



Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	10507/1
Permit type:	Purpose Permit
Applicant name:	Mobile Concreting Solutions Pty Ltd
Application received:	29 January 2024
Application area:	102 hectares
Purpose of clearing:	Mineral Production and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Lease 45/1232
Location (LGA area):	Town of Port Hedland
Colloquial name:	Indee Sand Quarry

1.2. Description of clearing activities

Mobile Concreting Solutions Pty Ltd proposes to clear up to 102 hectares of native vegetation within a boundary of approximately 102 hectares, for the purpose of mineral production and associated activities (Mobile Concreting Solutions, 2024; GIS Database). The project is located approximately 37 kilometres south of Port Hedland, within the Town of Port Hedland (GIS Database).

The application is to allow for the development of the Indee Sand Quarry which will supply sand to the many industrial and residential development projects in the region (Mobile Concreting Solutions, 2019).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	9 April 2024
Decision area:	102 hectares of native vegetation

1.4. Reasons for decision

This clearing permit 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 Energy, Mines, Industry Regulation and Safety advertised the application for a public comment for a period of 21 days, and one submission was received (Appendix A).

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix E), supporting information provided by the applicant, including the results of a flora and vegetation survey, the clearing principles set out in Schedule 5 of the EP Act (Appendix C), public feedback submissions (Appendix A), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

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;
- impacts to conservation significant fauna;
- potential land degradation in the form of wind erosion; and
- impacts to riparian vegetation.

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

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;
- staged clearing to minimise wind erosion;
- no clearing of trees with a diameter, at 1.5 metres above the ground, of 500 millimetres or greater and no clearing of native vegetation within the drip line of these trees;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity; and
- avoid riparian vegetation where practicable and maintain existing surface flow.

1.5. Site map

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

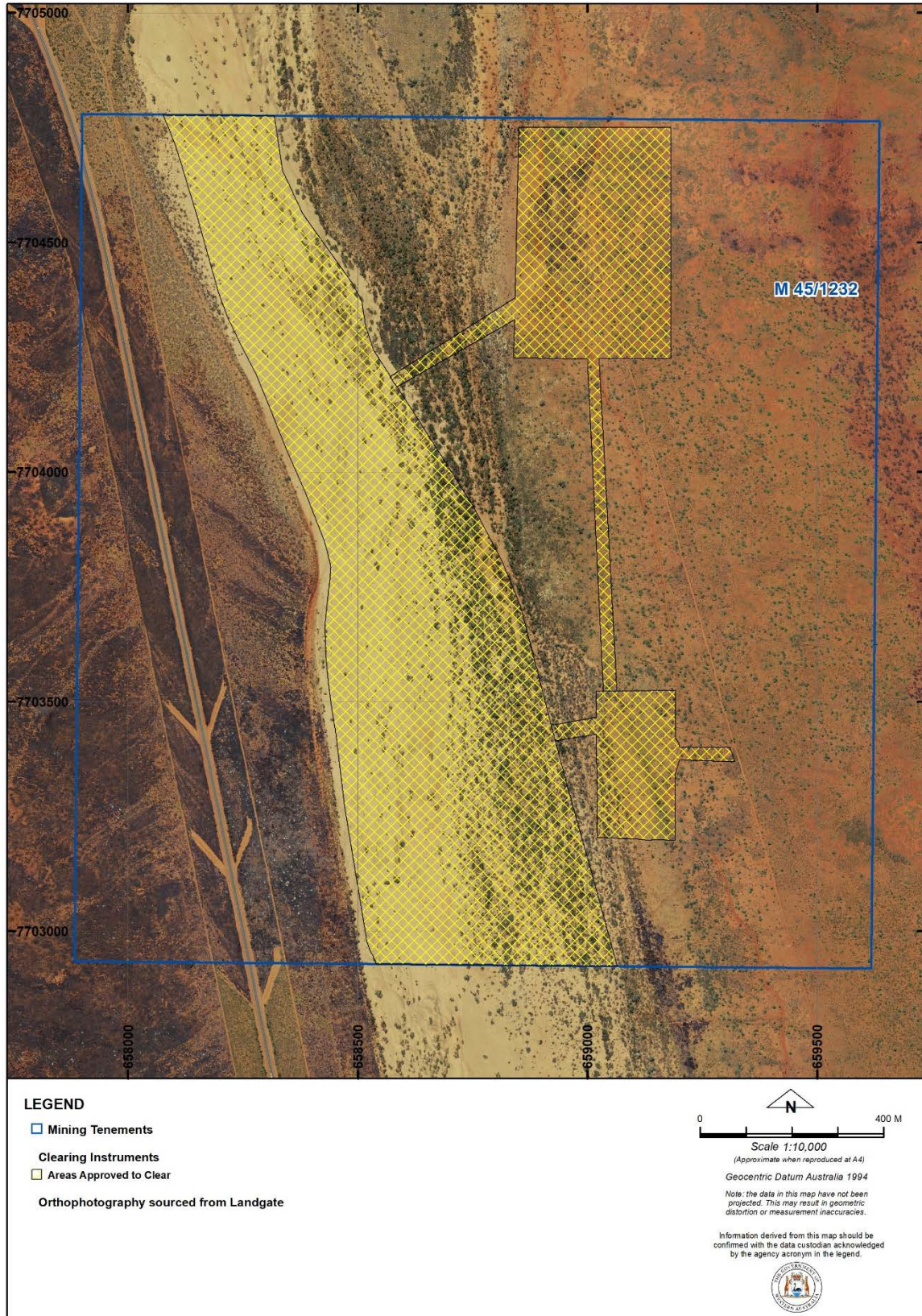


Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under the granted clearing permit.

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.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)

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)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Mobile Concreting Solutions (2019) have outlined they will maintain, but not limited to, the following avoidance and mitigation measures:

- trees in excess of 150 millimetres in diameter will not be cleared when procuring material or establishing access to the excavation area;
- clearing will proceed from the cleared area towards the uncleared areas to allow any fauna remaining within the area to escape;
- where it is available, cleared vegetation will be 'paddock dumped' to a maximum height of 2 metres along the eastern boundary of the infrastructure area to be used as potential faunal habitats;
- planning efforts have been made to clear areas with less vegetation;
- all employees will be inducted with the identified environmental values and risks relevant to the site;
- excavation will not be undertaken within five metres of the river bank to prevent erosion;
- excavation areas will be set at a distance of three metres from the drip-line of any significant vegetation within the river bed; and
- excavations will be ramped to allow fauna egress.

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

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles identified that the impacts of the proposed clearing present a risk to biological values (flora, vegetation and fauna). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

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

Assessment

The flora and vegetation survey identified a total of 109 flora taxa from 32 families representing 66 genera occurring within the survey area (Astron, 2013). No threatened flora species were recorded, however one Priority Flora species was recorded within the application area (Astron, 2013).

Euploca mutica (previously named *Heliotropium muticum*), Priority 3, is a perennial herb or shrub that has been recorded from 76 locations within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) region (Western Australian Herbarium, 1998-). One individual of this species was recorded within the application area (Astron, 2013). The removal of one individual would not have a significant impact to this species as there is suitable habitat available within the surrounding area and multiple records have been identified within the bioregion (GIS Database).

Six additional Priority 3 flora species have been recorded within 50 kilometres of the application area (*Abutilon* sp. *pritzelianum*, *Eragrostis crateriformis*, *Gomphrena leptophylla*, *Gymnanthera cunninghamii*, *Rothia indica* subsp. *australis* and *Stylidium weeliwollii*) and are considered to potentially occur within the application area (GIS Database). These species were not recorded during the flora survey, however the application area has not been surveyed in 12 years and therefore these species could potentially occur.

Abutilon sp. *Pritzelianum*, Priority 3, is a perennial shrub that is found inhabiting sand plains with orange-brown sandy loam substrate and is distributed across the Carnarvon, Murchison and Pilbara IBRA regions from 51 records (Western Australian Herbarium, 1998-). The flora survey identified three individuals of this species within the survey area, however no individuals were recorded within the application area (Astron, 2013). This species has 36 records within 50 kilometres of the application area, some records show a frequency of over 500 plants (GIS Database). The majority of the application area lies within the river bed, the remaining areas are disturbed from historical mining activity, and there are several records of this species within 50 kilometres of the application area, therefore the impact to this species if they were to occur within the application area would not be significant.

Eragrostis crateriformis, Priority 3, is an annual grass-like herb that is found inhabiting clayey loam or clay within creek banks or depressions and is distributed across the Carnarvon, Great Sandy Desert, Pilbara and Tanami IBRA regions from 53 records (Western Australian Herbarium, 1998-). The flora survey did not record any individuals of this species within the application area (Astron, 2013). This species has 13 records within 50 kilometres of the application area (GIS Database). Given the majority of the application area lies within the river bed, this species could potentially occur and impacts from the proposed clearing may be managed by implementing a vegetation condition requiring the Permit Holder to avoid riparian vegetation where possible and maintain existing water flow.

Gomphrena leptophylla, Priority 3, is a prostrate or erect to spreading annual herb that inhabits sand, sandy to clayey loam, granite and quartzite on open flats, sandy creek beds, edges salt pans/marshes and stony hillsides and is distributed across the Dampierland, Ord Victoria Plain, Pilbara and Tanami IBRA regions from eight records (Western Australian Herbarium, 1998-). The flora survey did not record any individuals of this species within the application area (Astron, 2013). This species has one record within 50 kilometres of the application area (GIS Database). Given the majority of the application area lies within the river bed, this species could potentially occur and impacts from the proposed clearing may be managed by implementing a vegetation condition requiring the Permit Holder to avoid riparian vegetation where possible and maintain existing water flow.

Gymnanthera cunninghamii, Priority 3, is an erect shrub which is found inhabiting sandy soils and is distributed across the Carnarvon, Gascoyne, Great Sandy Desert and Pilbara IBRA regions from 42 records (Western Australian Herbarium, 1998-). The flora survey did not record any individuals of this species within the application area (Astron, 2013). This species has nine records within 50 kilometres of the application area, some records show a frequency of over 100 plants (GIS Database). The majority of the application area lies within the river bed, the remaining areas are disturbed from historical mining activity, and there are several records of this species within 50 kilometres of the application area, therefore the impact to this species if they were to occur within the application area would not be significant.

Rothia indica subsp. *australis*, Priority 3, is a prostrate annual herb that is found inhabiting sandy soils on sandhills and sandy flats and is distributed across the Dampierland, Great Sandy Desert, Pilbara and Victoria Bonaparte IBRA regions from 21 records (Western Australian Herbarium, 1998-). This species has six records within 50 kilometres of the application area (GIS Database). The majority of the application area lies within the river bed, the remaining areas are disturbed from historical mining activity, and there are several records of this species within 50 kilometres of the application area, therefore the impact to this species if they were to occur within the application area would not be significant.

Styliidium weeliwoolli, Priority 3, is an annual herb that inhabits gritty sand soil or sandy clay on the edge of watercourses and is distributed across the Gascoyne and Pilbara IBRA regions from 29 records (Western Australian Herbarium, 1998-). The flora survey did not record any individuals of this species within the application area (Astron, 2013). This species has one record within 50 kilometres of the application area (GIS Database). Given the majority of the application area lies within the river bed, this species could potentially occur and impacts from the proposed clearing may be managed by implementing a vegetation condition requiring the Permit Holder to avoid riparian vegetation where possible and maintain existing water flow.

As suitable habitat is available within the surrounding areas and the habitat present within the application area is not considered significant to these species, the proposed clearing is not considered to have a significant impact. In addition, large areas of the application area are previously disturbed from historical mining activities, reducing the likelihood of these species occurring.

The proposed activities include mining sand from Turner River in campaigns when there is no water flow (Mobile Concreting Solutions, 2019). As the proposed clearing is located within and adjacent to Turner River, there are potential impacts to the riparian vegetation present within the application area (Astron, 2013). The proponent has committed to avoiding riparian vegetation where possible and may be further managed by implementing a flora management condition.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant flora can be managed by avoiding and minimising disturbance, taking steps to minimise the risk of the introduction and spread of weeds and avoiding riparian vegetation where practicable.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds; and
- avoid riparian vegetation where practicable and maintain surface water flow.

3.2.2. Biological values (fauna) - Clearing Principle (b)

Assessment

The application area was surveyed by Astron in May-June of 2012 (Astron, 2013). Astron (2013) identified six broad habitat types within the application area (Appendix B). According to Astron (2013) these habitat types are comparable to the River,

Uaroo and Mallina land system units as described by Van Vreeswyk *et al* (2004). These three systems are well represented in the Pilbara region (Astron, 2013).

Astron (2013) noted that the fringing layer of vegetation on both sides of the river was relatively dense and in near-pristine condition. Although a detailed survey was not undertaken, Astron did observe a large number and great diversity of bird life (Astron, 2013). The dense shrub layer is important foraging ground and habitat for passerine bird species, while large riverine trees provide nesting habitat for larger birds of prey and migratory species. Wetland bird species may also occupy the periphery of fresh water pools that remain after high flow events.

A desktop search identified 24 conservation significant fauna species and 36 migratory bird species occurring within 50 kilometres of the application area (see Section A.1). An analysis of preferred habitat and home range suggests that out of these species, the seven most likely to use the application area for foraging are the bilby, brush-tailed mulgara, crest-tailed mulgara, spectacled hare-wallaby, banded hare-wallaby, northern quoll and western pebble-mound mouse (GIS Database). Astron (2013) did note diggings during their survey, however confirmed that these diggings belonged to a large reptile species, possibly a monitor. No onsite evidence of these species was found (Astron, 2013). The majority of the application area falls within the river channel which is highly unstable, resulting in limited habitat available for terrestrial fauna.

Three conservation significant bat species have been recorded within 50 kilometres of the application area. The Pilbara leaf-nosed bat (*Rhinochiropterus aurantia*) has been recorded within one kilometre of the application area (GIS Database). The application area does not provide suitable roosting habitat, however the drainage line (Turner River) present within the application area may be used for foraging. The vegetation within the river bed is sparsely distributed and impacts from the proposed clearing on riparian vegetation may be minimised by implementing a vegetation condition, requiring the Permit Holder to avoid riparian vegetation where practicable and maintain surface water flow. As the habitats present are not restricted to the application area, the application area is not considered to represent significant habitat for these species and the proposed clearing is not considered to have a significant impact.

Although the vegetation potentially supports a diverse range of fauna, particularly avian fauna, the habitats present are not restricted to the application area and are unlikely to represent significant habitat (Astron, 2013). Highly mobile species that may be affected can readily source alternative habitat in the vicinity of the application area.

To minimise the potential impact to habitat, Mobile Concreting has indicated that sand extraction will not occur within five metres of the river bank and trees over 150 millimetres in diameter will be retained (Mobile Concreting Solutions, 2019). Mobile Concreting has also advised that excavation areas will be ramped to provide egress for fauna (Mobile Concreting Solutions, 2019). A fauna management condition is recommended requiring the retention of trees over 500 millimetres in diameter to maintain habitat for birds.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant fauna can be managed by conditioning the retention of trees with a diameter of 500 millimetres or greater at 1.5 metres above the ground and slow directional clearing.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- no clearing of trees with a diameter, at 1.5 metres above the ground, of 500 millimetres or greater and no clearing of native vegetation within the drip line of these trees; and
- undertake slow progressive clearing to allow fauna to move into adjacent environments.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 16 February 2024 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. One submission was received in relation to this application (Appendix A).

There is one native title claim over the area under application (Kariyarra - WCD2018/015) (DPLH, 2024). This claim has been determined by the Federal Court on behalf of the claimant group. However, the mining 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 is one registered Aboriginal Sites of Significance within the application area (DPLH, 2024). 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.

Other relevant authorisations required for the proposed land use include:

- A Mining Proposal / Mine Closure Plan approved under the *Mining Act 1978*.

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. Details of public submissions

Summary of comments	Consideration of comment
Feedback from the Town of Port Hedland was received regarding the proximity of the clearing from Great Northern Highway.	Mobile Concreting corrected their permit boundary to ensure no clearing within 200 metres from Great Northern Highway will occur.

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia (GIS Database). The area is located within the Chichester and Roebourne subregions of the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) Bioregion (GIS Database). The application area falls over an area previously cleared for mineral production under clearing permit CPS 5640/1 which expired 24 August 2023.
Ecological linkage	The application area is not known to be an important ecological linkage (GIS Database).
Conservation areas	The application area is not located within any conservation area (GIS Database). The nearest conservation area is Mungaroo Nature Reserve, located approximately 78 kilometres south-west of the application area (GIS Database).
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations:</p> <ul style="list-style-type: none"> • 93: Hummock grasslands, shrub steppe; kanji over soft spinifex; • 619: Medium woodland; river gum (<i>Eucalyptus camaldulensis</i>); and • 647: Hummock grasslands, dwarf-shrub steppe; <i>Acacia translucens</i> over soft spinifex (GIS Database). <p>A flora and vegetation survey was conducted over the application area by Astron during May and June 2012 (Astron, 2013). The following vegetation associations were recorded within the application area (Astron, 2013):</p> <p>River Flood Plain and Outer River Bank with deep red alluvial sands</p> <ul style="list-style-type: none"> • R3i: <i>Corymbia hamersleyana</i> open woodland over <i>Acacia inaequilatera/A. tumida</i> open tall shrubland over <i>Triodia lanigera</i> hummock grassland with some <i>T. epactia</i>. • R3ii: <i>Corymbia hamersleyana</i> open woodland over <i>Acacia inaequilatera</i> tall open heath with <i>A. orthocarpa</i>, <i>A. acradenia</i>, <i>A. trachycarpa</i> over <i>Triodia lanigera</i>, <i>T. epactia</i> mixed hummock grassland. <p>River Bed and Inner Banks with washed sands, stones and gravels</p> <ul style="list-style-type: none"> • R5i: <i>Melaleuca argentea</i> scattered to open low woodland over very scattered <i>Crotalaria cunninghamii</i>, <i>Petalostylis labicheoides</i> and <i>Cajanus cinereus</i>. • R5ii: <i>Melaleuca argentea</i> scattered tall trees over mixed <i>Acacia trachycarpa</i>, <i>M. lasiandra</i>, <i>A. pyrifolia</i> var <i>morrisonii</i> mixed open shrubland. • R5iii: <i>Eucalyptus victrix</i> open low woodland over <i>Acacia trachycarpa</i> tall shrubland with mixed <i>A. coriacea</i>, <i>A. orthocarpa</i>, <i>A. tumida</i>, <i>Grevillea wickhamii</i> over very scattered <i>Triodia longiceps</i>, <i>T. lanigera</i>, <i>T. epactia</i> hummocks and sedges <i>Cyperus vaginatus</i> and <i>C. blakeanus</i>. • R5iv: <i>Acacia trachycarpa/A. tumida</i> tall closed shrubland over <i>Corchorus incanus</i> subsp. <i>incanus</i>, <i>Sida rohlenae</i> open mixed low shrubland over open <i>Triodia epactia/T. lanigera</i> open hummock grassland. Scattered <i>Eucalyptus victrix</i>. <p>Level Sandy Loamy Plain with scalds</p> <ul style="list-style-type: none"> • M6i: <i>Triodia lanigera</i> hummock grassland on red loamy plain with intrusions of sandy scald.
Vegetation condition	<p>The vegetation survey undertaken in 2012 indicate the vegetation within the proposed clearing area is in 'Excellent' (Trudgen, 1991) condition, described as</p> <ul style="list-style-type: none"> • Excellent: Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement (Astron, 2013). <p>The full Trudgen (1991) condition rating scale is provided in Appendix D.</p>
Climate and landform	The Pilbara region has a tropical arid climate with hot wet summers and mild dry winters (Astron, 2013). The area experiences an average rainfall of 314.2 millimetres (BoM, 2024).

Characteristic	Details
Soil description and Land degradation risk	<p>The soils within the application area are mapped as:</p> <ul style="list-style-type: none"> River System (281Ri): Narrow, seasonally active flood plains and major river channels supporting moderately close, tall shrublands or woodlands of acacias and fringing communities of eucalypts sometimes with tussock grasses or spinifex. Rive Bed Phase (281RiX_BED): River bed with no vegetation. Mallina System (281Ma): Sandy surfaced alluvial plains supporting soft spinifex grasslands and minor hard spinifex and tussock grasslands (DPIRD, 2024b). <p>Both the River and Mallina land systems are susceptible to erosion if vegetation cover is removed (DPIRD, 2024a).</p>
Waterbodies	The application area occurs within and adjacent to the Turner River (GIS Database). The Turner River is an ephemeral watercourse (GIS Database).
Hydrogeography	The application area is not mapped within a proclaimed public drinking water area (GIS Database). The area is mapped within the Pilbara Groundwater Area, proclaimed under the Rights in Water Irrigation (RIWI) Act (GIS Database).
Flora	Astron (2013) identified two Priority flora species (<i>Abutilon pritzelianum</i> and <i>Euploca mutica</i> (previously named <i>Heliotropium muticum</i>)) within the survey area, one species, <i>Euploca mutica</i> , was recorded within the application area (Astron, 2013).
Ecological communities	According to available databases, there are no known Threatened Ecological Communities (TECs) within the application area (GIS Database).
Fauna	There are records of 60 conservation significant fauna within 50 kilometres of the application area (GIS Database). No conservation significant species have been recorded within the application area (Astron, 2013; GIS Database)
Fauna habitat	<p>Astron (2013) identified six broad habitat types within the application area:</p> <ul style="list-style-type: none"> river bed; inner river bank and raised river bed; river floodplain and outer river bank; levee with red sands and loams; level red sand plain and level sandy loamy plain with some scalds.

B.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA Managed Lands
IBRA Bioregion Pilbara	17,808,657.04	17,731,764.88	99.57	1,801,714.98	10.12
Beard vegetation associations - State					
Veg Assoc No. 93	3,044,309.52	3,040,640.98	99.88	59,536.96	1.96
Veg Assoc No. 619	119,373.78	118,205.01	99.02	236.34	0.20
Veg Assoc No. 647	195,860.89	191,711.41	97.88	0.00	0.00
Beard vegetation associations - Bioregion					
Veg Assoc No. 93	3,042,114.27	3,038,471.67	99.88	59,536.96	1.96
Veg Assoc No. 619	118,920.31	118,116.78	99.32	236.08	0.20
Veg Assoc No. 647	195,859.95	191,710.92	97.88	0.00	0.00

Government of Western Australia (2019)

A.1. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), impacts to the following conservation significant flora and fauna required further consideration (Astron, 2013; Western Australian Herbarium, 1998-; GIS Database).

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
<i>Abutilon</i> sp. <i>Pritzelianum</i> (S. van Leeuwen 5095)	P3	Y	~8	51
<i>Bulbostylis burbridgeae</i>	P4	N	~12	39
<i>Eragrostis crateriformis</i>	P3	Y	~8	53
<i>Euphorbia clementii</i>	P3	N	~12	31
<i>Euploca mutica</i>	P3	Y	0	76
<i>Gomphrena leptophylla</i>	P3	Y	~42	8
<i>Gomphrena pusilla</i>	P2	N	~45	15
<i>Gymnanthera cunninghamii</i>	P3	Y	~8	42
<i>Nicotiana umbratica</i>	P3	N	~43	18
<i>Ptilotus mollis</i>	P4	N	~12	45
<i>Rothia indica</i> subsp. <i>australis</i>	P3	Y	~8	21
<i>Stylidium weeliwollii</i>	P3	Y	~25	29
<i>Tephrosia rosea</i> var. <i>Port Hedland</i> (A.S. George 1114)	P1	N	~39	44
<i>Terminalia supranitifolia</i>	P3	N	~47	53
<i>Triodia chichesterensis</i>	P3	N	~11	42
<i>Vigna triodiophila</i>	P3	N	~46	21

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

A.2. Fauna analysis table

Species name	Common Name	Conservation status	Distance of closest record to application area (km)	Suitable habitat features? [Y/N]
<i>Actitis hypoleucos</i>	common sandpiper	MI	~6	Y
<i>Apus pacificus</i>	fork-tailed swift	MI	~4	Y
<i>Arenaria interpres</i>	ruddy turnstone	MI	~6	Y
<i>Calidris acuminata</i>	sharp-tailed sandpiper	MI	~6	Y
<i>Calidris alba</i>	sanderling	MI	~28	N
<i>Calidris canutus</i>	red knot	EN	~28	Y
<i>Calidris ferruginea</i>	curlew sandpiper	CR	~37	Y
<i>Calidris melanotos</i>	pectoral sandpiper	MI	~43	Y
<i>Calidris ruficollis</i>	red-necked stint	MI	~6	Y
<i>Calidris subminuta</i>	long-toed stint	MI	~24	Y
<i>Calidris tenuirostris</i>	great knot	CR	~28	Y
<i>Charadrius leschenaultii</i>	greater sand plover, large sand plover	VU	~28	N
<i>Charadrius mongolus</i>	lesser sand plover	EN	~28	Y
<i>Charadrius veredus</i>	oriental plover	MI	~49	Y
<i>Chlidonias leucopterus</i>	white-winged black tern	MI	~23	Y
<i>Ctenotus angusticeps</i>	Airlie Island ctenotus, northwestern coastal ctenotus	P3	~43	N
<i>Dasyercus blythi</i>	brush-tailed mulgara	P4	~7	Y
<i>Dasyercus cristicauda</i>	crest-tailed mulgara, Minyiminyl	P4	~37	Y
<i>Dasyurus hallucatus</i>	northern quoll	EN	~1	Y
<i>Falco hypoleucos</i>	grey falcon	VU	~8	Y
<i>Falco peregrinus</i>	peregrine falcon	OS	~31	Y
<i>Fregata ariel</i>	lesser frigatebird	MI	~6	Y
<i>Gallinago stenura</i>	pin-tailed snipe	MI	~43	Y

Species name	Common Name	Conservation status	Distance of closest record to application area (km)	Suitable habitat features? [Y/N]
<i>Gelochelidon nilotica</i>	gull-billed tern	MI	~21	Y
<i>Glareola maldivarum</i>	oriental pratincole	MI	~16	Y
<i>Hipposideros stenotis</i>	northern leaf-nosed bat	P2	~48	Y
<i>Hirundo rustica</i>	barn swallow	MI	~37	Y
<i>Hydroprogne caspia</i>	caspian tern	MI	~6	Y
<i>Lagorchestes conspicillatus leichardti</i>	spectacled hare-wallaby (mainland)	P4	~25	Y
<i>Lagostrophus fasciatus fasciatus</i>	banded hare-wallaby, mernine	VU	~44	Y
<i>Liasis olivaceus barroni</i>	Pilbara olive python	VU	~8	N
<i>Limicola falcinellus</i>	broad-billed sandpiper	MI	~49	N
<i>Limnodromus semipalmatus</i>	Asian dowitcher	MI	~49	N
<i>Limosa lapponica</i>	bar-tailed godwit	MI	~28	N
<i>Limosa lapponica menzbieri</i>	bar-tailed godwit (northern Siberian)	CR	~49	N
<i>Limosa limosa</i>	black-tailed godwit	MI	~49	N
<i>Macroderma gigas</i>	ghost bat	VU	~11	N
<i>Macrotis lagotis</i>	bilby, dalgyte, ninu	VU	~4	Y
<i>Ozimops cobourgiensis</i>	Northern coastal free-tailed bat	P1	~46	Y
<i>Numenius madagascariensis</i>	eastern curlew	CR	~28	N
<i>Numenius minutus</i>	little curlew	MI	~28	Y
<i>Numenius phaeopus</i>	whimbrel	MI	~28	N
<i>Onychoprion anaethetus</i>	bridled tern	MI	~48	N
<i>Pandion haliaetus</i>	osprey	MI	~6	Y
<i>Philomachus pugnax</i>	ruff	MI	~28	Y
<i>Plegadis falcinellus</i>	glossy ibis	MI	~24	Y
<i>Pluvialis fulva</i>	Pacific golden plover	MI	~6	Y
<i>Pluvialis squatarola</i>	grey plover	MI	~28	N
<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	P4	~3	Y
<i>Rhinonictes aurantia</i> (Pilbara form)	Pilbara leaf-nosed bat	VU	~1	Y
<i>Sminthopsis longicaudata</i>	long-tailed dunnart	P4	~47	N
<i>Sterna hirundo</i>	common tern	MI	~49	N
<i>Sternula albifrons</i>	little tern	MI	~49	N
<i>Sternula nereis nereis</i>	fairy tern	VU	~48	N
<i>Thalasseus bergii</i>	crested tern	MI	~6	Y
<i>Tringa brevipes</i>	grey-tailed tattler	MI & P4	~6	Y
<i>Tringa glareola</i>	wood sandpiper	MI	~24	Y
<i>Tringa nebularia</i>	common greenshank	MI	~6	Y
<i>Tringa stagnatilis</i>	marsh sandpiper	MI	~23	Y
<i>Xenus cinereus</i>	Terek sandpiper	MI	~28	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, OS: other specially protected, CD: conservation dependent

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?
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The flora survey identified a total of 109 flora taxa from 32 families representing 66 genera occurring within the application area (Astron, 2013). The area proposed to be cleared may contain significant flora and fauna and habitats.</p>	May be at variance	Yes Refer to Section 3.2.1, above.
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared may contain foraging habitat for several conservation significant fauna species (Astron 2013; GIS Database).</p>	May be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>There are no known records of Threatened flora within the application area (GIS Database). The flora survey of the application area did not record any species of Threatened flora (Astron, 2013).</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>There are no known Threatened Ecological Communities (TECs) located within the application area and the flora and vegetation survey did not identify any TECs (Astron, 2013; GIS Database).</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The extent of the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	Not at variance	No
<p><u>Principle (h):</u> <i>“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></p> <p><u>Assessment:</u></p> <p>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 (GIS Database).</p>	Not likely to be at variance	No
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>The application area is located within and adjacent to the Turner River (GIS Database). The proponent has committed to avoiding the clearing of riparian vegetation, larger trees, and vegetation within their drip lines where possible (Mobile Concreting Solutions, 2019). Therefore, the proposed clearing is unlikely to result significant impacts to the vegetation growing within Turner River. Potential impacts will be managed by the implementation of a vegetation management, which will assist in minimising impacts to riparian vegetation and ensure waterflow is maintained.</p>	At variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>Principle (g): <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>Given the application area is located within the Turner River and both the River and Mallina land systems are susceptible to erosion if vegetation cover is removed, the proposed clearing has potential to cause appreciable land degradation (DPIRD, 2024a). The proponent has committed to extracting sand from the river bed on a campaign basis, no sand extraction will occur when the river is flowing, trees in excess of 150 millimetres diameter will not be cleared and excavations will not be undertaken within five metres of the river bank (Mobile Concreting Solutions, 2019). Further land degradation impacts may be managed by implementing a staged clearing condition and a condition not permitting the clearing of native vegetation measuring 1.5 metres in height or greater and their associated drip line.</p>	May be at variance	No
<p>Principle (i): <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>Given the application area is located within the Turner River, the proposed clearing may impact surface or groundwater quality. The proponent has committed to extracting sand from the river bed on a campaign basis and no sand extraction will occur when the river is flowing (Mobile Concreting Solutions, 2019).</p>	Not likely to be at variance	No
<p>Principle (j): <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>Considering the natural topography of the Pilbara, the rivers and waterways are likely to flood post heavy rainfall events (Van Vreeswyk et al., 2004). Clearing of the vegetation on riverine system can increase risk of flooding. However, this will be mitigated by avoidance of clearing riparian vegetation. Therefore, the proposed clearing is unlikely to increase the risk or incidence of flooding.</p>	Not likely to be at variance	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. Sources of information

E.1. GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- Contours (DPIRD-073)
- Clearing Regulations – Schedule One Areas (DWER-057)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Interim 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 Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

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

E.2. References

- Astron Environmental Services (Astron) (2013) Indee Sand Quarry Level 1 Flora and Vegetation Survey. Unpublished report prepared for Mobile Concreting Solutions, January 2013.
- Bureau of Meteorology (BoM) (2024) Bureau of Meteorology Website – Climate Data Online, Weather Station: 004032. Bureau of Meteorology. <https://reg.bom.gov.au/climate/data/> (Accessed 19 March 2024).
- Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.
- Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf
- Department of Planning, Lands and Heritage (DPLH) (2024) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 14 March 2024).
- Department of Primary Industries and Regional Development (DPIRD) (2024a) Advice received in relation to Clearing Permit Application CPS 10507/1. Office of the Commissioner of Soil and Land Conservation, Department of Primary Industries and Regional Development, Western Australia, February 2024.
- Department of Primary Industries and Regional Development (DPIRD) (2024b) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://dpiird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (Accessed 14 March 2024).
- Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.pdf
- Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Mobile Concreting Solutions (2019) Mobile Concrete Solutions Mining Proposal Addendum, April 2019.
- Mobile Concreting Solutions (2024) Clearing permit application form, CPS 10507/1, received 29 January 2024.
- Town of Port Hedland (2024) Public submission in relation to clearing permit application CPS 10507/1, received 5 March 2024.

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.

Van Vreeswyk, A.M.E., Payne, A.L., Leighton, K.A. and Hennig, P. (2004) An inventory and condition survey of the Pilbara Region, Western Australia. Technical Bulletin No. 92. Department of Agriculture, South Perth, Western Australia.

Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 2 April 2024).

4. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , 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
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DEMIRS)
DMP	Department of Mines and Petroleum, Western Australia (now DEMIRS)
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	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Federal 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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

T Threatened species:

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 that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

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. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

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. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

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. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct Species:

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).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

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. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

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).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and 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.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD

Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species 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).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS

Other specially protected species

Fauna 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).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P

Priority species:

Possibly threatened species that do not meet survey criteria, 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 priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

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

Assessment of Priority codes 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

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, e.g. 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 and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2

Priority Two - Poorly-known species

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, e.g. 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 and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3

Priority Three - Poorly-known species

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. Such species are in need of 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 Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

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.

- (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.