



Application for Clearing Permit – Lot 360  
Fairway Drive, Fairway Drive Road Reserve  
and Broome Road Road Reserve, Broome

Supporting Documentation

7 January 2015

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# 1 AREA OF PROPOSED WORK

## 1.1 Project Background

The Clearing Permit is required for a 2 year period beginning March 2015. The purpose of up to 3.7 ha of clearing within an application area of 27.2 ha is to supply power to the proposed LandCorp Broome Road Industrial Estate via the:

- Installation of an additional Ring Main Unit (RMU) within Lot 360, Fairway Drive; and
- Installation of an underground feeder (via 6 kms of high voltage cabling) within Lot 0 Fairway Drive Road Reserve and Lot 0, Lot 392, Lot 423, and Lot 424 Broome Road Road Reserve.

## 1.2 Land Details

Table 1 below outlines the land details of the land parcels identified within the proposed area of clearing. Insert 1 displays these.

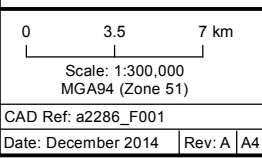
**Table 1-1: Land Details (Landgate, 2014)**

Name	Volume/Folio	PIN Number	Landowner
Lot 360 on Deposited Plan 67926	LR3159/423	11877132	Reserve under Management Order to Regional Power Corporation
Lot 0 Fairway Drive (Road Reserve)	N/A	11479498	Reserve under Management Order to the Shire of Broome
Lot 0 Broome Road (Road Reserve)	N/A	11500361 11731369 1164417	Reserve under Management Order to Main Roads WA
Lot 392 Broome Road (Road Reserve)	N/A	1079320	Reserve under Management Order to Main Roads WA
Lot 423 Broome Road (Road Reserve)	N/A	11229931	Reserve under Management Order to Main Roads WA
Lot 424 Broome Road (Road Reserve)	N/A	11229932	Reserve under Management Order to Main Roads WA

Please refer to Appendix A for Certificate of Title for Lot 360 on Plan 67926 and Appendix B for Letters of Authority from Landowners.



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## Horizon Power Regional Location

Figure: 1



## 1.3 Clearing Requirements

### 1.3.1 Purpose of Clearing

The purpose of up to 3.7 ha of clearing within an application area of 27.2 ha is to supply power to the proposed LandCorp Broome Road Industrial Estate via the:

- Installation of an additional RMU within Lot 360, Fairway Drive;
- Installation of an underground feeder (via 6 kms of high voltage cabling) within Lot 0 Fairway Drive Road Reserve and Lot 0, Lot 392, Lot 423 and Lot 424 Broome Road Road Reserve;
- Approximately every 250m along the cable route a cleared area of up to 36m<sup>2</sup> will be required for laydown areas for cable drums and associated equipment; and
- Approximately every 500m along the cable route access tracks will be required to allow for vehicle and equipment access from the main road to the proposed line route.

### 1.3.2 Scale of Clearing

Up to 3.7 ha of native vegetation will be cleared primarily by mechanical methods within an application area of 27.2 ha. Where possible existing tracks and cleared areas will be utilised to gain machinery and equipment access along the proposed cable route.

### 1.3.3 Timeframe for Clearing Permit

The Clearing Permit is required for a 2 year period beginning March 2014. The exact timing of the clearing of vegetation may vary pending receipt of the native vegetation clearing permit and weather conditions.

## 2 EXISTING ENVIRONMENT

### 2.1 Topography, Geology and Soils

The proposed area of clearing is located on the flat to gently undulating plain of the Dampier Peninsula. The Dampier Peninsula is underlain by the ancient (Pre-Cambrian) rocks of the Canning Basin. The Geological Survey of Western Australia (1982) indicates that the geology of the proposed area of clearing comprises of "Red sand, fine to medium, minor silt: Aeolian".

The primary soil-type of the Dampier Peninsula is the pindan, which developed during the Quaternary period on desert dune sandstone. The soils of the area are red earthy sands, which are of wind-blown origin (GHD, 2009). On the Dampier Peninsula the pindan soils form extensive undulating plains with little surface drainage. Seasonal runoff forms sheets of water behind the coastal dune systems (GHD, 2009). The pindan soils are overlain by a layer of more recent, coarser and unconsolidated sand, assisting in water penetration, plant establishment and growth (GHD, 2009).

### 2.2 Drainage and Hydrology

There are no watercourses or wetlands within or in close proximity to the proposal area of clearing. Roebuck Bay has been identified by the Department of Sustainability, Environment, Water Population and

Communities (SEWPaC, 2014) as an internationally significant wetland (RAMSAR listed site), located within 10 km of the proposal area of clearing. However, this RAMSAR listed wetland will not be impacted by the proposed clearing activities.

## 2.3 Pre-European Vegetation

During the 1970s, John Beard and Associates conducted a systematic survey of native vegetation, describing the vegetation systems in Western Australia and mapped at a scale of 1:250 000 in the south-west and at a scale of 1:1 000 000 in less developed areas. The vegetation survey of Western Australia maps and explanatory memoirs (1974-1981) are credited to J.S. Beard (or Beard with various co-authors).

Beard's vegetation maps attempted to depict the native vegetation as it was presumed to be at the time of settlement, and is known as the pre-European vegetation type and extent and has since been developed in digital form by Shepherd et al. (2002). Native vegetation types represented in the proposed area of clearing and their regional extent and reservation status are shown below in Table 2-1.

**Table 2-1: Vegetation Extent and Status in Dampierland IBRA Region**

Vegetation Association Number	Association Description	Pre-European Extent (ha)	Current Extent (ha) in Dampierland IBRA Region	% Remaining	% Pre-European Extent in ICUN Class I-IV Reserves
750	Shrublands, pindan; <i>Acacia tumida</i> shrubland with grey box & cabbage gum medium woodland over ribbon grass & curly spinifex	1229175.94	1227005.04	99.8	2.3

## 2.4 Vegetation Types

The proposed area of clearing falls within the Dampier Botanical District, which is broadly characterised by Pindan formation on sandplains (Beard, 1979). Vegetation can be classified as Pindan or Pindan Woodland, with both vegetation types dominated by *Acacia* species. Pindan is a shrubland with areas of *Acacia* thickets; while Pindan woodland also has an emergent tree layer, specifically of *Eucalyptus* and *Grevillea* species, *Gyrocarpus americanus*, *Erythrophloeum chlorostachys*, *Bauhinia cunninghamii*, *Adansonia gregorii*, *Buchanania obovata* and *Terminalia canescens* (GHD, 2009).

The Dampier District also has areas of Low Tree Savanna in which the grass layer is dominated by *Chrysopogon* species and the tree layer by *Adansonia gregorii*, *Bauhinia cunninghamii*, and species of *Eucalyptus*, *Grevillea*, *Hakea* and *Acacia* (GHD, 2009).

The majority of the Dampier Peninsula contains a relatively uniform environment of low relief undulating red sandplains with few creeks or hills. The vegetation is predominantly Pindan, grassland wooded by scattered trees, particularly *Eucalypts*, with a middle layer of *Acacias* (GHD, 2009).

## 2.5 Vegetation Condition

In 2009 GHD undertook a field survey adjacent to and including some areas along Fairway Drive and Broome Road Road Reserve. The survey results indicated that the majority of the area showed evidence of

disturbance. Disturbance areas were most evident along roads and tracks and within and adjacent to the private properties (GHD, 2009). These areas were rated Condition 4 to 6 (Good to Completely Degraded) of the Vegetation Condition Rating Scale (GHD, 2009).

## 2.6 Flora of Conservation Significance

As per the NatureMap Report (DPaW, 2014) and EPBC Act Protected Matters Report (SEWPAC, 2014), no Declared Rare Flora have been recorded within the proposed area of clearing.

One record of Priority 3 *Glycine pindanica* was located within close proximity to the proposed area of clearing (Appendix C).

For more detailed information, please refer to Appendix C and D.

## 2.7 Threatened Ecological Communities

As per the NatureMap Report (DER, 2014) no threatened or priority ecological communities have been recorded within the proposed area of clearing.

For more detailed information, please refer to Appendix C.

## 2.8 Fauna of Conservation Significance

As per the NatureMap Report (DPaW, 2014) one record of a species Protected under National Agreement *Merops ornatus* (Rainbow Bee-eater) has previously been recorded within proximity of the proposal area of clearing. The Rainbow Bee-eater is a 'common and widespread species' (GHD, 2009) and is unlikely to be significantly impacted by the small scale of clearing proposed by Horizon Power.

For more detailed information, please refer to Appendix C.

## 2.9 Land Use Planning

### 2.9.1 Water Protection Areas

Public Drinking Water Source Areas (PDWSAs) is a collective term used for the description of Water Reserves, Catchment Areas and Underground Pollution Control Areas declared (gazetted) under the provisions of the *Metropolitan Water Supply, Sewage and Drainage Act 1909* or the *Country Areas Water Supply Act 1947*. The protection of PDWSAs relies on statutory measures available in water resource management and land use planning legislation.

The Department of Water (DoW) policy for the protection of PDWSAs is based on three risk management-based priority classification areas and two types of protection zones.

The DoW Geographic Data Atlas indicates that no PDWSAs are located within or in close proximity to the proposed area of clearing. The nearest PDWSA is approximately 4 km to the north-east of the site. (DoW 2014).



## **2.9.2 Reserves and Conservation Areas**

No reserves or conservation areas are located within or adjacent to the proposed area of clearing. A small DPaW Reserve (ID 47964) is located approximately 500m to the west. This Reserve is vested in the Conservation Commission of W.A for the purpose of rehabilitation of wildlife, wildlife veterinary clinic, wildlife education and caretaker accommodation.

### 3 ASSESSMENT AGAINST THE CLEARING PRINCIPLES

The proposal to clear no more than 3.7 ha of native vegetation for the installation of approximately 6 km of high voltage cabling within the proposal clearing area is considered to comply with the 10 principles for clearing native vegetation as described in Schedule 5 of the *Environmental Protection Act, 1986*.

**Table 3-1: Assessment Against the Clearing Principles**

Principle	Compliant	Detail
1. Native vegetation should not be cleared if it comprises a high level of biological diversity	Yes	The surrounding region contains native vegetation with similar and higher levels of biological diversity compared to that within the proposed area of clearing.
2. 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 indigenous to Western Australia	Yes	One record of conservation significance fauna <i>Merops ornatus</i> (Rainbow Bee-eater) has been recorded within close proximity to the proposed area of clearing. The Rainbow Bee-eater is a common and widespread species and is unlikely to be significantly impacted by the small scale clearing proposed by Horizon Power.  Given that the vegetation within the proposed area of clearing has been degraded and there is vegetation in similar and better condition available in the surrounding area, the vegetation in the proposed area of clearing is considered unlikely to comprise habitat necessary for the maintenance of significant fauna.
3. Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora	Yes	No Threatened Flora has been recorded within or in close proximity to the proposed area of clearing.  One record of Priority 3 species <i>Glycine pindanica</i> was recorded in close proximity to the proposal area but is unlikely to be impacted by proposed clearing activities.
4. 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	Yes	No Threatened Ecological Communities occur within or in close proximity to the proposed area of clearing.
5. Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared	Yes	The vegetation types recorded in the area are widespread throughout the Kimberley region and have not been extensively cleared and are not considered remnants of native vegetation.
6. Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland	Yes	No surface water resources are located within the proposed area of clearing.

Principle	Compliant	Detail
7. Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation	Yes	<p>The proposed area of clearing is situated within previously disturbed land parcels within road reserves.</p> <p>Clearing associated with the proposal is unlikely to cause significant land degradation caused by wind or water erosion.</p>
8. 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.	Yes	No conservation areas occur adjacent or nearby to the proposed area of clearing.
9. 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	Yes	No surface water resources are located within the proposed area of clearing. Therefore, clearing of native vegetation is unlikely to have any impact on surface water resources. The proposal area is not located within a PDWSA and clearing of native vegetation is unlikely to have any impact on groundwater quality.
10. Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding	Yes	Clearing of native vegetation is unlikely to cause or exacerbate the incidence or intensity of flooding in the area.

## 4 REFERENCES

Department of Environment Regulation (DER). (2014, April). A Guide to the Exemptions and Regulations for Clearing Native Vegetation Under Part V of the Environmental Protection Act 1986, Version 3 .

Department of Parks and Wildlife. (2014, December 17). NatureMap Species Report from NatureMap [Online Search Tool].

Department of Sustainability, Environment, Water, Population and Communities (SEWPAC). (2014, December 17). *EPBC Act Protected Matters Report. Protected Matters Search Tool.*

Department of Water (DoW). (2014, December 18). *Geographic Data Atlas [Online] Government of Western Australia.* Retrieved from <http://www.water.wa.gov.au/idelve/dowdataext/index.jsp>

GHD. (2009). *LandCorp Broome North: Southern Portion (Area A) Preliminary Environmental Impact Assessment and Biological Survey.* Publically available report prepared for Landcorp.

Landgate. (2014, December 18). *Map Viewer [Online].* Retrieved from <http://www.landgate.wa.gov.au/corporate.nsf>

Shepard, D., Beetson, G., & Hopkins, A. (2001). *Native Vegetation in Western Australia. Technical Report 249.* Western Australia, South Perth: Department of Agriculture.