

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.

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1 Applicant Details

Applicant:	City of Wanneroo
COW NVC Site ID	101
Property	2 Brazier Road YANCHEP
LGA	City of Wanneroo
Proposed Clearing	4158.48 m ²
Land Tenure	Lot: 522 DP: 406005

2 Site Details










DBCA District:	Swan Coastal
Environmentally Sensitive Area	Environmentally Sensitive Area
EPA Red Book Area	M2
Country Areas Water Supply Act 1947 - Clearing Control	No Data
Rights in Water and Irrigation Act 1914 area	No Data

3 Applicant Site Attributes

Rainfall Annual Mean (mm)	729
Evapotranspiration Annual Mean (mm)	1800
Contour Elevation (1m interval)	10,11,12,13,14,15,16,17,18,6,7,8,9
Geology	Low hilly to gently undulating terrain. Yellow sand over limestone at 1-2 m. Banksia spp. woodland with scattered emergent E. gomphocephala and E. marginata and a dense shrub layer., The oldest phase. Dunes or remnants with low relief. Calcareous sands have organic staining to about 30 cm, overlying pale brown sand with definite cementation below 1 m., The second phase. A complex pattern of dunes with moderate relief. Calcareous sands have organic staining to about 20 cm, passing into pale brown sand; some cementation below 1 m., Undulating landscapes with shallow calcareous sands over limestone and much rock outcrop.
Soil	Karrakatta Sand Yellow Phase - 211Sp__Ky, Quindalup South oldest dune Phase - 211Qu__Q1, Quindalup South second dune Phase - 211Qu__Q2, Quindalup South shallow sand flat Phase - 211Qu__Qs
Department of Aboriginal Affairs Site	

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.

Clearing Principle	Impacts (please circle)	Reason (please provide explanation why you have selected the level of variance)
Principle (A) – High Biodiversity	Red Flag 	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
Principle (B) – Significant Habitat For Fauna	Red Flag 	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.
Principle (C) – Habitat For Rare Flora	Orange Flag 	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
Principle (D) – Habitat for TEC's	Red Flag 	Records within 5km of the application area.
Principle (E) – Significant Remnant In An Extensively Cleared Area	Red Flag 	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
Principle (F) – Growing In Association With A Watercourse Or Wetland	Green Flag 	There are no water courses or wetlands or vegetation is growing in association with a watercourse or wetland in the application area
Principle (G) – Likely To Cause Appreciable Land Degradation	Green Flag 	The application does not intersect with a Acid Sulfate Soil (ASS) site or area subject to erosion
Principle (H) – Impacts To Conservation Area	Red Flag 	The application area intersects with a conservation area, or is directly adjacent to a reserve
Principle (I) – Deterioration In The Quality Of Surface Or Underground Water	Green Flag 	The application area does not fall within the Red or Orange flag categories for "Principle I"

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, INVERTEBRATE P2, INVERTEBRATE P4, INVERTEBRATE VU, MAMMAL OS, MAMMAL P4, MAMMAL VU, REPTILE EN, REPTILE P3, REPTILE VU	EN, MI, P2, P4, VU, OS, P3	126, 2, 3, 79, 1, 11

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
437362, 195433, 195432, 195434, 195431, 195455, 195456, 195458, 195457, 195473, 195436, 195435, 195437, 195430, 195429, 195449, 195448, 195447, 195446, 195445, 195443,	Invertebrate	P4, P2	Certain, WAM Vouchered	104.5, 1598.1, 1610.6, 1613.8, 1618.4, 1620, 1637.6, 1654.5, 1656.4, 1682.7, 1707.5, 1715.1, 1869.7, 1870, 1884.5, 1906.4, 1922.1, 1934.3, 1948.8, 1964.1, 1965.2, 2101.4, 2172.7, 2275.5, 2378, 2409.2, 2477, 2482.7, 2571.4, 2604.3, 2628.6, 2640.5, 2649.4, 2710.5, 2724.3, 2731.4, 2736.5, 2757.4, 2775.7, 2777.4, 2788.7, 2856.4,

195444, 195442, 195441, 195440, 195438, 195439, 94339, 94338, 94337, 195468, 195470, 195460, 195450, 195459, 195428, 195451, 195461, 195474, 195467, 195469, 195423, 195424, 195421, 195427, 195426, 195471, 195415, 195425, 195454, 195453, 195414, 195466, 195465, 195416, 195463, 195462, 195464, 195472, 195422, 366655, 366657, 195413, 195417, 195418, 99592, 99591, 366656, 99594, 195399, 195400, 195401, 99616, 99593, 99617, 99620,				2867.8, 2983.8, 3037.3, 3078.7, 3111.7, 3337.8, 3367.1, 3516.5, 3557.7, 3744.3, 3883.2, 3973.5, 5071.1, 5195.3	2949.9, 2993, 3068.3, 3084.2, 3113, 3342.7, 3504, 3538.5, 3667.5, 3747.7, 3940.8, 5061.8, 5192.7,
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99619, 99618, 22113, 195406, 22119, 22118					
68322, 2225GAA, 2238GAA, 2247GAA, 794GAA, 789GAA, 791GAA, 857389, 801GAA, 804GAA, 802GAA	Mammal	P4	Moderately certain, No Data, Certain	3894.7, 4440.2, 4839.2, 5186.3	4414.4, 4480.2, 5065.1,
15130, 15126	Reptile	P3		1013.8	

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 Known Taxa	No Data	2

7.1.4 Priority Flora

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

Population ID	Priority	Distance (m)
90805, 90811	Priority 3 - Poorly Known Taxa	3597, 4540

7.1.5 Threatened Ecological Communities

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

Ranking	Count
Priority, Threatened	1, 73

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)
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122932, 122750, 125295, 3134, 125427, 192, 187, 191, 190, 189, 188, 125334, 126814, 122744, 122964, 122749, 122745, 122962, 125333, 122747, 125335, 122765, 1921, 122748, 122767, 122907, 122931, 122766, 122299, 122957, 122648, 122647, 122649, 122300, 122906, 122963, 122905, 125420, 122586, 125435, 122933, 122302, 371, 122598, 122911, 125294, 125296, 122588, 122751, 5055, 122746, 122587, 122961, 122571, 125419, 122960, 125416, 122695, 602, 122599, 125417, 122694, 122959, 125418, 126112, 125423, 125426, 122593, 122958, 375, 122592, 122595, 122594, 125425	Threatened, Priority	1	2971, 3328, 3518, 5196, 5234, 326.5, 561.5, 957.6, 981.1, 1370.3, 1380.2, 1431.3, 1731.9, 1880.3, 1929.9, 1987.9, 1995.7, 2044.2, 2550.1, 2570.2, 2696.8, 2721.5, 2770.9, 2779.1, 2810.4, 2868.3, 2871.1, 2877.6, 2880.5, 2894.6, 2974.4, 3022.2, 3034.4, 3046.9, 3047.7, 3049.5, 3122.1, 3154.7, 3157.2, 3232.7, 3255.4, 3310.2, 3359.2, 3519.9, 3524.7, 3553.4, 3557.8, 3637.7, 3689.5, 3704.9, 3724.4, 3813.6, 3818.2, 3836.7, 3977.1, 3994.7, 4065.8, 4261.5, 4281.8, 4283.8, 4420.9, 4475.2, 4680.1, 4732.7, 4798.2, 4799.2, 4819.6, 4883.7, 4948.7, 5105.6, 5133.7, 5162.1, 5223.8
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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)

0.146

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	0.006
Confirmed Breeding Site	0.221
Unconfirmed Breeding Site	0.221
Feeding Habitat	0.008
Confirmed Roosting Sites	0
Confirmed Roost Sites 6km Buffer	0.221
Unconfirmed Roosting Areas	0
Unconfirmed Roost Sites 6km Buffer	0.221

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	25337, 262265 115, 75881, 199108 794, 25160, 25161, 25159, 25158, 24455, 20056, 25326, 89499, 34326, 25321, 25324, 25322, 25323, 26348, 26360, 26342, 26368, 26327, 26339, 26333, 26354, 26362, 26330, 26336, 26359, 26353, 26365, 26351, 26345, 26334, 26346, 26357, 26328, 26331,	EN, MI	65.8, 603.9, 838.2, 932.8, 1474, 1587.2, 1938.7, 1946.2, 2116.9, 2129, 2202.3, 2323.6, 2373.1, 2388.4, 2409.6, 2441, 2652.5, 2822.8, 3216.3, 3243.2, 3303.2, 3501.5, 3537, 3579, 3891.2, 3895, 3989.8, 4088.2, 4257, 4261.3, 4464.4, 4464.8, 4563, 4600.2, 4711.8, 4712.6, 4749.6, 4827.2, 4828.7, 4834.7, 5113.8,

	26337, 26329, 26349, 26363, 26352, 26343, 26355, 26340, 26366, 26335, 26356, 26361, 26367, 26344, 26347, 26358, 26350, 26332, 26341, 26364, 26338, 23567, 23569, 27218, 27219, 89498, 5000813 794, 23590, 32674, 32673, 5000792 794, 33465, 89501, 89496, 24452, 24453, 24454, 25328, 30393, 30390, 25274, 25288, 25277, 25291, 25271, 25272, 25289, 30391, 25281, 30388, 25280, 25293, 25270, 30386, 25278, 25292, 25275, 30389, 25279, 25316, 25273, 25276, 25290, 23537, 190564 794, 23625, 5029575 794, 5029575 115, 172928 794, 190372 794, 89487, 157334 794, 127366, 23595, 262267 794, 286617 794, 29530, 23540, 21369, 20180, 24456, 24458, 24457, 24459, 24460, 164, 30392, 131909 794		5115.9, 5164.2, 5166.5, 5186.7, 5186.9, 5214.4, 5217.6
Fish	No Data	No Data	No Data
Invertebrate	85368	VU	4859.8
Mammal	631911, 631910, 631914, 5224	OS, VU	800.9, 2424.7

Reptile	19433, 20018	VU, EN	346.4, 391.9
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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:

1

The application area is within the following Gnangara Mound Ecological Linkages

Gnangara Mound Ecological Linkage	ha
Bush Forever associated with Conceptual Linkage, Conceptual Linkage	0.177

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)
No Data	No Data	

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)
122403, 119743, 119963, 119748, 119744, 123888, 119961, 119746, 119764, 119747, 119766, 122402, 119906, 119930, 119765, 119298, 119956, 119931, 119647, 122404, 119646, 119648, 119299, 119905, 119962, 119904, 119585, 119932, 119301, 119749, 122489, 119597, 119910, 122504, 119587, 209, 0, 119750, 119745, 119586, 122364, 119960, 119570, 122363, 122365, 119959, 119694, 122488, 119598, 122485, 119693, 119958, 122486, 119592, 119957, 122487	Priority 3, Endangered	1930.9, 2080.2, 2129.8, 2187.8, 2195.6, 2231.5, 2244.2, 2770.1, 2921.4, 2979, 3010.3, 3049.9, 3068.2, 3071, 3077.6, 3080.4, 3094.5, 3170.9, 3174.3, 3196.4, 3222.1, 3234.4, 3246.8, 3247.5, 3249.4, 3322.1, 3357.1, 3455.2, 3509.9, 3527.9, 3654.6, 3654.8, 3719.9, 3724.6, 3732.5, 3733.8, 3837.7, 3859, 3887.3, 3889.4, 3924.3, 4013.5, 4017.7, 4018.1, 4036.6, 4053.1, 4057.7, 4194.6, 4304.3, 4443.3, 4461.4, 4476.7, 4483.7, 4545.9, 4565.7, 4587.1, 4651.8, 4675.1, 4880, 4905.2, 4920.6, 5034.8, 5083.5, 5148.7, 5232.5

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 %	0.006 ha

7.5.3 Beard vegetation associations by Local Government Authority

LGA	Association	Rarity	Area (ha)
City of Wanneroo	1007	68.13 %	0.029 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:
116.297 km ²	169.293 km ²	68.696

7.5.6 South West Region Vegetation Complexes

Complex	ha
Quindalup Complex	0.221

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

Category	Description
A	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	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
C	Vegetation complexes with only 1500 ha or 15% or less protected for conservation in the Jarrah Forest IBRA-region
D	Vegetation complexes with only 400 ha or 10% or less protected for conservation on the Swan Coastal Plain portion of Perth and Peel
E	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)
F	Vegetation complexes with less than 30% of pre-European extent remaining within the Swan Coastal Plain and Jarrah Forest IBRA regions
G	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 4454.8m, LOCH MCNESS 4742.0m

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 second dune Phase, Karrakatta Sand Yellow Phase, Quindalup South shallow sand flat Phase, Quindalup South oldest dune Phase
Geomorphology	The second phase. A complex pattern of dunes with moderate relief. Calcareous sands have organic staining to about 20 cm, passing into pale brown sand; some cementation below 1 m., Low hilly to gently undulating terrain. Yellow sand over limestone at 1-2 m. Banksia spp. woodland with scattered emergent E. gomphocephala and E. marginata and a dense shrub layer., Undulating landscapes with shallow calcareous sands over limestone and much rock outcrop., The oldest phase. Dunes or remnants with low relief. Calcareous sands have organic staining to about 30 cm, overlying pale brown sand with definite cementation below 1 m.
Soil Symbol Category	211Qu__Q2, 211Sp__Ky, 211Qu__Qs, 211Qu__Q1

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 - 0.0m, Bush Forever Site ID 289 - 1772.6m, Bush Forever Site ID 288 - 3183.3m
Regional Park	No Data
Red Book Reserve	M2- 24.1m

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

RIWI Act Area	Yanchep Groundwater Area
Public Drink Water Source Area (PDWSA)	No Data

7.9.2 Terrestrial Water Dependent Ecosystem

The site is within the following Terrestrial Water Dependent Ecosystems.

Name	Type	Area (ha)
No Data	Low potential GDE - from national assessment	0.03

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.

Forest Management 2014 Proposed Reserve
--

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.

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8.4 Local Planning Scheme Zones

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

PARKS & RECREATION - MRS

8.5 Regional Scheme Zones

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

Parks and Recreation, Urban

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.