in instances where the neighbouring lot or lots will be managed in a low-fuel state on an ongoing basis, in perpetuity.

The APZ may include public roads, waterways, footpaths, buildings, rocky outcrops, golf courses, maintained parkland as well as cultivated gardens in an urban context, but does not include grassland or vegetation on a neighbouring rural lot, farmland, wetland reserves and unmanaged public reserves.

[Note: Regardless of whether an Asset Protection Zone exists in accordance with the acceptable solutions and is appropriately maintained, fire fighters are not obliged to protect an asset if they think the separation distance between the dwelling and vegetation that can be involved in a bushfire, is unsafe.]

Schedule 1: Standards for APZ

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 mm in thickness reduced to and maintained at an average of two tonnes per hectare (example below).

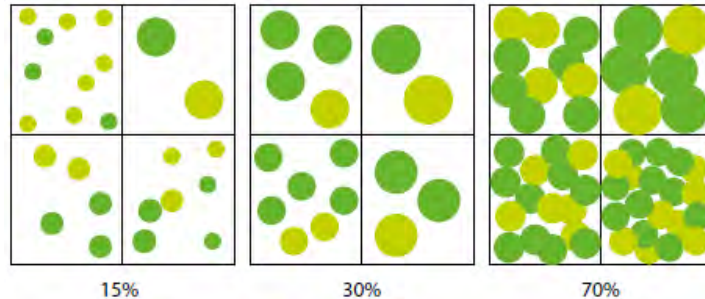


Example: Fine fuel load of 2 t/ha

(Image source: Shire of Augusta Margaret River's Firebreak and Fuel Reduction Hazard Notice)

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. Diagram below represents tree canopy cover at maturity.

Tree canopy cover – ranging from 15 to 70 per cent at maturity



(Source: Guidelines for Planning in Bushfire Prone Areas 2017, Appendix 4)

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 mm 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 mm or less.

The following example diagrams illustrate how the required dimensions of the APZ will be determined by the type and location of the vegetation.



A1.2 Requirements Established by the Local Government – the Firebreak Notice

The local government's current Firebreak Notice is available on their website, at their offices and is distributed as ratepayer's information. It must be complied with.

These requirements are established by the local government's Firebreak Notice created under s33 of the Bushfires Act 1954 and issued annually (potentially with revisions). The Firebreak Notice may include additional components directed at managing fuel loads, accessibility and general property management with respect to limiting potential bushfire impact.

If Asset Protection Zone (APZ) specifications are defined in the Firebreak Notice, these may differ from the Standards established by the Guideline's, with the intent to better satisfy local conditions. When these are more stringent than those created by the Guidelines, or less stringent and endorsed by the WAPC and DFES, they must be complied with.

The APZ dimensions to be physically established and maintained, will be based on which of the following establishes the larger APZ dimension:

- The dimensions corresponding to the determined BAL of a building (refer to Section 3.2 explanation of the 'planning' versus 'building' requirements and 'indicative' versus 'determined' BAL(s)); or
- The APZ dimensions established by the local government's Firebreak Notice.

A1.3 Requirements Recommended by DFES – Property Protection Checklists

Further guidance regarding ongoing/lasting property protection (from potential bushfire impact) is presented in the publication 'DFES – Fire Chat – Your Bushfire Protection Toolkit'. It is available from the Department of Fire and Emergency Services (DFES) website.

A1.4 Requirements Established by AS 3959:2018 – 'Minimal Fuel Condition'

This information is provided for reference purposes. This knowledge will assist the landowner to comply with Management Requirement No. 3 set out in the Guidance Panel at the start of this Appendix. It identifies what is required for an area of land to be excluded from classification as a potential bushfire threat.

"Australian Standard - AS 3959:2018 Section 2.2.3.2: Exclusions - Low threat vegetation and non-vegetated areas:

The Bushfire Attack Level shall be classified BAL-LOW where the vegetation is one or a combination of the following:

- a) Vegetation of any type that is more than 100m from the site.*
- b) Single areas of vegetation less than 1ha in area and not within 100m of other areas of vegetation being classified vegetation.*
- c) Multiple area of vegetation less than 0.25ha in area and not within 20m of the site or each other or other areas of vegetation being classified vegetation.*
- d) Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified vegetation.*
- e) Non-vegetated areas, that is, areas permanently cleared of vegetation, including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops.*
- f) Vegetation regarded as low threat due to factors such as flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, (means insufficient fuel available to significantly increase the severity of a bushfire attack – for example, recognisable as short cropped grass to a nominal height of 100mm), mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, orchards, banana plantations, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks (single row of trees)."*

APPENDIX 2: TECHNICAL REQUIREMENTS FOR VEHICULAR ACCESS

Each local government may have their own standard technical requirements for emergency vehicular access, and they may vary from those stated in the Guidelines.

When required, these are stated in Section 5.1 of this bushfire management plan.

Requirements Established by the Guidelines – The Acceptable Solutions

(Source: Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3, Appendix 4)

VEHICULAR ACCESS TECHNICAL REQUIREMENTS - PART 1

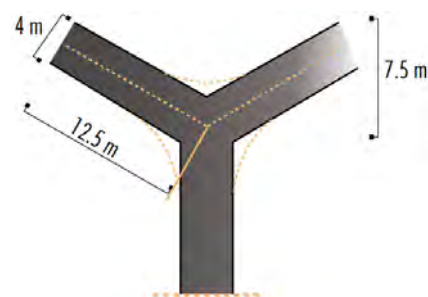
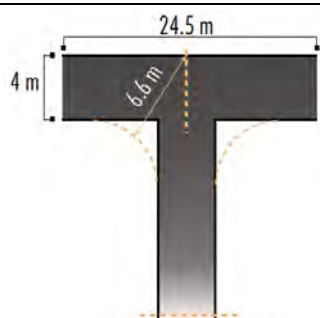
Acceptable Solution 3.5: Private Driveways

The following requirements are to be achieved:

- The design requirements set out in Part 2 of this appendix; and

Where the house site is more than 50 metres from a public road:

- Passing bays every 200 metres with a minimum length of 20 metres and a minimum width of two metres (ie combined width of the passing bay and constructed private driveway to be a minimum six metres);
- Turn-around areas every 500 metres and within 50 metres of a house, designed to accommodate type 3.4 fire appliances to turn around safely (ie kerb to kerb 17.5 metres);
- Any bridges or culverts are able to support a minimum weight capacity of 15 tonnes; and
- All weather surface (i.e. compacted gravel, limestone or sealed).



Acceptable Solution 3.8: Firebreak Width

Lots greater than 0.5 hectares must have an internal perimeter firebreak of a minimum width of three meters or to the level as prescribed in the local firebreak notice issued by the local government.

VEHICULAR ACCESS TECHNICAL REQUIREMENTS - PART 2

Technical Component	Vehicular Access Types				
	Public Roads	Cul-de-sacs	Private Driveways	Emergency Access Ways	Fire Service Access Routes
Minimum trafficable surface (m)	6*	6	4	6*	6*
Horizontal clearance (m)	6	6	6	6	6
Vertical clearance (m)	4.5	4.5	4.5	4.5	4.5
Maximum grade <50 metres	1 in 10	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity (t)	15	15	15	15	15
Maximum cross-fall	1 in 33	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius (m)	8.5	8.5	8.5	8.5	8.5

VEHICULAR ACCESS TECHNICAL REQUIREMENTS - PART 1

* A six metre trafficable surface does not necessarily mean paving width. It could, for example, include four metres of paving and one metre of constructed road shoulders. In special circumstances, where 8 lots or less are being serviced, a public road with a minimum trafficable surface of four metres for a maximum distance of ninety metres may be provided subject to the approval of both the local government and DFES.

APPENDIX 3: TECHNICAL REQUIREMENTS FOR FIREFIGHTING WATER

Reticulated Areas

[Source: Guidelines for Planning in Bushfire Prone Areas WAPC 2017 v1.3, Appendix 4, Element 4]

The Water Corporation's 'No 63 Water Reticulation Standard' is deemed to be the baseline criteria for developments and should be applied unless local water supply authority's conditions apply.

The requirement is to supply a reticulated water supply and fire hydrants, in accordance with the technical requirements of the relevant water supply authority and DFES.

Key specifications in the most recent version/revision of the design standard include:

- *Residential Standard* – hydrants are to be located so that the maximum distance between the hydrants shall be no more than 200 metres.
- *Commercial Standard* – hydrants are to be located with a maximum of 100 metre spacing in Industrial and Commercial areas.
- *Rural Residential Standard* – where minimum site areas per dwelling is 10,000 m² (1ha), hydrants are to be located with a maximum 400m spacing. If the area is further subdivided to land parcels less than 1ha, then the residential standard (200m) is to be applied.

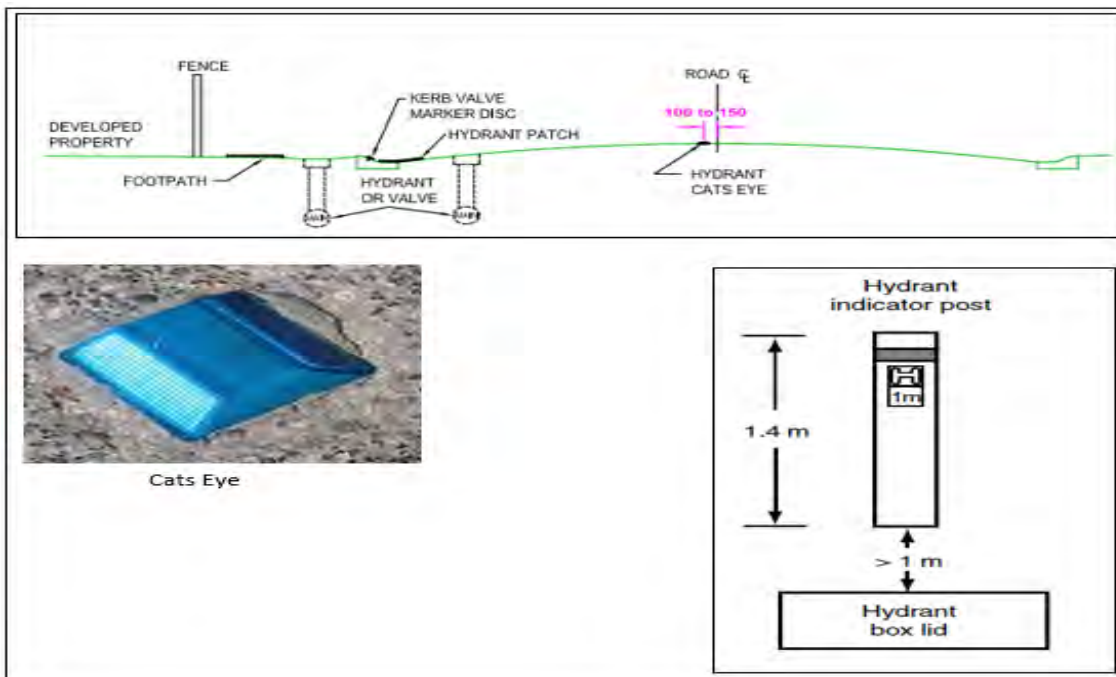


Figure A4.1: Hydrant Location and Identification Specifications

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PLANNING AND DEVELOPMENT ACT 2005

CITY OF WANNEROO

DISTRICT PLANNING SCHEME NO. 2 – AMENDMENT NO. 202

The City of Wanneroo under and by virtue of the powers conferred upon it in that behalf by the *Planning and Development Act 2005* hereby amends the above local planning scheme by:

1. Rezoning the following land from 'Industrial Development' to 'General Industrial', to the extent shown on the Scheme (Amendment) Map:
 - Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
 - Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
 - Portion Lot 1031 (24) Hemisphere Street, Neerabup (on DP: 405727);
 - Portion Lot 1030 (18) Greenwich Parade, Neerabup (on DP: 405727);
 - Portion Lot 1029 (22) Greenwich Parade, Neerabup (on DP: 405727);
 - Portion Lot 1019 (26) Greenwich Parade, Neerabup (on DP: 61212);
 - Portion Lot 1018 (30) Greenwich Parade, Neerabup (on DP: 61212);
 - Portion Lot 800 (34) Greenwich Parade, Neerabup (on DP: 415111);
 - Lot 1024 (15) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 1023 (11) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 1026 (7) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 1022 (20) Hemisphere Street, Neerabup (on DP: 409191);
 - Lot 1035 (12) Hemisphere Street, Neerabup (on DP: 409191);
 - Lot 1034 (6) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 1033 (12) Longitude Avenue, Neerabup (on DP: 409191);
 - Lot 40 (26) Mather Drive, Neerabup (on D: 78186);
 - Lot 9100 (60) Mather Drive, Neerabup (on DP: 411322);
 - Lot 44 (64) Mather Drive, Neerabup (on D: 83582);
 - Lot 2004 (69) Mather Drive, Neerabup (on DP: 70103);
 - Lot 9003 (85) Mather Drive, Neerabup (on DP: 70103);
 - Lot 2001 (240) Pederick Road, Neerabup (on DP: 60745);
 - Lot 1001 (220) Pederick Road, Neerabup (on DP: 37249);
 - Lot 1000 (190) Pederick Road, Neerabup (on DP: 37249);
 - Lot 100 (45) Trandos Road, Neerabup (on DP: 63371);
 - Lot 9000 (140) Pederick Road, Neerabup (on DP: 63371);
 - Lot 1506 (1) Trandos Road, Neerabup (on DP: 407752);
 - Lot 101 (141) Pederick Road, Neerabup (on DP: 413173);
 - Lot 102 (123) Pederick Road, Neerabup (on DP: 413173);
 - Lot 103 (125) Pederick Road, Neerabup (on DP: 413173);
 - Lot 104 (127) Pederick Road, Neerabup (on DP: 413173);
 - Lot 801 (109) Pederick Road, Neerabup (on DP: 57533);
 - Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
 - Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843); and
 - Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).
2. Rezoning portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704) from 'General Industrial' to 'Service Industrial', to the extent shown on the Scheme (Amendment) Map.
3. Rezoning the following land from 'Industrial Development' to 'Service Industrial', to the extent shown on the Scheme (Amendment) Map:

- Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
 - Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
 - Lot 1000 (45) Hemisphere Street, Neerabup (DP: 423704);
 - Portion Lot 1001 (11) Greenwich Parade, Neerabup (on DP: 61212);
 - Portion Lot 1021 (10) Greenwich Parade, Neerabup (on DP: 61212);
 - Lot 2 (19) Hemisphere Street, Neerabup (on DP: 413473);
 - Lot 1 (13) Hemisphere Street, Neerabup (on DP: 413473);
 - Lot 1057 (5) Ring Street, Neerabup (on DP: 420872);
 - Lot 1058 (11) Ring Street, Neerabup (on DP: 420872);
 - Lot 1060 (11) Pinnacle Drive, Neerabup (on DP: 420872);
 - Portion Lot 1059 (1) Pinnacle Drive, Neerabup (on DP: 420872);
 - Portion Lot 1064 (2) Pinnacle Drive, Neerabup (on DP: 420872);
 - Lot 1063 (10) Pinnacle Drive, Neerabup (on DP: 420872);
 - Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
 - Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843);
 - Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).
4. Reclassifying Lot 8002 (270) Flynn Drive, Neerabup (on DP: 411322) from the 'Industrial Development' zone to 'Local Scheme Reserve – Public Use', as shown on the Scheme (Amendment) Map.
 5. Reclassifying Lot 8001 (250) Flynn Drive, Neerabup (on DP: 411322) from the 'Industrial Development' zone to 'Local Scheme Reserve – Conservation', as shown on the Scheme (Amendment) Map.
 6. Insert the following under Part IV of the Scheme:

4.25 Additional site and development requirements for areas covered by a structure plan or local development plan

4.25.1 Table 4 sets out requirements relating to development that are included in precinct structure plans, structure plans approved before 19 October 2015 and local development plans that apply in the Scheme area.

Table 4 – Additional requirements that apply to land covered by structure plan or local development plan

NO.	DESCRIPTION OF LAND	REQUIREMENT
1	Neerabup Industrial Area Bound by Lot 801 on DP 415725, Lot 502 on DP 409677, Lot 1 on D 12751, Lot 9003 on DP 70103, Lot 100 on DP 63371, Lot 1506 on DP 407752, Lot 801 on DP 57533, Lot 902 on DP 50843 and Flynn Drive	Subdivision and development of the subject land shall be in accordance with an approved structure plan.

7. Applying the Additional Uses (A50) designation to various land parcels in the Neerabup locality, as shown on the Scheme (Amendment) Map.
8. Amending Schedule 2 – Section 1 of the Scheme text to insert the following:

NO		STREET/ LOCALITY	PARTICULARS OF LAND	ADDITIONAL USE AND CONDITIONS (WHERE APPLICABLE)
A50	1-50	Neerabup locality	Multiple land parcels zoned General Industrial.	<ul style="list-style-type: none"> • Intensive Agriculture • Data Storage Premises • Education Establishment

				<p><u>Conditions:</u></p> <ol style="list-style-type: none"> All the 'Additional Uses' shall be dealt with as "D" uses, pursuant to Clause 6.2.2. Land uses referred to above, but which are not defined in Schedule 1, are defined below: <p>Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.</p> Conditions and parameters for the carrying out of land uses listed above are provided for below: <p>Education Establishment: Activities shall be limited to establishments that provide education or training relating to activities consistent with Clause 3.11.2 – objectives of the General Industrial Zone.</p> <p>Intensive Agriculture: The cultivation and harvesting of produce shall only occur within a building, enclosed by walls and a roof (excluding greenhouses). Cultivation of produce shall not occur where exposed to the open natural environment.</p>
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9. Applying the Additional Uses (A51) designation to the following land parcels, as shown on the Scheme (Amendment) Map:

- Portion Lot 801 (410) Flynn Drive, Neerabup (on DP: 415725);
- Portions of Lot 9009 (370) Flynn Drive, Neerabup (on DP: 423704);
- Lot 1000 (45) Hemisphere Street, Neerabup (DP: 423704);
- Lot 2 (19) Hemisphere Street, Neerabup (on DP: 413473);
- Lot 1 (13) Hemisphere Street, Neerabup (on DP: 413473);
- Lot 1057 (5) Ring Street, Neerabup (on DP: 420872);
- Lot 1058 (11) Ring Street, Neerabup (on DP: 420872);
- Lot 1060 (11) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 1059 (1) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 1064 (2) Pinnacle Drive, Neerabup (on DP: 420872);
- Lot 1063 (10) Pinnacle Drive, Neerabup (on DP: 420872);
- Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435);
- Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843); and
- Portion Lot 901 (150) Flynn Drive, Neerabup (on DP: 50843).

10. Amending Schedule 2 – Section 1 of the Scheme text to insert the following:

NO		STREET/ LOCALITY	PARTICULARS OF LAND	ADDITIONAL USE AND CONDITIONS (WHERE APPLICABLE)
A51	1-51	<ul style="list-style-type: none"> • 410 Flynn Drive • 370 Flynn Drive • 45 Hemisphere Street • 19 Hemisphere Street • 13 Hemisphere Street • 5 Ring Street • 11 Ring Street • 11 Pinnacle Drive • 1 Pinnacle Drive • 2 Pinnacle Drive • 10 Pinnacle Drive • 190 Flynn Drive • 170 Flynn Drive • 150 Flynn Drive <p>All in the Neerabup locality.</p>	<ul style="list-style-type: none"> • Portion Lot 801 (on DP: 415725); • Portions of Lot 9009 (on DP: 423704); • Lot 1000 (on DP: 423704); • Lot 2 (on DP: 413473); • Lot 1 (on DP: 413473); • Lot 1057 (on DP: 420872); • Lot 1058 (on DP: 420872); • Lot 1060 (on DP: 420872); • Portion Lot 1059 (on DP: 420872); • Portion Lot 1064 (on DP: 420872); • Lot 1063 (on DP: 420872); • Portion Lot 5 (on D: 91435); • Portion Lot 900 (on DP: 50843); • Portion Lot 901 (on DP: 50843) 	<ul style="list-style-type: none"> • Data Storage Premises • Industry – Extractive <p><u>Conditions:</u></p> <ol style="list-style-type: none"> 1. Data Storage Premises shall be dealt with as a “D” use and Industry – Extractive as an “A” use pursuant to Clause 6.2.2. 2. Land uses as referred to above, but which are not defined in Schedule 1, are defined below: <p>Data Storage Premises – means premises that provide computer servers or other devices for the storage or retention of electronic data, and may include the provision of ancillary infrastructure and offices.</p>

11. Amending the Scheme Map by applying the Additional Uses (A52) designation to the following land parcels, as shown on the Scheme (Amendment) Map:

- Portion Lot 1001 (11) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 1021 (10) Greenwich Parade, Neerabup (on DP: 61212);
- Portion Lot 5 (190) Flynn Drive, Neerabup (on D: 91435); and
- Portion Lot 900 (170) Flynn Drive, Neerabup (on DP: 50843).

12. Amending Schedule 2 – Section 1 of the Scheme text to insert the following:

NO		STREET/ LOCALITY	PARTICULARS OF LAND	ADDITIONAL USE AND CONDITIONS (WHERE APPLICABLE)
A52	1-52	<ul style="list-style-type: none"> • 11 Greenwich Parade • 10 Greenwich Parade • 190 Flynn Drive • 170 Flynn Drive <p>All in the Neerabup locality.</p>	<ul style="list-style-type: none"> • Portion Lot 1001 (on DP: 61212); • Portion Lot 1021 (on DP: 61212); • Portion Lot 5 (on D: 91435); • Portion Lot 900 (on DP: 50843) 	<ul style="list-style-type: none"> • Data Storage Premises • Office • Restaurant • Shop • Take-Away Food Outlet <p><u>Conditions:</u></p> <ol style="list-style-type: none"> 1. In addition to Conditions 2-5 below, all the relevant conditions that are

				<p>specified for Additional Use area A51 also apply to A52.</p> <p>2. All the 'Additional Uses' shall be dealt with as "D" uses, pursuant to Clause 6.2.2.</p> <p>3. The maximum floorspace for the 'Office' land use is limited to no more than:</p> <p>a) 700m² net lettable area (NLA) across both subject portions of Lots 1001 and 1021; and</p> <p>b) 700m² NLA across both subject portions of Lot 5 and Lot 900.</p> <p>4. The maximum floorspace for the 'Restaurant' and 'Take-Away Food Outlet' land uses are limited to no more than:</p> <p>a) 1,000m² NLA across both subject portions of Lots 1001 and 1021; and</p> <p>b) 1,000m² NLA across both subject portions of Lot 5 and Lot 900; and</p> <p>Individual premises shall not exceed 500m².</p> <p>5. The maximum floorspace for the 'Shop' land use are limited to no more than</p> <p>a) 750m² NLA across both subject portions of Lots 1001 and 1021; and</p> <p>b) 750m² NLA across both subject portions of Lot 5 and Lot 900; and</p> <p>Individual premises shall not exceed 300m² NLA.</p>
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13. Amending Table 1 (Clause 3.2 – The Zoning Table) by:

- a) Depicting the land use permissibility for the 'Showroom' and 'Vehicle Sales/Hire Premises' in the Service Industrial Zone as 'P*'; and
- b) Adding a notation at the end of Table 1 as follows:

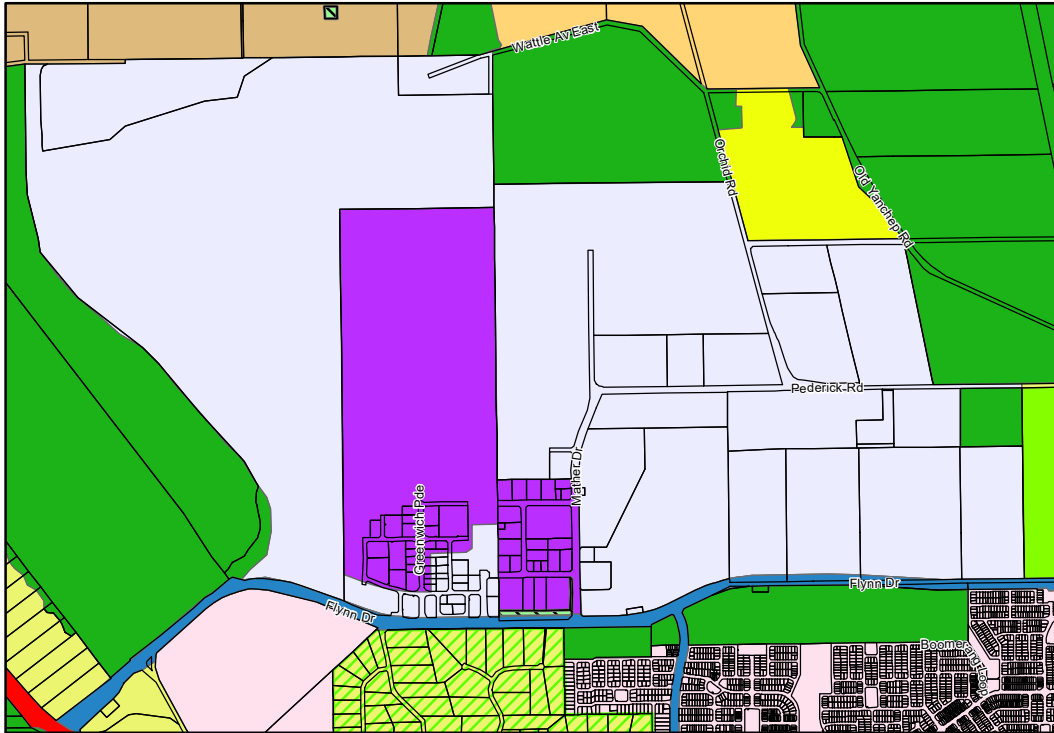
Notes:

** Refer to provisions contained in Clause 3.12.3*

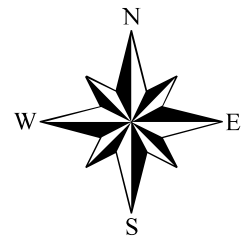
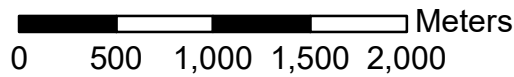
14. Introducing the following as a new Clause 3.12.3, relative to the Service Industrial Zone:

3.12.3 *Notwithstanding the provisions of Table 1, the 'Showroom' and 'Vehicle Sales/Hire Premises' use classes shall be dealt with as "P" uses pursuant to Clause 6.2.2; except in the Neerabup locality where these use classes are dealt with as "D" uses.*

CITY OF WANNEROO DISTRICT PLANNING SCHEME No. 2 AMENDMENT NO. 202



EXISTING ZONE



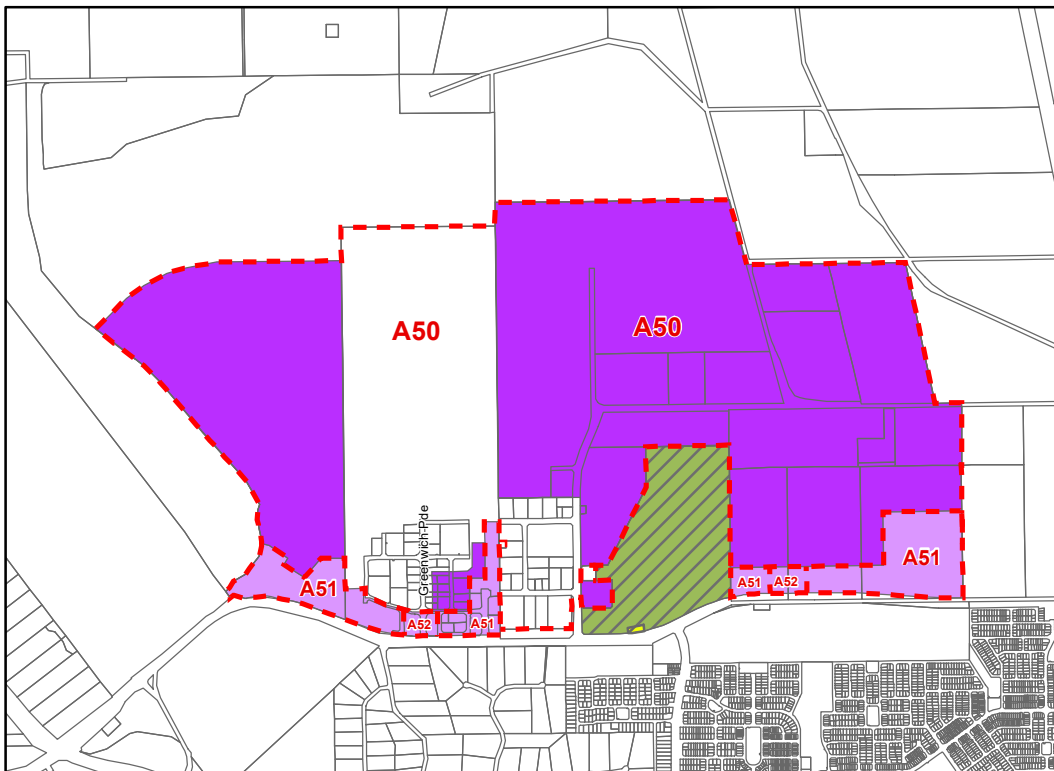
LEGEND

DPS2 ZONES & RESERVES

- GENERAL INDUSTRIAL
- GENERAL RURAL
- INDUSTRIAL DEVELOPMENT
- PARKS & RECREATION
- PRIVATE CLUBS & RECREATION
- RURAL RESOURCE
- SPECIAL RURAL
- URBAN DEVELOPMENT

MRS RESERVES

- OTHER REGIONAL ROADS
- PRIMARY REGIONAL ROADS
- PUBLIC PURPOSES
- REGIONAL PARKS & RECREATION
- STATE FOREST



SCHEME (AMENDMENT) MAP 1

LEGEND

A50 ADDITIONAL USE

DPS2 ZONES

- GENERAL INDUSTRIAL
- SERVICE INDUSTRIAL

LOCAL SCHEME RESERVES

- CONSERVATION
- PUBLIC USE

COUNCIL ADOPTION

This Complex Amendment was adopted by resolution of the Council of the City of Wanneroo at the Ordinary Meeting of the Council held on the 12th day of July, 2022.

.....
MAYOR

.....
CHIEF EXECUTIVE OFFICER

COUNCIL RESOLUTION TO ADVERTISE

By resolution of the Council of the City of Wanneroo at the Ordinary Meeting of the Council held on the 12th day of July, 2022, proceed to advertise this amendment.

.....
MAYOR

.....
CHIEF EXECUTIVE OFFICER

COUNCIL RECOMMENDATION

This Amendment is recommended for [support with/without modification or not support] by resolution of the City of Wanneroo at the Ordinary Meeting of the Council held on the [number] day of [month], 20[year], and the Common Seal of the City of Wanneroo was hereunto affixed by the authority of a resolution of the Council in the presence of:

.....
MAYOR

.....
CHIEF EXECUTIVE OFFICER

WAPC RECOMMENDATION FOR APPROVAL

.....
DELEGATED UNDER S.16 OF
PD ACT 2005

DATE

Approval Granted

.....
MINISTER FOR PLANNING

DATE