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Knightside Nominees Pty Ltd

19 June 2023

Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DA WA 6919

RE: Application to Clear Native Vegetation (CPS 10068/1) – Response to Request for Further Information

On behalf of PSP Properties Pty Ltd (**Applicant**) please find following additional information in relation to the clearing permit application for the Perth Surf Park project (CPS 10068/1).

The response addresses the items listed in emailed correspondence of 23 May 2023

1 Wetland

1.1 Assessment

Emailed correspondence of 23 May requests information on three additional items in relation to the wetland on the northern part of the site. In summary, the three items were:

- Provide spatial data of vegetation condition mapping of the wetland;
- Calculate a percentage figure for the vegetation in Good condition or better; and
- Modify the wetland management category assessment sheet.

To address the above PGV Environmental undertook a detailed vegetation condition mapping of the wetland on 1 June 2023. Paul van der Moezel walked the wetland on a 10m x 10m grid and recorded the vegetation condition using the Keighery (1994) scale within a 2m radius of the grid point. The methodology and 2m radius was agreed at a site meeting with DBCA on 17 May 2023.

The vegetation condition results for each grid point are shown in Attachment 1. Examples of vegetation on the site given the vegetation condition ratings are provided in Attachment 2.

A vegetation condition map was then prepared using the grid point results and interpolating the condition between the points using current aerial photography. At this fine scale the vegetation condition in the wetland is very chaotic and changes rapidly, in some cases from Very Good to

Degraded in the space of a metre. The condition of the vegetation under the areas of dense Paperbark are not easily interpolated using aerial photography.

Attachment 3 provides a list of weed species recorded during the vegetation condition assessment. This is not an exhaustive list of non-native species on site but gives an indication of the wide range of weed species in the wetland. The tall woody weed *Acacia longifolia* is the most abundant weed in the wetland.

The resultant vegetation condition map is provided in Attachment 4. We will send you the shapefiles in a separate email.

Table 1 summarises the percentage of each vegetation condition class in the wetland.

Table 1: Wetland Vegetation Condition

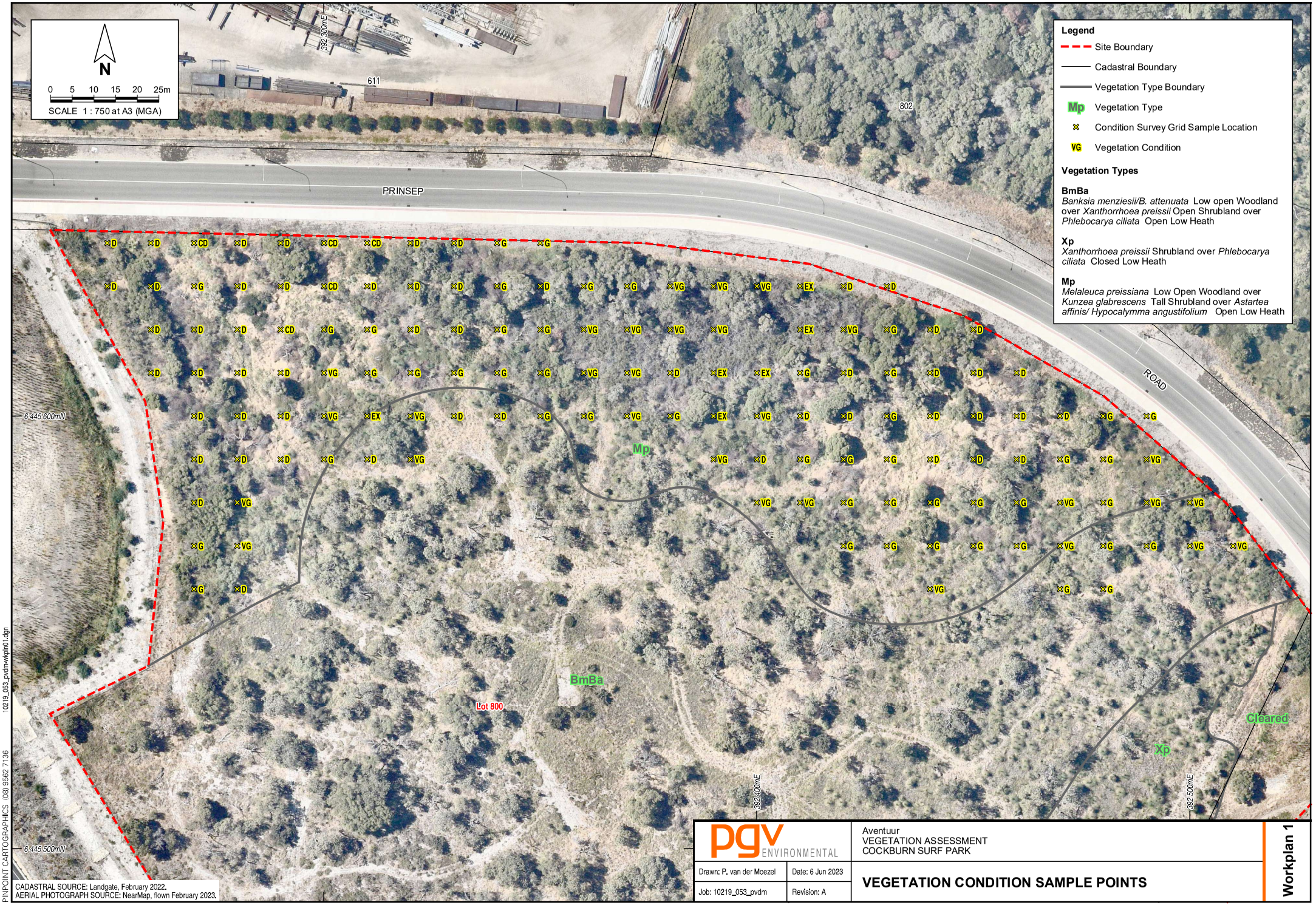
Vegetation Condition	Percentage (%)
Excellent	5.0
Very Good	25.2
Good	28.7
Degraded	35.6
Completely Degraded	5.6

The amount of vegetation in Good condition or better is 58.8%

We have updated the Wetland Evaluation assessment previously provided to you (Attachment 5). The revised Wetland Evaluation uses the vegetation condition percentage outlined above and also addresses your request in the email of 23 May to provide a response to each question rather than leaving the response blank. I also observed a Quenda entering the site during the vegetation condition mapping and have updated the Fauna section based on that observation.

The revised Wetland Evaluation gives a score of High – 3, Intermediate - 9 and Low– 1 (compared to High – 2, Intermediate – 7 and Low– 2 previously) which results in a Resource Enhancement management category.

ATTACHMENT 1
Wetland Vegetation Condition Map
Grid Points



CADASTRAL SOURCE: Landgate, February 2022.
AERIAL PHOTOGRAPH SOURCE: NearMap, flown February 2023.

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Aventuur
VEGETATION ASSESSMENT
COCKBURN SURF PARK

Drawn: P. van der Moezel | Date: 6 Jun 2023
Job: 10219_053_pvdm | Revision: A

VEGETATION CONDITION SAMPLE POINTS

Workplan 1

ATTACHMENT 2
Vegetation Condition Examples on Site

Wetland Vegetation Condition Examples on Site

Excellent




Very Good




Good




Degraded





Completely Degraded



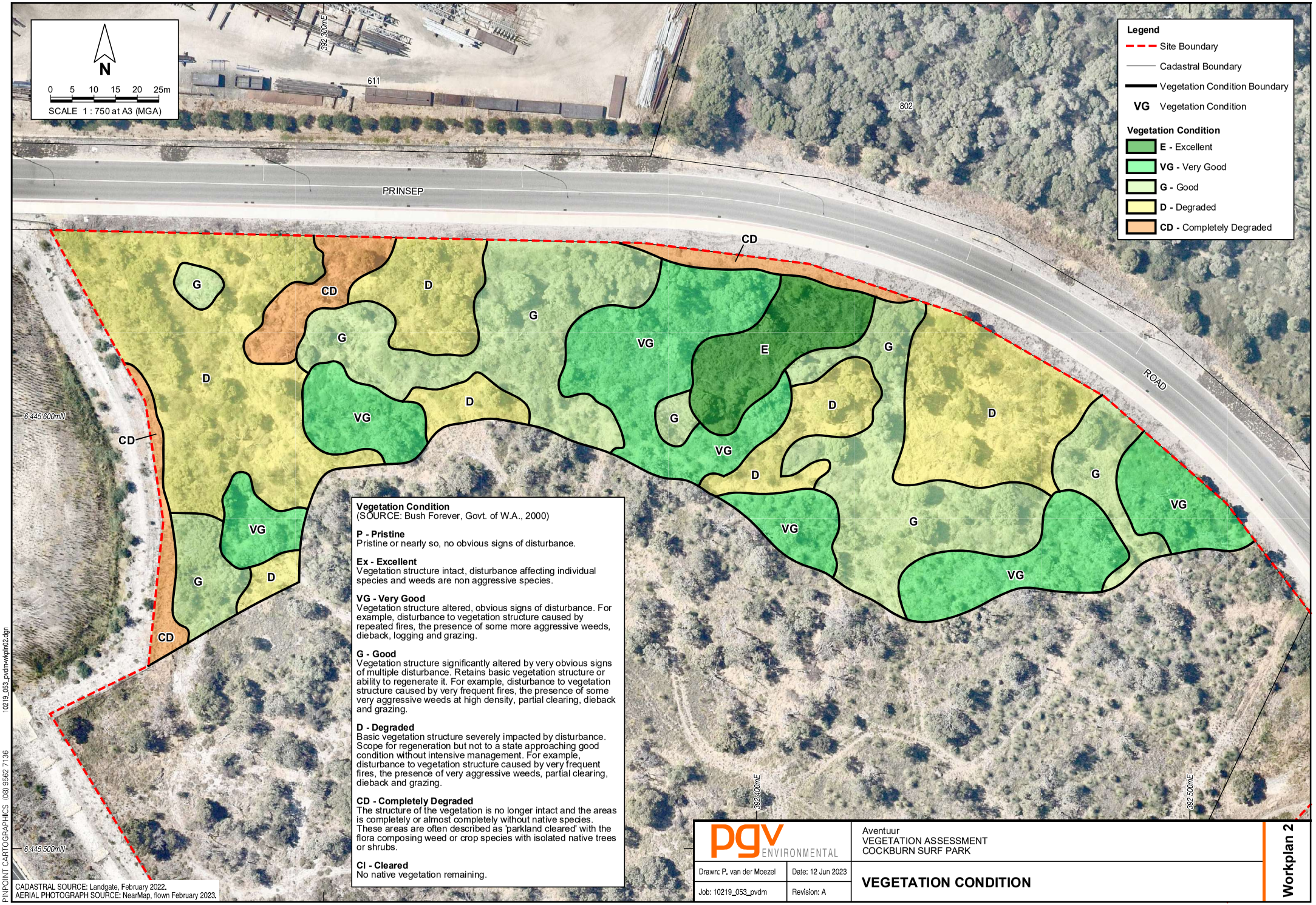


ATTACHMENT 3
Weed Species Recorded in the Wetland

Weed Species recorded during the Vegetation Condition Site Assessment

Species	Common Name
Acacia longifolia	Sydney Wattle
Asparagus asparagoides	Bridal Creeper
Carpobrotus edulis	Pigface
Chamelaucium uncinatum	Geraldton Wax
Cynodon dactylon	Couch Grass
Ehrharta calycina	Perennial Veldtgrass
Ehrharta longifolia	Annual Veldtgrass
Eragrostis curvula	African Lovegrass
Erigeron bonariensis	Fleabane
Eucalyptus camaldulensis	River Red Gum
Euphorbia terracina	Geraldton Carnation Weed
Fumaria capreolata	Fumitory
Gladiolus caryophyllaceus	Gladiolus
Lactuca serriola	Prickly Lettuce
Leptospermum laevigatum	Victorian Teatree
Lupinus cosentinii	Blue Lupin
Oxalis pes-caprae	Soursob
Pelargonium capitatum	Rose Pelargonium
Phytolacca octandra	Inkweed
Pseudognaphalium luteoalbum	Jersey Cudweed
Ricinus communis	Castor Oil
Schinus terebinthifolius	Japanese Pepper
Solanum nigrum	Blackberry Nightshade
Taraxacum officinale	Dandelion
Trachyandra divaricata	Onion Weed
Vicia sativa	Common Vetch
Washingtonia filifera	Cotton Palm

ATTACHMENT 4
Wetland Vegetation Condition Map


N
0 5 10 15 20 25m
SCALE 1 : 750 at A3 (MGA)
392 300mE
611
802
PRINSEP
ROAD
6 445 600mN
6 445 500mN
392 400mE
392 500mE
Legend
Site Boundary
Cadastral Boundary
Vegetation Condition Boundary
VG Vegetation Condition
Vegetation Condition
E - Excellent
VG - Very Good
G - Good
D - Degraded
CD - Completely Degraded
Vegetation Condition
(SOURCE: Bush Forever, Govt. of W.A., 2000)
P - Pristine
Pristine or nearly so, no obvious signs of disturbance.
Ex - Excellent
Vegetation structure intact, disturbance affecting individual species and weeds are non aggressive species.
VG - Very Good
Vegetation structure altered, obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.
G - Good
Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.
D - Degraded
Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.
CD - Completely Degraded
The structure of the vegetation is no longer intact and the areas is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora composing weed or crop species with isolated native trees or shrubs.
Cl - Cleared
No native vegetation remaining.
CADASTRAL SOURCE: Landgate, February 2022.
AERIAL PHOTOGRAPH SOURCE: NearMap, flown February 2023.
PINPOINT CARTOGRAPHICS (08) 9562 7136
10219_053_pvdm-wkpln02.dgn
pgv ENVIRONMENTAL
Aventuur
VEGETATION ASSESSMENT
COCKBURN SURF PARK
Drawn: P. van der Moezel
Date: 12 Jun 2023
Job: 10219_053_pvdm
Revision: A
VEGETATION CONDITION
Workplan 2

ATTACHMENT 5
Wetland Evaluation

UFI 6652 Dampland – portion on Lot 800

Preliminary evaluation criteria.

No.	Criteria	Y/N	Comments
1	The wetland is currently recognised as internationally or nationally significant for its natural values. Lists/registers include: – The Ramsar Convention on Wetlands – State government endorsed candidate sites for the Ramsar Convention on Wetlands – Directory of Important Wetlands in Australia National Heritage List – Or equivalent.	N	
2	The wetland is spatially dominated by vegetation in a good or better condition using the vegetation condition scale outlined in Appendix B and is identified as significant for its natural values under one or more of the following: – Conservation Reserves for Western Australia Systems 1, 2, 3, 5 – Conservation Reserves for Western Australia, The Darling System –System 6 – A Systematic Overview of Environmental Values of the Wetlands, Rivers and Estuaries of the Busselton – Walpole Region – The Environmental Significance of Wetlands in the Perth to Bunbury Region – Bush Forever, Swan Bioplan or equivalent.	N	
3	The wetland supports a breeding, roosting, or refuge site or a critical feeding site for populations of fauna listed by the Australian Government (for example, *Environment Protection and Biodiversity Conservation Act 1999*, migratory bird agreements such as JAMBA, CAMBA and RoKAMBA) or the State (for example, Threatened and Specially Protected Fauna listed under the *Wildlife Conservation Act 1950*).	N	
4	The wetland is spatially dominated by vegetation in a good or better condition using the vegetation condition scale outlined in Appendix B and supports one or more of the following: – An occurrence of a Threatened Ecological Community – A confirmed occurrence of a Priority 1 or Priority 2 Ecological Community – A confirmed occurrence of a Declared Rare (Threatened) flora species.	N	

No.	Criteria	Y/N	Comments
5	Equal to or greater than 90% of the wetland supports vegetation in a good or better condition using the vegetation condition scale outlined in Appendix B.	N	58.8% in Good condition or better following detailed vegetation condition mapping in June 2023
6	The wetland is spatially dominated by vegetation in a good or better condition using the vegetation condition scale outlined in Appendix B and is known to support internationally, nationally or state-wide scientific values including geoheritage and geoconservation.	N	
7	The wetland is spatially dominated by vegetation in a good or better condition using the vegetation condition scale outlined in Appendix B and meets one of the following: - ≤10% of wetlands of the same type are assigned Conservation management category within the Swan Coastal Plain (by area) - ≤10% of all wetlands in the same consanguineous suite are assigned Conservation management category (by area) - ≤10% of wetlands of the same type in its consanguineous suite are assigned Conservation management category (by area) - best representative of its type within its consanguineous suite domain	N	Jandakot Suite

Secondary evaluation criteria.

Attributes/ functions/ values	General criteria	Criteria	Score	Comments
Geomorphology				
1	*Representativeness*	≤20% of wetlands of the same type are assigned Conservation on the Swan Coastal Plain by area.	**H**	No
2		≤20% of wetlands in the same consanguineous suite are assigned Conservation by area.	**H**	No
3		≤20% of wetlands of the same type in the same consanguineous suite are assigned Conservation by area.	**H**	No
4		The wetland is outstanding in some geomorphic aspect, for example size, origin, height relative to sea level, depth, age.	**H**	No
5	*Naturalness*	Alteration to the wetland's geomorphology by % area: – < 25% altered – 25-75% altered – > 75% altered.	**H** **I** **L**	>75% for total area of mapped wetland
6	*Scarcity*	The wetland exhibits unusual geomorphology or unusual internal geomorphic features compared to other wetlands of the same type in the consanguineous suite.	**H**	No
7		The wetland is the best example of its type in its consanguineous suite.	**H**	No

Attributes/ functions/ values	General criteria	Criteria	Score	Comments
Wetland Processes				
8	*Representativeness*	The wetland is an important component of the natural hydrological cycle providing natural functions (e.g. flood protection and recharge/discharge). The wetland's vegetation, geomorphology, hydrology or sediments are modified; however, the wetland is still a component of the hydrological cycle providing natural and artificial functions (e.g. flood remediation, recharge/discharge and hydrological storage). The wetland's vegetation, geomorphology, hydrology or sediments are modified to the extent that the wetlands hydrological functions are artificial such as storage, or the wetland has been disconnected from the natural hydrological cycle and no longer provides natural attributes and functions.	**H** **I** **L**	The wetland's vegetation has been modified with areas in Degraded and Completely Degraded condition however the wetland is still a component of the hydrological cycle
9		The wetland supports a representative process (e.g. wetland process typical of the wetland's hydrological setting, sediment accretionary process typical of the wetland's geomorphic setting or hydrochemical process typical of the wetland's geological setting).	**H**	No
10	*Naturalness*	The wetland is not subject to altered wetland processes or, is subject to altered wetland processes and the wetland's natural attributes and functions are maintained. The wetland is subject to altered wetland processes and the wetland's natural attributes and functions have been changed; however, they have the potential to be rehabilitated. The wetland is subject to altered wetland processes to the extent that the wetland no longer supports natural attributes and functions.	**H** **I** **L**	The wetland is mostly surrounded by a built environment including major roads and industrial developments. Stormwater drainage basins are located to the north-east and west of the wetland.

Attributes/ functions/ values	General criteria	Criteria	Score	Comments
11	*Scarcity*	The wetland exhibits unusual processes (e.g. hydrological, sedimentological, chemical, biological) compared to other wetlands of the same type in the consanguineous suite.	**H**	No
Linkages				
12	*Representativeness*	The wetland is a hydrological link in a larger or more complex and intact system.	**H**	No
13	*Naturalness*	The wetland is part of a continuous ecological linkage or wildlife corridor, or a regionally significant ecological linkage or wildlife corridor connecting bushland or wetland areas. The wetland is part of a fragmented ecological linkage or wildlife corridor. The wetland is disturbed and isolated, surrounded by either a built or highly disturbed environment with no nearby native vegetation or waterways to support an intact or fragmented ecological linkage or wildlife corridor.	**H** **I** **L**	The wetland is mostly surrounded by a built environment apart from a larger, more intact portion of the same wetland north of Prinsep Road. The presence of the northern part of the wetland resulted in the wetland being considered part of a fragmented ecological linkage or wildlife corridor.
14	*Scarcity*	The wetland has unusual hydrological, hydrochemical or ecological linkages with adjacent wetland or bushland.	**I**	No
Habitats				
15	*Representativeness*	The wetland is isolated from other undisturbed wetlands or bushland and as a result, maintains important ecological or genetic fauna or flora diversity within its consanguineous suite domain.	**H**	The wetland, and the portion north of Prinsep Road, are isolated from other undisturbed wetlands and bushland
16		The wetland contains evidence of surface water that is vital to maintaining regionally significant populations of native aquatic or terrestrial flora or fauna.	**H**	No
17		The wetland provides a nursery for native fauna populations, or maintains fauna populations at a vulnerable stage of their life cycle.	**H**	No

Attributes/ functions/ values	General criteria	Criteria	Score	Comments
18	*Naturalness*	The wetland supports habitats that are unaltered or the wetland has been altered and its natural habitats are maintained. The wetland supports habitats that are altered; however, the habitats are still identifiable and have the potential to be rehabilitated. The wetland is altered and as a result is no longer supporting natural habitats which can be rehabilitated.	**H** **I** **L**	The wetland vegetation ranges from Completely Degraded to Excellent and hence fauna habitats have been altered but has potential to be rehabilitated
19	*Scarcity*	The wetland supports habitats that are unusual compared to other wetlands of the same type on the Swan Coastal Plain.	**H**	No
Flora				
20	*Representativeness*	The wetland's current diversity of native flora is similar to what would be expected in an unaltered state. The wetland supports a reduced diversity of native flora due to human induced disturbances. The wetland supports a significantly reduced diversity of native flora species due to human induced disturbances.	**H** **I** **L**	The wetland vegetation condition has X% in Degraded and Completely Degraded condition and X% in Good condition which includes many weeds. The native flora diversity is considered to be reduced as a result of the high weed infestation.
21		The wetland is identified in a vegetation complex (Heddle *et al.*, 1980) which is represented by: ≤30% of the pre-European extent 30-50% of the pre-European extent.	 **H** **I**	Bassendean – Central and South has 26.87% remaining
22	*Naturalness*	Using the vegetation condition scale outlined in Appendix B, the wetland's vegetation condition by area is: ≥ 75% Good, Very Good, Excellent or Pristine 25-75% Good, Very Good, Excellent or Pristine < 25% Good, Very Good, Excellent or Pristine.	 **H** **I** **L**	58.8% in Good condition or better following detailed vegetation condition mapping in June 2023

Attributes/ functions/ values	General criteria	Criteria	Score	Comments
23		The wetland or ≥ 50% of the wetland boundary is surrounded by land dominated by remnant native vegetation. The wetland or 10-50% of the wetland boundary is surrounded by land dominated by remnant native vegetation. The wetland or < 10% of the wetland boundary is surrounded by land dominated by remnant native vegetation.	**H** **I** **L**	The wetland boundary includes Prinsep Road to the north, a stormwater basin to the west and upland native vegetation to the south and east. The wetland perimeter is around 700m of which 285m is native vegetation (41%)
24	*Scarcity*	The wetland supports an occurrence of Declared Rare, Priority 1, Priority 2, Priority 3 or Priority 4 flora, or an occurrence of 3 or more significant flora taxa.	**H**	No
25		The wetland is likely to support Declared Rare, Priority 1, Priority 2, Priority 3 or Priority 4 flora; however, the occurrence cannot be located or its habitat has been altered and is no longer in a natural state.	**I**	No
26		The wetland supports an occurrence of a Threatened Ecological Community, Priority 1 or Priority 2 ecological community.	**H**	No – the vegetation in the wetland is not a TEC or PEC
27		The wetland supports an occurrence of a Priority 3 or Priority 4 ecological community.	**I**	No – the vegetation in the wetland is not a TEC or PEC
Fauna				
28	*Representativeness*	The wetland is an ecological refuge for regionally significant fauna species or fauna assemblages. The wetland has the potential to be an ecological refuge but is disturbed and its attributes and functions require rehabilitation.	**H** **I**	No
29		The wetland supports a permanent or seasonal feeding, breeding, roosting or watering site for regionally significant native fauna. The wetland supports a permanent or seasonal feeding, breeding, roosting or watering site for regional or local fauna but only in association with other surrounding natural areas.	**H** **I**	No

Attributes/ functions/ values	General criteria	Criteria	Score	Comments
30	*Naturalness*	The wetland's current diversity of native fauna is similar to what would be expected in an unaltered state, or the wetland supports diverse fauna compared to other wetlands of the same type. The wetland supports a reduced diversity of fauna compared to other wetlands of the same type.	**H** **I**	The condition of the vegetation is likely to result in a reduced diversity of fauna compared to other similar wetlands
		The wetland supports limited attributes and functions for fauna populations due to human induced disturbances.	**L**	No
31	*Scarcity*	The wetland is likely to support a breeding, roosting, refuge or feeding site for populations of fauna listed by the Commonwealth (e.g. *EPBC Act 1999*, JAMBA, CAMBA, RoKAMBA Agreements) or the State (e.g. Threatened or Specially Protected Fauna listed under the *Wildlife Conservation Act 1950*).	**H**	No
32		The wetland supports a breeding, roosting, refuge or feeding site for Priority 1, Priority 2, Priority 3 or Priority 4 fauna.	**H**	One Quenda (P4) spotted entering the wetland on 1 June 2023
33		The wetland supports an occurrence of a Threatened Ecological Community, Priority 1 or Priority 2 ecological community.	**H**	No
34		The wetland supports an occurrence of a Priority 3 or Priority 4 ecological community or a breeding, roosting, refuge or feeding site for significant fauna.	**I**	One Quenda (P4) spotted entering the wetland on 1 June 2023
Cultural				
35	*Representativeness*	The wetland or its immediate surrounds is identified for its natural values on a national or State heritage list or the wetland supports other known regional heritage values.	**H**	No
36		The wetland or its immediate surrounds is identified for its natural values on a municipal heritage list or the wetland supports other known local heritage values.	**I**	No

Attributes/ functions/ values	General criteria	Criteria	Score	Comments
37	*Representativeness*	The wetland or its immediate surrounds is identified on a national, State or local list or register for its Aboriginal cultural value (e.g. Department of Aboriginal Affairs register).	**H**	The wetland is not listed on any of these registers
38		The wetland is important to the local community either nationally or state wide for its natural values.	**H**	No
39		The wetland is or has the potential to be a site for public or private based recreation.	**I**	No
40		The wetland is likely to support heritage, cultural or social values; however, the value cannot be confirmed or the value has been disturbed and are no longer as important or significant. The wetland did support heritage, cultural or social values; however, these have been significantly disturbed and are no longer important or the values have been removed.	**I** **L**	No
Scientific and Educational				
41	*Representativeness*	The wetland supports known important teaching or research characteristics and for this reason is an existing or potential education or research site. Note, the wetland must still support the relevant teaching or research characteristics. The wetland has the potential to be used as a study or research site.	**H** **I**	No
42		The wetland supports known scientific, geoheritage or geoconservation values.	**H**	No

Tally for the Secondary Evaluation.

Attributes/functions/values	Scores		
	High	**Intermediate**	**Low**
Geomorphology	0	0	1
Wetland processes	0	2	0
Linkages	0	1	0
Habitats	1	1	0
Flora	1	3	0
Fauna	1	2	0
Cultural	0	0	0
Scientific and educational	0	0	0
Total score	**3**	**9**	**1**
Defining attributes/functions/values	Wetland Processes and Flora		
Applicable management category	Resource Enhancement		