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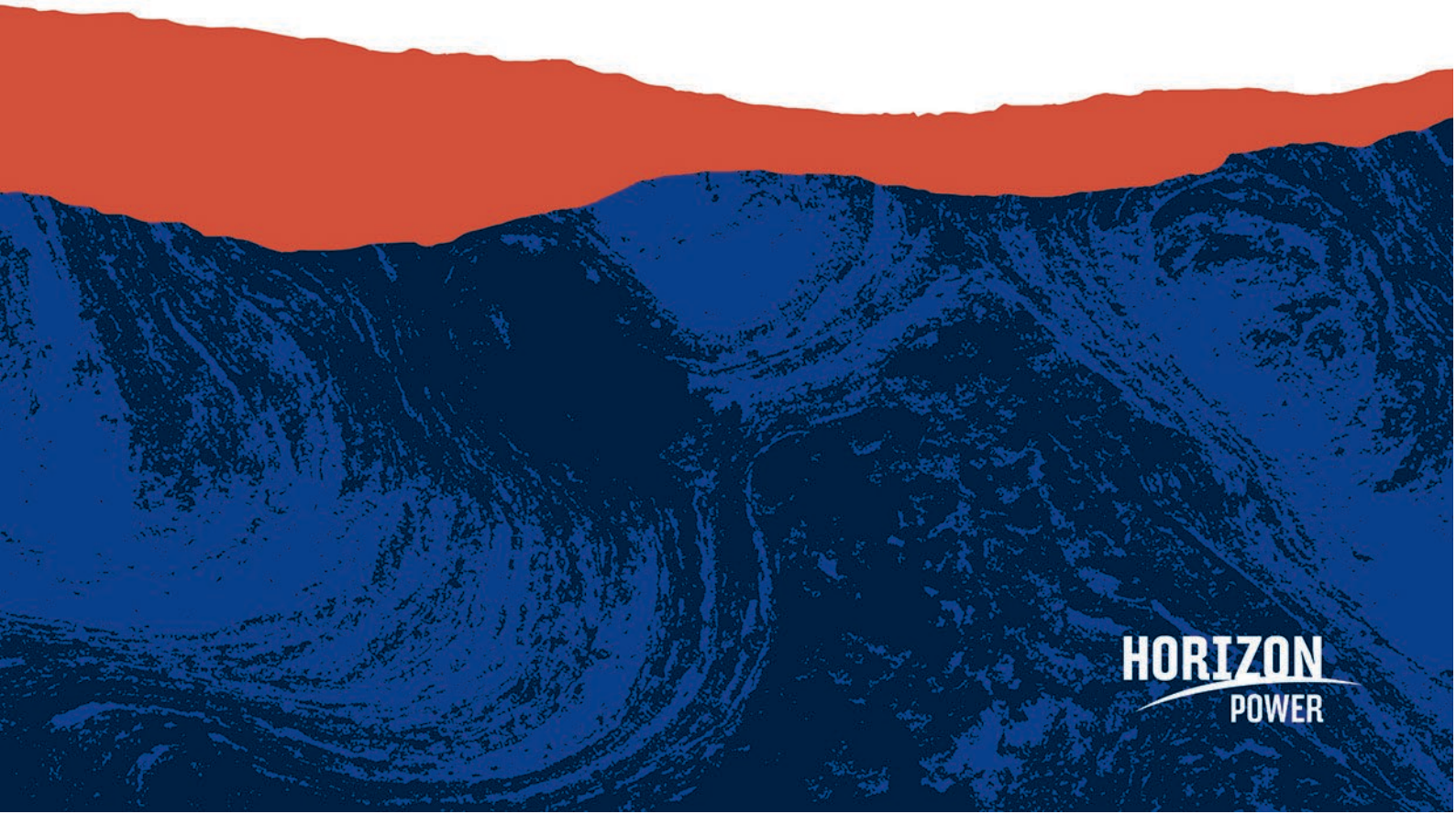
Midwest Towns Renewable Infrastructure Project – Gascoyne Junction, Menzies, Nullagine

Construction Environmental Management Plan

November 2024



Contents

1 Introduction

1.1 Project Context and Scope

Regional Power Corporation, trading as (T/A) Horizon Power, is a Western Australian (WA) Government Trading Enterprise (GTE) and the state's regional and remote energy provider. Horizon Power operates under the *Electricity Corporations Act 2005* and is governed by a Board of Directors accountable to the Minister for Energy.

Horizon Power is proposing to develop future energy systems in Gascoyne Junction, Menzies and Nullagine (the Project). The location of the Project is shown within the three Development Envelopes (DEs), shown in Figure 1, Figure 2 and Figure 3.

The Project as part of a program to transition mid-west and remote towns to renewable energy. The final design and footprint required for the Project will be determined once geotechnical surveys are undertaken.

At Gascoyne Junction, temporary clearing of native vegetation will be required for geotechnical surveys including geotechnical testing and incidental clearing (driving over and parking on native vegetation) for vehicle / machinery access to test sites. Temporary clearing of native vegetation will also be required for stringing and winching of the connection transmission or distribution lines and a laydown area for construction. A total of 1.69 ha of temporary clearing of native vegetation is required at Gascoyne Junction. An additional 7.01 ha of permanent clearing of native vegetation will be required at Gascoyne Junction for connection corridors, access tracks, fire breaks and solar infrastructure.

There will be no temporary clearing at Menzies and Nullagine, as both sites will be permanently cleared of native vegetation. Menzies requires 2.83 ha of permanent clearing of native vegetation, and Nullagine requires 1.42 ha of permanent clearing of native vegetation. This will allow for geotechnical surveys, which will be mainly incidental clearing (driving over and parking on native vegetation) for vehicle / machinery access to test sites. Clearing will also be undertaken for stringing and winching of the connection transmission lines, laydown areas, solar infrastructure, the connection corridors and access tracks.

The future energy systems are currently modelled to comprise of:

– Up to 1.37 megawatts (MW) of solar infrastructure, up to 0.39 MW BESS (battery energy storage system) inverter and up to2.84 MWh of battery capacity at Gascoyne Junction
– Up to 2.33 MW of solar infrastructure, up to 0.43 MW BESS inverter and up to3.64 MWh of battery capacity at Menzies
– Up to 0.85 MW of solar infrastructure, up to 0.24 MW BESS (batter energy storage system) inverter and up to 4.9 MWh of battery capacity at Nullagine.

Specific detail of the proposed clearing is provided in Section 2.2 of this document.

A Native Vegetation Clearing Permit (NVCP) will be required from the Department of Water and Environmental Regulation (DWER).

1.2 Scope and purpose

This Construction Environmental Management Plan (CEMP) has been developed to outline environmental management measures to be implemented by Horizon Power and its contractors during the construction of the Project. This includes, but is not limited to, measures to manage dust, erosion and spread of weeds during clearing of native vegetation.

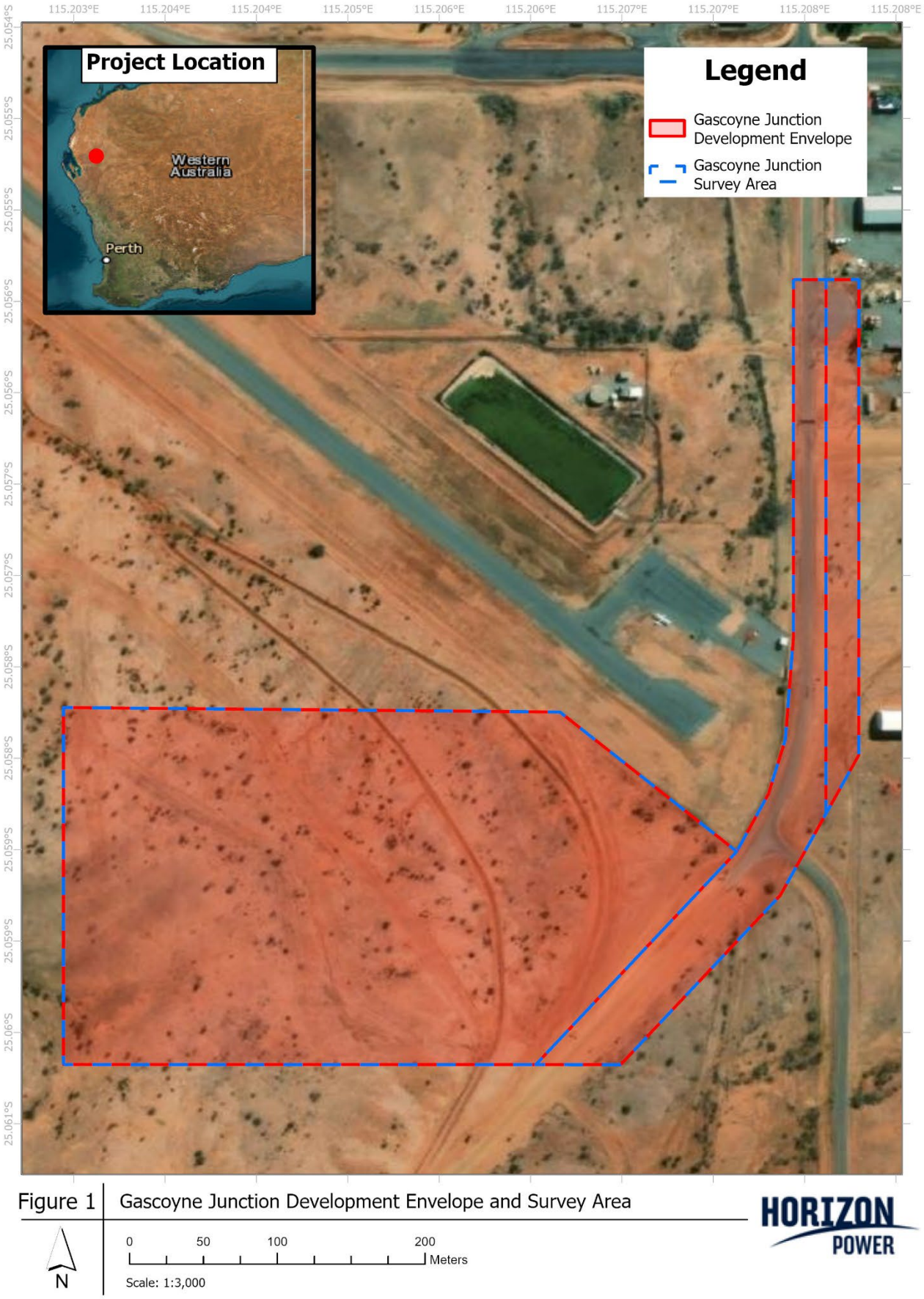


Figure 1 Gascoyne Junction Development Envelope and Survey Area

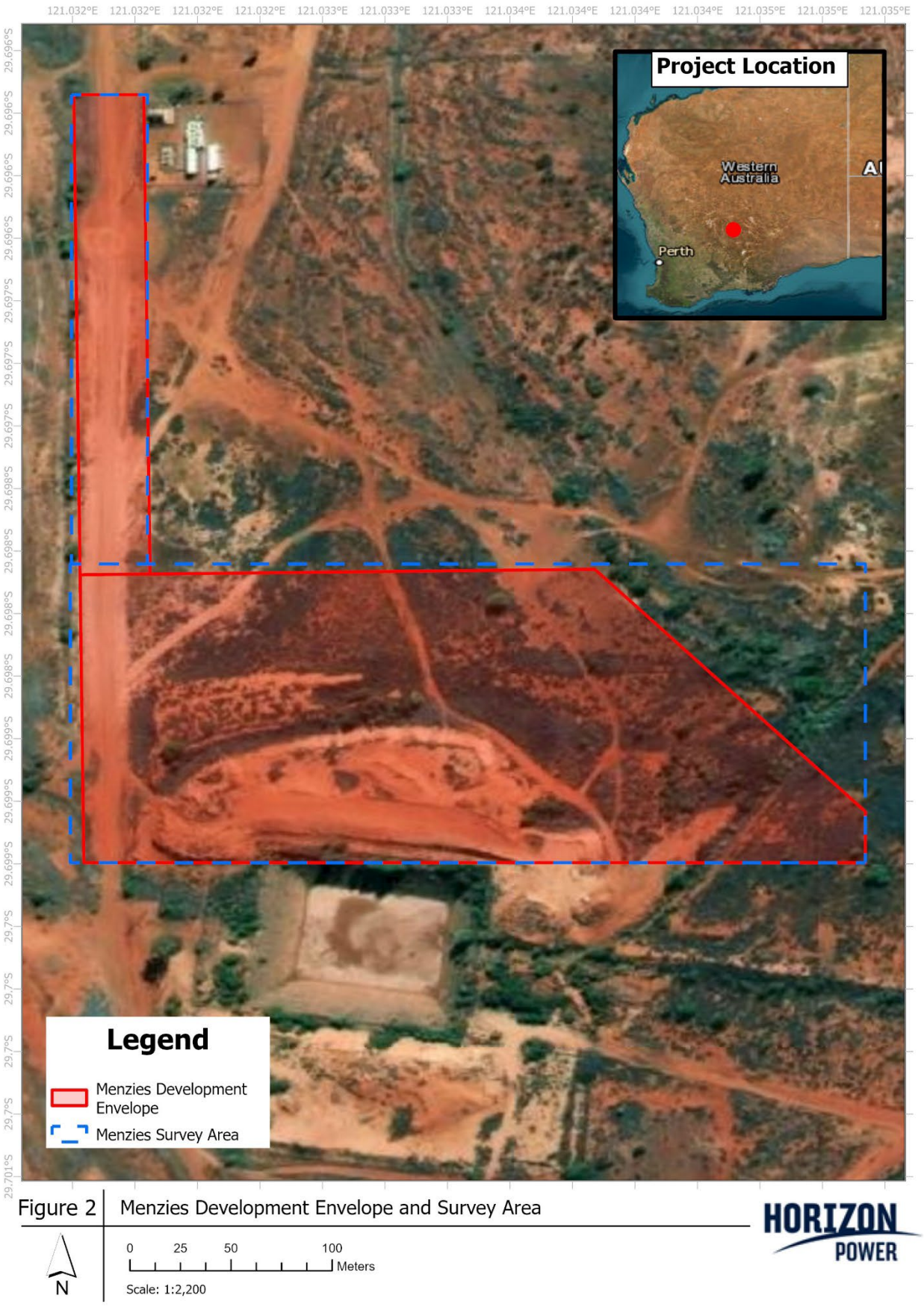


Figure 2 Menzies Development Envelope and Survey Area

Figure 3 Nullagine Development Envelope and Survey Area

2 Description of the Activity

2.1 Activity Overview

Geotechnical survey works will be required for the Project and will consist of mainly incidental clearing (driving over and parking on native vegetation) for vehicle / machinery access to test sites, as well as mechanical clearing at test sites

The Project will consist of the construction of several future energy systems including renewable infrastructure.

A five-year clearing permit is requested to accommodate supplier readiness, procurement of batteries and renewables technology with clearing undertaken within 3 months of construction.

2.2 Clearing of Native Vegetation

The final design and footprint required for the Project will be determined once geotechnical survey works are undertaken. All clearing will be undertaken within the DEs (Figure 1, Figure 2 and Figure 3).

Clearing at all sites will be required for geotechnical surveys, which will be mainly incidental clearing (driving over and parking on native vegetation) for vehicle / machinery access to test sites. Clearing will also be undertaken for stringing and winching of the connection transmission lines, laydown areas, solar infrastructure, the connection corridors and access tracks.

There will be temporary and permanent clearing at Gascoyne Junction, whereas the entire DEs at Menzies and Nullagine will be permanently cleared. The clearing at each site is shown in Table 1.

The combined area of permanent and temporary clearing of the four DEs is 12.95 ha.

Clearing of native vegetation within the DE will only be undertaken as specified by the Clearing Permit, including the extent and method of clearing to be undertaken and any specific management measures outlined in the permit conditions.

Table 1 Clearing estimated per site

Site	Proposed clearing	Clearing breakdown	Clearing purpose
Gascoyne Junction	8.70 ha	Temporary clearing: 1.69 ha	Geotechnical surveys, stringing and winching of the connection transmission lines and laydown areas
		Permanent clearing: 7.01 ha	Solar infrastructure, the connection corridors and access tracks
Menzies	2.83 ha	All permanent clearing	Geotechnical surveys, stringing and winching of the connection transmission lines, laydown areas, solar infrastructure, the connection corridors and access tracks.
Nullagine	1.42 ha	All permanent clearing	Geotechnical surveys, stringing and winching of the connection transmission lines, laydown areas, solar infrastructure, the connection corridors and access tracks.
TOTAL	**12.95**		

3 Avoidance Measures

Initial avoidance and minimisation was undertaken during site selection, including placement of the proposed infrastructure adjacent to the existing assets to reduce the clearing associated with additional transmission infrastructure. A large area was surveyed to allow for further refinement during site selection, to remove environmental constraints from the DE.

The following avoidance measures have also been applied:

- VT09 was identified in the Menzies Survey Area and is associated with a minor drainage line. The DE was modified to avoid this vegetation type/fauna habitat. As this minor drainage line is located outside of the DE, no impacts from the Project are expected.
- The Nullagine DE has been modified to avoid the following environmental sensitivities that were recorded in the Survey Area:
  - 2 Priority Flora species (*Acacia aphanoclada* (Priority 1) and *Solanum* sp. Mosquito Creek (A.A. Mitchell et al. AAM 10795) (Priority 1))
  - A Declared Pest flora species (*Calotropis procera*)
  - A Western Pebble-mound Mouse Mound.

4 Management Measures

The management measures listed in Table 2 will be implemented during geotechnical investigations and construction of this Project. Clearing of native vegetation will occur as per the conditions in the NVCP issued by DWER.

Table 2 Management Measures to be Implemented During Geotechnical Investigations and Construction

Aspect	Management Measure
Geotechnical works	
Extent of Clearing	– No clearing is permitted outside the DEs (Figure 1, Figure 2 and Figure 3) – Where possible, pre-existing access tracks will be used, and vehicles and machinery will exit the DE along the same route used for access. – Areas of degraded, sparsely vegetated and/or previously cleared areas will be preferentially selected for the location of test pit and laydown areas. – Mechanical clearing for the development of formal access tracks is not proposed during geotechnical works. – Works will be undertaken systematically to minimise re-run and compaction of access tracks. – The clearing locations are to be demarcated with flagging tape, GPS or similar prior to clearing activities. – A pre-clearing toolbox will be held so all staff are aware of their responsibilities under the permit. – Clearing areas are to be checked by an Environmental Specialist or Site Supervisor prior to clearing.
Flora and vegetation	– Areas that are degraded, sparsely vegetated and/or previously cleared will be used preferentially for laydown and access tracks. – Mechanically cleared areas will be restored, 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 to prevent compaction. – The clearing area allows for driving over vegetation to access geotechnical sites. Driving on vegetation will be kept to the minimum required to perform the works. – Movement of vehicles and machinery will be in convoy along access tracks/ routes and will not go into adjacent vegetation.
Fauna	– 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. – Construction personnel will not touch, feed or otherwise directly interact with fauna. – Vehicle and machinery speeds within the DE will be restricted to reduce the likelihood of fauna strike.
Weeds	– All vehicles and machinery will arrive clean on site.

Aspect	Management Measure
	– Movement of vehicles and machinery will be restricted to the DE or established tracks and roads.
Soils and erosion	– Standard construction measures regarding erosion and sediment control will be implemented during construction works. – Designated access tracks will be applied to prevent additional disturbance.
Dust	– Standard construction dust control and mitigation measures will be implemented during clearing. This may include the use of a water trucks, or similar. – Ground disturbance and clearing of vegetation will be restricted during high winds if dust cannot be adequately controlled. – Reduced vehicle speed limits will be applied in areas of unconsolidated soil. – Use of defined routes for machinery/ vehicles travelling on unsealed roads.
Noise	– The contractor will comply with the Environmental Protection (Noise) Regulations 1997 – Complaints regarding noise will be recorded and investigated by Horizon Power.
Waste	– Rubbish will be disposed of in appropriate containers and all waste will be removed from the site.
Contamination	– Works are to immediately cease if hydrocarbons affected soil are seen or smelled, or if suspected asbestos containing materials are uncovered during works. – Works may recommence once the contamination status has been determined and the contamination is addressed.
Hydrocarbons and chemicals	– Hydrocarbons and chemicals will be appropriately managed on site to prevent spills, including maintaining equipment in good working order in accordance with manufacturers specifications. – No refuelling will be undertaken within 50 m of a waterway, drain or drainage line. – Hydrocarbons will be appropriately stored at least 50 m away from drainage lines and stored in an appropriate bunded container. – Refuelling will be undertaken on hardstand or using catch trays only. Uncontrolled refuelling is not permitted. – Chemicals will be appropriately stored.
Heritage	– Should aboriginal cultural heritage materials be uncovered during construction works, works are to stop immediately within 20 m of the find. The Contractor is to contact the Horizon Project Manager and an incident will be raised. The area will be cordoned off and no access permitted to the area by people until the incident is investigated and resolved.
Construction	
Extent of Clearing	– No clearing is permitted outside the DEs (Figure 1, Figure 2 and Figure 3). – 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 12.95 ha of clearing is undertaken for the Project. – A pre-clearing toolbox will be held so all staff are aware of their responsibilities under the permit.
Flora and vegetation	– Areas that are degraded, sparsely vegetated and/or previously cleared will be used preferentially for laydown and access tracks. – Trees and tall shrubs will be avoided in the selection of access routes and laydown areas, where possible.
Fauna	– 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. – Construction personnel will not touch, feed or otherwise directly interact with fauna. – Vehicle and machinery speeds within the DE will be restricted to reduce the likelihood of fauna strike.

Aspect	Management Measure
Weeds	– The Contractor will ensure that no weed-affected soil, mulch, fill or other material is brought into the DE. – Vehicles and machinery will arrive clean, and weed control will be undertaken at the site post-construction as required. – Movement of vehicles and machinery will be restricted to the DE or established tracks and roads.
Dewatering	– If dewatering is proposed by the construction contractor at Gascoyne Junction, a licence will be required from the Department of Water and Environmental Regulation to construct wells and undertake dewatering/groundwater extraction.
Erosion and soils	– Standard construction measures regarding erosion and sediment control will be implemented during construction works. – Designated access tracks will be applied to prevent additional disturbance. – Acid sulphate soils will be managed in accordance with the ASSMP (if required pending geotechnical investigations, in accordance with the *Treatment and management of soils and water in acid sulfate soil landscapes* (DER, 2015b[1]).
Dust	– Standard construction dust control and mitigation measures will be implemented during clearing. This may include the use of a water trucks, or similar. – Ground disturbance and clearing of vegetation will be restricted during high winds if dust cannot be adequately controlled. – Reduced vehicle speed limits will be applied in areas of unconsolidated soil.
Noise	– The contractor will comply with the Environmental Protection (Noise) Regulations 1997 – Complaints regarding noise will be recorded and investigated by Horizon Power.
Waste	– Rubbish will be disposed of in appropriate containers and all waste will be removed from the site.
Hydrocarbons and chemicals	– Hydrocarbons and chemicals will be appropriately managed on site to prevent spills, including maintaining equipment in good working order in accordance with manufacturers specifications. – No refuelling will be undertaken within 50 m of a waterway, drain or drainage line. – Hydrocarbons will be appropriately stored at least 50 m away from drainage lines and stored in an appropriate bunded container. – Refuelling will be undertaken on hardstand or using catch trays only. Uncontrolled refuelling is not permitted. – Chemicals will be appropriately stored.
Heritage	– Should aboriginal cultural heritage materials be uncovered during construction works, works are to stop immediately within 20 m of the find. The Contractor is to contact the Horizon Project Manager and an incident will be raised. The area will be cordoned off and no access permitted to the area by people until the incident is investigated and resolved.

[1] Department of Environment Regulation 2015b, Treatment and management of soils and water in acid sulfate soil landscapes, May 2015, Perth, Western Australia