Denham Hybrid Power Station – Native Vegetation Clearing Permit Application Supporting Document

February 2020

DISCLAIMER

The information contained in this report is confidential, and is intended for the stated purpose only. This document or its contents must not be made available to external personnel or entities without the prior written approval of Horizon Power Management.

1. INTRODUCTION

1.1 Background

Horizon Power (HP) are proposing to construct a hybrid power station in Denham, Western Australia. To facilitate construction of the power station and associated supporting infrastructure, HP is seeking approval from the Department of Water and Environmental Regulation (DWER) to clear up to 10 Ha of native vegetation.

The proposed clearing envelope is located in Reserve 49809 (Figure 1), subject to a Management Order to the Shire of Shark Bay. Horizon Power, supported by Shire of Shark Bay, have submitted a request to the Department of Planning Lands and Heritage to enable Shire of Shark Bay to relinquish an approximately 20 Ha portion of Reserve 49809 back to the state for the benefit of HP for the purposes of Electricity Generation and Associated Infrastructure.

1.2 Scope and Purpose

This document has been prepared in support of HP's Native Vegetation Clearing Permit (NVCP) application made under Section 51E of Part V of the *Environmental Protection Act 1986 (EP Act).* The scope and purpose of this document is to report on the proposed clearing against the *Ten Clearing Principles* as outlined in Schedule 5 of the EP Act based on desktop review and field assessments of Flora and Fauna undertaken in the area (360 Environmental, 2019a/b/c).

2. AREA OF ACTIVITIES

2.1 Native Vegetation Clearing

The indicative areas of native vegetation clearing required are outlined in Table 2, with clearing to be minimised wherever possible. The majority of the clearing, including the Power Station Site, will be located within the area of proposed tenure, with only access roads and utility connections occurring outside this area. The proposed clearing envelope is depicted in Figure 1.

Table 2: Indicative areas of disturbance purpose.

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**

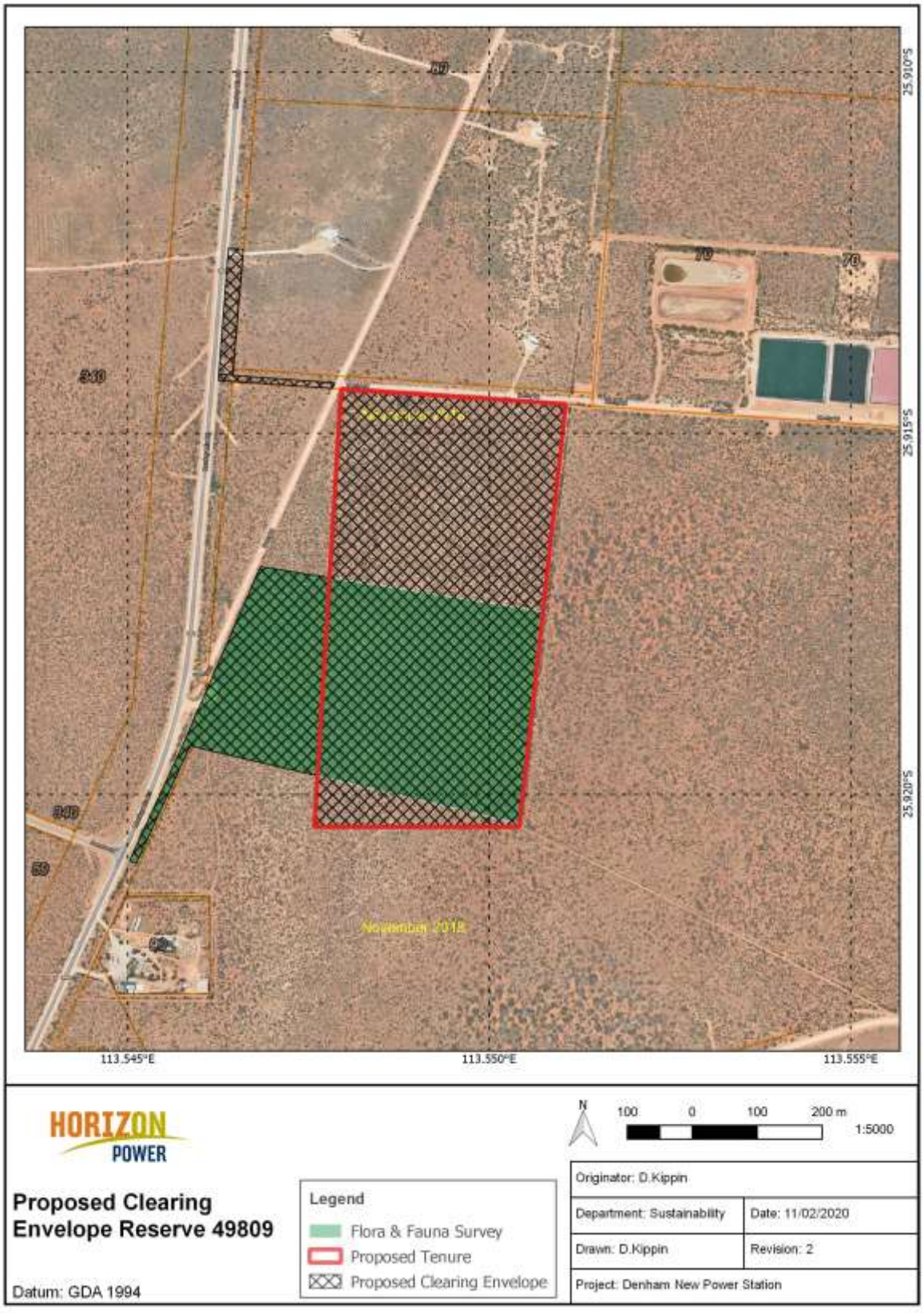

Figure 1 – Proposed Clearing Envelope Reserve 49809

3. ASSESSMENT OF VEGETATION CLEARING

An assessment of the required clearing (up to 10 Ha) within the proposed clearing envelope with respect to DWER's *Ten Clearing Principles* was undertaken (Table 1). The assessment is based on flora and fauna survey undertaken by 360 Environmental Pty Ltd (2019a) in an area overlapping and adjacent the proposed location as outlined in Figure 1. Supporting information has also been included from a further two flora and fauna surveys undertaken by 360 Environmental Pty Ltd in the adjacent area (<1 km) (2019b & 2019c).

This assessment concluded the proposed clearing associated with the project is unlikely to be at variance with the Ten Clearing Principles.

Table 2: Assessment of proposed clearing against DWER's Ten Clearing Principles

Principle (Native Vegetation should not be cleared if-)	Assessment	Outcome	References
(a) it comprises a high level of biological diversity	Two DBCA listed Priority flora are considered to have been recorded; Acanthocarpus affinis rupestris (P2), considered to be present throughout the survey area and Olearia occidentissima (P2). Acanthocarpus affinis rupestris was also present in three of four quadrants in two adjacent survey sites (28.3 Ha total) and was "considered to be present throughout the survey area".	The proposed clearing is unlikely to be at variance to this principle.	360 Environmental (2019a) - Section 4.3 and 5.1
(b) it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia	The Survey Area does not contain any specialist fauna habitat for any of the above conservation significant species, and the fauna habitat is common, extending to the north and south of the Survey area, and likely throughout the Peron Peninsula	The proposed clearing is unlikely to be at variance to this principle.	360 Environmental (2019a) - Section 6.0
(c) it includes, or is necessary for the continued existence of, rare flora	No Threatened flora species pursuant to the EPBC Act 1999 and/or gazetted as Threatened/Declared Rare Flora pursuant to the BC Act 2016 were recorded during the survey.	The proposed clearing is unlikely to be at variance to this principle.	360 Environmental (2019a) - Section 4.3.4

(d) it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community	One Priority Ecological Community listed by the State and identified within 20 km radius of the Survey Area. None of the vegetation types identified across the Survey Area are representative of the PECs identified in the desktop assessment due to the absence of suitable habitat required to support the PEC.	The proposed clearing is unlikely to be at variance to this principle.	360 Environmental (2019a) - Section 5.1.5
(e) it is significant as a remnant of native vegetation in an area that has been extensively cleared	One broad vegetation type was mapped over the Survey Area (Denham 1101). Locally 99.8% of the Pre-European extent remains (16,260 ha) with over 9,500 ha located in DBCA managed lands. The proposed clearing envelope exists within the Denham 1101 vegetation type.	The proposed clearing is unlikely to be at variance to this principle.	360 Environmental (2019a) - Section 2.3.1
(f) it is growing in, or in association with, an environment associated with a watercourse or wetland	The Survey Area does not intersect any major watercourses or water bodies.	The proposed clearing is unlikely to be at variance to this principle.	360 Environmental (2019a) - Section 2.24
(g) the clearing of the vegetation is likely to cause appreciable land degradation	Given the permeable nature of the sandy soils within the project footprint the proposed clearing is unlikely to cause appreciable land degradation in the form of water erosion, water logging or flooding. A review of the ASRIS risk mapping (ASRIS 2017) indicates that the project footprint is located within an area that has an extremely low probability of occurrence of acid sulfate soils (1-5 per cent chance of occurrence within small localised areas) with a very low degree of confidence.	The proposed clearing is unlikely to be at variance to this principle.	ASRIS (2017)

(h) the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area	The proposed clearing is located adjacent infrastructure (Water Treatment Plant and Wind Turbines) and major road. The Survey Area is not identified within a Conservation Area. The closest areas of conservation to the Survey Area are described below: • Francois Peron National Park located 2.7 km to the north of the Survey Area and is vested under the Conservation Commission of Western Australia • Shark Bay Marine Park, inclusive of Little Lagoon, located 1.7 km to the north west of the Survey Area and is vested under the Marine Parks and Reserves Authority	The proposed clearing is unlikely to be at variance to this principle.	360 Environmental (2019a) - Section 2.3.3
(i) the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water	It is considered unlikely that any clearing will significantly disturb or interrupt any natural drainage and surface run-off patterns. However, during heavy localised rainfall events erosion may occur in cleared areas leading to temporary soil erosion and/or sedimentation. These impacts are expected to be minimal and short-term. Furthermore, given the depth to groundwater (~21 m, Site: DEN298) it is considered unlikely that clearing will impact groundwater. Given appropriate management measures are undertaken during the project, the proposed clearing is unlikely to cause deterioration in the quality of surface or underground water.	The proposed clearing is unlikely to be at variance to this principle.	Bureau of Meteorology (2020)

(j) the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.	Given the sandy nature of the soils within the Project area and limited clearing proposed, it is unlikely that the removal of vegetation would cause or exacerbate the incidence or intensity of flooding or localised waterlogging in the local area.	The proposed clearing is unlikely to be at variance to this principle.	360 Environmental (2019a) – Section 2.2.3

4. REFERENCES

360 Environmental Pty Ltd. 2019a. Shire of Shark Bay Site – Flora and Fauna Report. Report prepared for Horizon Power.

360 Environmental Pty Ltd. 2019b. Synergy Site, Denham – Flora and Fauna Report. Report prepared for Horizon Power.

360 Environmental Pty Ltd. 2019c. Water Corporation Site, Denham – Flora and Fauna Report. Report prepared for Horizon Power.

Australian Soil Resource Information System (ASRIS). 2017. Accessed January 2020. http://www.asris.csiro.au

Bureau of Meteorology (BoM). 2020. Accessed January 2020. http://www.bom.gov.au/water/groundwater/explorer/map.shtml