



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8047/3
Permit Holder:	BHP Iron Ore Pty Ltd
Duration of Permit:	From 28 November 2018 to 30 November 2028

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of constructing and maintaining access roads and all associated activities.

2. Land on which clearing is to be done

Lot 453 on Deposited Plan 165816, Port Hedland
Lot 5432 on Deposited Plan 184949, Port Hedland
Wilson Street Road reserve (PIN 11426084), Port Hedland

3. Clearing authorised

The permit holder must not clear more than 1.37 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Application

This Permit allows the Permit Holder to authorize persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with conditions of this Permit and approval from the Permit Holder.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

- (a) avoid the clearing of *native vegetation*;

- (b) minimise the amount of *native vegetation* to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

6. Weed management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds*

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner towards adjacent *native vegetation* allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

PART III - RECORD KEEPING AND REPORTING

8. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	<ul style="list-style-type: none"> (a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; (f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> in accordance with condition 6.

9. Reporting

The permit holder must provide to the *CEO* the records required under condition 8 of this permit when requested by the *CEO*.


DEFINITIONS

In this permit, the terms in Table 2 have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
fill	means material used to increase the ground level, or to fill a depression.
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
weeds	means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i> ; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

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Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

28 November 2023

Schedule 1 Plan 8047/3

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).

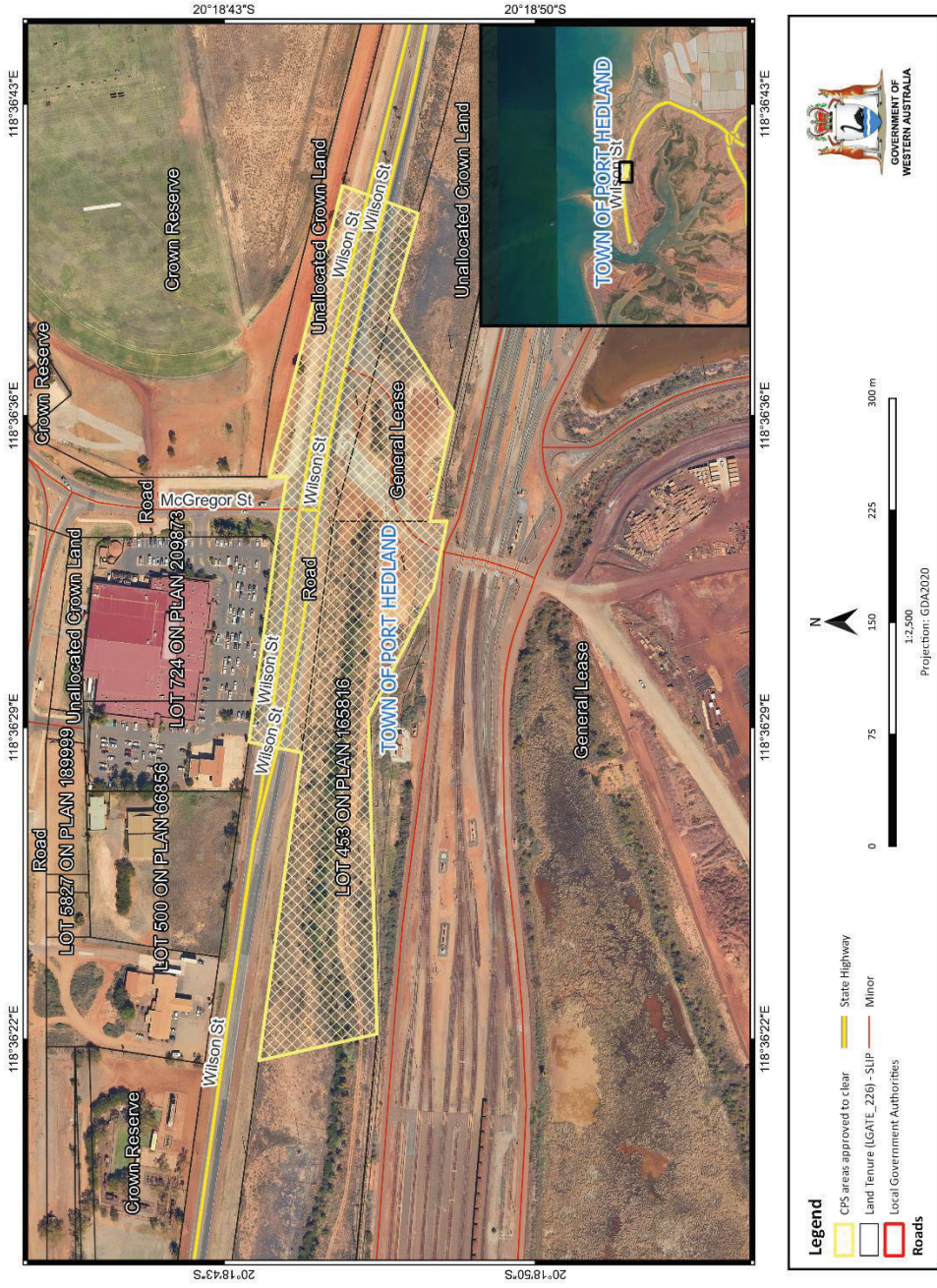


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 8047/3
Permit type:	Purpose permit
Applicant name:	BHP Iron Ore Pty Ltd
Application received:	3 August 2023
Application area:	1.37 hectares of native vegetation
Purpose of clearing:	Constructing and maintaining access roads and all associated activities
Method of clearing:	Mechanical
Property:	Lot 453 on Deposited Plan 165816, Lot 5432 on Deposited Plan 184949, Wilson Street Road reserve (PIN 11426084)
Location (LGA area/s):	Town of Port Hedland
Localities (suburb/s):	Port Hedland

1.2. Description of clearing activities

This amendment is to extend the duration of the clearing permit until 30 November 2028 and update the permit holder's name (see Figure 1, Section 1.5). CPS 8047/2 allowed for the clearing of 1.37 hectares to facilitate the construction and maintenance of access roads and all associated activities. The applicant advised that no clearing has been undertaken under CPS 8074/1, since the commencement of the permit in 2018 (BHP, 2023a).

1.3. Decision on application

Decision:	Granted
Decision date:	28 November 2023
Decision area:	1.37 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit amendment application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 14 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix H.1), the findings of a flora and fauna survey (see Appendix F), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The assessment has not changed since the assessment for CPS 8047/2. The Delegated Officer determined that the proposed extension of time is not likely to lead to an unacceptable risk to environmental values.

1.5. Site map

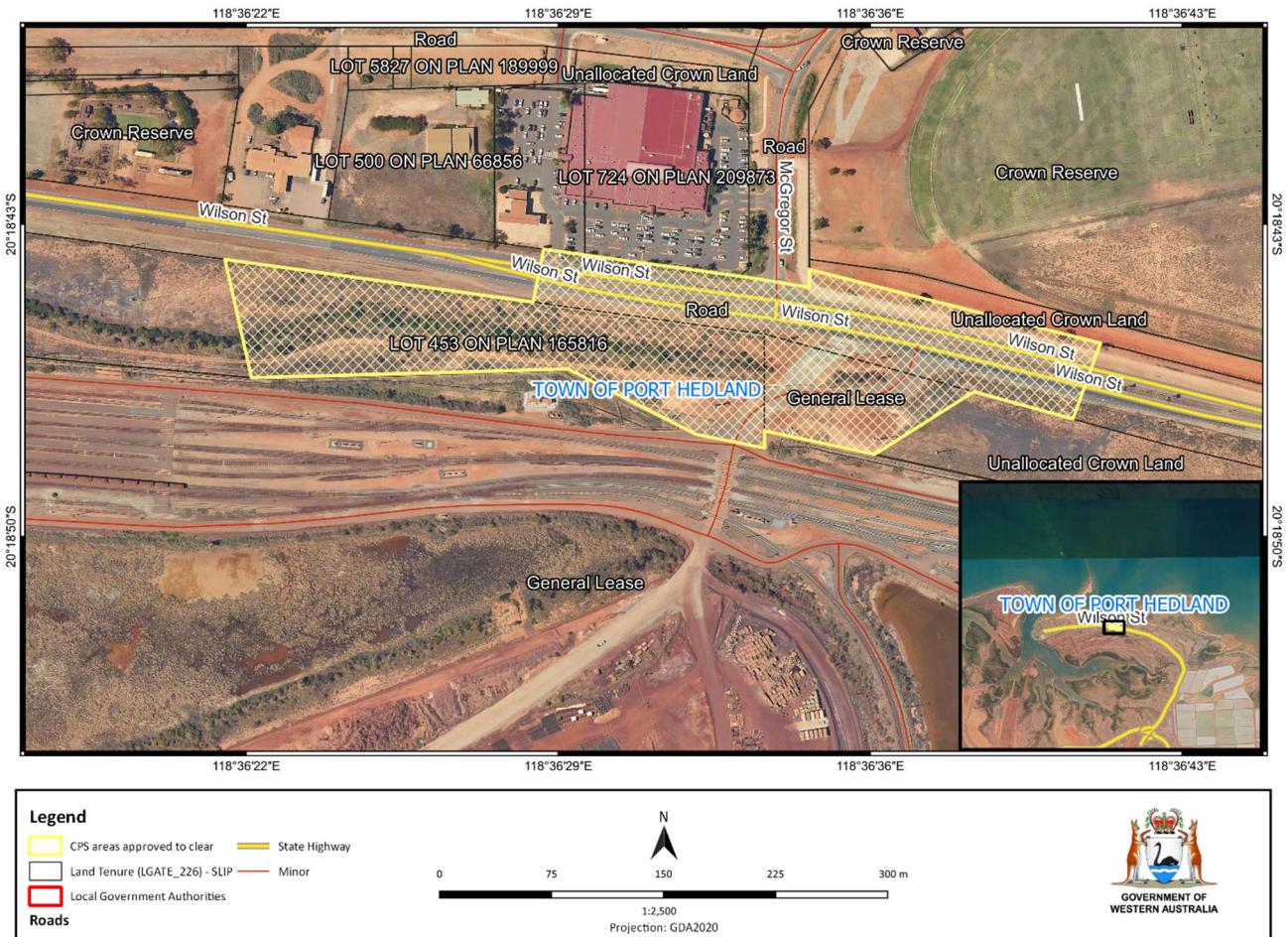


Figure 1 Map of the application area

The area cross-hatched yellow indicate the area authorised to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

No additional areas were applied for in this amendment application and the applicant has advised that the clearing of 1.37 hectares within the 4.74 hectare clearing envelope is the minimum amount necessary to allow for the required upgrades. As per CPS 8047/2, the buffer zone of vegetation would be restored except for areas that are covered by the new sealed road.

The Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

A review of current environmental information (Appendix C) reveals no significant changes in the assessment against the clearing principles from the Clearing Permit Decision Report CPS 8047/2.

One additional conservation significant flora record is noted 750 metres from the application area, Priority 2 *Gomphrena pusilla*. This species is generally recorded in vegetation of Very Good (Trudgen, 1991) condition and as such is unlikely to be impacted by the proposed clearing given the condition of native vegetation in the application area is Completely Degraded (Trudgen, 1991).

While multiple conservation significant fauna species have been recorded in the local area, none have been recorded within the application area. However, given the close proximity of the application area to a saline coastal flat, there is the possibility that fauna may be present at the time of clearing. Therefore, to mitigate potential impacts to fauna, the following additional condition should be applied:

- clearing should be undertaken in a slow, progressive manner towards adjacent native vegetation, to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

3.3. Relevant planning instruments and other matters

Access to Lot 5432 on Deposited Plan 18949 is due to expire on 31 December 2023. The lease extension permit has been reviewed and approved by the Department of Planning, Lands and Heritage (DPLH, 2023) with the Permit Holder currently awaiting replacement lease documents (BHP, 2023c). Until these documents are received, BHP are in a “holding over” period and remain the occupier of the lease until the new documents have been issued. BHP advise that this process can take upwards of 18 months (BHP, 2023c).

Based on the above, the Delegated Officer was satisfied that BHP has authority to access the land over which the proposed clearing will occur for the duration of the clearing permit extension.

Several Aboriginal sites of significance, Two Mile Ridge – Area A, Two Mile Ridge – Area B, Two Mile Ridge – Area C and Two Mile Ridge - Nelson Point, have been mapped within or close to the application area. It is the permit holder’s responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix C. Site characteristics

C.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of an isolated patch of native vegetation in the Town of Port Hedland in the extensive land use zone of Western Australia. It is surrounded by infrastructure and a commercial zone in a highly cleared part of the urban area of Port Hedland.</p> <p>Aerial imagery indicates the local area (50-kilometre radius from the centre of the area proposed to be cleared) retains approximately 95.29 per cent of the original native vegetation cover.</p>
Ecological linkage	The application area is not within an ecological linkage and there are no ecological linkages in the local area.
Conservation areas	There are no conservation areas within the local area.
Vegetation description	<p>Vegetation survey (ENV, 2011a) indicates the vegetation within the proposed clearing area consists of highly disturbed remnant mangrove vegetation and hummock grassland. The full survey descriptions and maps are available in Appendix F.</p> <p>This is consistent / inconsistent with the mapped vegetation type(s):</p> <ul style="list-style-type: none"> • Abydos Plain 127, which is described as tidal mudflat • Abydos Plain 117, which is described as hummock grassland <i>Triodia</i> species • Abydos plain 43, which is described as Low forest (Kimberley) or thicket (Pilbara) mangroves <i>Avicennia marina</i>, <i>Rhizophora stylosa</i>, <i>Bruguiera exaristata</i>. <p>The mapped vegetation types retain approximately 90.93, 93.52 and 86.23 per cent of the original extent (Government of Western Australia, 2019).</p>
Vegetation condition	<p>The vegetation survey (ENV, 2011a) indicates the vegetation within the proposed clearing area is in Completely Degraded (Trudgen, 1991) condition.</p> <p>The full Trudgen (1991) condition rating scale is provided in Appendix E. The full survey descriptions and mapping are available in Appendix F.</p>
Climate and landform	<p>The Port Hedland Airport weather station is 7.7 kilometres from Port Hedland and records the highest mean maximum temperature in March and December at 36.8 degrees with the lowest in July at 27.4 (BOM, 2023). The mean minimum temperature is the highest in January at 25.7 degrees and the lowest in July at 12.5 degrees, with the area receiving 315.8 mm annual rainfall.</p> <p>The application area is on very flat terrain around 10 metres above sea level. The application area is on the Littoral System which is described as bare coastal mudflats (unvegetated), samphire flats, sandy islands, coastal dunes and beaches, supporting samphire low shrublands, sparse acacia shrublands and mangrove forests.</p>
Soil description	The soil is mapped as the littoral system which is described as bare coastal mudflats (unvegetated), samphire flats, sandy islands, coastal dunes and beaches, supporting samphire low shrublands, sparse acacia shrublands and mangrove forests. It has quaternary mudflat deposits, clay, salt and sand.
Land degradation risk	High wind erosion, salinity and sub surface compaction risk for the Littoral system.
Waterbodies	The desktop assessment and aerial imagery indicated that the application area is 70 metres from a saline coastal flat and 500 metres south of the ocean.
Hydrogeography	The application area is within the Pilbara surface water area and the Pilbara groundwater area as proclaimed under the RIWI Act.
Flora	The desktop assessment identified 13 conservation significant flora species in the local area, with the closest 750 metres from the application area, <i>Gomphrena pusilla</i> and

Characteristic	Details
	<p><i>Gymnanthera cunninghamii</i>. Four priority flora species are recorded in the same vegetation type as that present within the application area, while four species have been recorded within the same soil type. A total of three species have been recorded in both the same soil and vegetation type.</p> <p>A biological survey identified that the amended area comprises 4.74 hectares of existing infrastructure or vegetation that has been highly disturbed by adjacent infrastructure, and classed the vegetation type as “Disturbed / Infrastructure” (ENV, 2011a). The full vegetation type mapping is available in Appendix E.</p>
Ecological communities	One Priority Ecological Community (PEC) is in the local area, the Priority 3 Eighty Mile Land System which is approximately 28 kilometres north-east of the application area.
Fauna	<p>The desktop assessment identified 58 conservation significant fauna species in the local area, with the closest being the barn swallow (<i>Hirundo rustica</i>) and little curlew (<i>Numenius minutus</i>) recorded 90 metres from the application area. While those species may fly over the application area, they are unlikely to be significantly impacted by the proposed clearing. The majority (35) of the conservation significant fauna species in the local area are migratory birds.</p> <p>A biological survey identified that the amended area comprises 4.74 hectares of existing infrastructure or vegetation that has been highly disturbed by adjacent infrastructure, and classed fauna habitat as “Disturbed / Infrastructure” (ENV, 2011b). The full fauna habitat mapping is available in Appendix E.</p>

C.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix H.1), and biological survey information, impacts to the following conservation significant flora species required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Gomphrena pusilla</i>	2	Y	Y	Y	0.75	5	N/A
<i>Gymnanthera cunninghamii</i>	3	Y	Y	Y	0.75	7	N/A
<i>Tephrosia rosea</i> var. Port Hedland (A.S. George 1114)	1	Y	Y	Y	3.89	24	N/A

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

C.3. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix H.1), and biological survey information, impacts to the following conservation significant fauna species required further consideration.

Species name	Common name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Actitis hypoleucos</i>	common sandpiper	MI	N	Y	0.74	51	N/A
<i>Arenaria interpres</i>	ruddy turnstone	MI	N	Y	0.47	71	N/A
<i>Calidris acuminata</i>	sharp-tailed sandpiper	MI	N	Y	0.56	40	N/A
<i>Calidris alba</i>	sanderling	MI	N	Y	1.48	24	N/A
<i>Calidris canutus</i>	red knot	EN	N	Y	2.64	16	N/A
<i>Calidris ferruginea</i>	curlew sandpiper	CR	N	Y	1.32	42	N/A
<i>Calidris ruficollis</i>	red-necked stint	MI	N	Y	1.25	63	N/A

Species name	Common name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Calidris subminuta</i>	long-toed stint	MI	N	Y	0.92	11	N/A
<i>Calidris tenuirostris</i>	great knot	CR	N	Y	2.44	28	N/A
<i>Charadrius leschenaultii</i>	greater sand plover, large sand plover	VU	N	Y	1.48	41	N/A
<i>Charadrius mongolus</i>	lesser sand plover	EN	N	Y	1.58	28	N/A
<i>Charadrius veredus</i>	oriental plover	MI	N	Y	0.27	15	N/A
<i>Chlidonias leucopterus</i>	white-winged black tern	MI	N	Y	0.22	1	N/A
<i>Gelochelidon nilotica</i>	gull-billed tern	MI	N	Y	0.74	16	N/A
<i>Glareola maldivarum</i>	oriental pratincole	MI	N	Y	1.28	230	N/A
<i>Hirundo rustica</i>	barn swallow	MI	Y	Y	0.09	3	N/A
<i>Hydroprogne caspia</i>	caspian tern	MI	N	Y	1.32	561	N/A
<i>Limicola falcinellus</i>	broad-billed sandpiper	MI	N	Y	1.50	6	N/A
<i>Limnodromus semipalmatus</i>	Asian dowitcher	MI	N	Y	0.55	3	N/A
<i>Limosa lapponica</i>	bar-tailed godwit	MI	N	Y	1.25	6	N/A
<i>Numenius madagascariensis</i>	eastern curlew	CR	N	Y	2.64	1	N/A
<i>Numenius minutus</i>	little curlew	MI	Y	Y	0.09	23	N/A
<i>Numenius phaeopus</i>	whimbrel	MI	N	Y	0.47	25	N/A
<i>Pandion haliaetus</i>	osprey	MI	N	Y	0.21	19	N/A
<i>Plegadis falcinellus</i>	glossy ibis	MI	N	Y	0.33	65	N/A
<i>Pluvialis fulva</i>	Pacific golden plover	MI	N	Y	0.22	1	N/A
<i>Pluvialis squatarola</i>	grey plover	MI	N	Y	2.76	1	N/A
<i>Sterna hirundo</i>	common tern	MI	N	Y	1.49	19	N/A
<i>Sternula albifrons</i>	little tern	MI	N	Y	1.25	13	N/A
<i>Thalasseus bergii</i>	crested tern	MI	N	Y	0.47	50	N/A
<i>Tringa brevipes</i>	grey-tailed tattler	MI & P4	N	Y	1.25	1	N/A
<i>Tringa glareola</i>	wood sandpiper	MI	N	Y	0.33	10	N/A
<i>Tringa nebularia</i>	common greenshank	MI	N	Y	0.74	63	N/A
<i>Tringa stagnatilis</i>	marsh sandpiper	MI	N	Y	1.28	31	N/A

Species name	Common name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Xenus cinereus</i>	Terek sandpiper	MI	N	Y	1.44	6	N/A

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>The additional area proposed to be cleared is unlikely to contain locally or regionally significant assemblages of flora or fauna.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No
<p><u>Principle (b):</u> "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain significant habitat for conservation significant fauna.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain habitat for threatened flora species listed under the BC Act.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No
<p><u>Principle (d):</u> "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."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contains species indicative of a threatened ecological community.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."</p> <p><u>Assessment:</u></p> <p>The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No
<p><u>Principle (h):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."</p> <p><u>Assessment:</u></p>	<p>Not likely to be at variance</p>	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	(as per CPS 8047/2)	
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>While saline coastal flats are recorded within 70 metres of the application area, the limited extent of proposed clearing is unlikely to impact on- or off-site hydrology and water quality.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils are highly susceptible to wind erosion and moderately susceptible to water erosion and salinity. Noting the extent of clearing proposed, the use of dust mitigation measures and that the cleared areas will be developed into sealed road infrastructure, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No
<p><u>Principle (i):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The application area is within a proclaimed surface and groundwater area. Given the limited extent of proposed clearing, it is unlikely to impact surface or groundwater quality.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding or waterlogging.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 8047/2)</p>	No

Appendix E. Vegetation condition rating scale

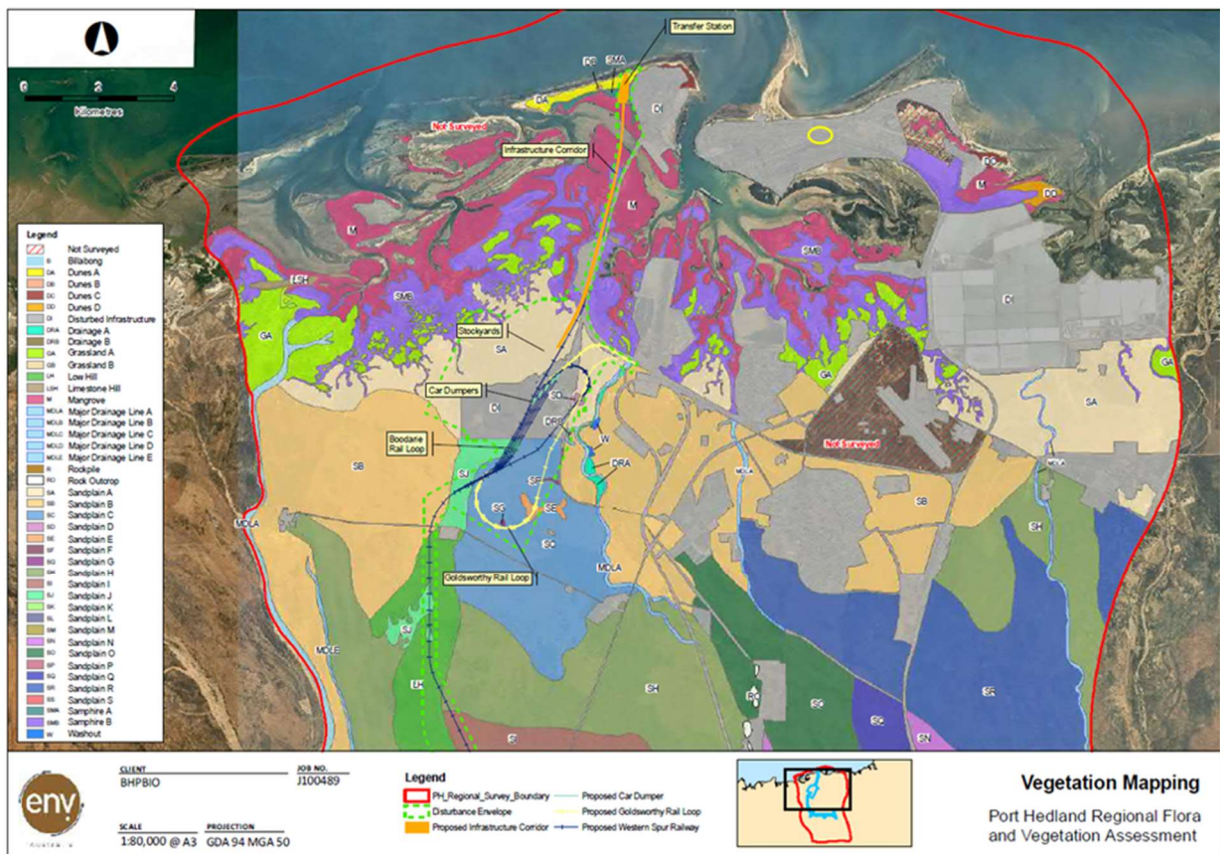
Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix F. Biological survey information excerpts



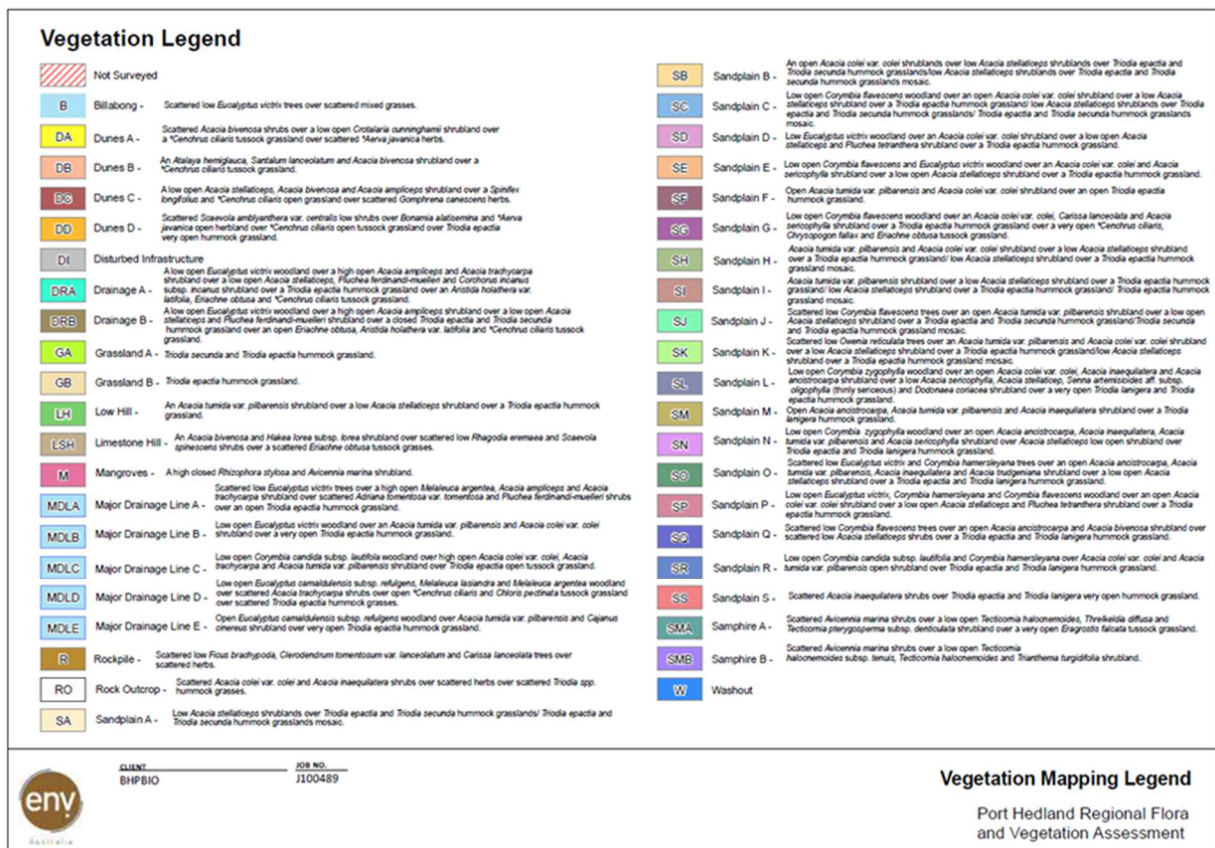


Figure 2. Regional vegetation mapping and descriptions from the Port Hedland Regional Flora and Vegetation Assessment (ENV Australia Pty Ltd, 2011a). Yellow circle indicates the approximate location of CPS 8047/3.

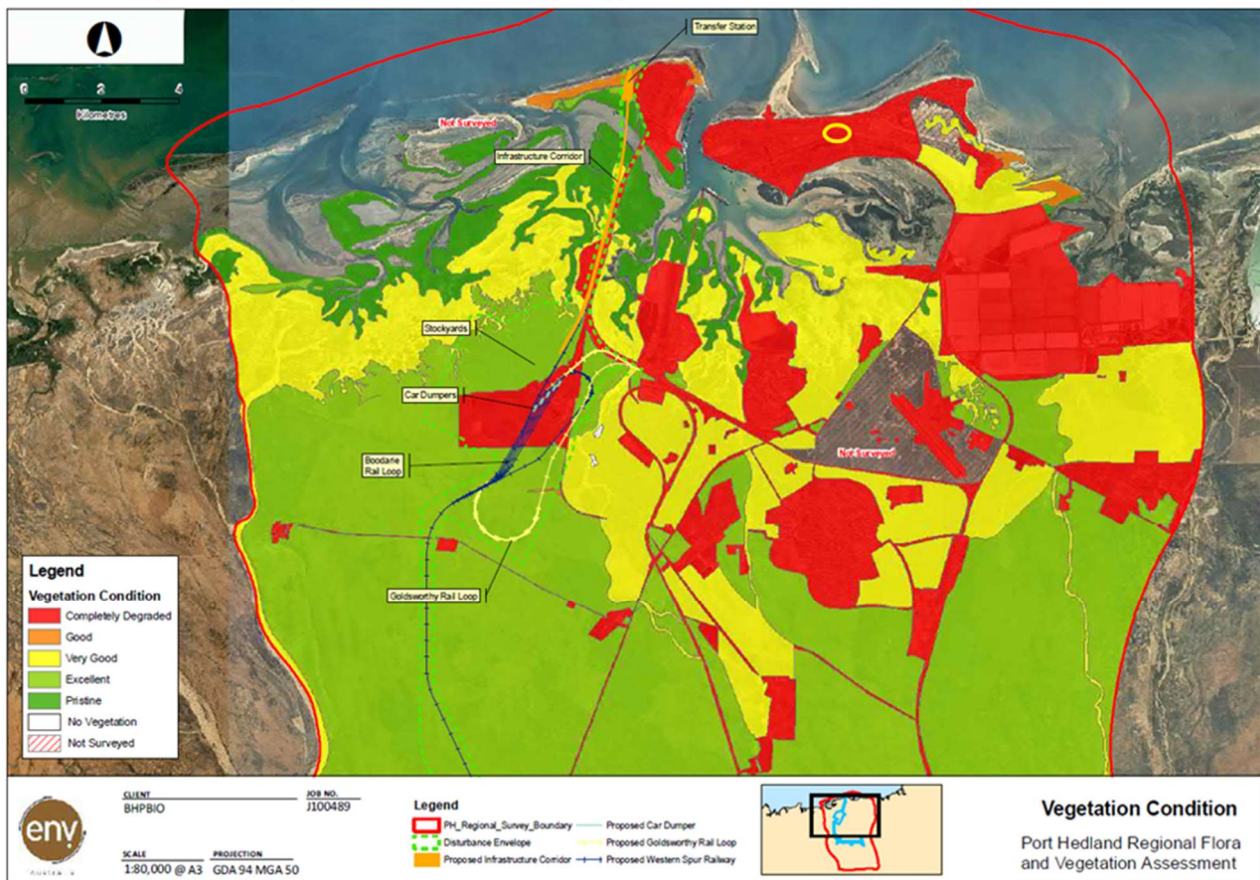


Figure 3. Regional vegetation condition mapping from the Port Hedland Regional Flora and Vegetation Assessment (ENV Australia Pty Ltd, 2011a). Yellow circle indicates the approximate location of CPS 8047/3.

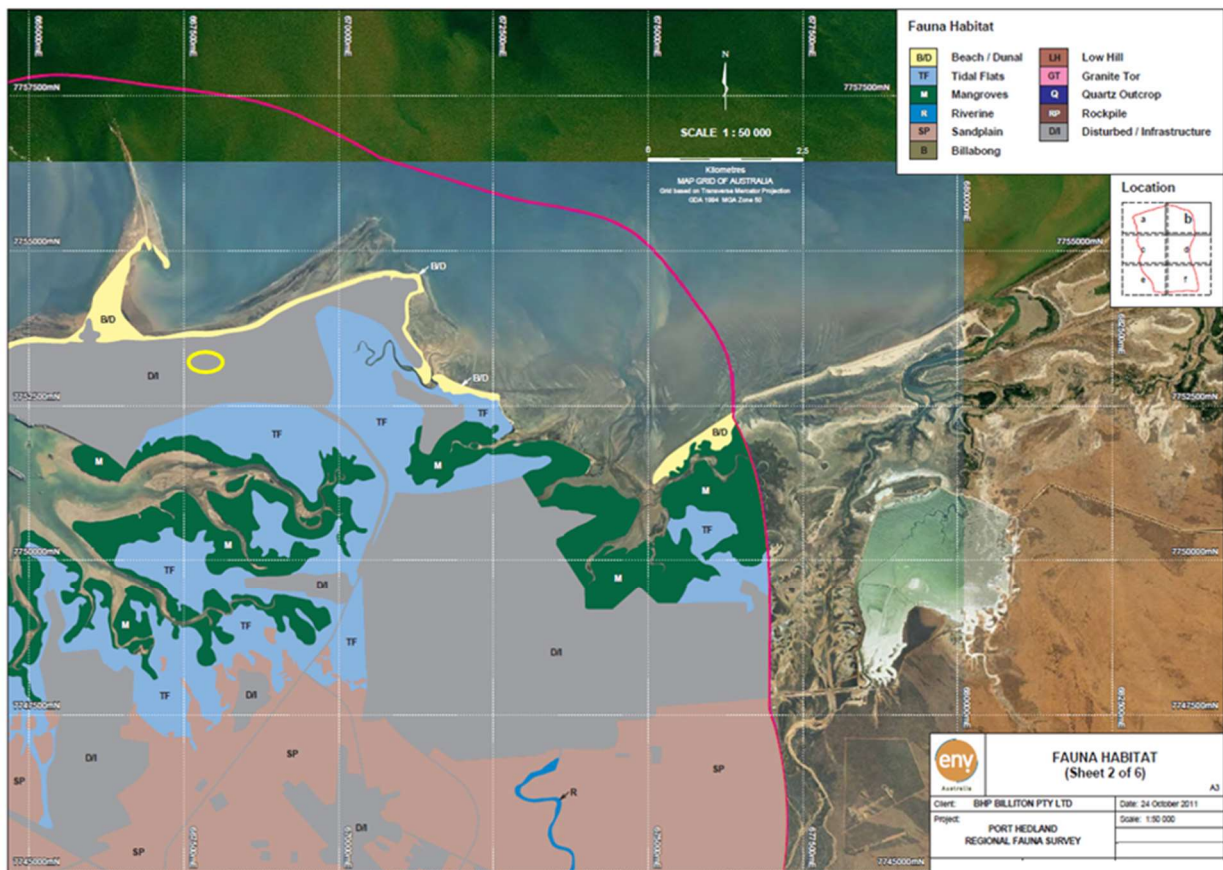


Figure 4. Regional fauna habitat mapping from the Port Hedland Regional Fauna Assessment (ENV Australia Pty Ltd, 2011b). Yellow circle indicates the approximate location of CPS 8047/3.

Appendix H. Sources of information

H.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas

- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

H.2. References

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