

# City of Wanneroo

## Desktop Assessment Report for Native Vegetation Clearing (NVC) Application



Based on data supplied by WALGA and Landgate



©Western Australian Land Information Authority (2020):  
Cadastral/Property boundaries  
Hydrography lines  
Crown Reserves

Distance and area calculations are performed using the MGA94 Zone 50.

This report and the application it is produced from is based on the discontinued WALGA Environmental Planning Tool developed by Fluffy Software.

## Table of Contents

|   |                                     |
|---|-------------------------------------|
| Table of Contents .....   | <b>Error! Bookmark not defined.</b> |
| 1 Applicant Details .....   | 4                                   |
| 2 Site Details .....  | 4                                   |
| 3 Applicant Site Attributes .....   | 5                                   |
| 4 Identified Potential Impacts of Clearing .....                                | 6                                   |
| 5 Explanatory Notes .....   | 7                                   |
| 6 Interpreting This Report .....  | 7                                   |
| 7 Appendix 1 – Data used for Calculating Principals .....                       | 7                                   |
| 7.1 Principal A - Biodiversity .....  | 8                                   |
| 7.1.1 Specially Protected Fauna .....   | 8                                   |
| 7.1.2 Priority Fauna .....  | 8                                   |
| 7.1.3 Specially Protected Flora .....   | 9                                   |
| 7.1.4 Priority Flora .....  | 9                                   |
| 7.1.5 Threatened Ecological Communities .....                                   | 9                                   |
| 7.1.6 Priority Ecological Communities .....                                     | 10                                  |
| 7.1.7 Apiary Sites .....  | 11                                  |
| 7.1.8 Environmentally Sensitive Area .....                                      | 11                                  |
| 7.2 Principle B - Significant Habitat for Fauna .....                           | 12                                  |
| 7.2.1 Carnaby's Cockatoo Habitat .....  | 12                                  |
| 7.2.2 Important Birding Areas .....   | 12                                  |
| 7.2.3 Specially Protected Fauna .....   | 12                                  |
| 7.2.4 Ecological Linkages and Vegetation Connectivity .....                     | 13                                  |
| 7.3 Principal C – Habitat for Rare Flora .....                                  | 14                                  |
| 7.3.1 Special Protected Flora .....   | 14                                  |
| 7.4 Principal D - Habitat for Threatened Ecological Communities (TEC) .....     | 19                                  |
| 7.4.1 Threatened Ecological Communities .....                                   | 19                                  |
| 7.5 Principal E - Mapped Vegetation Description .....                           | 20                                  |
| 7.5.1 Interim Biogeographical Regionalisation for Australia (IBRA) Region ..... | 20                                  |
| 7.5.2 Beard vegetation associations by IBRA region .....                        | 20                                  |
| 7.5.3 Beard vegetation associations by Local Government Authority .....         | 20                                  |
| 7.5.4 Beard Association – Description .....                                     | 20                                  |
| 7.5.5 Area of Remnant Vegetation within 10km Buffer .....                       | 20                                  |
| 7.5.6 South West Region Vegetation Complexes .....                              | 20                                  |
| 7.6 Principal F - Growing in Association with a Watercourse or Wetland .....    | 22                                  |
| 7.6.1 Within 5km of a Wetland .....   | 22                                  |
| 7.6.2 Within 5km of a Geoscience Australia Mapped Lake .....                    | 22                                  |
| 7.6.3 Within 50 m of a Geomorphic Wetland .....                                 | 22                                  |
| 7.7 Principle G - Likely to Cause Appreciable Land Degradation .....            | 22                                  |
| 7.8 Principle H – Impacts to Conservation area .....                            | 23                                  |

|       |   |    |
|-------|---|----|
| 7.9   | Principle I -Deterioration in the Quality of Surface or Underground Water ..... | 23 |
| 7.9.1 | RIWI Act Area and PDWSA .....   | 23 |
| 7.9.2 | Terrestrial Water Dependent Ecosystem.....                                      | 23 |
| 7.10  | Principle J -Flooding .....   | 23 |
| 8     | Appendix 2- Planning Instruments and Other Relevant Matters.....                | 24 |
| 8.1   | Within 5km of Forest Management 2014 Proposed Reserve .....                     | 24 |
| 8.2   | Within 5km of DAFWA Mapped Landuse .....  | 24 |
| 8.3   | DAA Site .....  | 24 |
| 8.4   | Local Planning Scheme Zones .....   | 24 |
| 8.5   | Regional Scheme Zones.....  | 24 |
| 8.6   | Representative Aboriginal / Torres Strait Islander Body Area.....               | 24 |
| 9     | Appendix 3- Parameter for Principals A to I.....                                | 25 |
| 10    | Appendix 4- Metadata .....  | 27 |
| 11    | References.....   | 29 |

## 1 Applicant Details

|                          |                       |
|--------------------------|-----------------------|
| <b>Applicant:</b>        | City of Wanneroo      |
| <b>COW NVC Site ID</b>   | 51                    |
| <b>Property</b>          | No Data               |
| <b>LGA</b>               | City of Wanneroo      |
| <b>Proposed Clearing</b> | 105.62 m <sup>2</sup> |
| <b>Land Tenure</b>       | No Data               |

## 2 Site Details










|   |              |
|---|--------------|
| <b>DBCA District:</b>   | Swan Coastal |
| <b>Environmentally Sensitive Area</b>                         | No Data      |
| <b>EPA Red Book Area</b>                                      | No Data      |
| <b>Country Areas Water Supply Act 1947 - Clearing Control</b> | No Data      |
| <b>Rights in Water and Irrigation Act 1914 area</b>           | No Data      |

### 3 Applicant Site Attributes

|  |  |
|--|--|
| <b>Rainfall Annual Mean (mm)</b>             | 729  |
| <b>Evapotranspiration Annual Mean (mm)</b>   | 1800   |
| <b>Contour Elevation (1m interval)</b>       | 13   |
| <b>Geology</b>                               | Undulating landscapes with deep calcareous sands overlying limestone. Soils have dark grey-brown sand to about 50 cm and then pale brown sand. Remnants of hummocks are often present. |
| <b>Soil</b>                                  | Quindalup South deep sand flat Phase - 211Qu__Qp   |
| <b>Department of Aboriginal Affairs Site</b> |  |

#### 4 Identified Potential Impacts of Clearing

**Red** – Likely to be at variance, **Orange** – May be at variance, **Green** – Not likely to be or not at variance. Appendix 3 contains definitions of all the Principals parameter values.

| <b>Clearing Principle</b>   | <b>Impacts</b><br>(please circle)  | <b>Reason</b><br>(please provide explanation why you have selected the level of variance)  |
|---|--|--|
| <b>Principle (A) – High Biodiversity</b>  | Red Flag<br>      | The vegetation is in a good or better (Keighery 1994) condition and there is flora, fauna, PEC, and TEC records within 5km of the application area. If ANY of the principles B, C, and D are red                         |
| <b>Principle (B) – Significant Habitat For Fauna</b>                                | Red Flag<br>      | If there are Carnaby records within 10km; hollows are present in the application area; other fauna records within 5km; vegetation is in a good or better (Keighery 1994) condition.                                      |
| <b>Principle (C) – Habitat For Rare Flora</b>                                       | Orange Flag<br>   | If the vegetation community and soil type mapped in the application area is the same as a Declared Rare Priority (DRF) record within 10km. If the vegetation is in a good or better (Keighery 1994) condition            |
| <b>Principle (D) – Habitat for TEC's</b>  | Red Flag<br>     | Records within 5km of the application area.  |
| <b>Principle (E) – Significant Remnant In An Extensively Cleared Area</b>           | Red Flag<br>    | If vegetation communities mapped in the application area are less than 30% or 10% in a constrained area. If the native vegetation in the local area is less than 30% and principle B, C, or D are red                    |
| <b>Principle (F) – Growing In Association With A Watercourse Or Wetland</b>         | Green Flag<br>  | There are no water courses or wetlands or vegetation is growing in association with a watercourse or wetland in the application area   |
| <b>Principle (G) – Likely To Cause Appreciable Land Degradation</b>                 | Green Flag<br>  | The application does not intersect with a Acid Sulfate Soil (ASS) site or area subject to erosion  |
| <b>Principle (H) – Impacts To Conservation Area</b>                                 | Green Flag<br>  | The application area is more than 50m from a conservation area   |
| <b>Principle (I) – Deterioration In The Quality Of Surface Or Underground Water</b> | Orange Flag<br> | The application area intersects with a mapped wetland/watercourse, or the application area intersects with vegetation growing in association with a watercourse or wetland. And/or falls within a RIWI, PDWSA, CAWS area |

## 5 Explanatory Notes

This report is designed to support City of Wanneroo with native vegetation clearing permit applications. The report is a desktop study and does not replace a site assessment

The information generated in this report is correct to the best of City of Wanneroo's knowledge.

Information about the clearing principles is available from the [Department of Water and Environment Regulation \(DWER\) "A guide to the assessment of applications to clear native vegetation"](#).

## 6 Interpreting This Report

This report will assist the user to determine if the proposed clearing is 'at variance', 'may be at variance', 'not likely to be at variance' or 'not at variance' to any of the clearing principles contained Schedule 5 of the *Environmental Protection Act 1986 (EP Act)*.

If using this report to complete an assessment as part of your desktop study under your Strategic Purpose Permit and an 'at variance' result is produced, you may refer your application to DWER for clarification. Please note that the Strategic Purpose Permit applies to clearing that is 'not at variance' or 'not likely to be at variance' to any of the clearing principles. Proposed clearing that 'may be at variance' or 'is at variance' will need to be referred to DWER for review.

If using this report as supporting information for a clearing permit application, please email this report, a covering sheet and accompanying shapefile with the application form and payment to DWER.

If you are unsure about the levels of variance identified in this report and require further clarification, please seek further advice from DWER by submitting a referral form via email or alternatively phone (08) 6364 7000.

The 'may be at variance' and 'at variance' levels determined in this report identifies that a clearing principle requires further attention. A more detailed assessment (including a site visit may be required) and further identification of impacts may alter the variance levels. If you wish to seek clarification on the altered variance level, please seek advice from DWER via email or alternatively phone (08) 6364 7000, using your Permit Number for reference. NB: Any actions you take should be accounted for and recorded. This information should be provided in your annual report and is subject to DWER auditing.

## 7 Appendix 1 – Data used for Calculating Principals

The data used to calculate the identified impacts of clearing are listed in Appendix 1. The data is indexed by Principal A to E. Further information might be available for your application site in specific project reports or site specific assessments that you might like to attach to this desktop assessment.

## 7.1 Principal A - Biodiversity

Native vegetation should not be cleared if it comprises a high level of biological diversity.

### 7.1.1 Specially Protected Fauna

The following fauna record counts have been located within 5km of the application area.

| Class   | Status                        | Number of Records     |
|---|-------------------------------|-----------------------|
| BIRD EN, BIRD MI,<br>INVERTEBRATE P4,<br>MAMMAL CD,<br>MAMMAL OS,<br>MAMMAL P4,<br>MAMMAL VU,<br>REPTILE EN,<br>REPTILE P3,<br>REPTILE VU | EN, MI, P4, CD, OS, VU,<br>P3 | 69, 4, 42, 1, 5, 3, 2 |

### 7.1.2 Priority Fauna

The following priority fauna records have been located within 5km of the application area.

| Source ID  | Class        | WA Status | Certainty | Distance (m)  |
|--|--------------|-----------|-----------|---|
| No Data  | Bird         | No Data   | No Data   | No Data   |
| No Data  | Fish         | No Data   | No Data   | No Data   |
| 366655,<br>366657,<br>99591, 99592,<br>366656,<br>437362,<br>99616, 99617,<br>99619, 99620,<br>99618, 99594,<br>99593, 94339,<br>94338, 94337,<br>195433,<br>195434,<br>195432,<br>195455,<br>195456,<br>195431,<br>195458,<br>195457,<br>195437,<br>195436,<br>195435,<br>195430, | Invertebrate | P4        | Certain   | 2801.7, 2811.2,<br>2864.7, 2866.2,<br>3015.7, 3068.1,<br>3271.4, 3696.3,<br>3895.4, 4332.5,<br>4472.7, 4482.9,<br>4491.4, 4492.2,<br>4496.5, 4524.6,<br>4530.5, 4559.4,<br>4601.1, 4606.2,<br>4726.3, 4804.8,<br>4809.5, 4823.8,<br>4847.7, 4853.9,<br>4856.9, 4858.3,<br>4863.9, 4865.4,<br>4871.5 |



|   |         |    |  |                          |
|---|---------|----|--|--------------------------|
| 195429,<br>195473,<br>195449,<br>195448,<br>195447,<br>195446,<br>195443,<br>195438,<br>195439,<br>195444,<br>195442,<br>195441,<br>195440,<br>195445 |         |    |  |                          |
| 68322, 23437,<br>794GAA,<br>789GAA,<br>791GAA   | Mammal  | P4 | Moderately<br>certain, Certain,<br>No Data | 851.8, 3590.7,<br>4618.6 |
| 15130, 15126  | Reptile | P3 |  | 3153.8                   |

### 7.1.3 Specially Protected Flora

The following flora record counts have been located within 5km of the application area.

| ConStatus  | WA Rank             | Number of Records |
|--|---------------------|-------------------|
| Priority 3 - Poorly<br>Known Taxa,<br>Priority 4 - Rare<br>Taxa, T | No Data, Vulnerable | 1                 |

### 7.1.4 Priority Flora

The following priority flora records have been located within 5km of the application area.

| Population ID | Priority  | Distance (m) |
|---------------|---|--------------|
| 90811, 110749 | Priority 3 - Poorly Known<br>Taxa, Priority 4 - Rare Taxa | 1489, 4576   |

### 7.1.5 Threatened Ecological Communities

The following threatened ecological community records have been located within 5km of the application area.

| Ranking    | Count |
|------------|-------|
| Threatened | 89    |

### 7.1.6 Priority Ecological Communities

The following priority ecological community records have been located within 5km of the application area.

| Record ID   | Ranking    | Level | Distance (m)   |
|---|------------|-------|--|
| 122571, 122299,<br>122963, 122909,<br>122935, 122749,<br>122753, 122937,<br>122747, 125295,<br>125296, 125294, 192,<br>191, 190, 187,<br>122960, 122961,<br>122587, 122569,<br>122581, 122959,<br>122568, 122580,<br>122570, 122687,<br>122930, 122958,<br>125416, 122950,<br>126112, 122586,<br>122588, 122911,<br>122957, 189, 188,<br>125409, 125411,<br>125417, 122703,<br>122962, 122945,<br>122300, 371, 125405,<br>125419, 125412,<br>125408, 122745,<br>126814, 122765,<br>122934, 122647,<br>122947, 125410,<br>122744, 5055,<br>122723, 122648,<br>125420, 122649,<br>122964, 125334,<br>125414, 122766,<br>122952, 125415,<br>125406, 122767,<br>125407, 125418,<br>122598, 122938,<br>122939, 125413,<br>122910, 126111,<br>122941, 122940,<br>122949, 122942,<br>125404, 122943,<br>122948, 122936,<br>122944, 122907,<br>122565 | Threatened | 1     | 2869, 3803, 4085,<br>4300, 4379, 4546,<br>4738, 4883, 4896,<br>1622.6, 1972.4,<br>2068.5, 2145.2,<br>2343.5, 2414.1,<br>2473.4, 2843.9,<br>2874.1, 2948.2,<br>3162.2, 3164.8,<br>3179.6, 3182.7,<br>3201.2, 3214.7,<br>3262.7, 3332.8,<br>3334.1, 3364.5,<br>3401.1, 3509.2,<br>3563.3, 3597.1,<br>3622.6, 3668.3,<br>3675.1, 3711.9,<br>3872.2, 3932.1,<br>4120.4, 4126.4,<br>4129.5, 4131.9,<br>4154.2, 4165.9,<br>4190.9, 4206.6,<br>4224.1, 4235.8,<br>4241.5, 4242.7,<br>4258.6, 4268.5,<br>4287.1, 4297.6,<br>4338.2, 4349.3,<br>4349.4, 4351.7,<br>4357.3, 4371.5,<br>4382.3, 4399.6,<br>4400.1, 4417.9,<br>4446.8, 4499.9,<br>4516.4, 4532.6,<br>4535.7, 4544.4,<br>4560.3, 4591.9,<br>4607.2, 4620.7,<br>4652.8, 4685.4,<br>4725.8, 4749.8,<br>4752.7, 4776.5,<br>4791.1, 4797.8,<br>4819.7, 4867.6,<br>4886.8, 4947.3,<br>4955.3, 4961.1 |

### 7.1.7 Apiary Sites

The following apiary site records have been located within 5km of the application area:

|                                 |
|---------------------------------|
| Waiting for data to be supplied |
|---------------------------------|

### 7.1.8 Environmentally Sensitive Area

Area of site within Environmentally Sensitive Area (ha)

|   |
|---|
| 0 |
|---|

## 7.2 Principle B - Significant Habitat for Fauna

Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

### 7.2.1 Carnaby's Cockatoo Habitat

| Cockatoo Attribute                 | Relationship with Site |
|------------------------------------|------------------------|
| Remnant Vegetation                 | 0                      |
| Confirmed Breeding Site            | 0.011                  |
| Unconfirmed Breeding Site          | 0.011                  |
| Feeding Habitat                    | 0                      |
| Confirmed Roosting Sites           | 0                      |
| Confirmed Roost Sites 6km Buffer   | 0                      |
| Unconfirmed Roosting Areas         | 0                      |
| Unconfirmed Roost Sites 6km Buffer | 0.011                  |

### 7.2.2 Important Birding Areas

The site is within the following Important Birding Areas.

|                                 |
|---------------------------------|
| Northern Swan Coastal Plain IBA |
|---------------------------------|

### 7.2.3 Specially Protected Fauna

The following fauna records have been located within 5km of the application area.

Key to conservation status ranking:

CD = Species of special conservation interest (conservation dependent fauna)

CR = Critically Endangered

EN = Endangered

EX = Presumed Extinct

MI = Migratory Species

OS = Other specially protected species

VU = Vulnerable

| Class | Source ID  | Ranking | Distance (m)   |
|-------|--|---------|--|
| Bird  | 89501, 199108 794,<br>25158, 25161,<br>25160, 25159,<br>89499, 8200, 25337,<br>25326, 20056,<br>24455, 34326,<br>262265 115,<br>5000813 794,<br>75881, 23590,<br>135345 115,<br>262266 115, 23569,<br>26343, 26355,<br>26352, 26366,<br>26363, 26337,<br>26329, 26344,<br>26347, 26349,<br>26340, 26358,<br>26350, 26332,<br>26361, 26341, | EN, MI  | 1364.4, 2166.6,<br>2222.5, 2303.2,<br>2679.1, 2802.7,<br>3049.2, 3264.9,<br>3270.6, 3349.2,<br>3514.2, 3659.4,<br>3819.8, 3868.4,<br>3885.3, 3889.2,<br>3898.1, 3958.2,<br>3983.8, 3990.3,<br>4002.2, 4243.5,<br>4486.9, 4531,<br>4991.7 |

|              |   |            |                         |
|--------------|---|------------|-------------------------|
|              | 26364, 26338,<br>26328, 26334,<br>26346, 26357,<br>26353, 26342,<br>26351, 26345,<br>26348, 26360,<br>26368, 26367,<br>26335, 26356,<br>26362, 26330,<br>26336, 26359,<br>26365, 26327,<br>26339, 26333,<br>26354, 26331,<br>61764 115, 23625,<br>89498, 23567,<br>89502, 25324,<br>25321, 25323,<br>25322, 25186 |            |                         |
| Fish         | No Data   | No Data    | No Data                 |
| Invertebrate | No Data   | No Data    | No Data                 |
| Mammal       | 5224, 631911,<br>631914, 631910,<br>5366  | VU, OS, CD | 3301, 3810.9, 3864      |
| Reptile      | 20018, 19433,<br>10459  | EN, VU     | 3080.1, 3159.3,<br>3887 |

#### 7.2.4 Ecological Linkages and Vegetation Connectivity

The application area is within a Regional Ecological Linkage. Regional Ecological Linkages should be maintained wherever possible.

The application area is within the following Perth Regional Ecological Linkages:

|         |
|---------|
| No Data |
|---------|

The application area is within the following Gngangara Mound Ecological Linkages

| <b>Gngangara Mound Ecological Linkage</b> | <b>ha</b> |
|---|-----------|
| No Data                                   | 0         |

### 7.3 Principal C – Habitat for Rare Flora

Native vegetation should not be cleared if it includes, or is necessary for the continued existence of rare flora.

#### 7.3.1 Special Protected Flora

The following flora records have been located within 5km of the application area.

Key to the Conservation Status:

CR - Critically Endangered

EN - Endangered

VU - Vulnerable

EX - Extinct

| Population ID   | WA Rank             | Distance (m)   |
|---|---------------------|--|
| 90811, 110749, 90768,<br>90758, 90769, 90764,<br>90767, 90761, 90755,<br>90757, 90770, 85076,<br>110790, 110769, 101587,<br>111490, 101588, 110789,<br>101584, 90760, 107424,<br>90756, 111492, 111509,<br>85080, 101582, 110770,<br>101581, 90759, 95536,<br>98745, 98744, 98743,<br>98740, 98739, 94008,<br>98738, 102734, 109328,<br>98741, 102733, 92205,<br>98748, 98747, 95535,<br>90765, 102728, 102727,<br>102724, 102725, 84935,<br>102762, 102763, 102757,<br>102761, 102760, 102758,<br>102755, 102751, 102752,<br>92210, 96700, 105398,<br>105394, 105384, 105385,<br>105393, 102745, 107903,<br>102744, 90762, 116409,<br>102746, 105402, 105401,<br>105388, 102748, 102749,<br>105399, 105397, 116449,<br>105386, 105396, 98959,<br>98960, 105387, 96622,<br>102742, 105272, 96701,<br>110250, 105271, 92208,<br>92203, 102739, 102741,<br>102740, 109326, 109327,<br>102736, 102737, 86914,<br>102730, 102731, 117549,<br>98750, 105391, 84470,<br>117269, 105390, 109302, | No Data, VU, CR, EN | 1489.1, 4576.2, 5052.1,<br>8827.6, 8885.3, 9536,<br>11055.1, 12913.3, 13240.2,<br>13364.2, 17609.6, 18094.1,<br>18322.5, 18360.1, 18379.8,<br>18681, 19252.3, 19420.7,<br>19449.5, 19526.3, 19571.8,<br>19635.7, 19920, 20484.2,<br>20680.9, 20757.2, 20867.4,<br>21387.3, 25768, 27130.9,<br>27264.8, 27632.8, 28473.7,<br>28690.8, 28696.5, 28833.1,<br>28849.3, 29073.6, 29082.4,<br>29097.8, 29290.6, 29863.3,<br>30347, 30575.1, 30675.4,<br>30993.6, 31013.9, 31137.3,<br>31303.9, 31406.5, 31706.7,<br>31716, 31778.1, 31808,<br>31910.2, 31994.5, 32960.6,<br>33117.3, 33145.8, 33310.7,<br>33322.6, 33408.4, 33561.2,<br>33628, 33628.2, 33650.4,<br>33838, 33847.1, 33849.9,<br>33965.9, 34026.7, 34102.6,<br>34108.2, 34161.8, 34203.4,<br>34270.5, 34305.8, 34322,<br>34350, 34405.3, 34448.8,<br>34462.3, 34501.1, 34512.8,<br>34585.9, 34643.4, 34644.8,<br>34762.6, 34790.6, 34825.5,<br>34825.9, 34837.9, 34840.7,<br>34855, 34907.9, 34912.6,<br>34999.5, 35000.6, 35042.4,<br>35048.3, 35059, 35834.2,<br>35853.8, 36163, 36220.8,<br>36282.7, 36308.3, 36376.2,<br>36445.5, 36510.2, 36660.7, |

|         |         |         |          |          |          |
|---------|---------|---------|----------|----------|----------|
| 96623,  | 98751,  | 113551, | 36810.6, | 37636.3, | 37659.7, |
| 113549, | 105275, | 105274, | 38037.9, | 38073.6, | 38712,   |
| 117270, | 89543,  | 113554, | 38765.9, | 38843.8, | 38870.1, |
| 113552, | 109321, | 102713, | 38870.8, | 38871.1, | 38955.5, |
| 106261, | 116269, | 116271, | 38958.7, | 39196.6, | 39283,   |
| 110231, | 110229, | 102720, | 39291.4, | 39399.1, | 39513.6, |
| 102719, | 107423, | 96527,  | 39569.2, | 39620.1, | 39639.2, |
| 109315, | 102721, | 102722, | 39709.5, | 39711.6, | 39947,   |
| 86253,  | 109316, | 109318, | 40060,   | 40074.3, | 40465.2, |
| 96526,  | 100446, | 89522,  | 40561.2, | 40821.3, | 41028.2, |
| 100444, | 100445, | 109330, | 41260.5, | 41438.3, | 42039.2, |
| 100442, | 100441, | 114949, | 42060.9, | 42101.5, | 42189.5, |
| 94007,  | 84938,  | 86912,  | 42327.9, | 42465.5, | 42492,   |
| 100443, | 106525, | 106523, | 42538.9, | 42540.8, | 42844.1, |
| 100447, | 98401,  | 98400,  | 42899.3, | 42903.1, | 42918.8, |
| 84963,  | 98416,  | 98415,  | 43065.2, | 43140.9, | 43142.1, |
| 98418,  | 110514, | 89499,  | 43144.8, | 43272.6, | 43473.1, |
| 98414,  | 89539,  | 96233,  | 43522.8, | 43545.7, | 43650,   |
| 96234,  | 98417,  | 98403,  | 43653.2, | 43723.6, | 43755.1, |
| 92201,  | 89532,  | 84942,  | 43767.5, | 43786.4, | 43843.4, |
| 92206,  | 98404,  | 110289, | 43888.6, | 43930.3, | 43970.3, |
| 110270, | 98392,  | 110271, | 44027.6, | 44044.3, | 44154.1, |
| 92202,  | 98391,  | 92209,  | 44175.9, | 44205.4, | 44232.8, |
| 98390,  | 117849, | 86254,  | 44253.4, | 44297.7, | 44427.3, |
| 84941,  | 84940,  | 107945, | 44547.4, | 44711.5, | 44824.2, |
| 91532,  | 92204,  | 112129, | 44884.3, | 44885.4, | 44891.4, |
| 92200,  | 104864, | 104863, | 45203.6, | 45229.6, | 45337.4, |
| 102717, | 102716, | 103584, | 45415.3, | 45833.6, | 45984.7, |
| 86255,  | 103585, | 107963, | 45986.4, | 46380.8, | 46481.9, |
| 86251,  | 86256,  | 107964, | 46499.5, | 46580.8, | 46882.5, |
| 85086,  | 86252,  | 84948,  | 47008.6, | 47503.5, | 47594.6, |
| 96349,  | 93992,  | 96227,  | 47686.5, | 47790.2, | 48591.3, |
| 102664, | 104175, | 102665, | 48672.1, | 48681.7, | 48723.7, |
| 94821,  | 106642, | 104174, | 48795.8, | 48838.1, | 48873.9, |
| 106641, | 102666, | 102667, | 49093.6, | 49251.4, | 49345.6, |
| 102668, | 85079,  | 106643, | 49894.9, | 49908,   | 49988.5, |
| 106645, | 106648, | 106649, | 50343.7, | 50727.4, | 50768.8, |
| 106650, | 106651, | 106646, | 50769.4, | 50812.5, | 52196.3, |
| 106647, | 114549, | 94004,  | 52667.3, | 52769.4, | 52799.8, |
| 85477,  | 106652, | 106654, | 52839.3, | 52943.5, | 53027.4, |
| 106655, | 89122,  | 102118, | 53050.9, | 53090.6, | 53356.3, |
| 102116, | 102117, | 99126,  | 53456.5, | 53530.1, | 53533,   |
| 102120, | 99130,  | 99129,  | 53598.2, | 53715.4, | 54727.5, |
| 99128,  | 102119, | 102123, | 54735.5, | 56298.3, | 56354.3, |
| 102122, | 102121, | 99127,  | 56371.4, | 56517.1, | 57562.2, |
| 102115, | 96228,  | 91509,  | 57729.3, | 58042.8, | 58074,   |
| 85529,  | 102125, | 102128, | 58135.9, | 58277.1, | 58345.3, |
| 102126, | 87741,  | 87742,  | 58350.2, | 58519.7, | 58557.2, |
| 99135,  | 96230,  | 99439,  | 58594,   | 58669.5, | 58757.2, |
| 88918,  | 99132,  | 109239, | 58863.3, | 58929.8, | 59019.5, |
| 99133,  | 99136,  | 88924,  | 59094.3, | 59134.5, | 59255.9, |
| 109238, | 103577, | 109240, | 59306.2, | 59344,   | 59346.7, |
| 99134,  | 91552,  | 99440,  | 59364.8, | 59403.8, | 59451,   |

|         |         |         |          |          |          |
|---------|---------|---------|----------|----------|----------|
| 93997,  | 91545,  | 102336, | 59459.9, | 59506.5, | 59513.9, |
| 111231, | 111229, | 102335, | 59610.4, | 59611.5, | 59797.6, |
| 109237, | 91546,  | 102358, | 59821,   | 59861.2, | 59872.7, |
| 102334, | 91549,  | 99443,  | 59892.9, | 59902,   | 60067.6, |
| 88923,  | 96229,  | 99444,  | 60131.5, | 60397.6, | 60438.8, |
| 88921,  | 91556,  | 102339, | 60499.2, | 60511.3, | 60621.5, |
| 99442,  | 91555,  | 103578, | 60735.7, | 60754.8, | 60821.7, |
| 91557,  | 96232,  | 106803, | 60843.1, | 60857.3, | 60944.3, |
| 106802, | 98432,  | 102352, | 60949.2, | 60990.9, | 61000.6, |
| 98433,  | 102353, | 102356, | 61022.6, | 61040.9, | 61046.5, |
| 102354, | 102357, | 102258, | 61053.8, | 61058.7, | 61058.9, |
| 102343, | 102359, | 102338, | 61062.7, | 61142.7, | 61148.3, |
| 102344, | 102355, | 102341, | 61190.2, | 61197,   | 61204.9, |
| 102360, | 102342, | 102362, | 61253.9, | 61314,   | 61333.2, |
| 102346, | 102348, | 102345, | 61338.2, | 61427.4, | 61444.7, |
| 91543,  | 103576, | 102254, | 61459.4, | 61465.2, | 61484.5, |
| 108166, | 102349, | 102350, | 61529.4, | 61541.9, | 61567.7, |
| 91544,  | 102261, | 91551,  | 61579.3, | 61623.3, | 61654.1, |
| 102262, | 102260, | 103574, | 61664.4, | 61674.5, | 61675.4, |
| 102351, | 103573, | 102257, | 61705.1, | 61730.4, | 61786.5, |
| 102263, | 102347, | 102361, | 61789.8, | 61800.8, | 61824,   |
| 102317, | 102310, | 102259, | 61841,   | 61844.9, | 61855.6, |
| 103736, | 88922,  | 102256, | 61883.3, | 61914.4, | 61932.3, |
| 102306, | 113349, | 102255, | 61972.3, | 61979.3, | 62001.6, |
| 102313, | 102304, | 102305, | 62020.1, | 62061.9, | 62079.9, |
| 93810,  | 102328, | 102312, | 62084.6, | 62097.8, | 62115.4, |
| 102307, | 91548,  | 103733, | 62132.2, | 62147.3, | 62154.6, |
| 103735, | 102329, | 102308, | 62164.1, | 62176.6, | 62179.7, |
| 102318, | 102320, | 102319, | 62201.8, | 62245.3, | 62254.8, |
| 102309, | 103582, | 102364, | 62365.6, | 62382.5, | 62511.5, |
| 103734, | 102316, | 102365, | 62545.4, | 62633.1, | 62782.1, |
| 103581, | 114589, | 102314, | 63103.1, | 63159.1, | 63167.1, |
| 84936,  | 103580, | 102311, | 63185.8, | 63376.1, | 63486.4, |
| 102315, | 103737, | 93812,  | 63487.1, | 63608,   | 63720.1, |
| 103622, | 113350, | 103623, | 63750.7, | 63801.1, | 64048.5, |
| 106721, | 113330, | 91558,  | 64064.8, | 64075.6, | 64111.6, |
| 102266, | 102270, | 102265, | 64152.1, | 64237.9, | 64301,   |
| 102271, | 102269, | 96231,  | 64332.3, | 64395.2, | 64414,   |
| 106421, | 106423, | 109748, | 64484.8, | 64492.1, | 64581.7, |
| 104866, | 102267, | 113309, | 64699.5, | 64775.4, | 64779.1, |
| 91550,  | 104873, | 104874, | 64781.7, | 64809.6, | 64833.4, |
| 97273,  | 97274,  | 104867, | 64838.2, | 64840.5, | 64843.7, |
| 113389, | 102268, | 99452,  | 64843.8, | 64856.2, | 64861.2, |
| 101696, | 101690, | 98422,  | 64862.2, | 64876.7, | 64901.4, |
| 93853,  | 98406,  | 98408,  | 64902.5, | 64915.1, | 64918.3, |
| 108062, | 98420,  | 98421,  | 64924.9, | 64939.2, | 64950,   |
| 98407,  | 101689, | 101688, | 64973.1, | 64992.4, | 64994.7, |
| 84471,  | 117730, | 98412,  | 65015.7, | 65026.7, | 65038.6, |
| 109248, | 109489, | 101687, | 65039.2, | 65040.2, | 65058.1, |
| 117809, | 89536,  | 101682, | 65062.6, | 65071.5, | 65079.6, |
| 86004,  | 99449,  | 93940,  | 65090.7, | 65100.4, | 65114.4, |
| 98410,  | 101685, | 110729, | 65125.1, | 65150.5, | 65158.1, |



|         |         |         |          |          |          |
|---------|---------|---------|----------|----------|----------|
| 102273, | 98411,  | 99451,  | 65170.5, | 65196.3, | 65226.1, |
| 101680, | 98423,  | 112269, | 65248.9, | 65267.3, | 65280.1, |
| 101683, | 101684, | 101678, | 65325,   | 65326.1, | 65326.8, |
| 103626, | 107087, | 107089, | 65340.1, | 65343.8, | 65356.1, |
| 101681, | 99450,  | 86265,  | 65356.9, | 65363.6, | 65371.2, |
| 93852,  | 89537,  | 85045,  | 65372.3, | 65378.1, | 65395,   |
| 113149, | 109355, | 102103, | 65400.3, | 65404.5, | 65407.2, |
| 104870, | 114889, | 109749, | 65411.1, | 65419.7, | 65427.2, |
| 88496,  | 104871, | 101693, | 65430.8, | 65431.7, | 65434.9, |
| 112549, | 96942,  | 103625, | 65441.2, | 65441.5, | 65446.9, |
| 102274, | 96938,  | 102331, | 65447.3, | 65448.2, | 65456.5, |
| 102277, | 102332, | 102325, | 65458.4, | 65464.7, | 65466.2, |
| 91363,  | 115249, | 96941,  | 65468.3, | 65486,   | 65488.6, |
| 96939,  | 104869, | 106701, | 65505,   | 65507.9, | 65522.1, |
| 107403, | 106902, | 87746,  | 65535.8, | 65541.9, | 65571.2, |
| 103627, | 101677, | 102105, | 65574.5, | 65596.8, | 65626.2, |
| 102104, | 102324, | 102107, | 65644.3, | 65647.2, | 65672.8, |
| 96943,  | 101675, | 115309, | 65682.6, | 65689.4, | 65704,   |
| 101694, | 84952,  | 102326, | 65716.7, | 65788.8, | 65823.8, |
| 88920,  | 102323, | 84939,  | 65841.7, | 65854.1, | 65919.4, |
| 102275, | 115329, | 102322, | 65966.6, | 66024.1, | 66059,   |
| 86263,  | 109378, | 102276, | 66082.3, | 66195.1, | 66208.6, |
| 106381, | 94003,  | 101676, | 66212.8, | 66240,   | 66408.7, |
| 84950,  | 96947,  | 96944,  | 66479.4, | 66598.2, | 66620.2, |
| 84943,  | 100652, | 101695, | 66709.3, | 66774.9, | 66849.6, |
| 96946,  | 84951,  | 91554,  | 66877.5, | 66959.8, | 66974.8, |
| 93993,  | 106402, | 108163, | 66989.8, | 66999.1, | 67016.2, |
| 86260,  | 91553,  | 108283, | 67053.5, | 67056.5, | 67066.9, |
| 87743,  | 84953,  | 108284, | 67070.4, | 67079.9, | 67093.6, |
| 91542,  | 102281, | 102280, | 67097.6, | 67108.4, | 67159.8, |
| 108285, | 100653, | 113029, | 67170.4, | 67173.9, | 67198.7, |
| 100651, | 102290, | 102289, | 67222.3, | 67250.8, | 67253.6, |
| 86258,  | 102288, | 102287, | 67286.2, | 67298.9, | 67299,   |
| 97302,  | 97304,  | 102279, | 67334.3, | 67368.7, | 67371.1, |
| 97271,  | 102297, | 102299, | 67474.4, | 67477.5, | 67596.3, |
| 84934,  | 102298, | 102291, | 67597.3, | 67605.1, | 67632.7, |
| 100655, | 100656, | 102294, | 67684.5, | 67685.6, | 67716.7, |
| 102286, | 97299,  | 86259,  | 67760.1, | 67855.7, | 67893.9, |
| 97270,  | 85072,  | 97301,  | 67909.5, | 67925.9, | 67933,   |
| 102292, | 102293, | 91547,  | 67973.4, | 67994.3, | 68085.2, |
| 114749, | 102300, | 102302, | 68116.8, | 68152,   | 68305.9, |
| 102301, | 115149, | 97298,  | 68346.1, | 68379.3, | 68474.9, |
| 106001, | 102295, | 102296, | 68590.7, | 68805,   | 68886.6, |
| 113051, | 85059,  | 91317,  | 69037.4, | 69055,   | 69069.9, |
| 86261,  | 97267,  | 113049, | 69085.2, | 69125.9, | 69136.8, |
| 117290, | 97300,  | 86266,  | 69242.6, | 69348.3, | 69403.8, |
| 97266,  | 97268,  | 86009,  | 69528.4, | 69529.5, | 69553.2, |
| 97259,  | 97260,  | 97297,  | 69555.5, | 69580.3, | 69614.8, |
| 97360,  | 97361,  | 97355,  | 69624.1, | 69627.7, | 69705.8, |
| 88919,  | 97354,  | 84930,  | 69727.2, | 69811.7, | 70019.6, |
| 97362,  | 97363,  | 97356,  | 70022.4, | 70026.5, | 70046.6, |
| 97357,  | 97358,  | 97359,  | 70185.6, | 70250.5, | 70257.7, |
| 105169, | 98245,  | 98429,  | 70396.2, | 70512.4, | 70557.2, |

|         |         |         |          |          |          |
|---------|---------|---------|----------|----------|----------|
| 112989, | 98430,  | 107262, | 70691,   | 70733.5, | 70823.9, |
| 108165, | 84931,  | 117732, | 70832.3, | 70976.7, | 71021.6, |
| 98244,  | 98243,  | 117733, | 71043.4, | 71082.8, | 71101.5, |
| 105170, | 117734, | 84945,  | 71154.1, | 71242.9, | 71301.4, |
| 96536,  | 85051,  | 108168, | 71322.2, | 71352.2, | 71492.4, |
| 108170, | 85058,  | 108164, | 71515.8, | 71550,   | 71557,   |
| 102283, | 102284, | 105164, | 71620.1, | 71642.9, | 71654.4, |
| 97264,  | 105163, | 114929, | 71691.2, | 71715.4, | 71764,   |
| 84944,  | 97281,  | 97262,  | 71784.8, | 72202.8, | 72433.2, |
| 97263,  | 105173, | 105172, | 72457.6, | 72499.2, | 72530.5, |
| 97282,  | 117829, | 85041,  | 72580.8, | 73151.8, | 73311.7, |
| 84969,  | 97289,  | 97291,  | 73380.8, | 73519.6, | 73530.9, |
| 97288,  | 97290,  | 99459,  | 73587.8, | 73683.7, | 73701.6, |
| 84946,  | 106241, | 99458,  | 73703.7, | 73722.7, | 73756.7, |
| 106242, | 99454,  | 99455,  | 73775.6, | 73783.2, | 73800.9, |
| 89124,  | 105167, | 84957,  | 73870.7, | 73893.1, | 73961.8, |
| 105166, | 108167, | 99457,  | 74005.8, | 74068.1, | 74068.6, |
| 98398,  | 98397,  | 98396,  | 74152.7, | 74241.1, | 74266.1, |
| 98395,  | 97804,  | 97825,  | 74322.5, | 74355.4, | 74364.7, |
| 97826,  | 97805,  | 108824, | 74466.8, | 74490.7, | 74566,   |
| 108822, | 97828,  | 97827,  | 74577.7, | 74628,   | 74636.1, |
| 97801,  | 98394,  | 97802,  | 74676.3, | 74681.2, | 74763.3, |
| 102671, | 102672, | 84954,  | 74923.6, | 74958.8, | 74992.9, |
| 97806,  | 97813,  | 97807,  | 75043.3, | 75056.9, | 75074.6, |
| 102670, | 97822,  | 84960,  | 75087.4, | 75092.9, | 75158.6, |
| 97834,  | 97833,  | 97812,  | 75175.5, | 75242.2, | 75267.2, |
| 97835,  | 97832,  | 97803,  | 75298.7, | 75325.7, | 75365.2, |
| 98251,  | 97823,  | 97819,  | 75372.6, | 75396.7, | 75454,   |
| 87744,  | 98252,  | 98254,  | 75458.3, | 75500.2, | 75509.4, |
| 97820,  | 97816,  | 97824,  | 75535.9, | 75616.6, | 75689.5, |
| 97811,  | 97815,  | 97810,  | 75694.2, | 75776.3, | 75885,   |
| 97817,  | 97814,  | 98253,  | 75899.3, | 76490.9, | 77067.5, |
| 97800,  | 97808,  | 97797,  | 77383.8, | 77463.6, | 77503.6, |
| 85053,  | 97821,  | 97798,  | 77508.1, | 77539.6, | 77583.5, |
| 97809,  | 89483,  | 97796,  | 77672.6, | 77776.2, | 77786.7, |
| 97799,  | 112490, | 84955,  | 77911.3, | 78025.1, | 78079.1, |
| 97794,  | 89541,  | 97795,  | 78087.7, | 78197.9, | 78514.5, |
| 89530,  | 89523,  | 91320,  | 78654.5, | 78770.6, | 78874.7, |
| 92109,  | 84964,  | 96129,  | 78947.3, | 78974.4, | 79182.1, |
| 97369,  | 97370,  | 97313,  | 79217.8, | 79223.8, | 79253.4, |
| 85085,  | 106221, | 97312,  | 79484.3, | 79640.4, | 79728.2, |
| 97314,  | 102428, | 84469,  | 80295.1, | 80389.4, | 80457,   |
| 103725, | 102429, | 84932,  | 80732,   | 81765.8, | 81838.9, |
| 84961,  | 85074,  | 84968,  | 82526.6, | 82777.4, | 83632.1, |
| 85084,  | 103724, | 110509, | 84148.4, | 84263.2, | 90049.5, |
| 106981, | 97306,  | 97308,  | 90051.5, | 90220.2, | 90385.1, |
| 107683, | 97310,  | 97309,  | 90564.4, | 90620.2, | 90687.1, |
| 97307,  | 114909, | 85050,  | 90689.2, | 90787.2, | 90800.6, |
| 97391,  | 97392,  | 97393,  | 90929.5, | 92259.1, | 92262.4, |
| 89525,  | 85052,  | 90754,  | 92425.8, | 94078.8, | 94080.8, |
| 85048,  | 89531,  | 89524,  | 94350.9, | 94353.7, | 94399.9, |
| 89535,  | 107549, | 116370, | 94487,   | 94524.2, | 94566.5, |

|  |  |  |
|--|--|--|
| 91676, 112629, 91675,<br>102431, 102432, 98450,<br>102433, 108222, 102434,<br>102435, 98451, 86533,<br>86821, 84909, 98444,<br>86257, 98445, 98442,<br>98441, 98438, 98440,<br>98436, 98435, 98459,<br>86267, 98443, 98437,<br>98453, 98454, 98439,<br>98455, 98456, 98457,<br>98458, 85046, 86262,<br>86269, 86268, 98426,<br>85047, 89204, 98425,<br>98427, 89206, 117710,<br>86264, 100458, 100456,<br>100457, 104131, 104130,<br>96353, 96350, 96352,<br>111173, 96351, 111171,<br>111169, 104959, 104960,<br>111172, 100969, 100970,<br>89208, 89207, 89205 |  | 94569.7, 94735, 94752.8,<br>95036.8, 95057.6, 95070.4,<br>95081.3, 95218.6, 95334.3,<br>95434, 96004.5, 96152.9,<br>96323.9, 96630.1, 96655.6,<br>96726.3, 96970.7, 96984.4,<br>97165.5, 97930.4, 97964.3,<br>98117.9, 98227.7, 98299.9,<br>98995.2, 99385.3, 99464.6,<br>101772.3, 102041.8,<br>103730.2, 104110.5,<br>104348.8, 104425.7,<br>104604.7, 105123.5,<br>106584.7, 107164.2,<br>107179, 113381, 115223.2,<br>120675.2 |
|--|--|--|

#### 7.4 Principal D - Habitat for Threatened Ecological Communities (TEC)

Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

##### 7.4.1 Threatened Ecological Communities

The following threatened ecological community records have been located within 5km of the application area.

| Record ID   | Ranking                | Distance (m)  |
|---|------------------------|---|
| 122364, 122365, 122363,<br>119959, 119570, 119960,<br>119586, 119568, 119580,<br>119958, 119567, 119579,<br>119569, 119686, 119929,<br>119957, 119949, 0, 119585,<br>119587, 119910, 122485,<br>119956, 119298, 123181,<br>119962, 119702, 119961,<br>119944, 119299, 122478,<br>122480, 119744, 119764,<br>119933, 119646, 119946,<br>119908, 119743, 119722,<br>119647, 119934, 119648,<br>119963, 122486, 119765,<br>209, 122474, 119951,<br>122488, 122481, 122477,<br>119766, 123888, 119748,<br>119597, 119937, 119938, | Priority 3, Endangered | 2122.5, 2472.1, 2568.2,<br>3043.9, 3068.9, 3074,<br>3148.1, 3362.2, 3364.7,<br>3379.6, 3382.5, 3401,<br>3414.7, 3462.6, 3532.7,<br>3534, 3601.1, 3744.7,<br>3763.2, 3797.1, 3822.6,<br>3864.3, 3868.3, 3903.5,<br>3911.1, 4002.8, 4008.9,<br>4052.2, 4284.9, 4326.2,<br>4329.5, 4331.8, 4354.1,<br>4366.9, 4372.1, 4372.3,<br>4416.7, 4431.9, 4441.5,<br>4458.6, 4468.4, 4487,<br>4494.5, 4497.6, 4499.9,<br>4512.9, 4549.3, 4551.6,<br>4557.3, 4562.7, 4578.9,<br>4582.3, 4599.6, 4620.4,<br>4627.2, 4639, 4646.8, |

|   |  |   |
|---|--|---|
| 122479, 122489, 119909,<br>122403, 122483, 119752,<br>119940, 119939, 119948,<br>119941 |  | 4665.7, 4690.8, 4699.7,<br>4699.8, 4700, 4706.5, 4724,<br>4735.5, 4735.6, 4742.7,<br>4745.9, 4753.9, 4782.4,<br>4791.8, 4807.1, 4820.7,<br>4838.2, 4848.5, 4871.4,<br>4885.4, 4899.7, 4917.6,<br>4937.9, 4949.8, 4952.6,<br>4955.2, 4963.7, 4976.4,<br>4988.7, 4991.1 |
|---|--|---|

## 7.5 Principal E - Mapped Vegetation Description

### 7.5.1 Interim Biogeographical Regionalisation for Australia (IBRA) Region

|                                   |
|-----------------------------------|
| Swan Coastal Plain / Perth(SWA02) |
|-----------------------------------|

### 7.5.2 Beard vegetation associations by IBRA region

| IBRA Region        | Association | Rarity  | Area (ha) |
|--------------------|-------------|---------|-----------|
| Swan Coastal Plain | 1007        | 69.21 % | 0.000 ha  |

### 7.5.3 Beard vegetation associations by Local Government Authority

| LGA              | Association | Rarity  | Area (ha) |
|------------------|-------------|---------|-----------|
| City of Wanneroo | 1007        | 68.13 % | 0.000 ha  |

### 7.5.4 Beard Association – Description

| Description           | Vegetation |
|-----------------------|------------|
| Scrub-heath / Thicket | 1007       |

### 7.5.5 Area of Remnant Vegetation within 10km Buffer

Area of remnant vegetation remaining within 10km of the selected area (local area vegetation retention). Land area is based on pre-European extent of Beard Vegetation Association mapping within the 10km buffer.

| Veg area:               | Land area:              | Remnant veg remaining: |
|-------------------------|-------------------------|------------------------|
| 126.298 km <sup>2</sup> | 172.795 km <sup>2</sup> | 73.091                 |

### 7.5.6 South West Region Vegetation Complexes

| Complex | ha |
|---------|----|
|         |    |

|                   |       |
|-------------------|-------|
| Quindalup Complex | 0.011 |
|-------------------|-------|

Vegetation complexes occurring within the Swan Coastal Plain and Jarrah Forest are categorised.

| <b>Category</b> | <b>Description</b>  |
|-----------------|---|
| <b>A</b>        | Vegetation complexes with less than 10% of pre-European extent remaining and < 10% being protected within the Swan Coastal Plain and Jarrah Forest IBRA regions         |
| <b>B</b>        | Vegetation complexes with less than 30% of pre-European extent remaining and less than 10% being protected within the Swan Coastal Plain and Jarrah Forest IBRA regions |
| <b>C</b>        | Vegetation complexes with only 1500 ha or 15% or less protected for conservation in the Jarrah Forest IBRA-region   |
| <b>D</b>        | Vegetation complexes with only 400 ha or 10% or less protected for conservation on the Swan Coastal Plain portion of Perth and Peel                                     |
| <b>E</b>        | Vegetation complexes with less than 10% of pre-European extent protected within the Swan Coastal Plain and Jarrah Forest IBRA regions (and not already listed above)    |
| <b>F</b>        | Vegetation complexes with less than 30% of pre-European extent remaining within the Swan Coastal Plain and Jarrah Forest IBRA regions                                   |
| <b>G</b>        | Vegetation complexes not meeting any of the above criteria  |

### 7.6 Principal F - Growing in Association with a Watercourse or Wetland

Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

#### 7.6.1 Within 5km of a Wetland

The site is in or within 5 km of the following Directory of Important Wetlands sites (distance from the application area)

| Wetland | Distance (m) |
|---------|--------------|
| No Data | No Data      |

#### 7.6.2 Within 5km of a Geoscience Australia Mapped Lake

The site is in or within 5 km of the following Geoscience Australia mapped lakes (distance from the application area).

| Lake Distance (m)     |
|-----------------------|
| Un-named Lake 4652.5m |

#### 7.6.3 Within 50 m of a Geomorphic Wetland

The site is within 50m of a geomorphic wetland.

| ID      | Classification | Distance (m) |
|---------|----------------|--------------|
| No_Data | No Data        | 0            |

### 7.7 Principle G - Likely to Cause Appreciable Land Degradation

Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

| Acid Sulphate Soil   |  |
|----------------------|--|
| Risk Category        | No Data  |
| Soil                 |  |
| Soil Name            | Quindalup South deep sand flat Phase   |
| Geomorphology        | Undulating landscapes with deep calcareous sands overlying limestone. Soils have dark grey-brown sand to about 50 cm and then pale brown sand. Remnants of hummocks are often present.   |
| Soil Symbol Category | 211Qu__Qp  |
| Salinity             |  |
| Salinity Risk        | 500-1000 mg/L  |
| Hydrogeology         |  |
| Coastal Plain        | Coastal & fixed sand dunes & calcarenite. Non-calcareous sands, podsolised soils with low-lying wet areas. Further inland, alluvial deposits, colluvial deposits adjacent to the Darling Scarp. Clayey to sandy alluvial soils with wet areas. |

### 7.8 Principle H – Impacts to Conservation area

Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any conservation area within a 5km buffer.

|                  |   |
|------------------|---|
| Bush Forever     | Bush Forever Site ID 397 - 891.5m, Bush Forever Site ID 288 - 2276.6m, Bush Forever Site ID 284 - 3663.7m, Bush Forever Site ID 396 - 4122.2m, Bush Forever Site ID 289 - 4622.8m |
| Regional Park    | No Data   |
| Red Book Reserve | No Data   |

### 7.9 Principle I -Deterioration in the Quality of Surface or Underground Water

Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water. For surface water features affected by clearing area see 2.6 Principle (f).

#### 7.9.1 RIWI Act Area and PDWSA

|   |   |
|---|---|
| <b>RIWI Act Area</b>                          | Yanchep Groundwater Area  |
| <b>Public Drink Water Source Area (PDWSA)</b> | Perth Coastal and Gwelup Underground Water Pollution Control Area |

#### 7.9.2 Terrestrial Water Dependent Ecosystem

The site is within the following Terrestrial Water Dependent Ecosystems.

| <b>Name</b> | <b>Type</b>                                       | <b>Area (ha)</b> |
|-------------|---|------------------|
| No Data     | Moderate potential GDE - from national assessment | 0.00             |

### 7.10 Principle J -Flooding

Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

The site is within the following DAFWA Land Quality flood risk categories

|   |
|---|
| <3% of the map unit has a moderate to high flood risk |
|---|

## 8 Appendix 2- Planning Instruments and Other Relevant Matters

### 8.1 Within 5km of Forest Management 2014 Proposed Reserve

The site is within 5km of the following Forest Management Plan 2014 proposed reserves.

|  |
|--|
| <b>Forest Management 2014 Proposed Reserve</b> |
|--|

|                             |
|-----------------------------|
| No Data - Distance No Datam |
|-----------------------------|

### 8.2 Within 5km of DAFWA Mapped Landuse

The site is within 5km of the following DAFWA mapped landuses.

|                             |
|-----------------------------|
| No Data - Distance No Datam |
|-----------------------------|

### 8.3 DAA Site

The site overlies or is adjacent to the following Department of Aboriginal Affairs heritage sites.

|         |
|---------|
| No Data |
|---------|

### 8.4 Local Planning Scheme Zones

The site overlies or is adjacent to the following local planning scheme zones

|                   |
|-------------------|
| URBAN DEVELOPMENT |
|-------------------|

### 8.5 Regional Scheme Zones

The site overlies or is adjacent to the following Regional Scheme classes

|                |
|----------------|
| Urban Deferred |
|----------------|

### 8.6 Representative Aboriginal / Torres Strait Islander Body Area

The site is within the following Representative Aboriginal/Torres Strait Islander Body areas.

|   |
|---|
| South West - South West Aboriginal Land and Sea Council |
|---|



## 9 Appendix 3- Parameter for Principals A to I

| Principal | Flag   | Definition   |
|-----------|--------|--|
| A         | Green  | The vegetation is in a degraded or completely degraded (Keighery 1994) condition and there is no fauna, flora, PEC and TEC records within the local area. If ALL principles B, C, D, and E are green   |
|           | Orange | The vegetation is in a good or better (Keighery 1994) condition and there are flora, fauna, PEC, and TEC records within 5 - 10 km of the application area. If ANY principles B, C, D and E are orange  |
|           | Red    | The vegetation is in a good or better (Keighery 1994) condition and there is flora, fauna, PEC, and TEC records within 5km of the application area. If ANY of the principles B, C, D and E are red   |
| B         | Green  | If within the applicant area there are no fauna records within 10km, and the vegetation is in a degraded or less (Keighery 1994) condition; No hollows are present after a visual assessment   |
|           | Orange | If there are Carnaby records within 10km; the application area may contain hollows; other fauna records within 5-10km; if the vegetation is in a good or better (Keighery 1994) condition.   |
|           | Red    | If there are Carnaby records within 10km; hollows are present in the application area; other fauna records within 5km; vegetation is in a good or better (Keighery 1994) condition.  |
| C         | Green  | No records of DRF within 10km of the application area or not the same vegetation and soil type as DRF records in 10km  |
|           | Orange | If the vegetation community and soil type mapped in the application area is the same as a DRF record within 10km. If the vegetation is in a good or better (Keighery 1994) condition   |
|           | Red    | A DRF record or 50 m buffer of a DRF record is within the application area. If the the vegetation community and soil type mapped in the application area is he same as a DRF record within 5km. If the vegetation is in a good or better (Keighery 1994) condition |
| D         | Green  | No records within 10km of the application area.  |
|           | Orange | Records within 10km of the application area  |
|           | Red    | Records within 5km of the application area   |
| E         | Green  | If the vegetation represented in the application area is more than 30% and principle B, C, and D are green   |
|           | Orange | If the vegetation communities mapped in the application area are less than 30% or 10% in DER region. If the native vegetation in the local area is less than 30% and principle B, C, or D are orange   |
|           | Red    | If vegetation communities mapped in the application area are less than 30% or 10% in a constrained area. If the native vegetation in the local area is less than 30% and principle B, C, or D are red  |
| F         | Green  | There are no water courses or wetlands or vegetation is growing in association with a watercourse or wetland in the application area   |
|           | Orange | There is a water course or wetland within 50m or the possibility that vegetation is growing in association watercourse or wetland in the application area  |
|           | Red    | The application area intersects with a mapped wetland/watercourse or if vegetation is growing in association with a watercourse or wetland   |
| G         | Green  | The application does not intersect with a ASS site or area subject to erosion  |
|           | Orange | The application intersects with a high risk ASS site and/or site at high risk of erosion   |

|   |        |   |
|---|--------|---|
|   | Red    | The application is greater than 5ha and intersects with a high risk ASS site, and/or, site at high risk of erosion  |
| H | Green  | The application area is more than 50m from a conservation area.   |
|   | Orange | The application is within 50m of a conservation area.   |
|   | Red    | The application area intersects with a conservation area, or is directly adjacent to a reserve.   |
| I | Green  | The application area does not fall within the Red or Orange flag categories for "Principle I"   |
|   | Orange | The application area intersects with a mapped wetland/watercourse, or the application area intersects with vegetation growing in association with a watercourse or wetland. And/or falls within a RIWI, PDWSA, CAWS area      |
|   | Red    | The application area is more than 5Ha and intersects with a wetland/watercourse. Or the application intersects with vegetation growing in association with a watercourse or wetland and is within a RIWI, PDWSA, or CAWS area |

## 10 Appendix 4- Metadata

| Schema_Name | Table_Name  | Function_Name                                       |
|-------------|---|---|
| nvc         | Principal_Index                                     | nvc.Principle_A                                     |
| dbo         | TecPecs_boundaries_28062021                         | nvc.Principle_A                                     |
| epc         | Threatened_Priority_Fauna_5km_Buffer                | nvc.Principle_B                                     |
| dbo         | Slip_CarnabyConfirmedBreeding_054                   | nvc.Principle_B                                     |
| dbo         | Slip_CarnabyUnconfirmedBreeding_055                 | nvc.Principle_B                                     |
| Enviro      | Potential_Quenda_Habitat_clipped                    | nvc.Principle_B                                     |
| Enviro      | Birds_Australia_IBA_2009                            | nvc.Principle_B                                     |
| epc         | Carnaby_Cockatoo_feeding_habitat_DBCA-057_clipped   | nvc.Principle_B                                     |
| epc         | CarnabysCockatooConfirmedRoostSitesDBCA_050_clipped | nvc.Principle_B                                     |
| epc         | CarnabysCockatooUnconfirmedRoostSitesDBCA_051       | nvc.Principle_B                                     |
| Enviro      | Declared_Rare_Priority_Flora                        | nvc.Principle_C                                     |
| dbo         | Slip_ThreatEcoComm_038                              | nvc.Principle_D                                     |
| nvc         | Principal_Index                                     | nvc.Principle_E                                     |
| Enviro      | NativeVegetationDPIRD_005_clipped                   | nvc.Principle_E                                     |
| carto       | Carto_Australia_Water_Ways_Line                     | nvc.Principle_F                                     |
| dbo         | slip_geomorphic_wetland                             | nvc.Principle_F                                     |
| dbo         | slip_lake_epp                                       | nvc.Principle_F                                     |
| epc         | Section_7-7_Acid_Sulfate_Soils                      | nvc.Principle_G                                     |
| dbo         | slip_bush_forever                                   | nvc.Principle_H                                     |
| dbo         | slip_geomorphic_wetland                             | nvc.Principle_H                                     |
| epc         | Leg_LandsandWatersDBCA_011_clipped                  | nvc.Principle_H                                     |
| dbo         | vw_COW_Park_Reserve                                 | nvc.Principle_H                                     |
| epc         | PDWSA_Wanneroo                                      | nvc.Principle_I                                     |
| carto       | Carto_Australia_Water_Ways_Line                     | nvc.Principle_I                                     |
| dbo         | slip_geomorphic_wetland                             | nvc.Principle_I                                     |
| dbo         | slip_lake_epp                                       | nvc.Principle_I                                     |
| Enviro      | Clearing_Regs_Enviro_Sensitive_Areas_DWER_046       | nvc.Section_2_Site_Details                          |
| nvc         | EPA_Redbook_Reserves_DBCA_029                       | nvc.Section_2_Site_Details                          |
| dbo         | Contour_1m  | nvc.Section_3_Applicant_Site_Attribute_Contour      |
| Enviro      | Soil_Landscape_Mapping_DPIRD                        | nvc.Section_3_Applicant_Site_Attributes             |
| nvc         | Section_3_Applicant_Site_Attribute_Contour          | nvc.Section_3_Applicant_Site_Attributes             |
| epc         | Fauna_ThreatPriorityFauna_DBCA                      | nvc.Section_7_1_1_Specially_Protected_Fauna         |
| epc         | Fauna_ThreatPriorityFauna_DBCA                      | nvc.Section_7_1_2_Priority_Fauna                    |
| NULL        | Slip_Threat_Priority_Flora_036                      | nvc.Section_7_1_3_Specially_Protected_Flora         |
| dbo         | Slip_Threat_Priority_Flora_036                      | nvc.Section_7_1_3_Specially_Protected_Flora         |
| dbo         | Slip_Threat_Priority_Flora_036                      | nvc.Section_7_1_4_Priority_Flora                    |
| dbo         | ThreatEcoComm_038                                   | nvc.Section_7_1_5_Threatened_Ecological_Communities |
| dbo         | ThreatEcoComm_038                                   | nvc.Section_7_1_6_Priority_Ecological_Communities   |
| dbo         | Slip_Enviro_Sensitive_Area_046                      | nvc.Section_7_1_8_Environmentally_Sensitive_Area    |
| nvc         | Flood_Risk_DPIRD_007                                | nvc.Section_7_10_Principle_J_Flooding               |
| Enviro      | Birds_Australia_IBA_2009                            | nvc.Section_7_2_2_Important_Birding_Areas           |
| dbo         | Slip_ThreatPriorityFauna_037                        | nvc.Section_7_2_3_Specially_Protected_Fauna         |
| Enviro      | Regional_Ecological_Linkages                        | nvc.Section_7_2_4_Regional_Ecological_Linkage       |
| Enviro      | GSS_Ecological_Linkages                             | nvc.Section_7_2_5_GSS_Ecological_Linkages           |
| dbo         | Slip_Threat_Priority_Flora_036                      | nvc.Section_7_3_1_Special_Protected_Flora           |

|          |  |   |
|----------|--|---|
| dbo      | TecPecs_boundaries_28062021                          | nvc.Section_7_4_1_Threatened_Ecological_Communities                 |
| SLIP     | BEARD_IBRA_Postclearing                              | nvc.Section_7_5_2_Beard_Vegetation_Assocation_By_IBRA_Region        |
| SLIP     | Beard_Assoc_by_IBRA_SubRegion                        | nvc.Section_7_5_3_Beard_Vegetation_Assocation_By_LGA_IBRA_SubRegion |
| Enviro   | Pre_EuropeanVegetationDPIRD_006_clipped              | nvc.Section_7_5_4_Beard_Association_Description                     |
| Enviro   | VegetationComplexes_SwanCoastalPlainDBCA_046_clipped | nvc.Section_7_5_5_Enviro_Vegetation                                 |
| Enviro   | NativeVegetationDPIRD_005_clipped                    | nvc.Section_7_5_5_Enviro_Vegetation                                 |
| nvc      | Dir_Important_Wetlands_DBCA_045                      | nvc.Section_7_6_1_Principal_F_Within_5km_Wetland                    |
| nvc      | Geoscience_Lake                                      | nvc.Section_7_6_2_Principal_F_Wiithin_5km_Geoscience_Au_Mapped_Lake |
| dbo      | slip_geomorphic_wetland                              | nvc.Section_7_6_3_Within50m_Geomorphic_Wetland                      |
| dbo      | Slip_Acid_Sulphate_Soil                              | nvc.Section_7_7_Principal_G_Land_Degradation                        |
| dbo      | Slip_SoilLandscapeBestAvail_027                      | nvc.Section_7_7_Principal_G_Land_Degradation                        |
| SLIP     | Groundwater_Salinity_DWER026                         | nvc.Section_7_7_Principal_G_Land_Degradation                        |
| dbo      | slip_bush_forever                                    | nvc.Section_7_8_1_Bush_Forever                                      |
| epc      | RegionalParksDBCA026_clipped                         | nvc.Section_7_8_2_Regional_Park                                     |
| nvc      | EPA_Redbook_Reserves_DBCA_029                        | nvc.Section_7_8_3_Red_Book  |
| nvc      | EPA_Redbook_Reserves_DBCA_029                        | nvc.Section_7_8_Principal_H_Impacts_to_Conservation_Area            |
| epc      | RegionalParksDBCA026_clipped                         | nvc.Section_7_8_Principal_H_Impacts_to_Conservation_Area            |
| dbo      | slip_bush_forever                                    | nvc.Section_7_8_Principal_H_Impacts_to_Conservation_Area            |
| SLIP     | RIWI_Act_GroundwaterAreasDWER034                     | nvc.Section_7_9_1_RIWI_Act_PDWSA                                    |
| SLIP     | PublicDrinkWaterSourcAreaDWER033                     | nvc.Section_7_9_1_RIWI_Act_PDWSA                                    |
| nvc      | GDE_Terrestrial_Ecosystem                            | nvc.Section_7_9_2_Groundwater_Dependent_Ecosystem                   |
| nvc      | Forest_Man_Plan_2014_2023_DBCA_041                   | nvc.Section_8_2_Forest_Man_Plan_2014_2023                           |
| nvc      | Forest_Man_Plan_2014_2023_DBCA_041                   | nvc.Section_8_2_Forest_Man_Plan_2014_2023_orig                      |
| nvc      | Generalised_Ag_Landuse_DPIRD_003                     | nvc.Section_8_3_DAFWA_Landuse                                       |
| Planning | dps2   | nvc.Section_8_5_Local_Planning_Scheme_Zone                          |
| Planning | mrs  | nvc.Section_8_6_Regional_Planning_Scheme_Zone                       |

## 11 References

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.