GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8823/1
Permit Holder:	Regional Power Corporation t/a Horizon Power
Duration of Permit:	19 June 2020 to 19 June 2025

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done
Clearing is for the purpose purpose of facilitating construction of Hybrid Power Station and associated infrastructure.

2. Land on which clearing is to be done
Lot 364 on Plan 193644, Road Reserve (PIN 11428273), Lot 3005 on Plan 54344 (Crown Reserve 49809), Denham, Western Australia.

3. Area of Clearing
The Permit Holder must not clear more than 10 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8823/1.

4. 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.

5. Period of which clearing is authorised
The Permit Holder must not clear any native vegetation after 19 June 2025.

6. Type of clearing authorised
This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the right to access land under the *Land Administration Act 1997* or any other written law.

PART II – MANAGEMENT CONDITIONS

7. Wind Erosion Management
The permit holder must commence construction of the Hybrid Power Station no later than three (3) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

8. Avoid, minimise and reduce the impacts and extent of clearing
In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in 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.

9. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(b) ensure that no *dieback* or *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.

PART III – RECORD KEEPING AND REPORTING

10. Record keeping

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
b) the date(s) that the area was cleared;
c) the size of the area cleared (in hectares);
d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with Condition 7 of this Permit;
e) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with Condition 8 of this Permit; and
f) rehabilitation activities undertaken in accordance with condition 9 of this Permit.

11. Reporting

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

a) The Permit Holder must provide to the CEO, on or before 31 December of each calendar year, a report containing:
    i. The records required to be kept under condition 10; and
    ii. Records of activities done by the Permit Holder under this Permit between 1 July of the preceding calendar year and 30 June of the current calendar year.
b) If no clearing authorised under this permit has been undertaken, a written report confirming that no clearing under this Permit has been undertaken, must be provided to the CEO on or before 31 December of each calendar year.
c) The Permit Holder must provide to the CEO, no later than 90 calendar days prior to expiry date of the Permit, a written report of records required under condition 10, where these records have not already been provided under condition 11(a).

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of *Phytophthora* species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

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;

local provenance means native vegetation seeds and propagating material from natural sources within 10 and 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.

optimal time means the period from May to June for undertaking *planting*;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

weed/s means any plant -

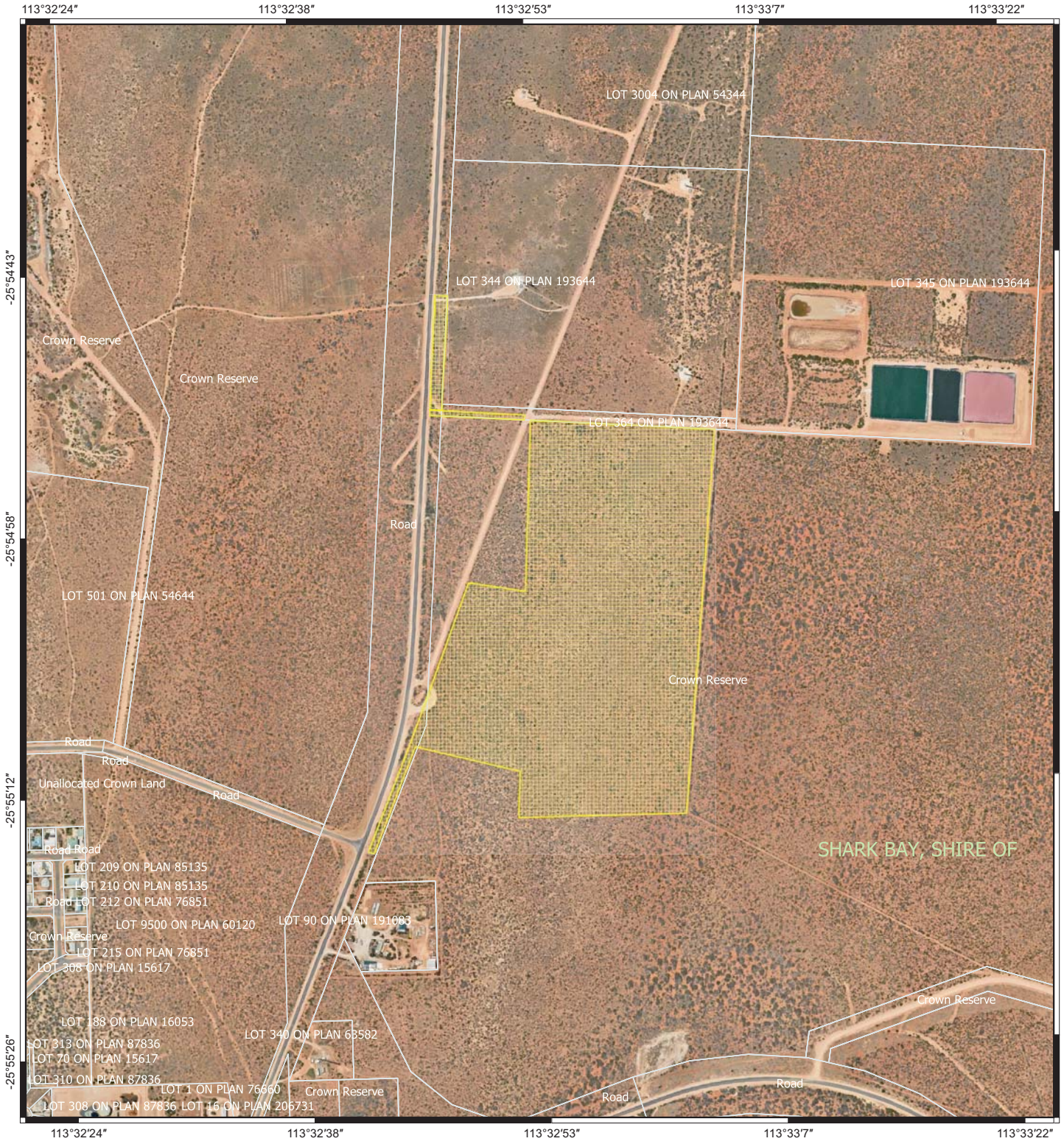
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
(c) not indigenous to the area concerned.

Richard Newman
DIRECTOR
NATIVE VEGETATION PROTECTION

Officer delegated under Section 20
of the Environmental Protection Act 1986

22 May 2020

Plan 8823/1



Legend

- CPS areas approved to clear
- Local Government Authorities
- Cadastre - LGATE 218
- Localities - Landgate

N

0 100 200 300 400 m

MGA 94
Geocentric Datum of Australia 1994

22 May 2020

Richard Newman, Director Native Vegetation Protection

Officer delegated under section 20 of the
Environmental Protection Act 1986

GOVERNMENT OF
WESTERN AUSTRALIA

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

Permit application details

Permit application No.: 8823/1
Permit type: Purpose Permit

Applicant details

Applicant's name: Regional Power Corporation t/a Horizon Power
Application received date: 24 February 2020

Property details

Property: Lot 364 on Plan 193644, Road Reserve (PIN 11428273), Lot 3005 on Plan 54344 (Crown Reserve 49809)
Local Government Authority: Shire of Shark Bay
Localities: Denham

Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
10		Mechanical Removal	Construction of power station

Decision on application

Decision on Permit Application: Grant
Decision Date: 22 May 2020
Reasons for Decision: The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is at varaince to principle (a) and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer determined the proposed clearing will impact three Priority Flora species including *Acanthocarpus affinis rupestris* (P2), *Olearia occidentissima* (P2) and *Triodia plurinervata* (P3), all recorded in relative abundance and distributed throughout the vegetation surrounding the applicaiton area. Given the abundance and distribution of the priority flora species, the proposed clearing is not likely to impact the conservation status of the species.

The vegetation within the application area is suitable for conservation-significant fauna including the Woma, Bilby, Malleefowl and Western Grasswren. All four have been recorded in the local area and are known on the Peron Peninsula. The application area and its surrounding vegetation presents a near uniform structure and species composition with slight variations in the ground cover flora species, and the local area indicates > 99% remnant vegetation. Given the abundance and uniform nature of the vegetation surrounding the application area, the proposed clearing is unlikely to impact on significant habitat for conservation dependent fauna.

The Delegated Officer decided to grant a clearing permit subject to weed and dieback and wind erosion management conditions.

In determining to grant a clearing permit subject to conditions, the Delegated Officer has given consideration to the above and found that the proposed clearing will not lead to an unacceptable risk to the environment.

2. Site Information

Clearing Description The application is to clear 10 hectares of native vegetation within a 24.73 hectare envelope at Lot 3005 on Plan 54344 (Crown Reserve 49809), Road Reserve (PIN 11428273) and Lot 364 on Plan 193644, Denham for the purpose of constructing a power station.

Vegetation Description The vegetation within the application area is mapped as the following Beard Vegetation Association (BVA):

Denham 1101: Shrublands; *Acacia ligulata x rostillifera* thicket; Thicket, Wattle, Casuarina and teatree acacia-allocasuarina-melaleuca alliance. (Shepherd et al, 2001).

The vegetation in part of the application area was surveyed by 360 Environmental (2019a). Only part of the application area was surveyed as the preferred siting of the power station had not been determined at this time. The majority of the vegetation (99.5% or 13.56 hectares) within the survey area was described as:

Mid Sparse Shrubland of *Acacia ligulata* and *Exocarpos aphyllus* over a Low Open Shrubland of *Acacia tetragonophylla*, *Scaevola spinescens* and *Thryptomene dampieri* over a Low Sparse Chenopod Shrubland of *Atriplex paludosa* and *Rhagodia latifolia.*

The remaining 0.07 hectares of 0.50% was recorded as cleared existing track.

Vegetation Condition

The vegetation condition was projected from a survey of vegetation directly adjacent to the application area, undertaken by 360 Environmental, supplied in support of native vegetation clearing permit application CPS 8823/1.

The vegetation across the survey area was recorded and shown in the table below.

Vegetation Condition	Area (ha)	Area (%)
Excellent	11.03	80.92
Very Good	2.53	18.56
Completely Degraded	0.07	0.51
Total	13.63	100.00

Table 1. Vegetation condition

Soil and Landform Type:

The application area is mapped as the following soil types:

- **237Pn – Peron System:** Undulating plains of calcareous sand supporting low acacia shrublands and Lamarchea hakeifolia heaths (DPIRD, 2017).

The Peron System is described as 'Sandy soils are slightly susceptible to wind erosion when exposed through loss of vegetation. Shrub associations are usually relatively dense and contain many unpalatable wood species resistant to degradation'.

Comments:

The local area referred to in the assessment of this application is defined as a 50 kilometre radius measured from the perimeter of the application area.

According to the applicant, the survey provided was conducted prior to the proposed tenure and subsequent preferred siting of the power station being confirmed internally by Horizon Power.

An additional two surveys for unrelated projects within 800 metres north of the application area were undertaken at the same time as the 'Shire of Shark Bay Site, Denham Flora and Fauna Report' and were submitted to the Department of Water and Environmental Regulation (DWER) for locality context (360 Environmental, 2019b; 360 Environmental, 2019c).

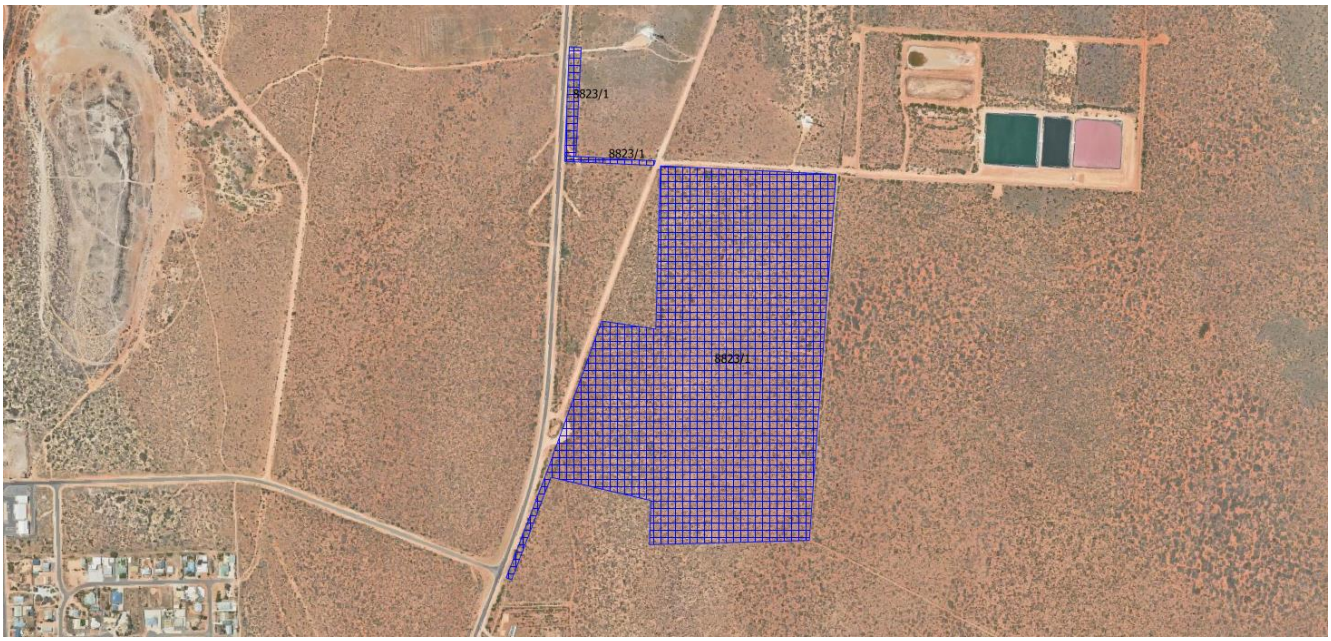


Photo 1: Application area and surrounding environmental attributes

Photo 2: Taken from survey (360 Environmental, 2019a) exhibiting dominant vegetation unit across survey area described in section 2 as Mid Sparse Shrubland of *Acacia ligulata* and *Exocarpos aphyllus* over a Low Open Shrubland of *Acacia tetragonophylla*, *Scaevola spinescens* and *Thryptomene dampieri* over a Low Sparse Chenopod Shrubland of *Atriplex paludosa* and *Rhagodia latifolia.*

Photo 3: Taken from survey (360 Environmental, 2019a) indicating main fauna habitat of survey area, described in the report as Open *Acacia* and *Exocarpos* Shrubland, over *Acacia*, *Melaleuca* and mixed shrubs. This fauna habitat provides breeding and foraging refuge to fauna, particularly small terrestrial birds and reptiles, utilising the shrubs and for cover.

Photo 4: Taken from additional surveys (360 Environmental, 2019b; 360 Environmental, 2019c) indicating the dominant vegetation unit described as Mid Open Shrubland of *Acacia ligulata* and *Exocarpos aphyllus* over a Low Open Shrubland of *Chorizema racemosum, Melaleuca eulobata* and *Thryptomene dampieri* over a Low Open Hummock Grassland of *Triodia plurinervata.*

3. Avoidance and minimisation measures

In the application form for CPS 8823/1, the applicant indicated that it had performed an options analysis which formed a key component of its Business Case for the project which includes consideration of alternatives and a risk assessment. The Business Case is an internal planning and funding document with commercially sensitive information, and the applicant advised that it is unable to provide this information. The options considered were:

- Base Scenario: Do Nothing
- Option 1: Diesel Only Power Station
- Option 2: Centralised Hybrid Diesel Power Station- Higher Penetration of Renewables (conservative baseload)

- Option 3: Centralised Hybrid Diesel Power Station- Low Penetration of Renewables (Recommended Option).

Strategies to minimise clearing

Horizon Power's tender process outlines the environmental requirements for all proponents seeking to submit a bid for the works. Horizon Power assesses tender submissions based on their adherence to the tender schedules. Environmental compliance and ability to demonstrate awareness of best practice environmental management is a key requirement of the tender submissions, through the respective responses to Schedule 8.

A project-specific Environmental Management Plan (EMP) is then developed by the successful contractor, which will address native vegetation clearing including but not limited to strategies to ensure compliance to the native vegetation clearing permit and minimise clearing where possible, as well as other project-related environmental risks and requirements.

Given that the tender has not yet been let, this EMP has not been developed by the successful contractor. Horizon provided DWER with a copy of its Schedule 8 form, which the EMP must address. The EMP must demonstrate the existence of an environmental management system that addresses:

- how the respondent identifies environmental risk;
- the respondent's proposed plan to successfully minimise and manage and, where applicable, remediate the consequences of environmental risks applicable to the Contractors Obligations. Applicable environmental risks might include but are not limited to:
    - ground disturbing activities;
    - environmentally and/or culturally sensitive areas;
    - waste management (prevention, storage, transportation, disposal), Including hazardous waste;
    - flora and fauna protection;
    - emissions to ground (e.g. spills, leaks);
    - emissions to air (e.g. dust, fumes, noise); and
    - environmental approvals (e.g. permits, licenses, works approvals)

In an email from the applicant on 19 May 2020, Horizon Power indicated as a Government Trading Entity, it is committed to reducing environmental impacts as far as practicable and supporting the State Government Greenhouse Gas Emissions Policy (DWER 2019), furthermore that this project, the Denham Hybrid Power Station, is an important step towards achieving the State Government's target of net zero greenhouse gas emissions by 2050.

Horizon Power noted the impact mitigation hierarchy sequence provided in the 'Guide to the assessment of applications to clear native vegetation' (DWER, 2014) and the higher priority given to clearing for public use than private benefit or commercial gain. Horizon Power has confirmed that the clearing undertaken for this project is for public works.

Horizon Power indicated the option to avoid any clearing and continue to operate the existing diesel power station in Denham is not viable on the following grounds:

- This generation uses outdated and inefficient diesel generators
- Potential noise issues
- Carbon emissions associated with inefficient diesel generation
- Safety concerns for Horizon Power operational personnel and contractors
- Parts availability becoming scarce leading to unacceptable risk of extended outages

A key outcome of this project is to provide an improved environmental outcome for Denham, moving generation load from fossil fuel generation to renewable sources, consistent with the State Government Greenhouse Gas Emissions Policy.

Further steps to minimise the clearing footprint are as follows:

- The proposed siting of the power station is to the north of the Lot which increases network connection costs i.e. additional cabling, however makes use of existing cleared access roads and tracks where possible avoiding the need for additional clearing.
- Preferred Option 3 minimises the amount of native vegetation clearing by approximately 1ha over Option 2 i.e. less solar PV being installed.
- Horizon Power does not anticipate utilising the engineering contingency (altering preferred location of power station) but Horizon's preference is to retain in the NVCP rather than seek an amendment should it be required for some unforeseen circumstance e.g. avoidance of disturbance to a heritage site, or unfavourable ground identified through the geotechnical investigation. If it is not needed it will not be used.

The applicant provided the table below summarising indicative areas of disturbance and purpose. Further opportunities to minimise the clearing footprint may be achievable through the project design, however this cannot be determined until heritage and geotechnical investigations have been completed.

Purpose	Area (Ha)
Access Road	1.20
Power Station Site	4.60
Utility Connections	1.20
Topsoil Storage	0.50
Fire Breaks	0.50
Engineering/Contingency	1.00
Total	**10.00**

Table 2. Indicative areas of disturbance and purpose

4. Assessment of application against clearing principles

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

Proposed clearing is at variance to this principle

The application area covers 24.3 hectares, with the proposed clearing covering 10 hectares. The application area is located in the Carnarvon IBRA Bioregion and the Carnarvon - Wooramel (CAR02) subregion. The application sits on the Peron Peninsula, making up part of the Shark Bay area including the Shark Bay Marine Park, Francois Peron National Park, Dirk Hartog Island National Park, Hamelin Pool Marine Nature Reserve, Shell Beach Conservation Park and Monkey Mia Reserve. This area was one of the more mammal rich areas of Western Australia before European settlement (Morris, *et al.,* 2004). The vegetation on the Peron Peninsula is predominantly of the Eremaean Botanical Province, consisting of desert-adapted species such as Acacia, samphire and spinifex (DBCA, 2020a), however the vegetation across Shark Bay also features species related to the South West Botanical Province.

Located at the transition of two botanical provinces, Shark Bay comprises more then 820 known and recorded flora taxa, including 53 species known to be endemic to the Shark Bay area (DBCA, 2020a). A review of the available databases indicated thirty-five conservation significant flora species, listed as Priority species in the Western Austalian context with historical records in the local area (50 km). Of those, five are listed as Priority 1, thirteen are Priority 2, fourteen are Priority 3 and three Priority 4. The nearest is the Priority 2 species *Oleria occidentissima*, contained within the northern portion of the application area, recorded in 2013. The survey (360 Environmental, 2019a) identified 37 conservation significant flora species previously recorded within the local area, ten of which were determined to have a high likelihood of occurring in the application area. Two of those species were recorded during the survey including:

- ***Acanthocarpus affinis rupestris* (P2)** - Rhizomatous, tufted perennial, herb, to 0.5 metres high. Flowersa are white, around May to Jun. Identified from the specimen collected during the survey. This specimen is described to be related to but not identical to *Acanthocarpus rupestris* the Priority 2 species. This species was recorded in all four quadrats, and although is not identified as the Priority species, it is considered to be of the same level of significance. There are two records of *A. rupestris* identified 28.2 km from the Survey Area. Due to the presence of this species in all five quadrats it is considered to be present throughout the Survey Area (360 Environmental, 2019a); and
- ***Olearia occidentissima* (P2)** - Prostrate, straggling to erect shrub, to 0.2 metres high. Fllowers are white/pink, around Jul to Sep. Shallow soils. Recorded in all four quadrats, although specimens were not identified completely to species level due to absence of complete flowering parts. There are two confirmed records of this species within 800 metres of the Survey Area and an additional seven records identified between 1 and 33.3 km from the Survey Area. As there are several nearby records, an extensive area of suitable habitat and records across all quadrats, it is considered that *O. occidentissima* is present and in abundance across the survey site (360 Environmental, 2019a).

Both of these species were found in all five quadrats surveyed across the study site. Two other biological surveys were also conducted by 360 Environmental within 800 metres north of the application area, however they were related to other projects. These included the Synergy Site, Denham - Flora and Fauna Report (360 Environmental, 2019b) and the Water Corporation Site, Denham - Flora and Fauna Report (360 Environmental, 2019c). All three of these surveys recorded the above mentioned Priority 2 species across their study sites in all quadrats. Given the records of both species across several study sites within relatively close proximity to the application area, the Delegated Officer applied a precautionary approach to assessment and assumes both species are distributed across the application area and would be impacted by the proposed clearing. Given the distribution of these species across three different survey sites and the local area retaining > 99 % of its remanant native vegetation, the applied clearing would be unlikely to impact the conservation status of the respective priority species and would not lead to an unacceptable risk to the environment.

As discussed under principle (c), the survey recorded a total of 66 flora taxa rom 45 genera across 26 families. The dominant families were Chenopodiaceae (eight species), Asteraceae (six species), Fabaceae (five species) and the dominant genera were *Acacia* (three species) and *Solanum*. The targeted flora survey focused on areas of suitable habitat for species determined to have a medium to high likelihood of occurring. No threatened flora species as per the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or WA *Biodiversity Conservation Act 2016* (BC Act) were recorded in the application area. As the survey covered only part of the application area, it is not possible for the the presence or absence of any conservation significant flora that would be impacted by the proposed clearing to be definitively determined Two other flora and fauna surveys within 800 metres north of the original survey presented similar results, with no threatened flora species recorded, and the same two P2 species, *Acanthocarpus* aff. *Rupestris* and *Olearia*? o*ccidentissima*. The additional surveys also

recorded the P3 species *Triodia plurinervata* in abundance as the dominant species of the grassland strata across 12.51 ha (92% of survey area) and 13.87 ha (96% of survey area), respectively (360 Environmental, 2019b; 360 Environmental, 2019c). The survey provided in support of CPS 8823/1 also stated the P3 species *T.plurinervata* was observed in abuandance in areas approximately 500 metres north of the survey area. Given the abundance of *T.pluniverta* across the additional survey sites (360 Environmental, 2019b; 360 Environmental, 2019c), and the application area extending appoximately 350 metres north from the survey site, the Delegated Officer has determined this species would be impacted by the proposed clearing. No other threatened or priority flora were recorded during the surveys.

The vegetation in the survey area was mapped as a uniform unit broadly labelled as Myrtaceae low Shrubland and described as Mid Sparse Shrubland of *Acacia ligulata* and *Exocarpos aphyllus* over a Low Open Shrubland of *Acacia tetragonophylla*, *Scaevola spinescens* and *Thryptomene dampieri* over a Low Sparse Chenopod Shrubland of *Atriplex paludosa* and *Rhagodia latifolia* (360 Environmental, 2019a). This vegetation unit represented 99.5 % (13.56 hectares) of the surveyed area, with 0.07 hectares recorded as cleared existing track. Two suveys from within 800 metres of the original survey site also mapped the same two species, *Acacia ligulata* and *Exocarpos aphyllus,* as the dominant overstory vegetation across approximately 93 % (11.78 ha & 13.87 ha) of both survey areas (360 Environmental, 2019b; 360 Environmental, 2019c). The dominant vegetation unit from these surveys was recorded as *Triodia* Hummock Grassland described as Mid Open Shrubland of *Acacia ligulata* and *Exocarpos aphyllus* over a Low Open Shrubland of *Chorizema racemosum, Melaleuca eulobata* and *Thryptomene dampieri* over a Low Open Hummock Grassland of *Triodia plurinervata* (360 Environmental, 2019b; 360 Environmental, 2019c). This indicates a realtively uniform vegetation structure, with slight variations to the understory compostion throughout the vegetation within kilometres of the application area.

As discussed under principle (b), a review of the avilable databases indicated sixty-nine conservation significant fauna species with historical recordings in the local area as listed under the BC Act, EPBC Act, or as Priority species in the state context. Of those, three are listed as Critically Endangered, five Endangered (two under International Agreement - IA), eighteen Vulnerable (two under IA), four Conservation Dependent, thirty-one Migratory and Marine, three Priority 1, one Priority 3, two Priority 4, and two other specially protected species. The Delegated Officer determined that eight of those species were considered likely to be present or use the area for habitat. No fauna species of conservation significance were recorded in the survey area (360 Environmental, 2019a). Given the likelihood of occurrence of the species as discussed under Princinple (b), the application area contains habitat for conservation significant fauna species. However, due to the unform nature of the surrounding vegetation, the habitat was not determined to be significant and the proposed clearing will not lead to an unacceptable risk to the enviroment.

The application area does not contain any mapped State-listed or Commonwealth-listed Threatened Ecological Communities (TEC's) or Priority Ecological Communities (PEC's) as per the BC Act or EPBC Act. The nearest mapped PEC is located 36 km to the south east, recorded as *Hypersaline microbial community number 2 (Hamelin Pool stromatolites)*.

There are no mapped Ecological linkages in the appplication area, nor in the local area (50 km). The vegetation in the local area retains > 99% of its pre-European vegetation extents and is therefore not constrained in its ability to provide linkages to local flora and fauna populations.

Limitations

A large proportion of flora, 13 taxa (19%), were unable to be identified confidently to species level. This was due to the specimens being sterile with no flowering material or fruit present (360 Environmental, 2019a). The recommended primary survey period for the Carnarvon IBRA Bioregion as per the EPA Technical Guidance, occurs 6 – 8 weeks post wet season (March – June). However, during the 2019 wet season the region experienced little to no rainfall. Consequently, because there was no break in season and therefore the survey was not undertaken during the recommended primary survey period. Instead the survey was undertaken in July 2019 (during the dry season), six weeks after a significant rainfall event (60.4 mm recorded between 7 June and 9 June 2019). This is considered adequate conditions for a supplementary survey timing for the Eremaean Botanical Provenance (Environmental Protection Authority, 2016a).

Despite being able to complete the survey during a recommended supplementary survey period following a significant rainfall event, the area still received below average rainfall for the period leading up to the survey. This is considered a moderate limitation of the survey.

The proposed clearing is at variance to this principle given its impacts on the previously mentioned priority flora species and suitable habitat for conservation significant fauna. However, all three flora species are distributed in relative abundance in the vegetation surrounding the aplication area, abundant suitable fauna habitat exists in the vegetation surrounding the application area, and the local area retains > 99 % of its remnant vegetation. This indicates the proposed clearing would not have an impact on the conservation status of the above priority flora and fauna species, and would not cause an unacceptable risk to the environment.

(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.

Proposed clearing not likely to be at variance to this principle

The applicant engaged 360 Environmental to undertake a fauna habitat assessment in a site directly outside the Denham townsite. The survey was conducted from 24 to 26 July 2019, with the aim to verfiy the accuracy of the desktop assessment and to further delineate and characterise the fauna assemblages and fauna habitat in the Survey Area. The field survey consisted primarily of fauna habitat assessments, systematic bird searches and opportunistic fauna observations (360 Environmental, 2019a). Malleefowl (*Leipoa ocellata*) and Bilby (*Macrotis lagotis*) leave obvious evidence of current use, in the form of nesting mounds, tracks and signs of the birds (for Malleefowl) and digging and tracks for Bilby. Therefore, targeted search transects were undertaken throughout the Survey Area, searching for any signs of the species (360 Environmental, 2019a).

As mentioned above, a review of the avilable databases indicated sixty-nine conservation significant fauna species, with historical recordings in the local area. Of those, three are listed as Critically Endangered, five Endagered (two under IA), eighteen Vulnerable (two under IA), four Conservation Dependent, thirty-one Migratory anf Marine, three Priority 1, one Priority 3, two Priority 4, and two other specially protected species. The Delegated Officer determined that eight species were considered likely to be present or utilise the area for habitat. These species and their preferred habitat include:

***Amytornis textilis textilis* – Western Grasswren (P4):** In the Shark Bay region, the species prefers *Acacia* shrubland with dense shrub clumps and lower recumbent shrubs in which foliage extends to the ground (Menkhorst et al., 2017);
***Leipoa ocellata* – Malleefowl (Vulnerable):** Unburned mallee and woodland with abundant litter and low scrub (Morcombe, 2003).
***Pandion cristatus* – Osprey (Migratory and Marine):** Coastal waters and estuaries, beaches islets and reefs - but usually not far out to sea except on islets or exposed reefs. Follows major rivers and wetlands far inland from the coast to larger river pools, even to arid regions where large pools occur in gorges hundreds of kilometres inland (Morcombe, 2003);
***Apus pacificus* – Pacific Swift (Migratory and Marine):** Low to very high airspace over varied habitat, rainforest to semi-desert (Morcombe, 2003);
***Macrotis lagotis* – Bilby (Dalgyte) (Vulnerable):** Variety of inland habitats including Mitchell Grass and stony downs country of cracking clays, desert sandplains and dune fields sometimes containing laterite, with hummock grassland and massive red earths with Acacia shrubland (Van Dyck and Strahan, 2008);
***Aspidites ramsayi (southwest subpop.)* – Woma (southwest subpop) (P1):** The Woma occurs within woodlands, heaths and shrublands, often with spinifex. It shelters mainly in abandoned monitor and mammal burrows and in soil cracks (Wilson and Swan, 2017).

Vegetation types and distinctive landforms were used to identify broad faunal habitats in the Survey Area. These fauna habitats were then assessed for their potential to support species of conservation significance and the quality of habitat they provide to a wider suite of fauna (360 Environmental, 2019a). A total of six fauna habitat assessments were undertaken during the field survey, identifying two fauna habitat types across the survey area. The fauna habitats recorded were Acacia Shrubland covering 13.56 hectares (99.5%) of the surveyed area and Cleared/Completely Degraded covering 0.07 hectares (0.5%). During the reconnaissance survey, targeted searches were conducted for Mallefowl (*Leipoa ocellata*) and Bilby (*Macrotis lagotis*) evidence in the form of nesting mounds, tracks, signs of the birds digging, and tracks from the Bilby (360 Environmental, 2019a).

Malleefowl is found in semi-arid to arid shrublands and low woodlands, especially those dominated by mallee and/or *Acacias*, with an abundance of leaf litter over a sandy substrate required for breeding (360 Environmental, 2019a). The survey area is located within the known distribution of the species, with appropriate habitat in the form of *Acacia* shrubland found within the application area and surrounding vegetation. Project Eden released 65 Malleefowl individuals across 14 sites in Francois Peron National Park on the Peron Peninsula between September 1997 and September 1998, suggesting there are populations known from the surrounding area. Despite this, the preferred habitat for the species, containing Mallee woodland due to higher levels of leaf litter, is not contained with the application area. This indicates the application area is unlikely to present significant breeding or nesting habitat for this species.

The Western Grasswren is moderately common in the Shark Bay area, with the preferred habitat consisting of *Acacia* shrubland with dense clumps of shrubs and lower recumbent shrubs in which foliage extends to the ground (Menkhorst *et al.*, 2017). The species is known to occur in vegetation of a similar composition and structure to that found in the application area. There are four records located within 2 km of the application area in the last fifteen years and the species is known to occur throughout most of the Peron Peninsula (360 Environmental, 2019a). Given the above, the species is highly likely to occur in the application area, and due to its inconspicuous nature (Menkhorst *et al.*, 2017), may have gone undetected during the field survey. The Western Grasswren is likely to utilise the fauna habitat for both breeding, foraging and refuge, however, given the dominance of the *Acacia* shrubland in the vegetation surrounding the application area, the distribution of this avian species across the Peron Peninsula and the local area retaining >99% of its remnant vegetation, the application area does not offer significant habitat for this species that cannot be found in the abundant surrounding vegetation.

The Osprey is a large raptor that is mostly found in coastal areas, offshore islands and the lower sections of rivers. Individuals will often build a large stick nest in a tall, dead or very occasionally live tree, usually in an exposed position close to suitable feeding habitat (NSW, 2004). Given the lack of large trees in the vegetation surrounding the application area, the proposed clearing is unlikely to offer significant habitat for this species. The Osprey is more likely to be an occasional overhead visitor to the area.

The Pacific Swift is an almost exclusively aerial species, foraging and sleeping on the wing. It has a large range over varied habitats ranging from rainforests to semi-arid deserts (Morcombe, 2003). Given this large range and dominant aerial behaviour, this species will not rely on the application area for habitat. In addition, it has not been recorded in the application area or

surrounding area for over 15 years (360 Environmental, 2019a). Therefore, the clearing will not affect habitat significant to this species.

The Bilby is a small burrowing desert bandicoot, formerly present throughout arid and semi-arid Australia, to the western slopes of NSW. It is now scattered in colonies in *Acacia* shrubland and hummock grassland in the Northern Territory to near Broome in Western Australia (Menkhorst & Knight, 2004). The Bilby has also been re-introduced to Peron Peninsula (within Francois Peron National Park) as part of Project Eden with 171 released across 10 sites between 2000 and 2005 (Morris *et al.*, 2004), with some still sighted as recent as 2016 (360 Environmental, 2019a). The application area does contain habitat suitable for the species, however this fauna habitat is consistent throughout the surrounding vegetation and most of the Peron Peninsula. Therefore, the application area vegetation doesn't offer any greater significance than adjacent vegetation and no Bilby activity including diggings, scats or tracks were observed during the targeted survey for this species. It is noted that the survey does not cover the entire application area and it is therefore not possible to determine if evidence of Bilbies would be found in unsurveyed parts of the application area. Given the uniform nature of the vegetation in the survey area, the surrounding vegetation and the Peron Peninsula, it is unlikely that the application area offers significant habitat for this species, and the proposed clearing would not cause a significant impact to the conservation status of the species.

The Woma Python is a desert species most often found in sandy terrain, although sometimes associated with stony environments, directly adjacent to sandy country (360 Environmental, 2019a). The Woma occurs in the arid zones of Western Australia, favouring open myrtaceous heath on sandplains, and dunefields dominated by spinifex (*Triodia spp.*) (DBCA, 2020). The range of this species extends to Shark Bay, however, this signifies the northern most extent of the species' distribution. Given the habitat preferences of the Woma, the application area contains suitable habitat for this species, however it would likely be in relatively low abundance given the location at the extent of its range. The application area does not contain any specialist fauna habitat that could not be accessed in the adjacent vegetation. Given the above, and the abundant remnant vegetation on the Peron Peninsula and local area, it is unlikely the application area offers significant habitat for this species, and the proposed clearing would not cause a significant impact to the conservation status of the species.

A total of 40 terrestrial vertebrate fauna species from 29 families were recorded during the field survey (360 Environmental, 2019a). No fauna species of conservation significance (Threatened or Priority), or evidence of these species such as tracks, scats, nest, diggings, burrows or direct sightings were recorded within or directly surrounding the Survey Area (360 Environmental, 2019a). The survey report indicated the fauna habitat identified in the survey area is considered to be common throughout the surrounding remnant vegetation areas and common throughout the overall Carnarvon bioregion and the subsequent Wooramel (CAR2) subregion (360 Environmental, 2019a).

Given the entire application area was not surveyed during the fauna habitat assessment as the exact location of the construction had not been determined at the time, it is not possible to definitively determine the presence or absence of any conservation significant fauna species in the wider application area. The vegetation in the application area offers suitable habitat for the Woma, Bilby, Malleefowl and Western Grasswren. These species are determined as likely to occur in the application area given their habitat preferences and known distribution in the Peron Peninsula. However, given the abundant remnant vegetation in the local area, and uniform structure and composition of the application area and its adjacent vegetation, the Delegated Officer determined the vegetation proposed to clear unlikely to present significant fauna habitat for that cannot be accessed in the surrounding vegetation. Therefore, the applied clearing is not likely to be at variance to this principle.

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

Proposed clearing is not likely to be at variance to this principle

The applicant engaged 360 Environmental to conduct a flora survey in accordance with *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016a). This guidance states flora surveys for the Carnarvon IBRA bioregion should be conducted 6-8 weeks post the wet season (March – June). During the 2019 wet season, the region experienced little to no rainfall, indicating no break in the seasons and therefore the survey could not be conducted during the recommended primary survey period (360 Environmental, 2019a). To counteract this, the survey was undertaken six weeks after a significant rainfall even (60.4 mm recorded between 7 June and 9 June 2019). This is considered sufficient conditions for a supplementary survey for the Eremaean Botanical Province (EPA, 2016a).

The survey was conducted by 360 Environmental on 24- 26 July 2019 over part of the applied clearing area covering 13.62 hectares. According to the applicant, the preferred siting of the power station had not been determined at this time, and therefore was not specifically surveyed (Kippin, 2020a). Two other surveys (360 Environmental, 2019b; 360 Environmental, 2019c) were conducted within 800 metres north of the application area and have been used in the assessment of this application.

None of the surveys identified any Threatened flora species. All three surveys identified *Eucalyptus beardiana* as having a medium likelihood of occurring in the vegetation in the survey area. Given its distinct size and Mallee form, it's considered that if the species was present, it would have been identified and recorded during the survey. None of the surveys identified this species and it is therefore considered very unlikely to be present in the application area.

Given the above, and the uniform structure and composition of the vegetation surveyed in the application area, the surrounding vegetation and additional survey sites, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this principle

A review of the available databases did not indicate any mapped or known occurrences of any Threatened Ecological Communities (TEC's), listed under the BC Act, within the application area. The nearest mapped TEC is located over 400km away, recorded as the *Moonagin System,* listed as Vulnerable under the BC Act.

The survey did not record any state listed TEC's within the survey area (360 Environmental, 2019a). Neither of the additional surveys recorded any TEC's within 800 metres north of the application area.

Given the lack of TEC-representative vegetation from three areas surveyed, and the relatively uniform structure and composition of the surveyed vegetation, the Delegated Officer determined the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this principle

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The application area is contained within Carnarvon IBRA Bioregion and subsequent Carnarvon - Wooramel (CAR02) sub-region, located at the border of two Botanical Provinces (the South West and Eremaean). A review of the available databases indicates the vegetation in the application area is mapped as the following vegetation associations:

Denham (1101): Shrublands; Acacia ligulata x rostellifera thicket (Shepherd *et al., 2001*).

In assessing the risk of further loss and subsequent cumulative effects, consideration has been given to the extent of native vegetation remaining and what is currently managed as conservation estate:

- as indicated in Table 1, the current vegetation extents for the bioregion and the mapped vegetation complex are all significantly above the 30 per cent threshold;
- also indicated in Table 1, over 70 per cent of the pre-European extent of the mapped vegetation complex within the bioregion is contained in conservation estate; and
- the Shire of Shark Bay retains approximately 99 per cent (4,613,554.78 hectares) vegetative cover, and the proposed clearing will reduce this by approximately 0.0002 per cent.

Given the above, the application area is not likely to be significant as a remnant of native vegetation in an area that has been extensively cleared.

The proposed clearing is not likely to be at variance to this principle.

Table 1: Vegetation representation statistics (Government of Western Australia, 2018)

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed lands (ha)	Extent remaining in all DBCA managed lands (proportion of Pre-European extent) (%)
IBRA bioregion					
Carnarvon	8,382,890.35	8,360,801.46	99.74	12.20	12.17
Beard vegetation association					
1101	17,613.56	15,232.09	86.48	70.29	60.79
Beard vegetation association in IBRA bioregion					
1101	15,232.09	15,232.09	100.00	70.29	70.29
Local Shire					
Shire of Shark Bay	4,637,447.90	4,613,554.78	99.48	7.74	7.70

* Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

** Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

** Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

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

Proposed clearing is not likely to be at variance to this principle

A review of the available databases indicates there are no known or mapped watercourse or wetlands in the application area. The nearest watercourse is located approximately 2.2 km to the north west, mapped as a Little Lagoon Mangrove. The nearest mapped wetland is Shark Bay East, located approximately 36 km to the south east. This is a *Directory of Important Wetlands in Australia* (DIWA)-declared wetland, *and* covers an area of 190 623 hectares.

The original survey and the two additional surveys from the application area and the surrounding vegetation did not identify any flora species that is associated with a wetland or watercourse (360 Environmental, 2019a; 360 Environmental, 2019b; 360 Environmental, 2019c)

Given the above, the proposed clearing is not likely to be at variance to this principle.

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

Proposed clearing is not likely to be at variance to this principle

The application area is mapped as the following soil type:

- 237Pn – Peron System**:** Undulating plains of calcareous sand supporting low acacia shrublands and Lamarchea hakeifolia heaths (Schoknecht *et al.,* 2004; DPIRD,2017).

The broad landforms within this system are described as depositional surface with undulating sandy plains and low coastal dunes; no organised drainage features. The geology of this system is described as quaternary aeolian sands with minor areas of birrida gypsiferous deposits (Schoknecht *et al.,* 2004; DPIRD,2017).

The land degradation risk categories that apply to **Peron System** are (Schoknecht *et al.,* 2004; DPIRD,2017):

- Water Erosion: 100% of the map unit has a nil to moderate water erosion risk
- Wind Erosion: no data available
- Salinity: 95% of the map unit has a slight to nil salinity risk;
- Subsurface Acidification: 100% of map unit has a low subsurface acidification risk
- Flood risk: 100% of the map unit has a nil flood risk
- Water logging: 80% of map unit has a low to nil waterlogging risk

The sandy soils of the application area have the potential to be at risk of wind erosion. DWER has conditioned the permit to allow staged clearing, aiming to minimise the effects of wind erosion at the site prior to construction commencing. Given the above land degradation risks, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing may be at variance to this principle

A review of the available databases indicated that the closest conservation area is Francois Peron National Park, located 3 km north of the application area, vested as Crown Land under the Conservation Commission of Western Australia. According to the available database, the Francois Peron National Park covers a legal area 52 586 hectares. The Shark Bay Marine Park is mapped as 1.1 km away from the application, covering the vast majority of the marine waters in the Shark Bay area.

Given the distance to the National Park and the extent of the clearing, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this principle

The groundwater in the application area is mapped at 7,000 - 14,000 mg/L Total Dissolved Solids, which according to the Water and Rivers Commission is classified as Saline (Waters and Rivers Commission, 2000). Given the proximity to marine waters (1.4 km), this level of groundwater salinity would be standard for the area. The vegetation to be cleared, according to surveys of the adjacent area, consists of Mid Sparse Shrubland of *Acacia ligulata* and *Exocarpos aphyllus* over a Low Open Shrubland of *Acacia tetragonophylla*, *Scaevola spinescens* and *Thryptomene dampieri* over a Low Sparse Chenopod Shrubland of *Atriplex paludosa* and *Rhagodia latifolia* (360 Environmental, 2019a), mixed with Mid Open Shrubland of *Acacia ligulata* and *Exocarpos aphyllus* over a Low Open Shrubland of *Chorizema racemosum, Melaleuca eulobata* and *Thryptomene dampieri* over a Low Open Hummock Grassland of *Triodia plurinervata* (360 Environmental, 2019b; 360 Environmental, 2019c). The clearing of these species is not likely to raise the groundwater in the area given the shrub and ground cover structure of the vegetation. No large tree species were mapped in the three surveys provided to DWER in support of this application (360 Environmental, 2019a; 360 Environmental, 2019b; 360 Environmental, 2019c).

As discussed under principle (g), the sandy soils in the application area are mapped as having a low water logging risk (Schoknecht *et al.,* 2004; DPIRD,2017), and due to their sandy nature would offer high permeability to any surface water captured in the application area.

Given the above, the proposed clearing is not likely to be at variance to this principle.

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

Proposed clearing is not likely to be at variance to this principle
As discussed under principle (f) and (i), the application area does not contain any known or mapped wetlands or watercourses and has a low risk of waterlogging due to the permeability of the sandy soils.

Given the above, the proposed clearing is not likely to be at variance to this principle.

Planning instruments and other relevant matters.

Exemption from the need for planning approvals

In accordance with Section 51O(4) of the *Environmental Protection Act 1986,* in consider a clearing matter, the CEO shall have regard to any planning instrument, or other matter, that the CEO considers relevant. In assessing the application, DWER queried the applicant and the local government authority, the Shire of Shark Bay, on planning approvals for the project, which DWER had not received as part of the application submission. The Shire of Shark Bay's planning consultant provided the following information indicating Horizon Power is a 'Section 6 Body' and therefore exempt from the need for planning approvals (Bushby, 2020):

The term "public authority" is defined in section 4 of the Planning and Development Act 2005 as meaning any of the following:
(a) a Minister of the Crown in right of the state;
(b) a department of the public service, state trading concern, state instrumentality or state public utility; and
(c) any other person or body, whether corporate or not, who or which, under the authority of any written law, administers or carries on for the benefit of the state, a social service or public utility.

The Western Australian Planning Commission Planning Bulletin 94 states that 'Any body that can demonstrate compliance with section 4(c) is deemed to be a public authority. For example, a corporation such as Western Power is deemed to be a public authority for planning and development purposes if:
(a) it carries out work under the Electricity Corporations Act 2005 and the Energy Operations (Powers) Act 1979;
(b) the work is for the benefit of the state; and
(c) the work is a public utility (provision of electricity).'

The Department of Treasury website states that the Western Australian Government owns and operates three statutory electricity corporations: Western Power, Synergy and Horizon Power. The Government established four corporations on 1 April 2006 after the split-up of Western Power Corporation (a government owned electricity utility that controlled the production, transmission, distribution and retailing of electricity in Western Australia).

Horizon Power operates under the Electricity Corporations Act 2005, the same as Western Power, and the proposal is for provision of electricity which is a public utility. The attached WAPC Planning Bulletin explains the exemptions that apply to Western Power, and those same exemptions would apply to Horicon Power.

The exemption applies under Section 6 of the Planning and Development Act 2005 which states that:
"nothing in this Act interferes with the right of the Crown, or the Governor, or the Government of the state, or a local government -
(a) to undertake, construct or provide any public work; and
(b) to take land for the purposes of that public work."

This essentially gives the bodies referred to in section 6, called "section 6 bodies", the power to undertake a public work or take land for the purposes of a public work without obtaining development approval from the responsible authority (being the Shire of Shark Bay) under the relevant planning scheme (being the Shire of Shark Bay Local Planning Scheme No 4).

In addition to the above Section 60 of the Energy Corporations Act states that the Electricity Networks Corporation (Western Power) and the Regional Power Corporation (Horizon Power) are not required to comply with the provisions of an interim development order or a local planning scheme when undertaking works for the extension, expansion or enhancement of an electricity distribution or transmission system.

Based upon the above information, the Shire of Shark Bay deems Horizon Power to be exempt from the need for planning approvals and the clearing approval can be processed. The Shire has encouraged Horizon to prepare a Local Development Plan/Concept Plan so this can be advertised to the community.

No Aboriginal sites of significance have been mapped within the application area.

The clearing permit application was advertised on the DWER website on 10 March 2020 with a 21 day submission period. No public submissions were received in relation to this application.

4. References

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5. GIS Datasets

- Aboriginal Sites of Significance
- Clearing Regulations - Environmentally Sensitive Areas
- Carnaby's cockatoo: breeding, roosting, feeding
- Department of Biodiversity Conservation and Attractions, Tenure
- Geomorphic Wetlands, Swan Coastal Plain
- Groundwater salinity, statewide
- South west forest vegetation complexes
- Hydrology, linear
- IBRA Australia
- Land for Wildlife
- PDWSA, CAWSA, RIWI Act Areas
- Remnant vegetation
- SAC Biodatasets (accessed January 2019)
- Soils, statewide
- South coast significant wetlands
- Town Planning Scheme Zones