Department of Mines, Petroleum and Exploration

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	4242/4
Permit type:	Purpose Permit
Applicant name:	BHP Iron Ore Pty Ltd
Application received:	17 February 2025
Application area:	12 hectares
Purpose of clearing:	Port infrastructure
Method of clearing:	Mechanical Removal
Tenure:	*Iron Ore (Mount Goldsworthy) Agreement Act 1964*, Special Lease for Mining Operations 3116/6178, Document J998595 L, Lot 3000 on Deposited Plan 51079 Lot 558 on Deposited Plan 424409
Location (LGA area):	Town of Port Hedland
Colloquial name:	Hunt Point Project

1.2. Description of clearing activities

Clearing permit CPS 4242/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Petroleum and Exploration) on 12 May 2011 and was valid from 4 June 2011 to 4 June 2016 (DMP, 2011; GoWA, 2011). The permit authorised the clearing of up to 12 hectares of native vegetation within a boundary of 44.04 hectares, for the purpose of port infrastructure (DMP, 2011; DMP, 2015; GoWA, 2011).

CPS 4242/1 was amended on 30 April 2015 to increase the permit boundary to 47.65 hectares, extend the permit duration by until 30 November 2022, and amend the annual reporting date to 1 October (DMP, 2015). The area of clearing authorised (12 hectares) remained unchanged (DMP, 2015).

CPS 4242/2 was amended on 15 February 2019 to extend the period in which clearing is authorised to 30 November 2025, and extend the permit duration and final reporting date to 30 November 2030 (DMIRS, 2019). The size of the area approved to clear (12 hectares), and the permit boundaries remain unchanged (DMIRS, 2019).

BHP Iron Ore Pty Ltd applied on 17 February 2025 to amend CPS 4242/3 to extend the period in which clearing is authorised to 30 November 2030, extend the permit duration and final reporting date to 30 November 2035, update the Permit Holder to reflect a change of company name, and reduce the permit boundary to exclude areas outside of BHP tenure (BHP, 2025a; 2025b). The amended permit will allow the clearing of up to 12 hectares of native vegetation within a boundary of approximately 36 hectares.

Up to 30 June 2024, a total of 5.78 hectares of native vegetation has been cleared under 4242/3 (BHP, 2024; 2025a). None of the clearing conducted was within the areas to be removed from the permit boundary in this amendment (BHP, 2025a).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	19 September 2025
Decision area:	12 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51KA(1) and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Mines, Petroleum and Exploration (DMPE) advertised the application for a public comment for a period of 7 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix H), supporting information provided by the applicant (Appendix A) including the results of a flora and vegetation survey (Appendix E, Appendix F and Appendix G), the clearing principles set out in Schedule 5 of the EP Act (Appendix C), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3). The Delegated Officer also took into consideration the purpose of the clearing for port infrastructure on Finucane Island (BHP, 2025a).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- impacts to conservation significant flora, due to the prescence of weeds;
- potential land degradation in the form of wind erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing can minimised and managed to be unlikely to lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures (Section 3.1).

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- at least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any weeds growing within areas cleared under this Permit;
- commence construction no later than six months after undertaking clearing to reduce the risk of wind erosion; and
- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within the adjacent existing gravel extraction area within 12 months of clearing to ensure native vegetation is not permanently lost.

The assessment has not changed since the assessment for CPS 4242/3. The Delegated Officer determined that the proposed extension of duration and reduction in permit boundary is not likely to lead to an unacceptable risk to environmental values.

1.5. Site map

A site map of proposed clearing is provided in Figure 1 below.

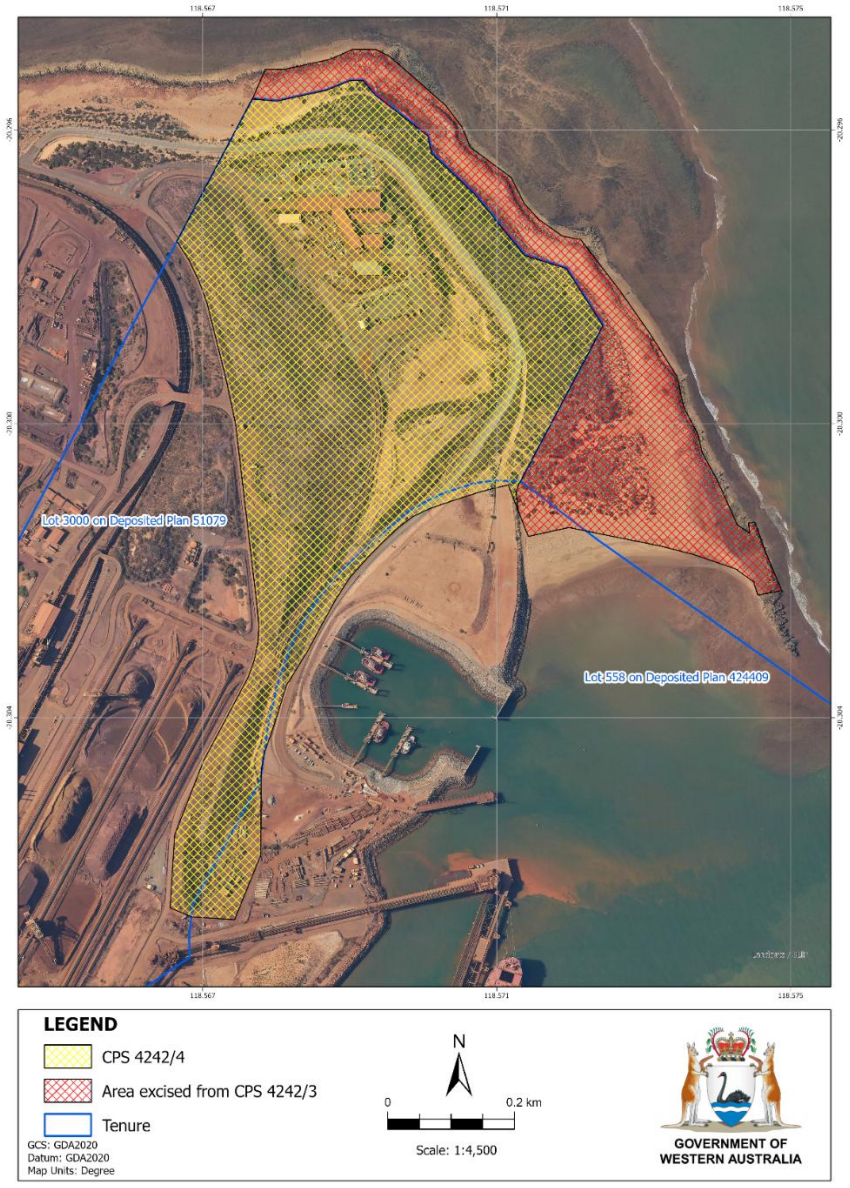

Figure 1. Map of the application area. The yellow crosshatched area indicates the area within which conditional authorised clearing can occur under the granted clearing permit. The red crosshatched area indicates areas which have been removed from the amendment area (CPS 4242/4) but were included within the clearing boundary of CPS 4242/3.

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 (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

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Biosecurity and Agriculture Management Act 2007* (BAM Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Land Administration Act 1997* (WA)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)
- *Iron Ore (Mount Goldsworthy) Agreement Act 1964*

Relevant agreements (treaties) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2014)
- *Procedure: Native vegetation clearing permits* (DWER, October 2021)
- Guidance for the Assessment of Environmental Factors – *Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004a)
- Guidance for the Assessment of Environmental Factors – *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004b)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant commits to:

- controlling established weed populations in accordance with the BHP Iron Ore Weed Control and Management Procedure (or subsequent revisions); and
- undertaking activities in accordance with BHP Iron Ore's Project Environmental Aboriginal Heritage Review Procedure (or subsequent revisions) (BHP, 2025a).

The Delegated Officer was satisfied that the applicant has made a reasonable effort 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 that the assessment against the clearing principles has not changed significantly from the clearing permit decision report CPS 4242/3.

3.2.1. Biological values (flora) - Clearing Principle (a)

Assessment

***Tephrosia rosea* var. Port Hedland:**
Tephrosia rosea var. Port Hedland (Priority 1) inhabits sandy soils on plains or dunes, including coastal and near-coastal locations (Butcher et al., 2017; Western Australian Herbarium, 1998-). *Tephrosia rosea* var. Port Hedland was recorded in the ENV (2010) survey of the application area as *Tephrosia rosea* var. *venulosa* (which are synonymous) (Butcher et al., 2017; Western Australian Herbarium, 1998-). There are three populations within the survey area, with approximately 300 (Population 1), over 1,000 (Population 2) and approximately 100 (Population 3) plants in each population (ENV, 2010). A map of the populations within the study area is available in Appendix G. The change to the permit boundary in this amendment has excised Population 3 from the amendment application area.

Population 3 may be indirectly impacted the proposed clearing, as the proposed clearing may reduce connectivity between Population 3 and other populations on the island (Banks-Leite et al., 2020; Xiao et al., 2016). However, as the remnant vegetation where Population 3 is located is already isolated from populations to the west of the application area by the

development on the eastern side of Finucane Island, potential impacts to *Tephrosia rosea* var. Port Hedland from further population fragmentation is unlikely to be significant.

Information from the ENV (2011) regional flora and vegetation assessment indicates that over 5,000 *Tephrosia rosea* var. Port Hedland have been recorded from 304 locations in the Port Hedland region. This includes records of the species outside of the application area on Finucane Island (ENV, 2011). The applicant's consolidated records indicates that there are 524 records of *Tephrosia rosea* var. Port Hedland on Finucane Island (Appendix A). 47 of these records are within the application area (Appendix A). Most records on Finucane Island are from a large population to the west of the application area. A map of the records on Finucane Island is available in Appendix G.

Tephrosia rosea var. Port Hedland is a disturbance specialist and is hypothesised to establish two to three years after a disturbance event, before being outcompeted by other vegetation in five to seven years (Butcher et al., 2017; ENV, 2011).

As there are 53 Western Australian Herbarium (1998-) records of *Tephrosia rosea* var. Port Hedland, there have been 19 records collected since the initial assessment, there are other populations on Finucane Island, Population 3 has been excised from the amendment application area, and the species is a disturbance specialist, it is unlikely that the species will be significantly impacted by the proposed clearing (Butcher et al., 2017; ENV, 2010; 2011). However, the species may be impacted through competition with weed species (Adair & Groves, 1998).

Buffel grass (*Cenchrus ciliaris*) is a highly competitive invasive weed species, that can outcompete established native vegetation (Adair & Groves, 1998; Read et al., 2020; Western Australian Herbarium, 1998-). Buffel grass dominates all vegetation associations within the application area (ENV, 2010).

***Gomphrena pusilla*:**
Gomphrena pusilla (Priority 2) occurs in fine beach sand behind foredunes and over limestone (Western Australian Herbarium, 1998-). Suitable habitat for this species occurs within the application area (ENV, 2010; Western Australian Herbarium, 1998-). This species was not detected in the ENV (2010) survey, but as this species is an annual, it may not have been identifiable at the time of survey (ENV, 2011; Kew, n.d.). There is one record of *Gomphrena pusilla* on Finucane Island, but this record is from 1981 (GIS Database). ENV (2011) recorded one *Gomphrena pusilla* population within the Port Hedland regional survey, and there are three other populations previously recorded in other surveys within the regional survey area. All four of these populations are to the southwest of the application area, and occur in association with mangroves (ENV, 2011). As the record on Finucane Island is not recent, suitable habitat on Finucane Island is degraded, and locally known populations have been recorded in association with mangroves, which are not present within the application area, *Gomphrena pusilla* is unlikely to occur.

***Abutilon* sp. Pritzelianum:**
Abutilon sp. Pritzelianum (Priority 3) occurs on sandplains and sand dunes (Western Australian Herbarium, 1998-). *Abutilon* sp. Pritzelianum was included in the ENV (2010) desktop assessment as *Abutilon pritzelianum* (which are synonymous) (Western Australian Herbarium, 1998-). This species is mainly known from the Carnarvon and Pilbara bioregions, with one record in the Murchison bioregion (in close proximity to the Carnarvon bioregion) (Western Australian Herbarium, 1998-; GIS Database). The ENV (2010) desktop assessment considered the species unlikely to occur, as it had not been recorded in coastal locations. The species has been recorded in coastal locations; however, these have all been within the Carnarvon bioregion (GIS Database). Within the Pilbara, this species is more commonly located further inland (GIS Database). Therefore, this species is unlikely to occur within the application area.

Conclusion

For the reasons set out above, it is considered that the direct impacts of the proposed clearing on *Tephrosia rosea* var. Port Hedland are unlikely to be significant. However, *Tephrosia rosea* var. Port Hedland may be indirectly impacted by clearing through the introduction and spread of weeds. This can be managed by taking steps to minimise the risk of the introduction and spread of weeds.

Gomphrena pusilla and *Abutilon* sp. Pritzelianum are unlikely to occur within the application area and are therefore unlikely to be impacted by the proposed clearing.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:
- take hygiene steps to minimise the risk of the introduction and spread of weeds; and
- at least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any weeds growing within areas cleared under this Permit.

3.2.2. Biological values (fauna) - Clearing Principles (a) and (b)

Assessment

Fauna habitats:
The application area consists of the following four fauna habitats:
- Dunes;
- Shoreline;
- Rehabilitated; and
- Cleared/developed (ENV, 2010).

Based on these identified habitat types, the following species require further discussion.

Migratory bird species recorded or likely to occur:
The following species are migratory birds that have been recorded within the application area, or are considered likely to occur, due to the presence of nearby records, and the presence of preferred habitat within the application area (Commonwealth of Australia, 2008; 2020; ENV, 2010; Menkhorst et al., 2019; Simpson & Day, 2010):

- Ruddy turnstone (*Arenaria interpres*);
- Caspian tern (*Hydroprogne caspia*);
- Osprey (*Pandion haliaetus*);
- Whimbrel (*Numenius phaeopus*);
- Greater sand plover (*Charadrius leschenaultii*);
- Lesser sand plover (*Charadrius mongolus*);
- Common tern (*Sterna hirundo*);
- Crested tern (*Thalasseus bergii*);
- Red-necked stint (*Calidris ruficollis*);
- Grey plover (*Pluvialis squatarola*);
- Little tern (*Sternula albifrons*);
- Oriental plover (*Charadrius veredus*)
- Little curlew (*Numenius minutus*);
- Barn swallow (*Hirundo rustica*);
- Sanderling (*Calidris alba*); and
- Pacific golden plover (*Pluvialis fulva*).

These species are unlikely to be impacted by the proposed clearing as they are migratory, and although suitable habitat occurs, this habitat is unlikely to be critical for the survival of these species.

Peregrine falcon:
Peregrine falcon (*Falco peregrinus*), Other Specially Protected, is a migratory species. Within their global range, peregrine falcons can be found in a variety of habitats, including mountains, forests, cities, valleys, deserts, and coastlines (NWF, n.d.). This species may use the application area as a wider home range; however, the area is not considered critical habitat.

Migratory bird species possibly occurring:
The following species are migratory birds that are considered possibly occurring, due to the presence of nearby records, and the presence of suitable (but not preferred) habitat within the application area (Commonwealth of Australia, 2008; DCCEEW, 2024; ENV, 2010; Menkhorst et al., 2019; Simpson & Day, 2010):

- Marsh sandpiper (*Tringa stagnatilis*);
- Bar-tailed godwit (*Limosa lapponica*);
- Grey-tailed tattler (*Tringa brevipes*);
- Eastern curlew (*Numenius madagascariensis*);
- Common sandpiper (*Actitis hypoleucos*);
- Great knot (*Calidris tenuirostris*);
- Terek sandpiper (*Xenus cinereus*);
- Curlew sandpiper (*Calidris ferruginea*);
- Red knot (*Calidris canutus*);
- Sharp-tailed sandpiper (*Calidris acuminata*);
- Oriental pratincole (*Glareola maldivarum*);
- Bar-tailed godwit (northern Siberian) (*Limosa lapponica menzbieri*);
- Black-tailed godwit (*Limosa limosa*);
- Ruff (*Calidris pugnax*); and
- Pectoral sandpiper (*Calidris melanotos*).

These species are unlikely to be impacted by the proposed clearing as they are migratory, and although suitable habitat occurs, this habitat is unlikely to be critical for the survival of these species.

Flatback turtle:
Flatback turtle (*Natator depressus*), Vulnerable and Migratory, lays its eggs on sandy beaches (Commonwealth of Australia, 2008). This turtle species is frequently recorded breeding on the beaches of Port Hedland (GIS Database). As this amendment has excised most of the beach habitat from the application area, and the remaining beach is bare of vegetation, the proposed clearing is unlikely to be significant to this species (ENV, 2010).

Greater bilby and northern quoll:
Greater bilby (*Macrotis lagotis*), Vulnerable, inhabits areas with soils suitable for burrowing, such as sandy areas (DCCEEW, 2023). Although suitable habitat for this species occurs within the application area, there have been no records of the species on Finucane Island, despite several surveys being conducted (ENV, 2010; 2011; GIS Database). The nearest record of the species was from 1970, and more recent records have been recorded further south (GIS Database). It is unlikely that the greater bilby occurs in the disjunct habitats of the eastern side of Finucane Island, due to the port development in this area (ENV, 2010).

Northern quoll (*Dasyurus hallucatus*), Endangered, occurs in a variety of habitats, including beaches (Commonwealth of Australia, 2008). Although suitable habitat for this species occurs within the application area, there have been no records of the species on Finucane Island, despite several surveys being conducted (ENV, 2010; 2011; GIS Database). There have been recent records of the species within the Port Hedland townsite (GIS Database). Although the northern quoll may visit developed areas, it is unlikely that it would reside in the disjunct habitats of the eastern side of Finucane Island, due to the port development in this area (ENV, 2010).

Conclusion

Based on the above assessment, the proposed clearing is unlikely to result in significant impacts to conservation significant fauna species.

Conditions

No fauna management conditions required.

3.3. Relevant planning instruments and other matters

The clearing permit amendment application was advertised on 8 July 2025 by the Department of Mines, Petroleum and Exploration inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WCD2018/015 – Kariyarra) over the area under application (DPLH, 2025). This claim has been determined by the Federal Court on behalf of the claimant group. The project's tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2025). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
The applicant provided a shapefile with consolidated records of *Tephrosia rosea* var. Port Hedland.	This information provided was used during the assessment of Principle (a).

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is located on Finucane Island, approximately 3.5 kilometres west of Port Hedland, in the extensive land use zone of Western Australia (GIS Database). The eastern side of Finucane Island, where the amendment application area is located, is highly developed with limited native vegetation remaining (ENV, 2010; GIS Database). It is located within the Roebourne subregion of the Pilbara bioregion (GIS Database).
Ecological linkage	The amendment application area is not representative of an ecological linkage as it is within a highly developed area (GIS Database).
Conservation areas	The application area is not located within any DBCA legislated conservation areas (GIS Database). The nearest legislated conservation area is the North Turtle Island Nature Reserve located approximately 56 kilometres northeast of the application area (GIS Database).
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation association: • 117: Hummock grasslands, grass steppe; soft spinifex (GIS Database). A flora and vegetation survey was conducted over the application area by ENV (2010) on 19 August 2010. The following five broad floristic formations were recorded within the application area: • *Cenchrus* Closed Tussock Grassland; and • *Spinifex* Open Tussock Grassland; • Rehabilitated; • Beach; and • Cleared/developed (ENV, 2010). Descriptions of these vegetation types are available in Appendix E. A map of the application area vegetation is available in Appendix F.
Vegetation condition	The vegetation survey (ENV, 2010) indicates the application area is in poor to completely degraded (Trudgen, 1991) condition, described as: • 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. The condition of the application area is likely to be a result of numerous disturbances recorded in the survey area, including the close proximity of surrounding infrastructure, historic clearing, vehicle tracks and introduced species (ENV, 2010). The latter is the greatest disturbance, with **Cenchrus ciliaris* dominating all the vegetation associations present in the survey area (ENV, 2010). There was also evidence of erosion of the foreshore dunes in the survey area, most likely to be a result of coastal winds/storms and historic land use activities (ENV, 2010). A large portion of the survey area was also recorded as being cleared/developed (completely degraded) (ENV, 2010; Trudgen, 1991). In addition, a large portion of the application area has been rehabilitated (ENV, 2010). This rehabilitated area comprised of non-endemic vegetation (planted) on constructed landforms (ENV, 2010). The fire age for the survey area was considered to be old (eight to 12 years since the last fire) (ENV, 2010). The full Trudgen (1991) condition rating scale is provided in Appendix D. A map of the application area vegetation is available in Appendix F.

Characteristic	Details
Climate and landform	The climate of the Roebourne subregion of the Pilbara bioregion is described as semi-desert tropical, with the nearest weather station (Port Hedland Airport) recording an average rainfall of approximately 314.2 millimetres per year (BoM, 2025; CALM, 2002). The application area is mapped at elevations of 0-20 metres Australian height datum (GIS Database). Land system mapping broadly describes the application area as tidal flats and sand dunes (van Vreeswyk et al., 2004).
Soil description	The soil of the application area is broadly mapped as the following land system: • Littoral system (286Li): Bare coastal mudflats (unvegetated), samphire flats, sandy islands, coastal dunes and beaches, supporting samphire low shrublands, sparse acacia shrublands and mangrove forests (DPIRD, 2025). The survey by ENV (2010), indicates that the soils within the application area are soft sands and sandy loam soils.
Land degradation risk	The Littoral land system is highly susceptible to wind erosion in sand dune areas if plant cover is removed (van Vreeswyk et al., 2004). As sand dunes are a main feature of the application area, and erosion has been recorded in these areas, it is highly likely that the application area is susceptible to erosion (ENV, 2010).
Waterbodies	The desktop assessment and aerial imagery indicated that no watercourses or waterbodies occur within the area proposed to be cleared (GIS Database).
Hydrogeography	The application area is not within any mapped Public Drinking Water Source Areas (PDWSA) (GIS Database). The nearest PDWSA is the Yule River Water Reserve located approximately 37 kilometres to the southwest of the application area (GIS Database). The application area is located within the Pilbara Surface Water Area and the Pilbara Groundwater Area, both proclaimed under the *Rights in Water and Irrigation Act 1914* (GIS Database). The mapped groundwater salinity is 1,000-3,000 total dissolved solids milligrams per litre, which is described as brackish water (NWGA, 2023; GIS Database).
Flora	There are records of 11 priority flora species in the local area (50 kilometre radius of the amendment application area) (GIS Database). One species (*Tephrosia rosea* var. Port Hedland) has been recorded within the application area, and a further two species are possibly occurring based on nearby records and habitat preferences (ENV, 2010; Western Australian Herbarium 1998-; GIS Database).
Ecological communities	The botanical surveys did not record any threatened ecological communities (TECs) or priority ecological communities (PECs) within the application area or the Port Hedland region (ENV, 2010; 2011). There are two listed TECs that are known to occur within the Pilbara bioregion (DBCA, 2023b). These are the 'Ethel Gorge aquifer stygobiont community' and the '*Themeda* grasslands on cracking clays' TECs (DBCA, 2023b). These TECs are not expected to occur due to the absence of extensive clay plains typical of the *Themeda* grasslands and calcrete geology for the stygobionts (ENV, 2011). There is one PEC recorded within a 50 kilometre radius of the application area (GIS Database). This is the Eighty Mile Land System, Priority 3 PEC (GIS Database). The Eighty Mile Land System is characterised as beach foredunes, longitudinal coastal dunes and sandy plains with tussock grasslands and spinifex grasslands (DBCA, 2023a). Although vegetation units within the application area may match the description of this PEC, this PEC does not extend as far west as the application area, with the nearest occurrence approximately 32 kilometres east of the application area (DBCA, 2023a; ENV, 2010; GIS Database).
Fauna	There are records of 64 conservation significant fauna species in the local area (50 kilometre radius of the amendment application area) (GIS Database). Four species (*Arenaria interpres*, *Hydroprogne caspia*, *Pandion haliaetus* and *Numenius phaeopus*) have been recorded within the application area, and a further 31 species are likely to occur or possibly occurring based on nearby records and habitat preferences (ENV, 2010; GIS Database; Appendix B.4).
Fauna habitat	The application area consists of the following four fauna habitats: • Dunes; • Shoreline; • Rehabilitated; and • Cleared/developed (ENV, 2010).

B.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current extent in all DBCA Managed Land (proportion of pre-European extent) (%)
IBRA Bioregion - Pilbara	17,808,657.04	17,731,764.88	~99	1,801,714.98	10.12
Beard vegetation associations - State					
117	919,517.05	886,005.79	~96	131,013.19	14.25
Beard vegetation associations - Bioregion (Pilbara)					
117	82,705.78	78,096.64	~94	17,600.29	21.28

Government of Western Australia (2019)

B.3. Flora analysis table

The following conservation significant fauna species have been recorded within 50 kilometres of the application area (GIS Database).
The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area, species distribution, biological survey information and adequacy, and known regional records (ENV, 2010; Forster, 2024; van Leeuwin, 1993; Western Australian Herbarium 1998-; GIS Database).

Species name	Conservation status	Suitable habitat? [Y/N]	Distribution includes coastal areas? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N]	Likelihood of occurrence
Tephrosia rosea var. Port Hedland (A.S. George 1114)	P1	Y	Y	0	Y	Recorded – discussed in Section 3.2.1
Gomphrena pusilla	P2	Y	Y	<1	N	Possible – discussed in Section 3.2.1
Abutilon sp. Pritzelianum (S. van Leeuwen 5095)	P3	Y	Y	<17	Y	Unlikely – discussed in Section 3.2.1
Atriplex eremitis	P1	Y	Y	<45	Y	Unlikely
Gymnanthera cunninghamii	P3	N	N	<4	Y	Unlikely
Bulbostylis burbidgeae	P4	N	N	<7	Y	Unlikely
Gomphrena leptophylla	P3	N	N	<11	Y	Unlikely
Euploca mutica	P3	N	N	<15	Y	Unlikely
Rothia indica subsp. *australis*	P3	N	N	<17	Y	Unlikely
Ptilotus mollis	P4	N	N	<39	Y	Unlikely
Triodia chichesterensis	P3	N	N	<42	Y	Unlikely

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

B.4. Fauna analysis table

The following conservation significant fauna species have been recorded within 50 kilometres of the application area (GIS Database).

The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area, species distribution, biological survey information and adequacy, and known regional records (Australian Museum, 2019; Bat Call WA, 2021; Birdlife Australia, 2025; Birdlife International, 2019; Burbidge, 2016; CALM, n.d.; Commonwealth of Australia, 2008; 2020; Cramer et al., 2022; DCCEEW, 2023; 2024; ENV, 2010; Garnett & Crowley, 2000; GBIF, 2023; Menkhorst et al., 2019; NESP, 2021; Northover et al., 2023; NWF, n.d.; SEWPAC, 2012; Simpson & Day, 2010; TSSC, 2018; GIS Database).

Species name	Conservation status	Suitable habitat? [Y/N]	Distance of closest record to application area (km)	Likelihood of occurrence
Ruddy turnstone (*Arenaria interpres*)	MI	Y	0.0	Recorded – discussed in Section 3.2.2
Caspian tern (*Hydroprogne caspia*)	MI	Y	0.0	Recorded – discussed in Section 3.2.2
Osprey (*Pandion haliaetus*)	MI	Y	0.0	Recorded – discussed in Section 3.2.2
Whimbrel (*Numenius phaeopus*)	MI	Y	0.0	Recorded – discussed in Section 3.2.2
Greater sand plover (*Charadrius leschenaultii*)	VU & MI	Y	0.7	Likely – discussed in Section 3.2.2
Lesser sand plover (*Charadrius mongolus*)	EN & MI	Y	0.7	Likely – discussed in Section 3.2.2
Common tern (*Sterna hirundo*)	MI	Y	0.9	Likely – discussed in Section 3.2.2
Crested tern (*Thalasseus bergii*)	MI	Y	0.9	Likely – discussed in Section 3.2.2
Red-necked stint (*Calidris ruficollis*)	MI	Y	1.2	Likely – discussed in Section 3.2.2
Grey plover (*Pluvialis squatarola*)	MI	Y	1.4	Likely – discussed in Section 3.2.2
Little tern (*Sternula albifrons*)	MI	Y	1.4	Likely – discussed in Section 3.2.2
Oriental plover (*Charadrius veredus*)	MI	Y	1.4	Likely – discussed in Section 3.2.2
Sanderling (*Calidris alba*)	MI	Y	1.5	Likely – discussed in Section 3.2.2
Pacific golden plover (*Pluvialis fulva*)	MI	Y	4.3	Likely – discussed in Section 3.2.2
Marsh sandpiper (*Tringa stagnatilis*)	MI	Y	0.9	Possible – discussed in Section 3.2.2
Bar-tailed godwit (*Limosa lapponica*)	MI	Y	0.9	Possible – discussed in Section 3.2.2
Grey-tailed tattler (*Tringa brevipes*)	P4 & MI	Y	0.9	Possible – discussed in Section 3.2.2
Eastern curlew (*Numenius madagascariensis*)	CR & MI	Y	1.1	Possible – discussed in Section 3.2.2
Common sandpiper (*Actitis hypoleucos*)	MI	Y	1.1	Possible – discussed in Section 3.2.2
Great knot (*Calidris tenuirostris*)	CR & MI	Y	1.2	Possible – discussed in Section 3.2.2
Terek sandpiper (*Xenus cinereus*)	MI	Y	1.2	Possible – discussed in Section 3.2.2
Curlew sandpiper (*Calidris ferruginea*)	CR & MI	Y	1.4	Possible – discussed in Section 3.2.2
Red knot (*Calidris canutus*)	EN & MI	Y	1.4	Possible – discussed in Section 3.2.2
Little curlew (*Numenius minutus*)	MI	Y	1.5	Possible – discussed in Section 3.2.2
Flatback turtle (*Natator depressus*)	VU & MI	Y	2.0	Possible – discussed in Section 3.2.2
Sharp-tailed sandpiper (*Calidris acuminata*)	MI	Y	2.5	Possible – discussed in Section 3.2.2
Barn swallow (*Hirundo rustica*)	MI	Y	4.3	Possible – discussed in Section 3.2.2
Oriental pratincole (*Glareola maldivarum*)	MI	Y	5.3	Possible – discussed in Section 3.2.2
Bar-tailed godwit (northern Siberian) (*Limosa lapponica menzbieri*)	CR & EN	Y	10.2	Possible – discussed in Section 3.2.2
Black-tailed godwit (*Limosa limosa*)	MI	Y	10.4	Possible – discussed in Section 3.2.2
Peregrine falcon (*Falco peregrinus*)	OS	Y	12.1	Possible – discussed in Section 3.2.2
Ruff (*Calidris pugnax*)	MI	Y	22.3	Possible – discussed in Section 3.2.2
Pectoral sandpiper (*Calidris melanotos*)	MI	N	10.4	Possible – discussed in Section 3.2.2
Greater bilby (*Macrotis lagotis*)	VU	Y	0.8	Unlikely – discussed in Section 3.2.2
Northern quoll (*Dasyurus hallucatus*)	EN	Y	1.2	Unlikely – discussed in Section 3.2.2
Green turtle (*Chelonia mydas*)	VU & MI	Y	0.8	Unlikely
Fairy tern (*Sternula nereis nereis*)	VU	Y	1.4	Unlikely
Northern short-tailed mouse (*Leggadina lakedownensis*)	P4	Y	6.1	Unlikely

Species name	Conservation status	Suitable habitat? [Y/N]	Distance of closest record to application area (km)	Likelihood of occurrence
Brush-tailed mulgara (*Dasycercus blythi*)	P4	Y	7.6	Unlikely
Banded hare-wallaby (*Lagostrophus fasciatus fasciatus*)	VU	Y	9.0	Unlikely
Northern coastal free-tailed bat (*Ozimops cobourgianus*)	P1	N	0.5	Unlikely
Lesser frigatebird (*Fregata ariel*)	MI	N	0.9	Unlikely
Common greenshank (*Tringa nebularia*)	MI	N	1.0	Unlikely
Wilson's storm-petrel (*Oceanites oceanicus*)	MI	N	1.1	Unlikely
Gull-billed tern (*Gelochelidon nilotica*)	MI	N	1.1	Unlikely
White-winged black tern (*Chlidonias leucopterus*)	MI	N	1.2	Unlikely
Pin-tailed snipe (*Gallinago stenura*)	MI	N	1.2	Unlikely
Dugong (*Dugong dugon*)	MI	N	1.2	Unlikely
Australian humpback dolphin (*Sousa sahulensis*)	P4, VU & MI	N	1.2	Unlikely
Airlie Island ctenotus (*Ctenotus angusticeps*)	P3	N	1.4	Unlikely
Wood sandpiper (*Tringa glareola*)	MI	N	1.5	Unlikely
Green sawfish (*Pristis zijsron*)	VU	N	2.6	Unlikely
Asian dowitcher (*Limnodromus semipalmatus*)	VU & MI	N	3.5	Unlikely
Glossy ibis (*Plegadis falcinellus*)	MI	N	4.7	Unlikely
Long-toed stint (*Calidris subminuta*)	MI	N	5.0	Unlikely
Brown booby (*Sula leucogaster*)	MI	N	5.4	Unlikely
Broad-billed sandpiper (*Calidris falcinellus*)	MI	N	5.7	Unlikely
Bridled tern (*Onychoprion anaethetus*)	MI	N	6.2	Unlikely
Grey falcon (*Falco hypoleucos*)	VU	N	15.3	Unlikely
Pilbara leaf-nosed bat (*Rhinonicteris aurantia* (Pilbara form))	VU	N	30.8	Unlikely
Ghost bat (*Macroderma gigas*)	VU	N	30.9	Unlikely
Western pebble-mound mouse (*Pseudomys chapmani*)	P4	N	31.0	Unlikely
Red-necked phalarope (*Phalaropus lobatus*)	MI	N	35.0	Unlikely
Pilbara olive python (*Liasis olivaceus barroni*)	VU	N	45.1	Unlikely

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, MI: migratory, OS: other specially protected

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The priority flora species *Tephrosia rosea var. Port Hedland* has been recorded within the application area (ENV, 2010). However, as the area proposed to be cleared is degraded and dominated by weeds, it is unlikely to represent a high level of biodiversity (ENV, 2010).	Not likely to be at variance as per CPS 4242/3	Yes *Refer to Section 3.2.1, above.*
Principle (b): *"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."* Assessment: The area proposed to be cleared does not contain critical habitat for conservation significant fauna.	Not likely to be at variance as per CPS 4242/3	Yes *Refer to Section 3.2.2, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain flora species listed under the BC Act, as no Threatened flora have been recorded within a 50 kilometre radius of the amendment application area (GIS Database).	Not likely to be at variance as per CPS 4242/3	No
Principle (d): *"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."* Assessment: There are no mapped Threatened Ecological Communities (TECs) within the application area (GIS Database). The application area is unlikely to support TECs known to the Pilbara bioregion (DBCA, 2023b; ENV, 2010).	Not likely to be at variance as per CPS 4242/3	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the native vegetation in the region is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001; Appendix B.2).	Not at variance as per CPS 4242/3	No
Principle (h): *"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."* Assessment: Given the distance (56 kilometres) to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas (GIS Database).	Not likely to be at variance as per CPS 4242/3	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: According to available databases, there are no watercourses or wetlands within the application area (GIS Database). The vegetation within the application area is not likely to be growing in association with any watercourse or wetland.	Not likely to be at variance as per CPS 4242/3	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils and landforms are highly susceptible to wind erosion when vegetation cover is removed. Noting the extent of the application area, the proposed clearing may have an appreciable impact on land degradation.	May be at variance as per CPS 4242/3	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Condition: To address the above impact, the following management measure will be required as a condition on the clearing permit: • A staged clearing condition to minimise erosion.		
Principle (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."* Assessment: Given no watercourses or waterbodies occur within the area proposed to be cleared and the amendment application area is not located within a Public Drinking Water Source Area (PDWSA), the proposed clearing is unlikely to impact surface or underground water quality (GIS Database).	Not likely to be at variance as per CPS 4242/3	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The amendment application area experiences a semi-desert tropical climate, with the nearest weather station (Port Hedland Airport) recording an average rainfall of approximately 314.2 millimetres per year (BoM, 2025; CALM, 2002). Based on an average annual evaporation rate of 3,200 - 3,600 millimetres, any surface water resulting from rainfall events is likely to be relatively short lived (BoM, 2006). Based on the small scale clearing (12 hectares) and the low impact nature of the proposed activities, it is unlikely that the proposed clearing will increase the incidence or intensity of flooding.	Not likely to be at variance as per CPS 4242/3	No

Appendix D. 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 E. Broad floristic formations

Overview of broad floristic formations. Table adapted from (ENV, 2010).

Broad floristic formation	Description	Site
**Cenchrus* Closed Tussock Grassland (1a)	Closed Tussock Grassland of **Cenchrus ciliaris* with Scattered Shrubs of *Acacia stellaticeps* and *Acacia bivenosa* over Scattered Herbs of *Ipomoea pes-*	HPX01

	caprae subsp. *brasiliensis* on Orange Sand on Sandplain (further described below).	
Spinifex Open Tussock Grassland (1b)	Open Tussock Grassland of *Spinifex longifolius* and **Cenchrus ciliaris* with Shrubland of *Acacia stellaticeps* and *Santalum lanceolatum* over Scattered Herbs of *Ipomoea pes-caprae* subsp. *brasiliensis* and *Ptilotus exaltatus* var. *exaltatus* on Foreshore-Dunes (further described below).	HPX02
Rehabilitated	Scattered Shrubs *of Acacia ampliceps* and *Casuarina obesa*[1] over Scattered Tussock Grass **Cenchrus ciliaris* on Red Brown Loamy on Rehabilitated – Low Hill.	HPXR01
Beach	Little to no vegetation. A few scattered *Ipomoea pes-caprae* subsp. *brasiliensis* and *Ptilotus exaltatus* var. *exaltatus* near to inland boundary.	N/A
Cleared/developed	No vegetation.	N/A

**Cenchrus ciliaris* (Buffel grass) is a species introduced to Western Australia (Western Australian Herbarium, 1998-).
[1]*Casuarina obesa* (Swamp sheoak) is native to Western Australia, but introduced to the local area (ENV, 2010). It is more commonly located in Southern parts of Western Australia (ENV, 2010; Western Australian Herbarium, 1998-). The records of this species within the application area are not considered as a range extension, as this species was used for coastal rehabilitation (ENV, 2010).

Broad Floristic Formation: **Cenchrus* Closed Tussock Grassland

Vegetation Association: 1a
Closed Tussock Grassland of **Cenchrus ciliaris* with Scattered Shrubs of *Acacia stellaticeps* and *Acacia bivenosa* over Scattered Herbs of *Ipomoea pes-caprae* subsp. *brasiliensis* on Orange Sand on Sandplain.

Mapped Colour: Green

Area: 12 ha **Current Survey Sites:** HPX01

Landform Description

Location and Landform: Occurs on the Sandplains in the Survey area.
Geology: Sand.
Soil Attributes: Orange-brown Sand.
Litter Cover: <1% Logs, <1% Twigs and <1% Leaves. **Bare Ground:** 5%

Vegetation Structure and Floristics
The Closed Tussock **Cenchrus ciliaris* Grassland is the diagnostic feature of this vegetation association.

Stratum	Key Characteristics
Overstorey	
Canopy Layer	N/A.
Midstorey	
Middle Shrub Layer	Scattered Shrubs of *Acacia bivenosa* and *Rhagodia eremaea*.
Lower Shrub Layer	Low Shrubland of *Acacia stellaticeps*, and *Tephrosia rosea* var. *venulosa* (in areas indicated in Figure 6)
Understorey	
Hummock Grasses	N/A
Tussock Grasses	Scattered Tussock Grass of **Cenchrus ciliaris*.

Vegetation Condition

Condition Rating: Degraded.
Disturbances: Nearby infrastructure, roads, tracks and introduced species.
Average Fire Age: Old.

Broad Floristic Formation: *Spinifex* Open Tussock Grassland

Vegetation Association: 1b

Open Tussock Grassland of *Spinifex longifolius* and **Cenchrus ciliaris* with Shrubland of *Acacia stellaticeps* and *Santalum lanceolatum* over Scattered Herbs of *Ipomoea pes-caprae* subsp. *brasiliensis* and *Ptilotus exaltatus* var. *exaltatus* on Foreshore-Dunes.

Mapped Colour: Yellow.

Area: 7 ha **Current Survey Sites:** HPX02

Landform Description

Location and Landform: Occurs on the Foreshore-Dunes in the Survey area.

Geology: Sand.

Soil Attributes: Orange-brown sandy loam.

Litter Cover: 2% Logs, <1% Twigs and 1% Leaves. **Bare Ground:** 20%

Vegetation Structure and Floristics

The Tussock Grassland of *Spinifex longifolius* and Scattered Shrubs of *Ipomoea pes-caprae* subsp. *brasiliensis* is the diagnostic feature of this vegetation association.

Stratum	Key Characteristics
Overstorey	
Canopy Layer	N/A.
Midstorey	
Middle Shrub Layer	Shrubland of *Acacia stellaticeps, Santalum lanceolatum, Adriana tomentosa* var. *tomentosa* and *Acacia bivenosa*.
Lower Shrub Layer	Scattered Herbs of *Ipomoea pes-caprae* subsp. *brasiliensis* and *Ptilotus exaltatus* var. *exaltatus* and *Crotalaria cunninghamii* subsp. *sturtii*. Some Scattered to Low Shrubland of *Tephrosia rosea* var. *venulosa* (in areas indicated in Figure 6)
Understorey	
Hummock Grasses	N/A.
Tussock Grasses	Open Tussock Grassland of *Spinifex longifolius* and**Cenchrus ciliaris*.

Vegetation Condition

Condition Rating: Good.

Disturbances: Nearby infrastructure, road, tracks and introduced species.

Average Fire Age: Old.

Appendix F. Vegetation mapping

The mapped vegetation types of the application area are shown in Figures 2, below.

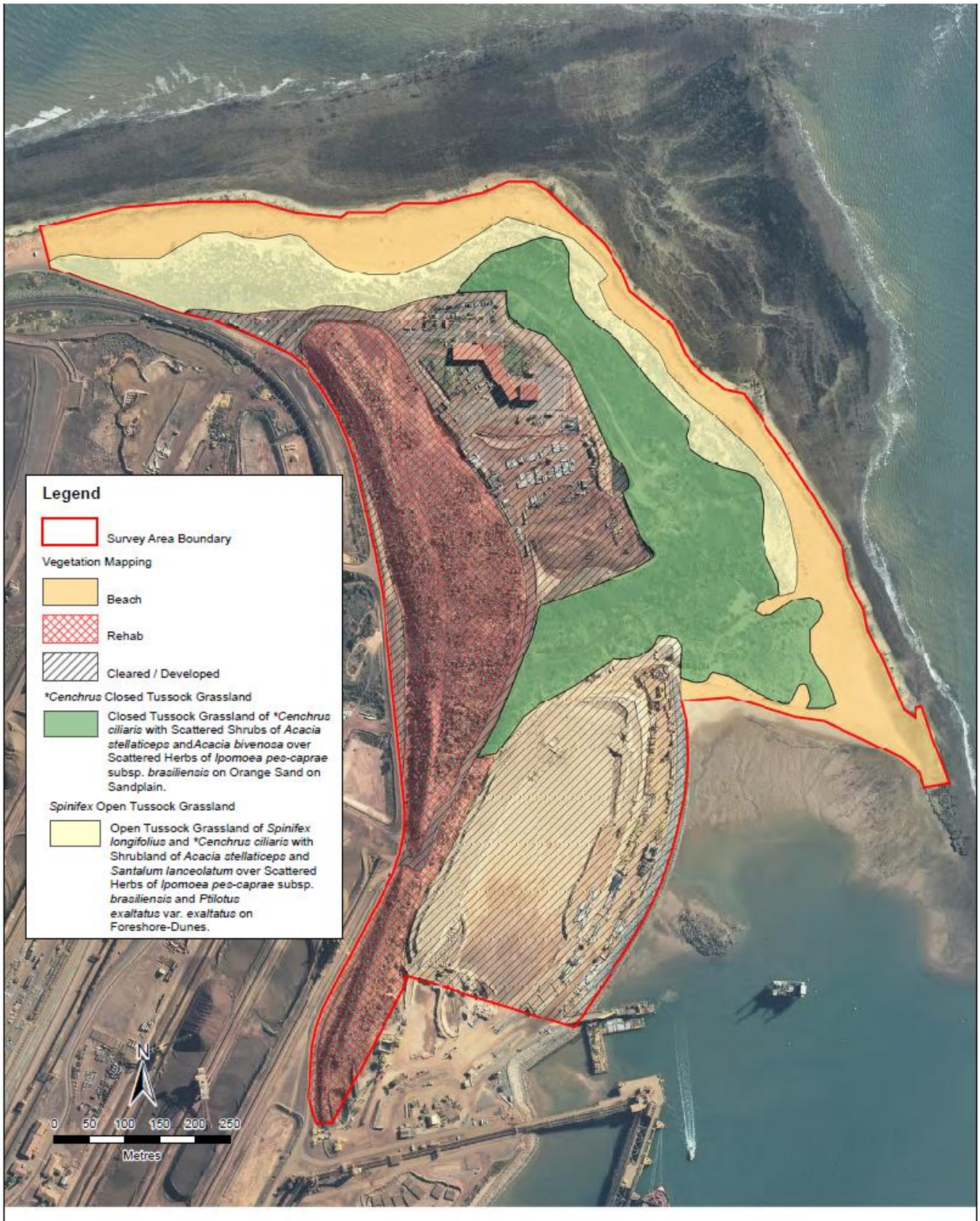

Figure 2. Map of vegetation types within the survey area (ENV, 2010).

Appendix G. Map of *Tephrosia rosea* var. Port Hedland populations

The locations of *Tephrosia rosea* var. Port Hedland records within the application area and on Finucane Island are shown in Figures 3 and 4, below.

Figure 3. Map of *Tephrosia rosea* var. Port Hedland populations within the survey area (ENV, 2010).

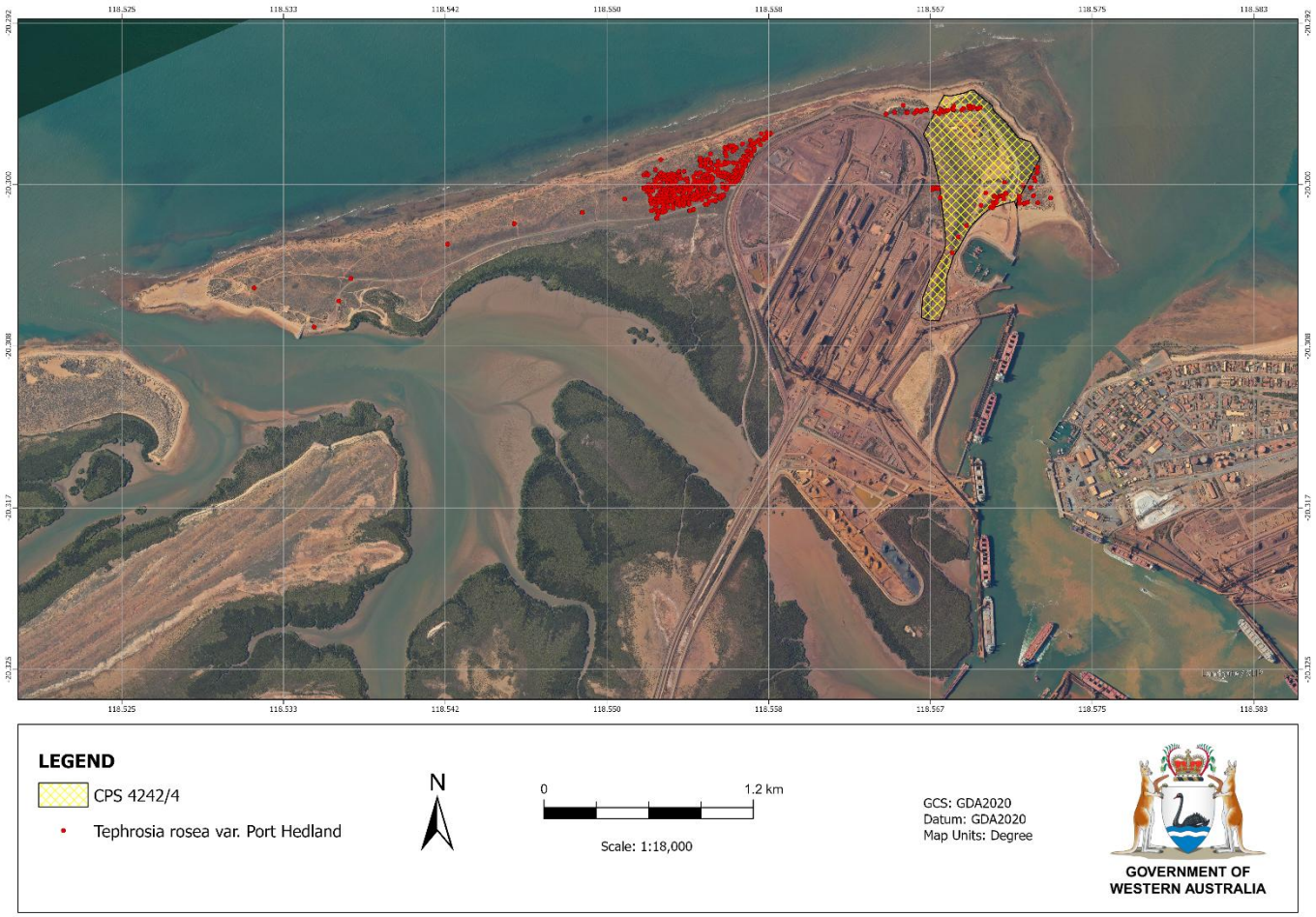

Figure 4. Map of *Tephrosia rosea* var. Port Hedland records on Finucane Island (Appendix A).

Appendix H. Sources of information

H.1. GIS datasets

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

- 10 metre contours (DPIRD-073)
- Cadastre (Polygon) (LGATE-217)
- Clearing Instruments Activities (Areas Approved to Clear) (DWER-076)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- EPA Referred Schemes Pending (DWER-121)
- EPA Referred Significant Proposals (DWER-120)
- EPA Referred Significant Proposals Pending (DWER-103)
- Geographic Names (GEONOMA) (LGATE-013)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- Regional Parks (DBCA-026)
- Reserves (LGATE-227)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Rivers (DWER-036)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)

- Surface Water Management Areas (DWER-041)
- Townsites (LGATE-248)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Threatened and Priority Flora (TPFL)
- Threatened and Priority Flora (WAHerb)
- Threatened and Priority Fauna
- Threatened and Priority Ecological Communities
- Threatened and Priority Ecological Communities (Buffers)

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4. Glossary

Acronyms:

BC Act	*Biodiversity Conservation Act 2016,* Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)

DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety (now DMPE)
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)
DMP	Department of Mines and Petroleum, Western Australia (now DMPE)
DMPE	Department of Mines, Petroleum and Exploration
DoEE	Department of the Environment and Energy (now DCCEEW)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

DBCA (2023) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia:

Threatened species

T Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the Biodiversity Conservation Act 2016 (BC Act).

Threatened fauna is the species of fauna that are listed as critically endangered, endangered or vulnerable threatened species.

Threatened flora is the species of flora that are listed as critically endangered, endangered or vulnerable threatened species.

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of Ministerial Guideline Number 1 and Ministerial Guideline Number 2 that adopts the use of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species Categories and Criteria, and is based on the national distribution of the species.

CR **Critically endangered species**

Threatened species considered to be "*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.

EN **Endangered species**

Threatened species considered to be "*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines.

VU **Vulnerable species**

Threatened species considered to be "*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

EX **Extinct species**

Species where "*there is no reasonable doubt that the last member of the species has died*", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

EW **Extinct in the wild species**

Species that *"is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild.

Specially protected species

SP **Specially protected species**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered, or vulnerable) or extinct species under the BC Act cannot also be listed as specially protected species.

MI **Migratory species**

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) or The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

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

Species of special conservation need that are dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Currently only fauna are listed as species of special conservation interest.

OS **Other specially protected species**

Species otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Currently only fauna are listed as species otherwise in need of special protection.

Priority species

P **Priority species**

Priority is not a listing category under the BC Act. The Priority Flora and Fauna lists are maintained by the department and are published on the department's website.

All fauna and flora are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

Species that are adequately known, meet criteria for near threatened, or are rare but not threatened, or that have been recently removed from the threatened species list or conservation dependent or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of priority status is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 **Priority One - Poorly-known species – known from few locations, none on conservation lands**

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

P2 **Priority Two - Poorly-known species – known from few locations, some on conservation lands**

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

P3 **Priority Three - Poorly-known species – known from several locations**

Species that are known from several locations and the species does not appear to be under imminent threat or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.

Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring**

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.

(c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.

(d) Other species in need of monitoring.

Principles for clearing native vegetation:

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

(b) 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.

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

(d) 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.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

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

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

(h) 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.

(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.

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