GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10097/1
Permit Holder:	Regional Power Corporation, trading as Horizon Power
Duration of Permit:	From 9 June 2023 to 9 June 2033

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

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of geotechnical survey, construction of solar arrays generating 900kW, battery storage, thermal generator, associated supporting infrastructure, fire breaks, access tracks and laydown area.

2. Land on which clearing is to be done

Lot 297 on Deposited Plan 93256, Dampier Peninsula

3. Clearing authorised

The permit holder must not clear more than 4.06 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 9 June 2028

5. Application

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

PART II – MANAGEMENT CONDITIONS

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

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

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

(b) minimise the amount of *native vegetation* to be cleared; and

(c) reduce the impact of clearing on any environmental value.

7. Weed management

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

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *weed*-affected soil, *mulch, fill*, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

8. Directional clearing

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

9. Fauna management

The Permit Holder must:

(a) fence all test pits on the day of drilling/excavating with fine mesh to prevent fauna access; or

(b) cover all test pits on the day of drilling/excavating with a cover which prevents entry to the pits by fauna species and backfill upon completion; and

(c) cover all bore holes at the end of each day and backfill upon completion.

(d) the permit holder must restrict clearing activities to day-light hours to avoid the possibility of injury to fauna.

10. Wind erosion management

The permit holder must commence activities related to the purpose of the clearing, no later than three (3) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

11. Rehabilitation and revegetation (temporary works)

The permit holder must:

(a) retain the vegetative material and topsoil removed by clearing authorised under this permit and stockpile the vegetative material and topsoil in an area that has already been cleared;

(b) at an optimal time within 12 months following completion of temporary clearing, *revegetate* the areas not required for the authorised purpose for which they were cleared under this permit, by:

(i) ripping the ground on the contour to remove soil compaction; and

(ii) laying the vegetative material and topsoil retained under condition 11(a) the cleared area(s).

(c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 11(b) of this permit:

(i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and

(ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 11(c)(i) of this Permit will not result in similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately planting and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

PART III - RECORD KEEPING AND REPORTING

12. Records that must be kept

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

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 6; and (f) actions taken to minimise the risk of the introduction and spread of *weeds* in accordance with condition 7. (g) the direction in which clearing was undertaken in accordance with condition 8 of the Permit.
2.	In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 11 of the permit	(a) actions taken to retain topsoil; (b) the size of the area *revegetated;* (c) the date(s) on which the area *revegetation* was undertaken; (d) the *revegetation* activities under taken; the date(s) where additional planting or direct seeding of native vegetation was

No.	Relevant matter	Specifications
		undertaken; and (e) the boundaries of the area *revegetated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA20). Expressing the geographical coordinates in Eastings and Northings.

13. Reporting

The permit holder must provide to the *CEO* the records required under condition 12 of this permit when requested by the *CEO*.

DEFINITIONS

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

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
direct seeding	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent and has a minimum of 2 years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.
EP Act	*Environmental Protection Act 1986* (WA)
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 25 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared;
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
revegetation, revegetate,	means the re-establishment of a cover of native vegetation in an area such that the species composition, structure and density is similar to

Term	Definition
rehabilitated,	pre-clearing vegetation types in that area, and can involve regeneration, direct seeding and/or planting;
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

17 May 2023

Schedule 1

Plan 10097/1

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

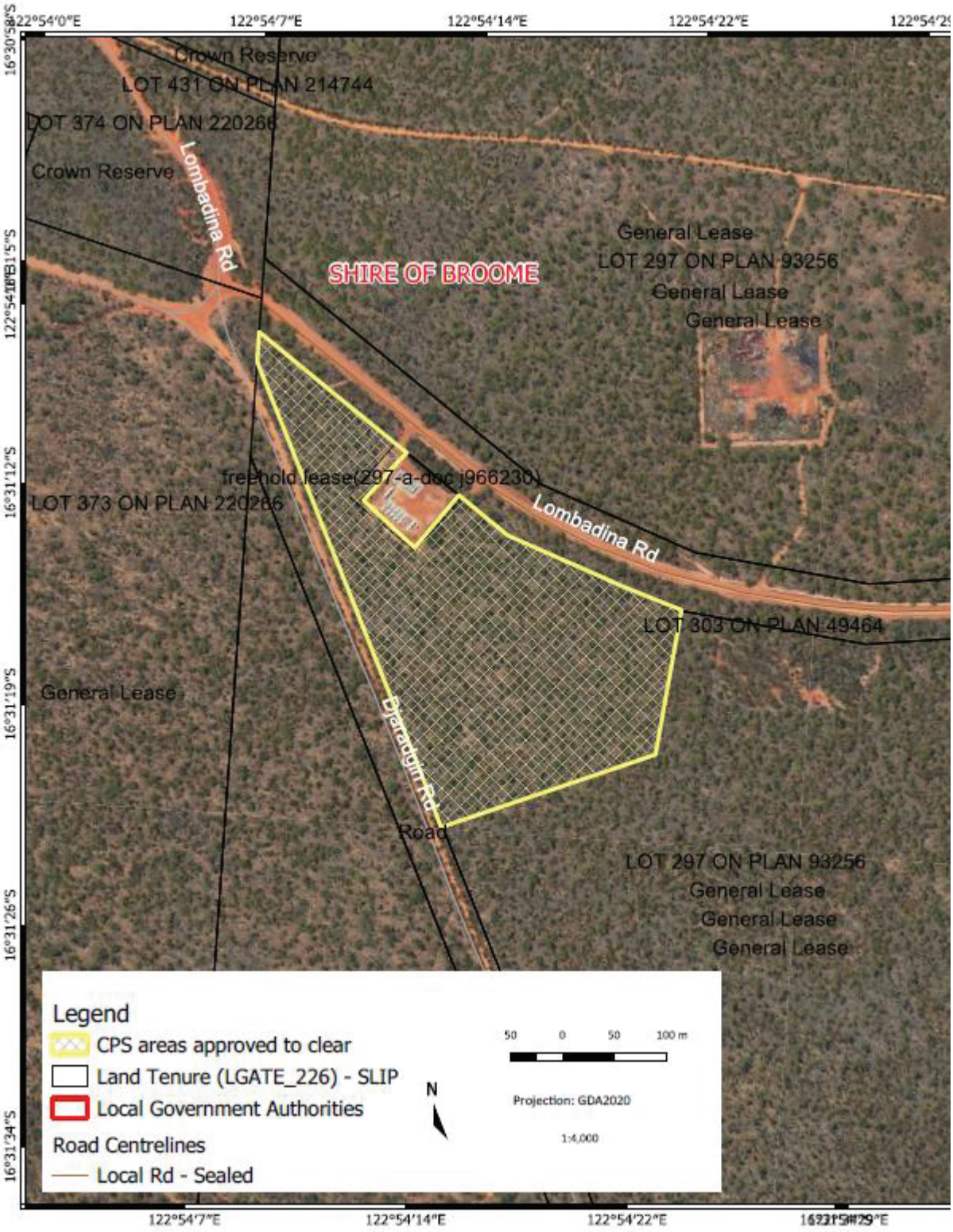

Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10097/1
Permit type:	Purpose permit
Applicant name:	Regional Power Corporation, trading as Horizon Power
Application received:	1 March 2023
Application area:	4.06 hectares of native vegetation
Purpose of clearing:	Geotechnical survey, construction of solar arrays generating 900kW, battery storage, thermal generator, associated supporting infrastructure, fire breaks, access tracks and laydown area.
Method of clearing:	Mechanical
Property:	Lot 297 on Deposited Plan 93256
Location (LGA area):	Shire of Broome
Localities (suburb):	Dampier Peninsula

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5). The purpose of clearing is for geotechnical survey to inform the design and construction requirements for a renewable energy facility (Horizon Power, 2023a).

Horizon Power have provided information regarding their clearing practices as well as their mitigation and management methods. Temporary clearing for the geotechnical surveys will include mechanical removal and driving over vegetation (Horizon Power, 2023b). This will include up to six 10 x 10 metre test pits, with the depth being four metres and below throughout the application area. Furthermore, there will be areas that are permanently cleared where renewable energy infrastructure will be constructed (Horizon Power, 2023b).

1.3. Decision on application

Decision:	Granted
Decision date:	17 May 2023
Decision area:	The permit holder must not clear more than 4.06 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

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 Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix B), the findings of a flora and fauna assessment and a site inspection (see Appendix D), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration that the purpose of the clearing is for geotechnical surveys that would support a future proposed solar farm at the location.

The assessment identified that the proposed clearing would result in:

- the loss of native vegetation that is suitable habitat for conservation significant flora and fauna.
- the potential spread of weeds in areas of cleared vegetation.
- 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 (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to have a long-term adverse impact on biological values (biodiversity and fauna). The applicant has suitably demonstrated avoidance and minimisation measures (see Section 4).

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

- avoid, minimise to reduce the impacts and extent of clearing.
- take hygiene steps to minimise the risk of the introduction and spread of weeds.
- requirement to commence activities for which clearing is authorised within a three (3) month period of clearing to minimise wind erosion.
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.
- cover all boreholes at the end of each day, fence or cover test pits on the day of drilling/excavation and backfill all test pits and boreholes upon completion.
- restricting the clearing activities to day-light hours to avoid injury to fauna.

1.5. Site map

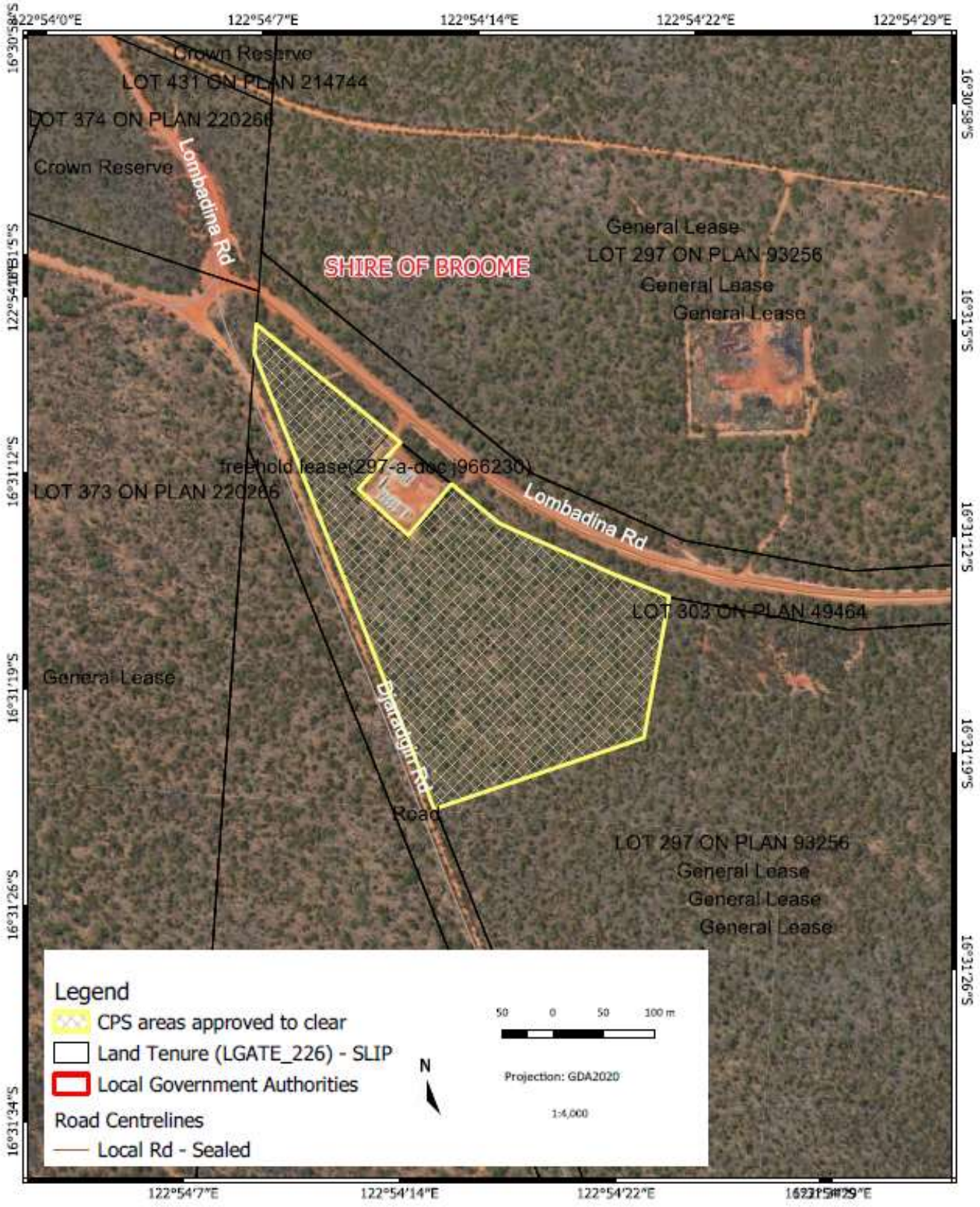

Figure 1: Map of the application area

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)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that avoidance and mitigation measures will be undertaken (Horizon Power, 2023b). These measures are as follows:

Geotechnical works
A construction and environmental management plan (CEMP) has been developed for the project, which lists the specific mitigation and management measures to be applied. Key management measures include:

- where possible, pre-existing access tracks will be used, and vehicles and machinery will exit the development envelope (DE) along the same route used for access.
- mechanical clearing for the development of formal access tracks is not proposed during geotechnical works.
- areas of degraded, sparsely vegetated and/or previously cleared areas will be preferentially selected for the location of test pit and laydown areas.
- works will be undertaken systematically to minimise re-run and compaction of access tracks.
- standard weed and hygiene management practices which will be applied to these works.
- mechanical clearing will be undertaken slowly and in a one-way direction to allow fauna to move offsite if present.

Restoration of Cleared Areas
Restoration of the site will be limited to management of excavated fill and compaction (where applicable), as follows:

- topsoil will be stockpiled separately to other excavated materials.
- on completion of test pit works, excavated materials will be placed back into the test pits. Topsoil from the test pit will then be respread over the surface.
- recontouring of soil within the test pit and laydown areas will be undertaken.

Renewable energy infrastructure
Key management measures detailed in the CEMP for the renewable energy infrastructure include:

- no clearing is permitted outside the DE.

- clearing will be minimised where possible through placement of assets and access tracks in existing cleared locations where possible.
- the clearing locations are to be demarcated prior to clearing activities.
- clearing areas are to be checked by an Environmental Specialist or Site Supervisor prior to clearing to ensure no more than 4.06 hectares of clearing is undertaken.
- a pre-clearing toolbox will be held so all staff are aware of their responsibilities under the permit.
- clearing of native vegetation will be undertaken in a slow, progressive manner in one direction to allow fauna to move away from the clearing area.

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 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 (Appendix C) identified that the impacts of the proposed clearing present a risk to biological values (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 (Biodiversity and fauna) - Clearing Principles (A and B)*

Assessment

Fauna

The desktop assessment identified 49 conservation significant fauna species within the 50-kilometre radius buffer of the application area (excluding the area which extended into the ocean). The recorded list of species includes 40 bird species, three mammal species and six reptile species.

GHD conducted a basic flora and fauna assessment across four project areas, which are located within the West Kimberley bioregion, which was undertaken from 1 to 5 March 2021. The Djarindjin project area site covered approximately 80 percent of the application area (see Figure 4 in Appendix D). The findings of this flora and fauna assessment can be extrapolated to make reasonable assumptions on the environmental values present within the portion of the application area which was not surveyed. It is noted that the GHD assessment was conducted within the appropriate timing of Northern botanical province, as per the technical guidance – Flora and Vegetation Assessments for Environmental Impact Assessment (EPA, 2016a).

According to the flora and fauna assessment (GHD, 2023), one fauna habitat was identified within the application area, *Eucalyptus* and *Corymbia* woodland over tussock grasses and herbs on pindan red sand loam on low plain. This habitat type is widespread in the local area and therefore unlikely to represent significant core habitat for the identified fauna species.

According to the analysis of a likelihood of occurrence, the following conservation significant fauna species have been considered 'likely' to occur within the application area and required further consideration:

- *Erythrura gouldiae* (Gouldian finch)
- *Elanus scriptus* (Letter-winged kite)
- *Falco peregrinus* (Peregrine falcon)
- *Macrotis lagotis* (Bilby, dalgyte, ninu)
- *Simoselaps minimus* (Dampierland burrowing snake)

Class: Bird

The *Erythrura gouldiae* (Gouldian finch) is known to inhabit Eucalyptus woodlands with suitable hollows for breeding during the dry season and inhabit lowland drainage areas with native grasses such as Sorghum in the wet season; often associated with recently burnt areas with exposed seeds. The Gouldian finch exclusively nests in tree hollows or holes in termite mounds with the breeding season ranging from January to April (Australian Museum, 2020). The closest record of this species occurred approximately 0.3 kilometres from the application area. It is unlikely that the native vegetation within the proposed application area will provide core habitat for the Gouldian finch, however it is likely this species may utilise the application area.

The *Elanus scriptus* (Letter-winged kite) is associated with open grasslands in arid and semi-arid areas; may disperse to coastal regions when food is plentiful; roost in high canopy of leafy trees during the day, hunts at night for small rodents and marsupials, particularly the long-haired rat. The record of the Letter-winged kite was identified over 37 kilometres from the application area and was last sighted in 1977. Given the letter-winged kite is a highly mobile, avian species with large home ranges, the proposed clearing is considered unlikely to significantly impact on this species.

The *Falco peregrinus* (Peregrine falcon) may regularly overfly the application area. According to the Australian Museum, the Peregrine Falcon 'is found in most habitats, from rainforests to the arid zone, and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites and prefers coastal and inland cliffs or open woodlands near water and may even be found nesting on high city buildings. This species is widespread and highly mobile and is found in various habitats (Birdlife, n.d). The flora and fauna assessment did not identify any evidence of the Peregrine falcon (GHD, 2023). It is likely that the Peregrine falcon may overfly the application area but based on the habitat preference and the large home range of this bird, the proposed clearing will not have a significant impact on the Peregrine falcon.

Class: Mammal

It is noted that while GHD undertook a basic flora and fauna assessment (GHD, 2023), within this assessment itself a targeted Bilby (*Macrotis lagotis*) assessment was also conducted (Figure 3, Appendix D.1).

The Bilby is known from four records within the local area and largely occupies three major vegetation types; open tussock grassland on uplands and hills, mulga woodland or shrubland growing on ridges and rises, and hummock grassland in plains and alluvial areas (DAWE, n.d). The distribution of the greater Bilby is highly fragmented in Western Australia (Pavey, 2006). Bilbies are found in a range of habitats from arid rocky soils with little ground cover to semi-arid shrublands and woodlands (DAWE, n.d). The closest record was identified 10.36 kilometres from the application area. Bilbies are known to emerge after dark to forage for food. A targeted bilby assessment was conducted throughout the application area and did not identify evidence of bilby activity (footprint, scats and digging) within the application area (GHD, 2023). While this species was not identified within the application area, it may transiently occur on site given the high mobility of the species and the habitat suitability of the application area. It is recommended that clearing activities are conducted slowly, in one direction and is limited to daylight hours as the Bilby is known to be active during the dark hours, as they are nocturnal.

Class: Reptile

The *Simoselaps minimus* (Dampierland burrowing snake) is known from one location approximately 5 kilometres from the application area. This species is a small fossorial snake known only from the Dampierland Bioregion of the western Kimberley region of Western Australia. This species is poorly known and has a characteristic habitat which is the pindan woodland (Atlas of Living Australia, n.d). The flora and fauna assessment did not identify evidence of this species (GHD, 2023). However, noting that there are relatively recent records of these species within the local area, it is considered that the Dampierland burrowing snake may be a transient visitor within the application area while foraging and dispersing. Given this, it is important the clearing activities are conducted slowly and in one direction towards the adjacent native vegetation to avoid possible mortality of Dampierland burrowing snake species.

Conclusion

No evidence of fauna of significance were recorded during the flora and fauna assessment (GHD, 2023).

Based on the above assessment, the proposed clearing is unlikely to impact on significant habitat for any conservation listed fauna species. However, the proposed clearing may result in fauna fatalities should they occur within the application area during the clearing.

It is important that machinery operators involved in the clearing process are advised to be alert for fauna when clearing the native vegetation within the application area and to take steps to avoid impacts to fauna, where practical. Conducting the clearing in a slow progressive manner from one direction towards the adjacent vegetation will allow any fauna present to move into the adjacent native vegetation ahead of the clearing activity. Restricting the proposed clearing to day-light hours will further avoid potential injuries to fauna. In addition, uncapped boreholes and uncovered test pits pose a potential threat to ground fauna. Capping boreholes at the end of each day, fencing or covering test

pits on the day of drilling/excavation and backfilling all test pits and boreholes upon completion will reduce the likelihood of death or injury to fauna.

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

- clearing be conducted during daylight hours.
- cover all boreholes at the end of each day, fence or cover test pits on the day of drilling/excavation and backfill all test pits and boreholes upon completion.
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

3.2.2. *Land and water resources – Clearing Principle*

Assessment:
The soils within the application area are mapped as having high to extreme risks of wind and water erosion (DPIRD, 2019). Despite this, the surrounding vegetation will provide some coverage and limit the levels of wind erosion. The levels of water erosion should only be a major issue during periods of high rainfall, which should not be an issue due to the highly porous soils within the application area. The likelihood of land degradation could be minimised by commencing the activities for which clearing is authorised within three months of clearing.

Conclusion:
Based on the above assessment, the proposed clearing is unlikely to result in appreciable land degradation due to wind erosion. The potential for wind erosion could be minimised through conditions imposed on the permit.

Conditions:
To address the above impact, a condition has been imposed which requires activities for which clearing is authorised to commence within three months of clearing.

3.3. Relevant planning instruments and other matters

The Shire of Broome was contacted about the development and submitted advice that they would not raise any objections to the development (Shire of Broome, 2023).

A native title determination encompasses the application area; the Bardi and Jawi Niimidiman (WC1995/048).

One Aboriginal heritage site of significance have been mapped within the application area; (Djarindjin) ID12164. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

The acid sulphate soil risk is "moderate to low" in the application area at three metres and above. Below three metres, there is a "moderate to high" risk. Horizon Power intends to drill to four metres to conduct groundwater assessments (Horizon Power, 2023c). Despite the moderate – high levels this is not considered to have a significant impact as significant earthworks are not being conducted. The only other significant drilling that will also take place will be to three metres for solar farm footings.

Under the *Rights in Water and Irrigation* (RiWI) Act 1914 under exemptions (Section 26C) Order 2012, licensing (5C and 26B (3) to (6)), Horizon Power advised they are exempt from requiring a water extraction licence as they are conducting geotechnical tests and do not intend on extracting ground water (Horizon Power, 2023c)

End

Appendix A. Additional information provided by applicant

Information Received	Description
Supporting Documentation, to support the Native Vegetation Clearing Permit application (Horizon Power, 2023b)	This document includes information of project activities and description of the proposed clearing and brief description of the ecological assessments undertaken as well as avoidance and mitigation measures, stakeholder engagement and the applicant's assessment against the clearing principles.
Information on acid sulphate soils and groundwater exemption (Horizon Power, 2023c)	Further information was required concerning the earthwork activities to determine the scale of impact that the acid sulphate levels would have on the application area and whether their ground water activities required a permit under the RiWI Act 1914

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 intensive land use zone of Western Australia. The application area is located within the northern extent of the Dampier Peninsular, approximately 175 kilometres northeast of Broome. The application area is approximately 0.52 kilometres east from Djarindjin Aboriginal community. The application area has been sited directly adjacent the existing power plant, reducing the requirement for additional clearing associated with power transmission infrastructure from the renewable energy infrastructure to the power plant. Aerial imagery indicates the local area (excluding the ocean, within a 50-kilometre radius from the centre of the area proposed to be cleared) retains approximately 99 per cent of the original native vegetation cover.
Ecological linkage	The application area is not part of any mapped formal ecological linkage.
Conservation areas	No conservation areas of significance are mapped within the application area (DBCA-012, DBCA-026). The closest conservation area to the proposed clearing is the Bardi Jawi Gaarra Marine Park Class A, located approximately 1.18 kilometres to the southwest of the application area.
Vegetation description	The vegetation within the application area is Eucalyptus and Corymbia woodland to isolated clumps of trees over tussock grasses and herbs on pindan red sand loam on low plain (GHD, 2023). Representative photographs and the full assessment descriptions and maps are available in Appendix F. The broad scale mapped vegetation type over the application area is: • Beard vegetation association 750, which is described as pindan woodland consisting of acacia thicket with eucalypt woodland over spinifex *Acacia tumida*, *Eucalyptus tectifica, Corymbia grandifolia, Triodia pungens* and *T. bitextura* (Shepherd et al, 2001). The mapped vegetation type retains approximately 99 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	A flora and fauna assessment by GHD (2023) indicates the vegetation within the proposed clearing area is in Very Good (Trudgen, 1991) condition, described as:

Characteristic	Details
	• Shrublands, pindan; *Acacia tumida* shrubland with grey box & cabbage gum medium woodland over ribbon grass & curly spinifex. The full Trudgen (1991) condition rating scale is provided in Appendix D. Representative photographs and the full assessment descriptions and mapping are available in Appendix D.
Climate and landform	The Dampier Peninsula has a tropical climate and is characterised by a hot wet summer (December to March) and a dry season (April to November). Rainfall is generally received during the summer as a result of unpredictable tropical downpours and cyclonic low-pressure systems. Climate data from this station indicates the mean maximum temperature ranges from 35.3 °C in November I to 28.2 °C in July. The mean minimum temperature ranges from 14.8 °C in July to 25.6 °C in December. The mean annual rainfall is 781.0 mm, with approximately 56 rain days a year (BoM, 2023). The application area is located within the Yeeda land system which is described as sandplains with red and yellow sands supporting pindan acacia shrublands with emergent eucalypt trees, located on the Quaternary aeolian sands (GHD, 2023a).
Soil description	The soil is mapped as deep red sandplains supporting pindan vegetation with dense acacia shrubs, scattered bloodwood and grey box trees and curly spinifex and ribbon grass. The soil symbology number is: 355ye (DPIRD, 2019). A review of the Acid Sulphate Soil (ASS) risk mapping indicates the soil under the project area has 'moderate to low' risk of containing ASS. The 'moderate to low' risk rating indicates the risk of ASS occurring within 3 metres of natural soil surface, however, this rating indicates a high to moderate risk of ASS beyond 3 metres of natural soil surface. The wider study area records as both a 'high to moderate' and 'moderate to low' risk of containing ASS. The 'high to moderate' risk rating indicates the risk of ASS occurring within 3 metres of the natural soil surface.
Land degradation risk	The mapped soil type is prone to grazing pressure and frequent burning is required. Water and wind erosion hazard is high to extreme. (DPIRD, 2019). During the high intensity rainfall, short-term water erosion may occur.
Waterbodies	The application area is within the Cape Leveque Coast Basin hydrographic catchment (DPIRD-069). The desktop assessment and aerial imagery indicate that no watercourse or wetlands occur over the application area. The nearest watercourse is a non-perennial minor river located approximately 0.67 kilometres south-west from the application area.
Hydrogeography	The proposed application area falls within the Canning-Kimberley Groundwater Area, proclaimed under the *Rights in Water and Irrigation Act* 1914 (RiWI) (DWER-034). The applicant has no intention to extract groundwater and therefore will not impact on groundwater, however, does intend to drill to four metres deep (Horizon Power, 2023c). The application area does not fall within an area subject to the *County Areas Water Supply Act* 1917 and does not fall within a proclaimed surface water area under the RiWI Act, nor does it occur within a Public Drinking Water Source Area. Groundwater salinity level (Total Dissolved Solids) is mapped as less than 500 milligrams per litre (fresh) (DWER-026).
Flora	A total of 17 conservation significant flora species were identified in the local area with 33 records. The nearest record is located approximately 1.83 kilometres from the application area. Of the 17 conservation significant flora species recorded in the local area, 11 of these were identified as having a possibility to occur over the application area. No threatened or priority species were recorded within the application area during the Flora and fauna assessment (GHD, 2023).

Characteristic	Details
Ecological communities	The Monsoon (vine) thickets on coastal sand dunes of Dampier Peninsula which is listed as a Threatened Ecological Community (TEC) is located approximately 900 metres north of the application area. This TEC does fall within the reaction of the buffer zone.
Fauna	A total of 49 conservation significant fauna records were identified in the local area, which include 40 bird species, three mammal species and six reptile species. The nearest record was the Priority four bird; *Erythrura gouldiae* (Gouldian finch), identified 0.3 kilometres from the application area. No evidence of conservation significant fauna species was identified during the assessment by GHD (2023) although, five species were identified as having a likelihood of occurrence over the application area.

B.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Dampierland	8,343,944.95	8,319,879.14	99.71	142,055.31	1.71
Vegetation complex					
Pindan Woodland 750	1,229,182.16	1,225,280.52	99.68	34,114.53	2.78
Local area					
50km radius	277,261.215	222,555.68	80.27	-	-

*Government of Western Australia (2019a)

B.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets, and flora and fauna assessment (GHD, 2023), impacts to the following conservation significant flora species required further consideration.

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Acacia monticola x tumida var. kulparn	3	N	Y	42.66	1	N/A
Aphyllodium glossocarpum	3	N	Y	47.83	1	N/A
Glycine pindanica	3	N	Y	42.23	3	N/A
Haemodorum capitatum	1	Y	Y	13.53	1	Y
Lophostemon grandiflorus subsp. grandiflorus	3	N	Y	5.06	1	Y
Nymphoides beaglensis	3	N	Y	46.79	1	N/A
Parsonsia kimberleyensis	1	N	Y	13.20	2	Y
Stylidium pindanicum	3	N	Y	13.53	3	Y
Thespidium basiflorum	1	N	Y	40.51	2	N/A

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Triodia acutispicula	3	Y	Y	1.83	4	Y
Utricularia bidentata	3	Y	Y	11.75	3	Y

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

B.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix 0), and flora and fauna assessment (GHD, 2023), impacts to the following conservation significant fauna species required further consideration.

Species name	Common Name	Conservation status	Likelihood of occurrence	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Bird						
Apus pacificus	Fork-tailed swift	MI	Maybe	10.12	3	Y
Erythrura gouldiae	Gouldian Finch	P4	Likely	0.3	23	Y
Falco peregrinus	Peregrine Falcon	OS	Likely	30.50	3	Y
Mammal						
Macrotis lagotis	Bilby, Dalgyte, Ninu	VU	Likely	10.18	4	Y
Reptile						
Simoselaps minimus	Dampierland burrowing snake	P2	Likely	5.06	8	Y

B.5. Ecological community analysis table

Community name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Kimberley Vegetation Association 37	Priority 3	N	3.93	2	Y
Kimberley Vegetation Association 67	Priority 3	N	31.13	3	N/A
Monsoon (vine) thickets on coastal sand dunes of Dampier Peninsula	Vulnerable	N	0.91	59	Y

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

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared does not contain locally or regionally threatened or priority ecological communities, significant flora and assemblages of plants, however, the application area may contain habitat for conservation significant fauna (GHD, 2023).	Not likely to be at variance	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 may contain habitat for five conservation significant fauna (GHD, 2023). However, none of these species were identified within the application area during the GHD flora and fauna assessment (2023).	May be at variance	Yes *(Refer to Section 3.2.1 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 threatened flora species listed under the BC Act and EPBC Act. No threatened flora species were recorded within the application area during the GHD flora and fauna assessment (2023).	Not likely to be at variance	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: The area proposed to be cleared does not contain species that can indicate a threatened ecological community.	Not likely to be at variance	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 application area is located within the Dampier IBRA bioregion and the Shire of Broome, both of which retain 99 per cent of the pre-European vegetation. The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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 to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	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: Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.	Not likely to be at variance	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 are susceptible to land degradation risks with a high to extreme risk of wind and water erosion. Given the strong winds and the sandy nature of the soil in the area, clearing may expose the soils to risk of wind erosion.	May be at variance	Yes *(Refer to Section 3.2.2 above).*
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, wetlands or Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	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 proposed clearing may increase the risk of localised flooding following periods of heavy rainfall, which is commonly experienced by the region. Given the soil within application area is sandy which is highly permeable, the localised flooding that may occur will be short term and is not likely to have a significant environmental impact. Given no watercourses and wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging and exacerbate flooding.	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.

D.1. Biological survey information excerpts / photographs of the vegetation

Habitat type	Photograph	Extent within the survey area (ha)
Eucalyptus and *Corymbia* woodland to isolated clumps of trees over tussock grasses and herbs on Pindan red sand loam on low plain. This habitat type generally corresponds with vegetation type VT01. It tends to occur on well draining porous sandy soil. Habitat condition is generally very good to excellent; however some disturbance includes frequent fire, edge effects of weeds from adjacent tracks and clearings, and dumped rubbish. This habitat is extensive and widespread within the Pindanland bioregion of the Dampier Peninsular and occurs within Ardyaloon, Djarindjin and Beagle Bay survey areas. It is foraging and nesting habitat for a diverse range of insectivorous, nectar and granivore bird species including common resident and nomadic woodland bird species such as DollarBird. Rainbow Bee-eater, Little Friarbird, Peaceful Dove, Grey-crowned Babbler and Double-barred Finch. A range of reptiles utilise this habitat including arboreal species: Stimson's Python, Black-tailed Monitor, and Tree Dtella. Borrowing and fossorial reptiles include Griffin's Slider, Dampierland Limbless Slider and Gould's Monitor. **Conservation significant fauna** Foraging habitat Gouldian Finch (*Erythrura gouldiae*), Foraging and nesting habitat for Peregrine Falcon (*Falco peregrinus*), habitat for Dampierland Burrowing snake (*Simoselaps minimus*), and Dampierland plain slider (*Lerista separanda)* and Greater Bilby (*Macrotis lagotis*) **Habitat value** High value		18.29 ha (Djarindjin, Beagle Bay and Ardyaloon)

Figure 2: Mapped habitat type, conservation fauna and habitat value within the application area

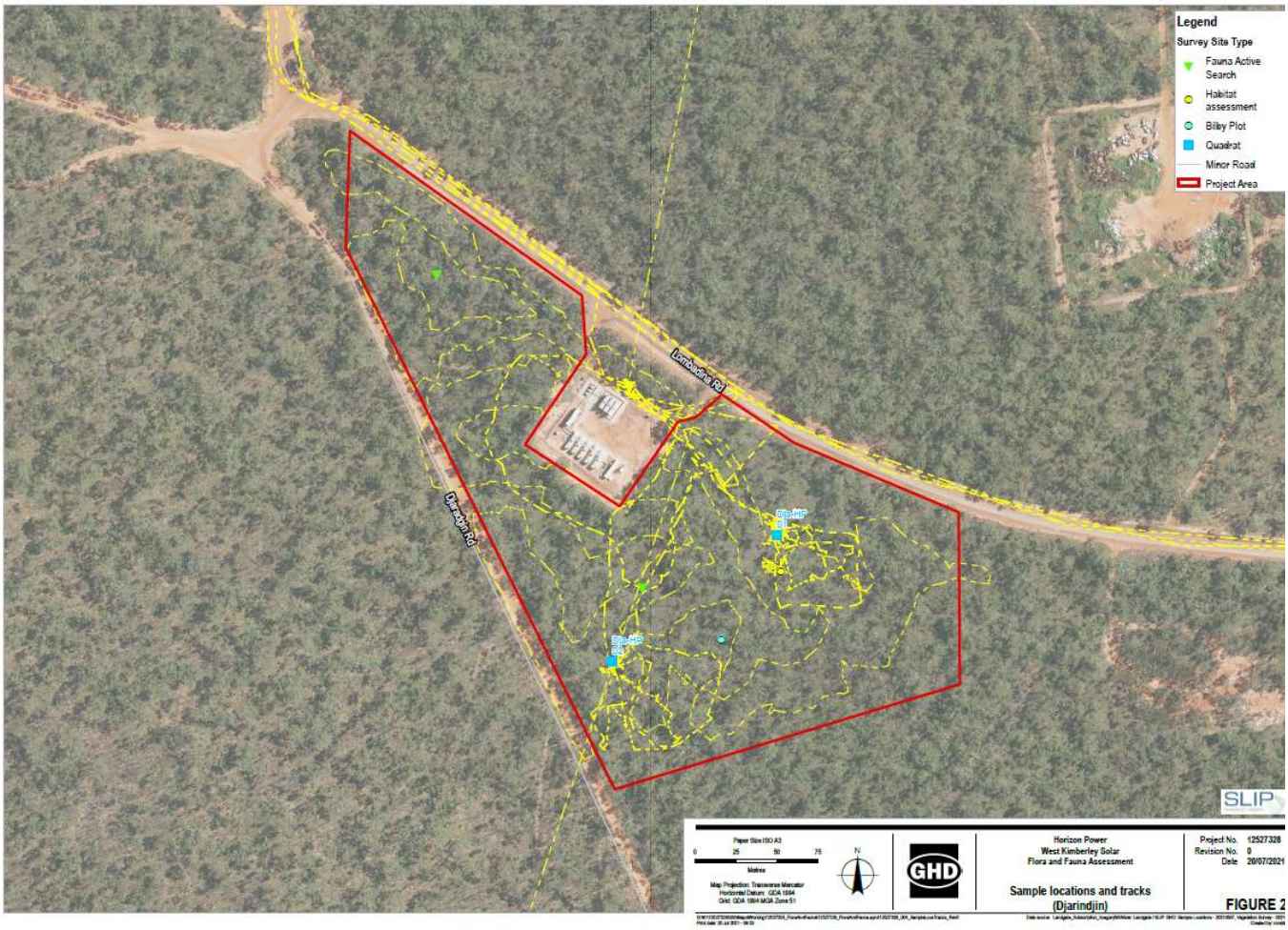

Figure 3: Fauna sample location and tracks within the application area

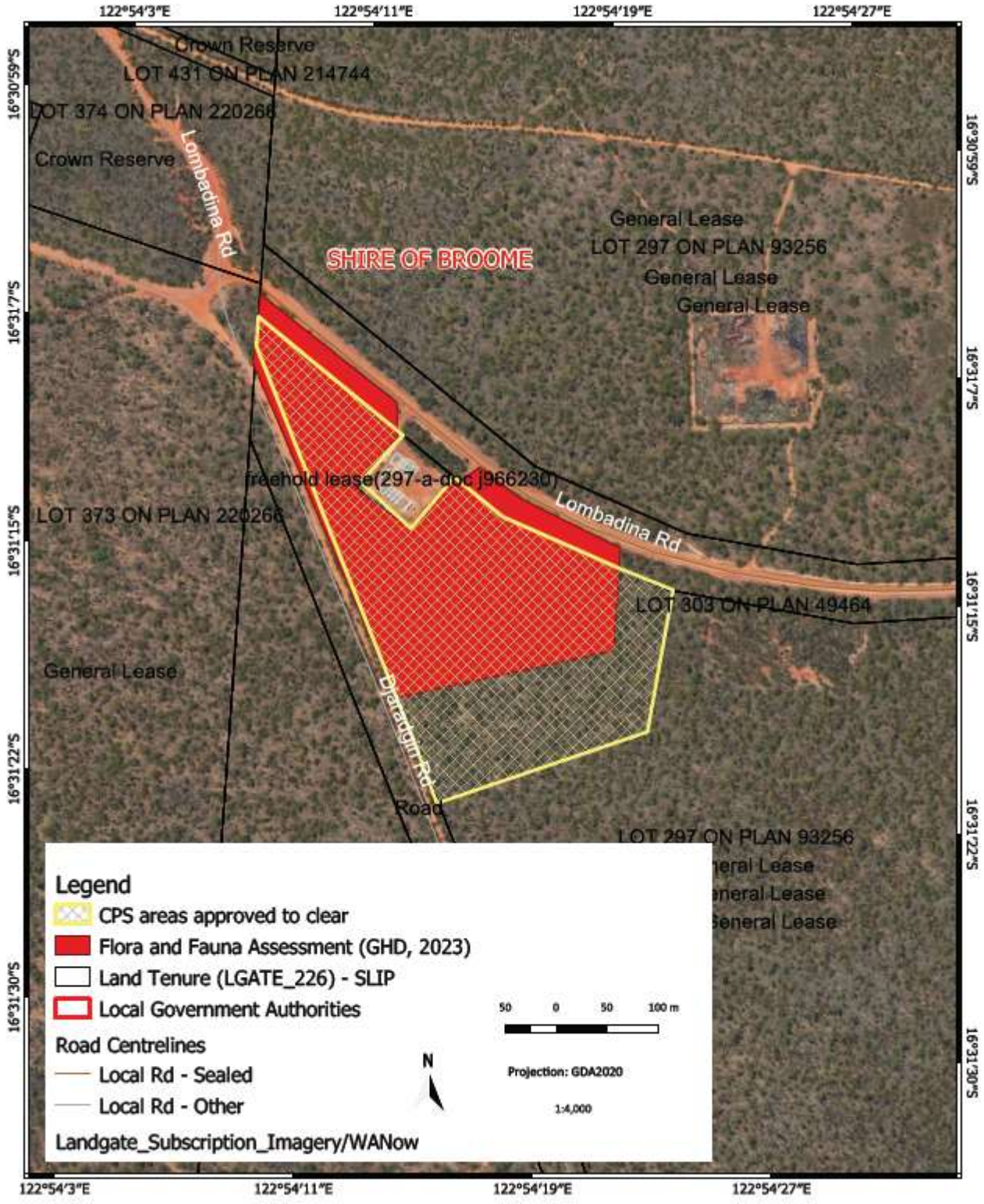

Figure 4: The application area compared to the GHD Flora and Fauna Assessment (2023a)

Appendix F. Sources of information

F.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

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