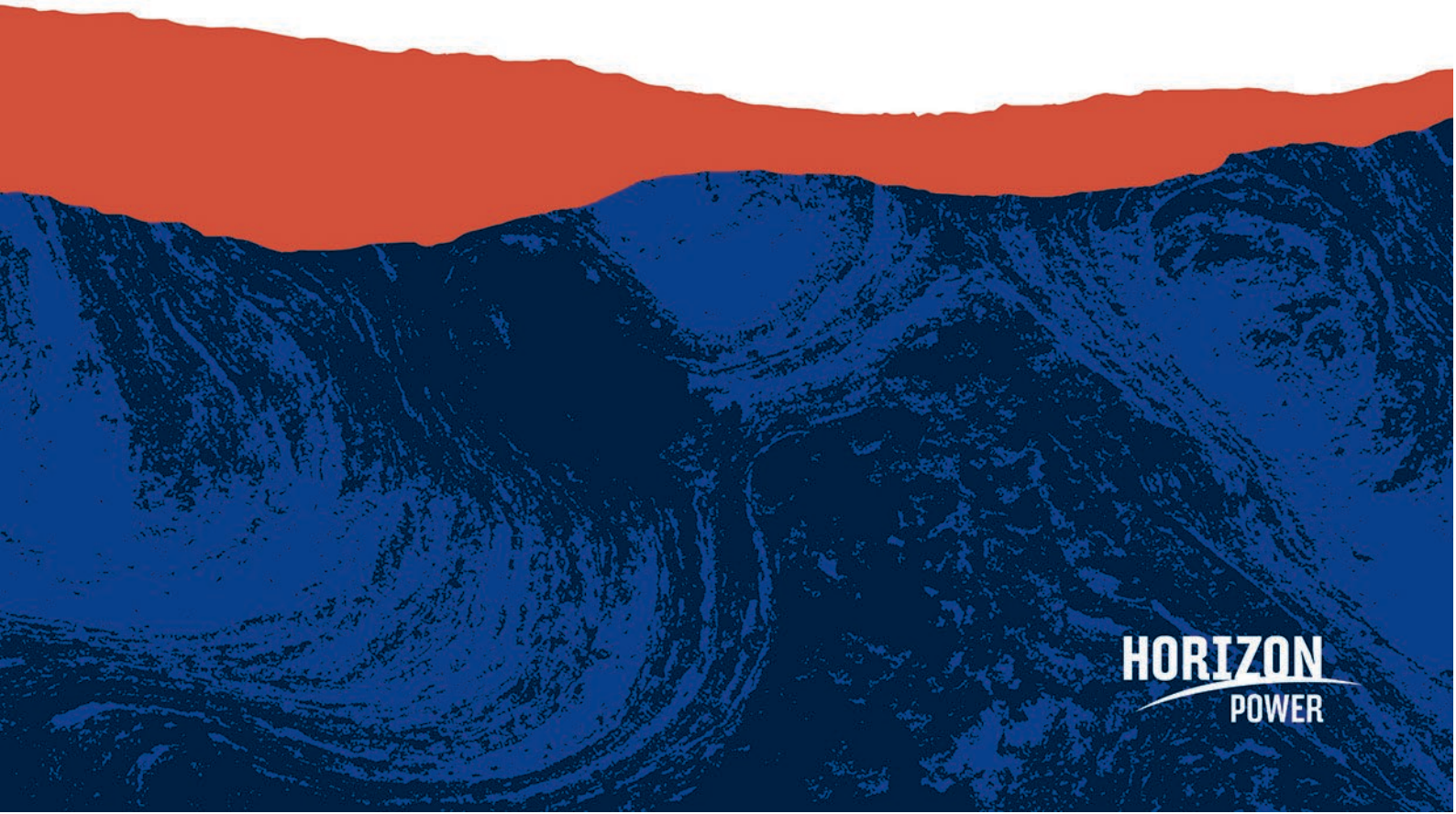
Midwest Towns Renewable Infrastructure Project - Native Vegetation Clearing Permit

Gascoyne Junction, Menzies, Nullagine

Supporting Document

November 2024



Contents

1 Introduction

1.1 Project Context

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 in WA (the Project). The Project is 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 to 2.84 MWh of battery capacity at Gascoyne Junction
- Up to 2.33 MW of solar infrastructure, up to 0.43 MW BESS inverter and up to 3.64 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.

A Native Vegetation Clearing Permit (NVCP) will be required from the Department of Water and Environmental Regulation (DWER). Horizon Power met with DWER in 2023 and identified that the sites can be assessed together under a single clearing permit application.

1.2 Scope and Purpose

This document has been prepared to support a NVCP application for the Project. Specifically, this document provides further detail regarding the proposed activities (Section 2) and related clearing (Section 3).

To support environmental approvals for the Project, ecological surveys were undertaken by GHD (2023). The results of these surveys, as relevant to the proposed clearing, are summarised in Section 4 of this document and have been taken into account when avoiding and mitigating Project environmental impacts (Section 6).

An assessment of the 10 Clearing Principles as outlined in '*A guide to the assessment of applications to clear native vegetation*' (DER 2014) has also been undertaken and is presented Section 8.

A Construction Environment Management Plan (CEMP) has also been prepared in support of the NVCP Application and is provided in Appendix A.

2 Description of the Activity

2.1 Project Location

Development Envelopes (DEs) have been identified for each of the sites for this clearing permit application. The DEs are described in Table 1 and shown in Figure 1, Figure 2 and Figure 3.

Table 1 Development Envelope locations

Site	Size of Development Envelope (ha)	Development Envelope location	Shire	Neighbouring land uses
Gascoyne Junction	10.78	Freehold Lot 501 on DP409810, CT2926/988	Shire of Upper Gascoyne	Freehold, unallocated crown land, roads, weather station, residential, waste disposal site
		Road - Pimblee Road Lot 551 on DP71572, LR3023/901		
		Road - Pimblee Road Lot 553 on DP71572, LR3023/902		
		Road No title PIN 11477822		
Menzies	4.85	Reserve 50507 Lot 301 on DP49818, LR3158/525 Unmanaged for the purpose of 'Railway Purposes'	Shire of Menzies	Residential, road, crown land, camping, railway reserve, recreation
		Road- Mahon Street No title PIN 11428738		
		Road - Trafalgar Street No title PIN 3464570		
		Reserve 54363 Lot 561 on DP424406, LR3176/426 Managed by 'Regional Power Corporation' for 'Electricity Purposes'		
		Reserve 49393 Lot 560 on DP424406, LR3176/425 Managed by 'Shire of Menzies' for 'Water'		
Nullagine	2.91	Lot 440 on DP67092, CT2753/407 Registered Proprietor: Regional Power Corporation	Shire of East Pilbara	Common unallocated crown land, power station

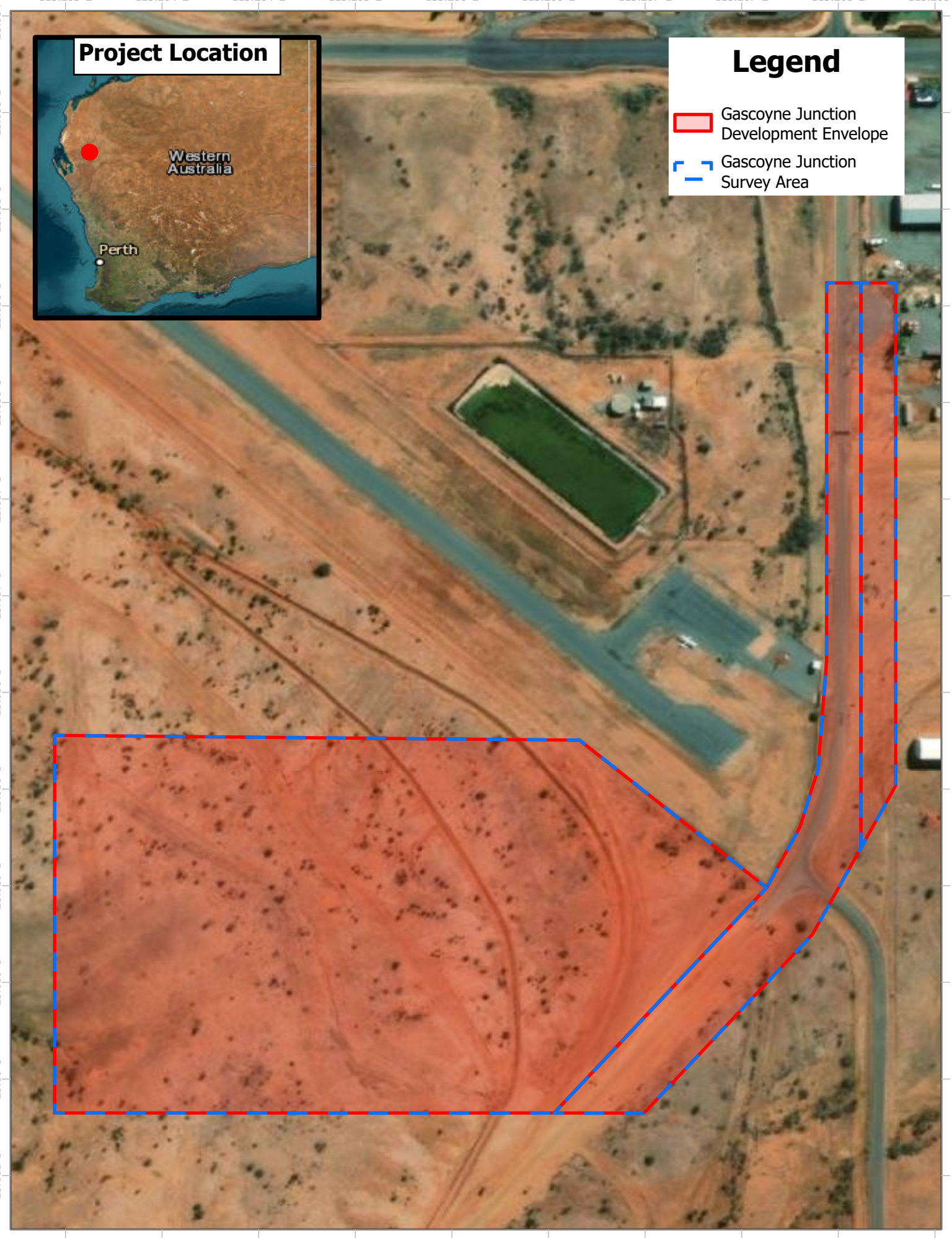


Figure 1 | Gascoyne Junction Development Envelope and Survey Area

N

0 50 100 200 Meters

Scale: 1:3,000

HORIZON POWER

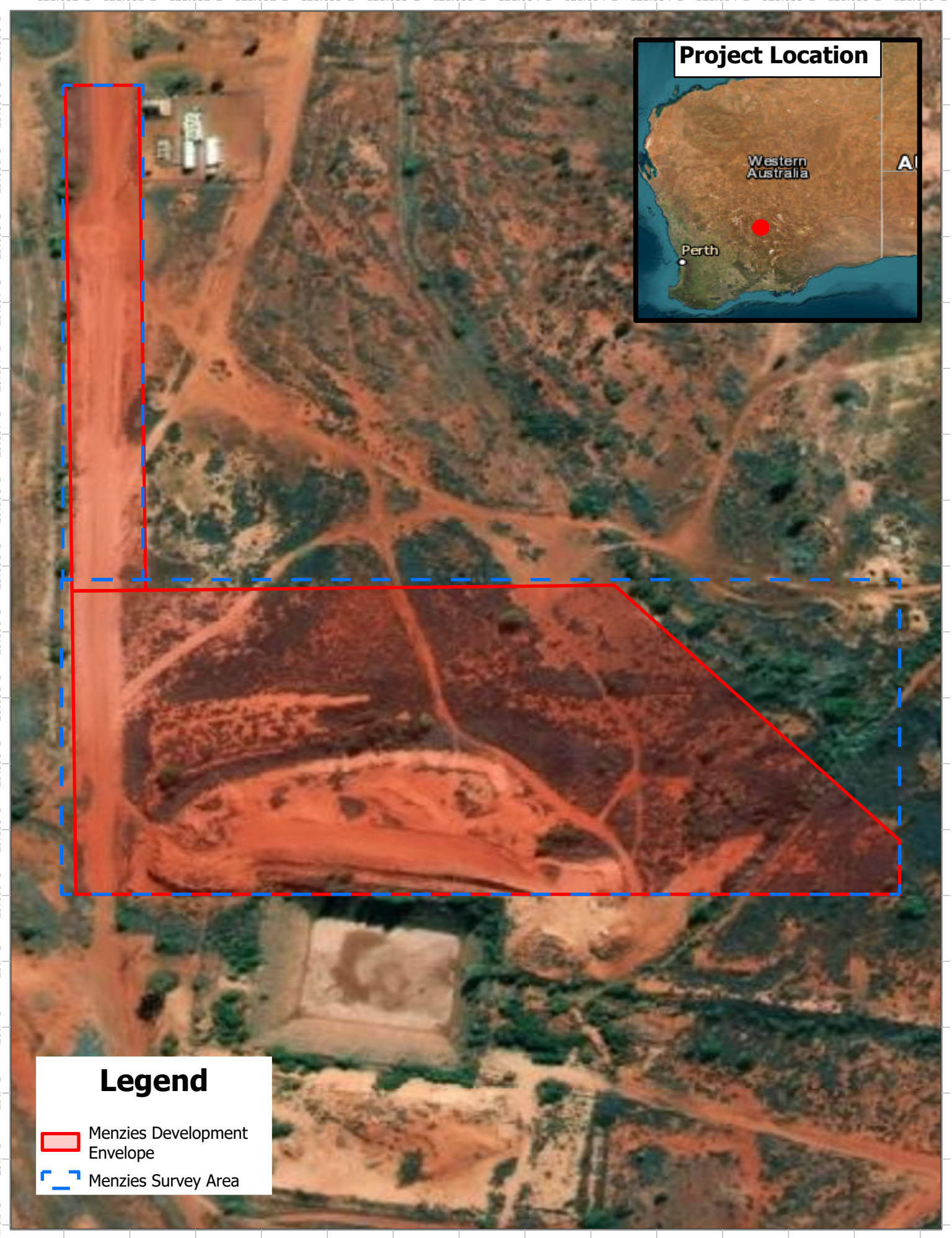


Figure 2 | Menzies Development Envelope and Survey Area

N

0 25 50 100 Meters

Scale: 1:2,200

HORIZON POWER

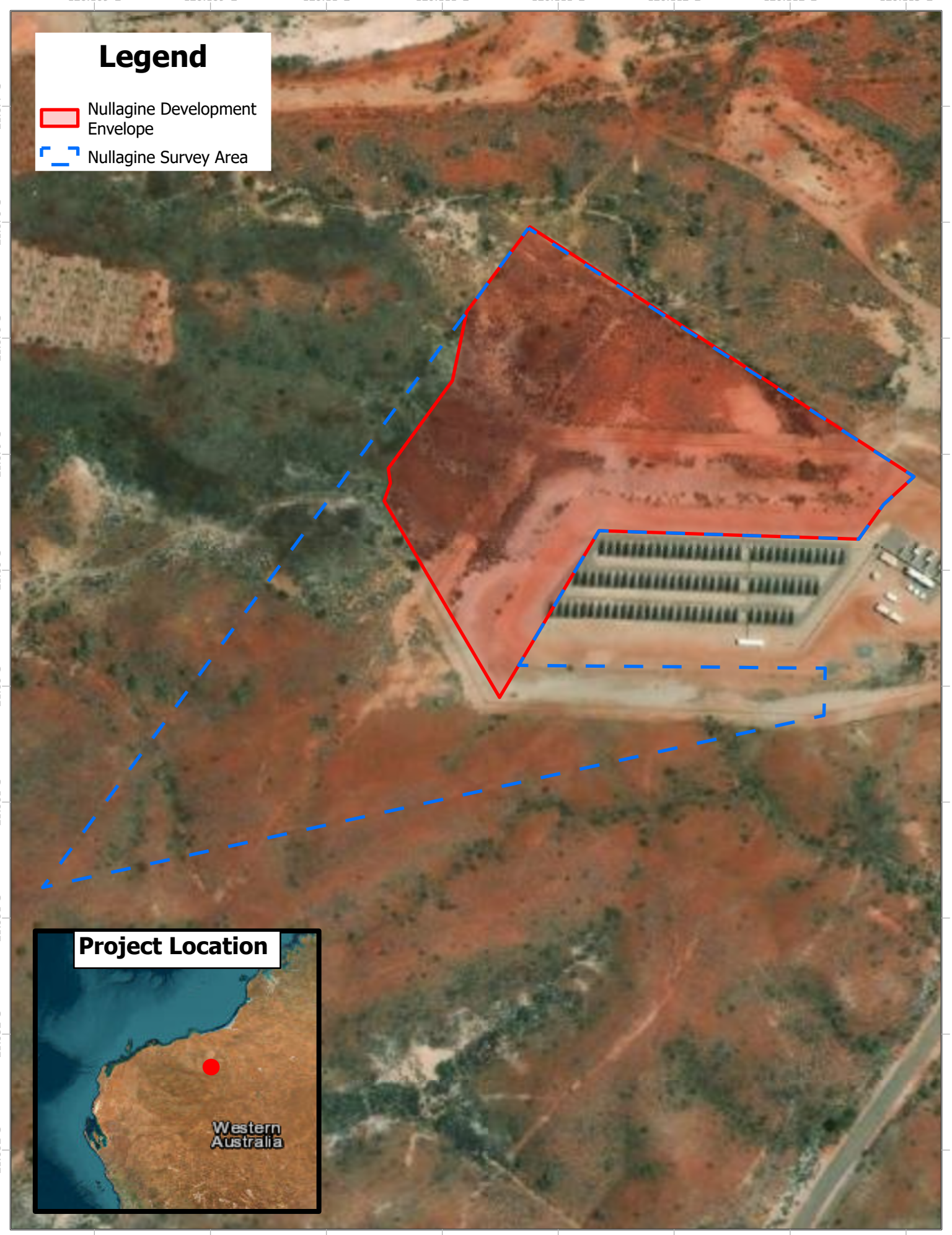


Figure 3 | Nullagine Development Envelope and Survey Area

N

0 25 50 100 Meters

Scale: 1:2,500

HORIZON POWER

2.2 Activity Overview and Timelines

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 locations.

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.

2.3 Land Access

Horizon will utilise the access conferred by Sections 46 and 49 of the *Energy Operators (Powers) Act 1979* (the Act) for geotechnical investigations and connection infrastructure. The Nullagine site is owned by Horizon Power, Menzies is under a Management Order to Horizon Power. The Gascoyne Junction site land access is pending resolution and construction will not be undertaken until resolved by lease or ownership as required.

3 Description of Proposed Clearing

3.1 Proposed Clearing Area

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, as described in Section 2.1.

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 of native vegetation at Gascoyne Junction, whereas all of the native vegetation within the DEs at Menzies and Nullagine will be permanently cleared. The clearing at each site is shown in Table 2. Note that the proposed clearing areas are less than the DE areas shown in Table 1 as there are already cleared areas in all of the sites, as explained in Section 4.

The combined area of permanent and temporary clearing of native vegetation within the three DEs is 12.95 ha.

Table 2 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 ha**		

3.2 Proposed Clearing Method

Mechanical removal and driving over vegetation will be required for the geotechnical surveys, stringing and winching of the connection transmission line, laydown areas and infrastructure construction.

4 Ecological Survey

To inform the Project, a post-wet single season Detailed and Targeted flora and vegetation survey and Basic and Targeted fauna survey was undertaken for each of the sites from 27th April to 5th May 2023 by GHD (2023). The surveys were undertaken in accordance with EPA guidelines (EPA, 2016 and EPA, 2020). The ecological surveys are summarised in this section.

Note that the DEs at the three sites are smaller than their respective Survey Areas to avoid unnecessary overlap with additional land parcels and to avoid environmental sensitivities. The Survey Areas are shown in Figure 1, Figure 2 and Figure 3 and the results of the survey of these areas, are summarised in Table 3.

Table 3 Summary of Ecological Survey

Survey	Summary of findings
GHD (2023). Midwest and Remote Towns Biological assessment. **IBSA number: IBSA-2023-0426**	**Gascoyne Junction** Survey Dates: 3rd May to 5th May 2023 Survey Area: 10.78 ha Flora / Vegetation Findings: – One vegetation type aligning with broad landforms was identified in the Survey Area, not including cleared tracks. The vegetation has been mapped as: *Acacia victoriae*, *Acacia tetragonophylla* and *Hakea recurva* isolated shrubs over *Rhagodia eremaea*, *Atriplex* ?*codonocarpa* and *Maireana* sp. isolated chenopod shrubs on brown loamy clay on low undulating rise with quartz (VT13). – The vegetation condition was mapped as 'Good' to 'Degraded' – No Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) listed under the EPBC Act, Biodiversity Conservation Act 2016 (BC Act) or listed by the Department of Biodiversity, Conservation and Attractions (DBCA) were identified within the Survey Area. – No EPBC Act listed, BC Act listed or DBCA listed Threatened or Priority flora were recorded in the Survey Area, or are considered likely to occur. – Twenty-two (22) flora taxa (including subspecies and varieties) representing 9 families and 18 genera were recorded from the Survey Area during the field survey. This total comprised 21 native taxa and one introduced flora taxon. – Dominant families recorded from the Survey Area included Chenopodiaceae (six taxa) and Poaceae (five taxa). – The one introduced flora taxon that was recorded in the Survey Area was **Cenchrus ciliaris.* No Declared Pests under the BAM Act or WoNS were recorded. *Cenchrus ciliaris has previously been recorded from the Murchison bioregion. Fauna / Fauna Habitat Findings: – One fauna habitat type was identified in the Survey Area. The fauna habitat has been mapped as: *Acacia* shrubland on low rise. – No Threatened fauna listed under the EPBC Act, BC Act or by DBCA were recorded in the Survey Area. – A total of 17 fauna species were recorded at the Survey Area. This total comprised 14 birds, two mammals and one reptile. One of the mammals recorded is introduced (cow). – The conservation significant species considered likely to occur in the Survey Area were the Peregrine Falcon (*Falco peregrinus*, Other Specially Protected Fauna) and Grey Falcon (*Falco hypoleucos*, Vulnerable).
	Menzies Survey Dates: 28th April to 4th May 2023 Survey Area: 5.78 ha Flora / Vegetation Findings: – Two vegetation types aligning with broad landforms were identified in the Survey Area, not including cleared tracks. The vegetation has been mapped as: *Maireana pyramidata*, *Atriplex bunburyana*, *Maireana planifolia* and *Sclerolaena diacantha* open chenopod shurbland over, **Cenchrus ciliaris*, **Carrichtera annua* and *Sclerolaena alata* sparse grassland and forbland on orange clay flats (VT08), and **Schinus molle* and *Acacia jennerae* isolated clumps of trees over

Survey	Summary of findings
	Eremophila longifolia, *Maireana pyramidata* and *Atriplex bunburyana* sparse shrubland over *Chloris truncata* and **Cenchrus ciliata* grassland on orange clay within minor drainage lines (VT09). – The vegetation condition was mapped as 'Good' – No TECs or PECs listed under the EPBC Act, BC Act or listed by the DBCA were identified within the Survey Area. – No EPBC Act listed, BC Act listed or DBCA listed Threatened or Priority flora were recorded in the Survey Area, or are considered likely to occur. – Thirty-four (34) flora taxa (including subspecies and varieties) representing 14 families and 27 genera were recorded from the Survey Area during the field survey. This total comprised 28 native taxa and six introduced flora taxa. Dominant families recorded from the Survey Area included Chenopodiaceae (nine taxa), Asteraceae (five taxa), Fabaceae (four taxa). – The six introduced flora taxa that were recorded in the Menzies Survey Area were **Carrichtera annua*, **Cenchrus ciliaris*, **Medicago polymorpha*, **Schinus molle*, **Sisymbrium orientale*, **Sonchus oleraceus*. No Declared Pests under the BAM Act or WoNS were recorded. All of the introduced flora have been previously recorded from the Murchison bioregion. Fauna / Fauna Habitat Findings: – Two fauna habitat types were identified in the Survey Area. The fauna habitat has been mapped as: Low chenopod shrublands on clay flats and Tall shrubland minor drainage line. – No Threatened fauna listed under the EPBC Act, BC Act or by DBCA were recorded in the Survey Area. – Transect searches were undertaken for *Idiosoma clypteatum* (P3) burrows in suitable habitat at Menzies with no burrows recorded. – A total of 17 fauna species were identified in the Survey Area. This total comprised 11 birds, five mammals, and one reptile. Four introduced species (cattle, cat, dog and rabbits) were recorded and are included in this total. – The conservation significant species considered likely to occur in the Survey Area were the Peregrine Falcon (*Falco peregrinus*, Other Specially Protected Fauna), Grey Falcon (*Falco hypoleucos*, Vulnerable) and Woma (*Aspodotes ramsayi* southwest subpop., Priority 1).
	Nullagine Survey Dates: 27th April to 29th April 2023. Survey Area: 6.06 ha Flora / Vegetation Findings: – One vegetation type aligning with broad landforms was identified in the Survey Area, not including cleared tracks. The vegetation has been mapped as: Isolated Snappy Gum over Triodia: *Eucalyptus leucophloia* subsp. *leucophloia* isolated trees over *Acacia bivenosa*, *Senna symonii* and *Acacia hilliana* isolated shrubs over and *Triodia* spp. tussock grassland (VT01). – The vegetation condition was mapped as 'Excellent' to 'Degraded'. – No TECs or PECs listed under the EPBC Act, BC Act or listed by the DBCA were identified within the Survey Area. – Two DBCA Priority flora taxa were recorded in the Survey Area:

Survey	Summary of findings
	• *Acacia aphanoclada* (Priority 1): Forty-eight occurrences of *Acacia aphanoclada* (Priority 1) were recorded within the Nullagine Survey Area. *Acacia aphanoclada* has a very distinct slender wispy form that can grow up to 5 m. It is known to grow on rocky hills and rises from the Nullagine area (WAH, 1998). This species was not in flower and only one seed pod was found during the field survey. The species locations are shown in Figure 6. • *Solanum* sp. Mosquito Creek (A.A. Mitchell et al. AAM 10795) (Priority 1): One individual was recorded within the Nullagine Survey Area. *Solanum* sp. Mosquito Creek (A.A. Mitchell et al. AAM 10795) (Priority 1) is described as un upright silver to grey shrub with linear leaves and a bluish/ purple flower. It has only ever been recorded within the Nullagine area (WAH, 1998). This species was in full flower during the field survey and recorded as 1.25m tall. The species locations are shown in Figure 6. – Forty-eight flora taxa (including subspecies and varieties) representing 18 families and 33 genera were recorded from the Survey Area during the field survey. This total comprised 46 native taxa and two introduced flora taxa. Dominant families recorded from the Survey Area included Poaceae (11 taxa), Fabaceae (10 taxa) and Asteraceae (4 taxa). – The two introduced flora taxa that were recorded in the Survey Area were **Cenchrus ciliaris* and **Calotropis procera.* **Calotropis procera* is listed as a Declared Pest under the BAM Act. No Weeds of National Significance (WoNS) were recorded. All of the introduced flora have been previously recorded from the Pilbara bioregion. Fauna / Fauna Habitat Findings: – One fauna habitat type was identified in the Survey Area. The fauna habitat has been mapped as: Low undulating hills. – No Threatened fauna listed under the EPBC Act or BC Act were recorded in the Survey Area. – One Priority 4 species (listed by DBCA) was recorded at the Nullagine Survey Area. A recently active Western Pebble-mound Mouse mound was observed on the southern boundary of the Survey Area, shown in Figure 6. – A targeted assessment was undertaken for the Greater Bilby in the Nullagine Survey Area with no evidence found. Due to the size of the site the entire area was traversed with all diggings and evidence recorded from Monitors, rodents and small birds. If Bilby were present the likelihood of observing evidence would be high suggesting the species is not present in the area. – A total of 34 fauna species were identified in the Survey Area. This total comprised 21 birds, nine reptiles and four mammals. One of the species is introduced (dingo/domestic dog). – The conservation significant species considered likely to occur in the Survey Area were the Peregrine Falcon (*Falco peregrinus*, Other Specially Protected Fauna), Grey Falcon (*Falco hypoleucos*, Vulnerable), Western Pebble-mound Mouse (*Pseudomys chapmani*, Priority 4), Pilbara Olive Python (*Lialis olivaceus barroni*, Vulnerable), Pin-striped finesnout Ctenotus (*Ctenotus nigrilineatus*, Priority 1), Pilbara leaf-nosed Bat (*Rhinonicteris aurantia*, Vulnerable), Ghost Bat (*Macroderma gigas*, Vulnerable) and Northern Quoll (*Dasyurus hallucatus*, Endangered).

5 Existing Environment

The existing environment of the DEs are described in Table 4, Table 5 and Table 6.

Table 4 Existing environment within the Gascoyne Junction DE

<table>
<tr><th>Environmental Value</th><th>Assessment</th></tr>
<tr><td>Vegetation associations, types and condition</td><td>
The project is located within Pre-European Vegetation Association 282. 100% of this vegetation association remains, none of which is within DBCA managed lands.
<table>
<tr><th>Vegetation association</th><th>Scale</th><th>Pre-European extent (ha)</th><th>Current extent (ha)</th><th>% Remaining</th><th>% of current extent in all DBCA managed land (proportion of current extent)</th></tr>
<tr><td rowspan="4">282</td><td>State: Western Australia</td><td>12,031.29</td><td>12,031.29</td><td>100</td><td>No data</td></tr>
<tr><td>IBRA bioregion: Carnarvon</td><td>12,031.29</td><td>12,031.29</td><td>100</td><td>No data</td></tr>
<tr><td>IBRA sub-region: Wooramel</td><td>12,031.29</td><td>12,031.29</td><td>100</td><td>No data</td></tr>
<tr><td>LGA: Shire of Upper Gascoyne</td><td>12,031.29</td><td>12,031.29</td><td>100</td><td>No data</td></tr>
</table>
One vegetation type was identified in the DE:
– VT13 - Acacia victoriae, Acacia tetragonophylla and Hakea recurva isolated shrubs over Rhagodia eremaea, Atriplex ?codonocarpa and Maireana sp. isolated chenopod shrubs on brown loamy clay on low undulating rise with quartz.
Vegetation was recorded in Good to Degraded condition.
The extent of vegetation types and vegetation condition within the DE were:
<table>
<tr><th></th><th>Vegetation Type/ Vegetation Condition</th><th>Extent in DE (ha)</th><th>% within DE</th></tr>
<tr><td rowspan="3">Vegetation Type</td><td>VT13</td><td>8.70 ha</td><td>80.71</td></tr>
<tr><td>Cleared</td><td>2.08 ha</td><td>19.29</td></tr>
<tr><td>Total extent</td><td>10.78 ha</td><td>100</td></tr>
<tr><td rowspan="3">Vegetation Condition</td><td>Good</td><td>8.14</td><td>75.51</td></tr>
<tr><td>Degraded</td><td>0.56</td><td>5.20</td></tr>
<tr><td>Cleared/Tracks</td><td>2.08</td><td>19.29</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Environmental Value</th><th>Assessment</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>Total extent</td><td>10.78</td><td>100</td></tr>
</table>
</td></tr>
<tr><td>Fauna habitat</td><td>
One fauna habitat type was identified in the DE:
– Acacia shrubland on low rise: Mid-tall Acacia open shrubland with emergent isolated chenopod shrubs and grasses on undulating stony ground. Disturbances to this habitat type include severe drought and grazing. There is surrounding clearing and disturbance from industry as well. Very little fauna species were recorded during the survey. A long domed bird nest was found in one of the tall shrubs, which may have been a finch, wren or thornbill nest. No active reptiles were recorded, but would provide suitable dispersal for some elapid snakes, lizards and arboreal geckos.
The extent fauna habitat within the DE were:
<table>
<tr><th>Fauna habitat</th><th>Extent in DE (ha)</th><th>% within DE</th></tr>
<tr><td>Acacia shrubland on low rise</td><td>8.70</td><td>80.71</td></tr>
<tr><td>Cleared/Tracks</td><td>2.08</td><td>19.29</td></tr>
<tr><td>Total extent</td><td>10.78</td><td>100</td></tr>
</table>
</td></tr>
<tr><td>Significant fauna</td><td>
No significant fauna were recorded in the biological survey. Two fauna species are considered likely to occur within the DE (GHD, 2023):
– Peregrine Falcon (Falco peregrinus) - Other Specially Protected Fauna
– Grey Falcon (Falco hypoleucos) – Vulnerable
The Grey Falcon’s distribution overlaps the DE. There is limited suitable habitat within the DE, but the species might be seen flying overhead towards more suitable habitat, in or near the Gascoyne River and drainage channels.
The Peregrine Falcon’s distribution overlaps the DE and the species may utilise the DE for foraging opportunity. The records for this species are located more than 20 km northwest of the DE. This species is more likely to utilise riverine habitat located outside of the DE but may hawk over the DE.
</td></tr>
<tr><td>Significant ecological linkages</td><td>No significant ecological linkages were identified.</td></tr>
<tr><td>Ecological communities</td><td>No TECs or PECs listed under the EPBC Act, BC Act or listed by the DBCA were identified within the DE during the field survey (GHD, 2023).</td></tr>
<tr><td>Significant flora</td><td>No Threatened or Priority flora were recorded within the DE. A likelihood of occurrence assessment (GHD 2023) identified no Threatened or Priority flora species as likely to occur within the DE.</td></tr>
<tr><td>Wetlands and/or waterways</td><td>There are no rivers or wetlands of significance located within the DE or within 16 km of the DE.</td></tr>
<tr><td>Water resources</td><td>The Gascoyne Groundwater Area (a Groundwater Area proclaimed under the RIWI Act) is present within the DE. The Groundwater bores at Gascoyne Junction are located along the Gascoyne River which is approximately 1 km north of the DE. The bores are drilled to less than 10 m deep (Department of Water, 2008), indicating shallow groundwater in the region, commensurate with the distance to the Gascoyne River. Dewatering may be required, depending on time of year for construction, and will be minor and localised.</td></tr>
</table>

Environmental Value	Assessment
	No PDWSAs are present within the DE. The Gascoyne Junction Water Reserve is located 0.75 km north of the DE. The Gascoyne River and Tributaries RIWI Act Surface Water Area and overlaps the DE and there are no RIWI Act Rivers overlapping the DE.
Conservation Reserves	No DBCA managed conservation areas occur within the DE or within 15 km of the DE.
Environmentally Sensitive Areas (ESAs)	No ESAs occur within the DE or within 15 km of the DE.
Land and soil quality	The DE intersects the Sandiman Land System which is described as 'Plateau remnants and breakaway slopes on sedimentary rocks, with ridge spurs above saline stony footslopes and interfluvial plains, supporting mulga and snakewood shrublands occasionally with Gascoyne bluebush and other halophytes. A review of Acid Sulphate Soil (ASS) risk mapping (spatial dataset DWER-048; GoWA, 2024) indicates the DE has a low risk of ASS occurrence. The northern portion of the DE is immediately adjacent to a contaminated site 'Contaminated - restricted use' (spatial dataset DWER-059; GoWA, 2024), as shown in Figure 4. No activities will be conducted outside the DE and this site will not be impacted by the Project.
Environmental heritage	There are no National or World Heritage Areas mapped as overlapping the DE.

Table 5 Existing environment within the Menzies DE

<table>
<tr><th>Environmental Value</th><th>Assessment</th></tr>
<tr><td>Vegetation associations, types and condition</td><td>
The project is located within Pre-European Vegetation Association 251. More than 99% of this vegetation association remains, of which, 69.71% is in DBCA managed lands at a state and local government authority (LGA) scale.
<table>
<tr><th>Vegetation association</th><th>Scale</th><th>Pre-European extent (ha)</th><th>Current extent (ha)</th><th>% Remaining</th><th>% of current extent in all DBCA managed land (proportion of current extent)</th></tr>
<tr><td>251</td><td>State: Western Australia</td><td>173,096.19</td><td>172,864.64</td><td>99.87</td><td>69.71</td></tr>
<tr><td></td><td>IBRA bioregion: Murchison</td><td>58,012.00</td><td>57,780.45</td><td>99.60</td><td>9.37</td></tr>
<tr><td></td><td>IBRA Subregion: East Murchison</td><td>58,012.00</td><td>57,780.45</td><td>99.60</td><td>9.37</td></tr>
<tr><td></td><td>LGA: Shire of Menzies</td><td>173,096.19</td><td>172,864.64</td><td>99.87</td><td>69.71</td></tr>
</table>
One vegetation type was identified in the DE:
– VT08 - *Maireana pyramidata*, *Atriplex bunburyana*, *Maireana planifolia* and *Sclerolaena diacantha* open chenopod shrubland over, **Cenchrus ciliaris*, **Carrichtera annua* and *Sclerolaena alata* sparse grassland and forbland on orange clay flats
Vegetation was recorded in Good condition.
The extent of vegetation types and vegetation condition within the DE were:
<table>
<tr><th></th><th>Vegetation Type/ Vegetation Condition</th><th>Extent in DE (ha)</th><th>% within DE</th></tr>
<tr><td>Vegetation Type</td><td>VT08</td><td>2.83 ha</td><td>58.35</td></tr>
<tr><td></td><td>Cleared</td><td>2.02 ha</td><td>41.65</td></tr>
<tr><td></td><td>Total extent</td><td>4.85 ha</td><td>100</td></tr>
<tr><td>Vegetation Condition</td><td>Good</td><td>2.83</td><td>58.35</td></tr>
<tr><td></td><td>Cleared</td><td>2.02</td><td>41.65</td></tr>
<tr><td></td><td>Total extent</td><td>4.85</td><td>100</td></tr>
</table>
</td></tr>
<tr><td>Fauna habitat</td><td>
One fauna habitat type was identified in the DE:
– Low chenopod shrublands on clay flats: Clay flats with some gilgai micro-relief, supporting low chenopod shrublands over a sparse grassland and forbland with occasional scattered trees and shrubs (*Acacia* and *Eremophila* species). The DE has been impacted by a long history of disturbances including previous clearing, vehicle tracks, old fencing, adjacent dam, weed invasion, grazing and old mine shafts. The old mine shafts provide habitat for a number reptile, small mammal and
</td></tr>
</table>

<table>
<tr><th>Environmental Value</th><th>Assessment</th></tr>
<tr><td></td><td>bird species such as the Welcome Swallow. The depression in the clay soils (gilgais) provide shelter for small reptiles and mammals which inhabit the area such as skinks, snakes, dragons and dunnarts.
The extent fauna habitat within the DE were:
<table>
<tr><th>Fauna habitat</th><th>Extent in DE (ha)</th><th>% within DE</th></tr>
<tr><td>Low chenopod shrublands on clay flats</td><td>2.83</td><td>58.35</td></tr>
<tr><td>Cleared</td><td>2.02</td><td>41.65</td></tr>
<tr><td>Total extent</td><td>4.85</td><td>100</td></tr>
</table></td></tr>
<tr><td>Significant fauna</td><td>No significant fauna were recorded in the biological surveys. Three fauna species are considered likely to occur within the DE (GHD, 2023):
– Grey Falcon (Falco hypoleucos) – Vulnerable
– Peregrine Falcon (Falco peregrinus) – Other Specially Protected Fauna
– Woma (Aspodotes ramsayi) (southwest subpop.) – Priority 1
The Grey Falcon and Peregrine Falcon’s distributions overlap the DE and they may both utilise the DE for foraging opportunity in the Low chenopod shrubland on clay flats habitat type.
This habitat type is also potential habitat for the Woma. There is a historical DBCA record (1966) less than 500 m from the DE. The DE is considered to be on the edge of its current known distribution.</td></tr>
<tr><td>Significant ecological linkages</td><td>No significant ecological linkages were identified.</td></tr>
<tr><td>Ecological communities</td><td>No TECs or PECs listed under the EPBC Act, BC Act or listed by the DBCA were identified within the DE during the field survey (GHD, 2023).</td></tr>
<tr><td>Significant flora</td><td>No Threatened or Priority flora were recorded within the DE. A likelihood of occurrence assessment (GHD 2023) identified no Threatened or Priority flora species as likely to occur within the DE.</td></tr>
<tr><td>Wetlands and/or waterways</td><td>There are no rivers or wetlands of significance located within the DE or within 20 km of the DE. VT09 was identified in the Survey Area (outside of the DE) and is associated with a minor drainage line (shown in Figure 5). As this minor drainage line is located outside of the DE, no impacts from the Project are expected.</td></tr>
<tr><td>Water resources</td><td>The Goldfields Groundwater Area (a Groundwater Area proclaimed under the RIWI Act) is present within the DE. The groundwater depth in Menzies ranges between 14 to 61 m below ground level (Department of Water, 2010). No impacts to groundwater are expected.
No PDWSAs are present within the DE. The Menzies Water Reserve is located 0.6 km south of the DE.
No Surface Water Areas or Irrigation Districts or Rivers proclaimed under the RIWI Act are present within the DE.</td></tr>
<tr><td>Conservation reserves</td><td>No DBCA managed conservation areas occur within the DE or within 20 km of the DE.</td></tr>
<tr><td>Environmentally Sensitive Areas (ESAs)</td><td>No ESAs occur within the DE or within 14 km of the DE.</td></tr>
</table>

Environmental Value	Assessment
Land and soil quality	The DE intersects the Moriarty Land System which is described as 'Low greenstone rises and stony plains supporting chenopod shrublands with patchy eucalypt overstoreys'. A review of ASS risk mapping (spatial dataset DWER-048; GoWA, 2024) indicates the DE has a low risk of ASS occurrence. The DE does not intersect any contaminated sites (spatial dataset DWER-059; GoWA, 2024). The closest contaminated site is approximately 0.4 km northwest of the DE and the Project will not impact this site.
Environmental heritage	There are no National or World Heritage Areas mapped as overlapping the DE.

Table 6 Existing Environment within the Nullagine DE

<table>
<tr><th>Environmental Value</th><th>Assessment</th></tr>
<tr><td>Vegetation associations, types and condition</td><td>
The project is located within Pre-European Vegetation Association 190. More than 99% of this vegetation association remains, none of which is within DBCA managed lands.
<table>
<tr><th>Vegetation association</th><th>Scale</th><th>Pre-European extent (ha)</th><th>Current extent (ha)</th><th>% Remaining</th><th>% of current extent in all DBCA managed land (proportion of current extent)</th></tr>
<tr><td rowspan="4">190</td><td>State: Western Australia</td><td>169,199.72</td><td>169,051.00</td><td>99.91</td><td>No data</td></tr>
<tr><td>IBRA bioregion: Pilbara</td><td>169,199.72</td><td>169,051.00</td><td>99.91</td><td>No data</td></tr>
<tr><td>IBRA sub-region: Chichester</td><td>169,199.72</td><td>169,051.00</td><td>99.91</td><td>No data</td></tr>
<tr><td>LGA: Shire of East Pilbara</td><td>169,199.72</td><td>169,051.00</td><td>99.91</td><td>No data</td></tr>
</table>
One vegetation type was identified in the DE:
– VT01- Isolated Snappy Gum over Triodia: Eucalyptus leucophloia subsp. leucophloia isolated trees over Acacia bivenosa, Senna symonii and Acacia hilliana isolated shrubs over and Triodia spp. tussock grassland
Vegetation condition varied from Good to Excellent.
The extent of vegetation types and vegetation condition within the DE were:
<table>
<tr><th></th><th>Vegetation Type/ Vegetation Condition</th><th>Extent in DE (ha)</th><th>% within DE</th></tr>
<tr><td rowspan="3">Vegetation Type</td><td>VT01</td><td>1.42 ha</td><td>48.80</td></tr>
<tr><td>Cleared</td><td>1.49 ha</td><td>51.20</td></tr>
<tr><td>Total extent</td><td>2.91 ha</td><td>100</td></tr>
<tr><td rowspan="4">Vegetation Condition</td><td>Excellent</td><td>1.419</td><td>48.77</td></tr>
<tr><td>Good</td><td>0.001</td><td>0.03</td></tr>
<tr><td>Cleared</td><td>1.49</td><td>51.20</td></tr>
<tr><td>Total extent</td><td>2.91</td><td>100</td></tr>
</table>
</td></tr>
<tr><td>Fauna habitat</td><td>
One fauna habitat type was identified in the DE:
– Low undulating hills: The DE is undulating low hills of Ironstone with areas of low exfoliating rocky ridge line and associated rocky slopes. This habitat type supports limited vegetation (likely due to shallow soil profiles). However the environment supports scattered mixed shrubs of Acacia, Senna sp., Eucalypt.,
</td></tr>
</table>

<table>
<tr><th>Environmental Value</th><th>Assessment</th></tr>
<tr><td></td><td>Solanum and grevillea sp.. The environment had few ground covers, litter, logs or debris present. This is due to the lack of vegetative material and/or impacts by fire which the site appeared a mosaic of ages from long unburnt to within the last 12 months. Evidence of historical disturbance were present from old drill lines, soil excavation, tracks and erosion. The low rocky slopes are a mosaic of quartz and iron stone composition with scattered minor outcropping, crevasses, slopes, rock sizes and stability. No typical caves were recorded in outcropping but ground level undermined areas were recorded around some small exfoliating areas likely dug by echidna or monitors. Locally and regionally an extensive habitat type occurring to the north and east with the Nullagine Gold project to the west and town centre to the south.
The extent fauna habitat within the DE were:
<table>
<tr><th>Fauna habitat</th><th>Extent in DE (ha)</th><th>% within DE</th></tr>
<tr><td>Low undulating hills</td><td>1.42</td><td>48.80</td></tr>
<tr><td>Cleared/ weed dominant</td><td>1.49</td><td>51.20</td></tr>
<tr><td>Total extent</td><td>2.91</td><td>100</td></tr>
</table></td></tr>
<tr><td>Significant fauna</td><td>Eight fauna species are considered likely to occur within the DE:
– Grey Falcon (Falco hypoleucos) – Vulnerable
– Peregrine Falcon (Falco peregrinus) – Other Specially Protected Fauna.
– Western Pebble-mound Mouse (Pseudomys chapmani) – Priority 4
– Pilbara Olive Python (Lialis olivaceus barroni) – Vulnerable
– Pin-striped finesnout Ctenotus (Ctenotus nigrilineatus) – Priority 1
– Pilbara leaf-nosed Bat (Rhinonicteris aurantia) – Vulnerable
– Ghost Bat (Macroderma gigas) – Vulnerable
– Northern Quoll (Dasyurus hallucatus) – Endangered
The Undulating low rocky hills habitat within the Nullagine DE may support the above species due to suitable habitat and regional records.</td></tr>
<tr><td>Significant ecological linkages</td><td>No significant ecological linkages were identified.</td></tr>
<tr><td>Ecological communities</td><td>No TECs or PECs listed under the EPBC Act, BC Act or listed by the DBCA were identified within the DE during the field survey (GHD, 2023).</td></tr>
<tr><td>Significant flora</td><td>No EPBC Act listed, BC Act listed or DBCA listed Threatened or Priority flora were recorded the DEs, or are considered likely to occur.
Note that 2 DBCA listed Priority flora species were recorded in the Nullagine Survey Area, however the DE has been modified to avoid these records.</td></tr>
<tr><td>Wetlands and/or waterways</td><td>There are no rivers or wetlands of significance located within the DE or within 20 km of the DE.</td></tr>
</table>

Environmental Value	Assessment
Water resources	The Pilbara Groundwater Area (a Groundwater Area proclaimed under the RIWI Act) is present within the DE. Groundwater in the Nullagine region is approximately 13 m below ground level (Water and Rivers Commission, 1999). No impacts to groundwater are expected. The DE overlaps the Nullagine Water Reserve PDWSA and the Pilbara Surface Water Area. The DE does not overlap any RIWI Act listed Rivers.
Conservation Reserves	No DBCA managed conservation areas occur within the DE or within 20 km of the DE.
Environmentally Sensitive Areas (ESAs)	No ESAs occur within the DE or within 20 km of the DE.
Land and soil quality	The DE intersects the Mosquito Land System which is described as 'Stony plains and prominent ridges of schist and other metamorphic rocks supporting shrubby hard spinifex grasslands'. A review of ASS risk mapping (spatial dataset DWER-048; GoWA, 2024) indicates the DE has a low risk of ASS occurrence. The DE does not intersect any contaminated sites (spatial dataset DWER-059; GoWA, 2024). No known contaminated sites are recorded within 20 km of the DE.
Environmental heritage	There are no National or World Heritage Areas mapped as overlapping the DE.

6 Avoidance, Mitigation and Management Measures

6.1 Avoidance

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 (shown in Figure 5). 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 (Figure 6):
    - 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

6.2 Mitigation and Management

6.2.1 Geotechnical works

A CEMP has been developed for the project (Appendix A), this lists the specific mitigation and management measures to be applied. Key management measures include:

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

6.2.1.1 Restoration of Cleared Areas

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

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

6.2.2 Project infrastructure

Key management measures detailed in the CEMP for the Project include:

- No clearing is permitted outside the DE
- 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

- Clearing will be minimised through placement of assets and access tracks in existing cleared locations where possible
- The clearing locations are to be demarcated prior to clearing activities
- A pre-clearing toolbox will be held so all staff are aware of their responsibilities under the permit
- Clearing of native vegetation will be undertaken in a slow, progressive manner in one direction to allow fauna to move away from the clearing area
- Vehicles and equipment will remain on designated vehicle tracks where possible and avoid driving over, or parking on native vegetation
- Vehicles and machinery will arrive clean, and weed control will be undertaken at the site post-construction as required.

7 Stakeholder Engagement

Horizon Power has engaged with the Traditional Owners, local community, local Shires and Department of Planning, Lands and Heritage to date for all sites.

8 Assessment Against the 10 Clearing Principles

An assessment against the 10 Clearing Principles has been undertaken to support the NVCP application for the Project, as presented in Table 7. The assessment found that the Project is unlikely to be at variance with any of the clearing principles.

Table 7 Assessment Against the 10 Clearing Principles

Principle	Assessment	Outcome
(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.	**Gascoyne Junction** Up to 8.70 ha of native vegetation is proposed to be cleared for the Project within the Gascoyne Junction DE, of which 1.69 ha is temporary clearing. **Vegetation** The Gascoyne Junction DE is located in the Carnarvon bioregion and the Wooramel sub-region as described by IBRA. One vegetation type was identified in the Gascoyne Junction DE during the GHD (2023) survey (VT13). The vegetation type was representative of the vegetation associations in the region, with a high proportion of pre-European extent remaining. The vegetation within the DE is in Good to Degraded condition. The DE had been subject to grazing with the vegetation structure and cover reduced through grazing pressure. There are a number of cleared tracks through the DE and signs of rubbish (GHD, 2023). No TECs listed under the EPBC Act or BC Act or PECs listed by DBCA were identified within the Gascoyne Junction DE (GHD, 2023). **Flora** Twenty-two (22) flora taxa (including subspecies and varieties) representing 9 families and 18 genera were recorded from the Gascoyne Junction Survey Area during the field survey (GHD, 2023). This total comprised 21 native taxa and one introduced flora taxa. No Threatened or Priority flora were recorded within the Gascoyne Junction DE. A likelihood of occurrence assessment (GHD 2023) identified no Threatened or Priority flora species as likely to occur within the DE. One introduced flora taxa was recorded in the Gascoyne Junction DE (**Cenchrus ciliaris*). No Declared Pests or WoNS were recorded. **Fauna and fauna habitat** One fauna habitat type was recorded at the Gascoyne Junction DE during the GHD (2023) survey; *Acacia* shrubland on low rise. This habitat type is considered to have moderate value for fauna species. A total of 17 fauna species were identified in the Gascoyne Junction Survey Area (GHD, 2023). This total comprised 14 birds, 2 mammals and one reptile and included one introduced species (cow). No significant fauna species were recorded during the survey. Two conservation significant species are considered likely to occur in the DE due to potentially suitable habitat (GHD, 2023): – Peregrine Falcon – other specially protected fauna – Grey Falcon – Vulnerable **Menzies** Up to 2.83 ha of native vegetation is proposed to be permanently cleared for the Project within the Menzies DE. **Vegetation** The Menzies DE is located in the Murchison bioregion and the East Murchison sub-region as described by IBRA.	Proposed clearing is not likely to be at variance to this Principle.

Principle	Assessment	Outcome
	One vegetation type was identified in the Menzies DE during the GHD (2023) survey (VT08). The vegetation type was representative of the vegetation associations in the region, with a high proportion of pre-European extent remaining. The vegetation within the DE was in Good condition with weeds such as **Cenchrus ciliaris* forming a large component of the understorey in some areas. Vehicles tracks, litter and mine shafts were also present within the DE. Cleared areas within the DE are associated with vehicle tracks and a dam (GHD, 2023). No TECs listed under the EPBC Act or BC Act or PECs listed by DBCA were identified within the Menzies DE (GHD, 2023). **Flora** Thirty-four (34) flora taxa (including subspecies and varieties) representing 14 families and 27 genera were recorded from the Menzies Survey Area during the field survey (GHD, 2023). This total comprised 28 native taxa and six introduced flora taxa. No Threatened or Priority flora were recorded within the Menzies DE. A likelihood of occurrence assessment (GHD 2023) identified no Threatened or Priority flora species as likely to occur within the DE. Six introduced flora taxa were recorded in the Menzies DE: – **Carrichtera annua* – **Cenchrus ciliaris* – **Medicago polymorpha* – **Schinus molle* – **Sisymbrium orientale* – **Sonchus oleraceus* No Declared Pests under the BAM Act or WoNS were recorded. **Fauna and fauna habitat** One fauna habitat type was recorded in the Menzies DE during the GHD (2023) survey; Low chenopod shrublands on clay flats. This habitat type is considered to have moderate value for fauna species. A total of 17 fauna species were identified in the Menzies Survey Area (GHD, 2023). This total comprised 11 birds, five mammals and one reptile and included four introduced species (cattle, cat, dog and rabbits). No significant fauna species were recorded during the survey. Three conservation significant species are considered likely to occur in the DE due to potentially suitable habitat (GHD, 2023): – Grey Falcon – Vulnerable – Peregrine Falcon – other specially protected fauna – Woma – Priority 1 **<u>Nullagine</u>** Up to 2.83 ha of native vegetation is proposed to be cleared for the Project within the Nullagine DE. **Vegetation**	

Principle	Assessment	Outcome
	The Nullagine DE is located in the Pilbara bioregion and the Chichester sub-region as described by IBRA. One vegetation type was identified in the Nullagine DE during the GHD (2023) survey (VT01). The vegetation type was representative of the vegetation associations in the region, with a high proportion of pre-European extent remaining. Vegetation condition varied from Good to Excellent. The fenced area surrounding the solar farm and the adjacent vehicle track were mapped as Cleared. A section that had been either cleared or backfilled with soil/ rubble was mapped as Good. No TECs listed under the EPBC Act or BC Act or PECs listed by DBCA were identified within the Nullagine DE (GHD, 2023). **Flora** Forty-eight (48) flora taxa (including subspecies and varieties) representing 18 families and 33 genera were recorded from the Nullagine Survey Area during the field survey (GHD, 2023). One introduced flora taxa was recorded in the DE **Cenchrus ciliaris*. No Threatened or Priority flora were recorded within the Nullagine DE. A likelihood of occurrence assessment (GHD 2023) identified no Threatened or Priority flora species as likely to occur within the DE. Note that 2 DBCA listed Priority flora species were recorded in the Nullagine Survey Area, however the DE has been modified to avoid these species. **Fauna and fauna habitat** One fauna habitat type was recorded at Nullagine during the GHD (2023) survey; Low undulating hills. This habitat type is considered to have moderate value for fauna species. A total of 34 fauna species were identified in the Nullagine Survey Area (GHD, 2023). This total comprised 21 birds, four mammals and nine reptiles. No significant fauna species were recorded during the survey in the DE. However, a recently active Western Pebble-mound Mouse mound was recorded on the southern boundary of the Survey Area (outside of the DE) (GHD, 2023). Eight conservation significant species are considered likely to occur in the DE due to potentially suitable habitat (GHD, 2023): – Grey Falcon – Vulnerable – Peregrine Falcon – Other Specially Protected Fauna – Western Pebble-mound Mouse – Priority 4 – Pilbara Olive Python – Vulnerable – Pin-striped Finesnout Ctenotus – Priority 1 – Pilbara Leaf-nosed Bat – Vulnerable – Ghost Bat – Vulnerable – Northern Quoll – Endangered Overall, the flora, vegetation and fauna values of the DEs are highly represented outside the DEs and surrounding vegetation typically has similar or better condition vegetation. The native vegetation within the DEs is not considered to comprise high levels of biological diversity compared to the surrounding region, and as such, the proposed clearing is not considered to be at variance with this principle.	
(b) Native vegetation should not be cleared if	**Gascoyne Junction**	Proposed clearing is not

Principle	Assessment	Outcome
it comprises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous Western Australia.	One fauna habitat type was identified in the DE by GHD (2023): – *Acacia* shrubland on low rise: Mid-tall *Acacia* open shrubland with emergent isolated chenopod shrubs and grasses on undulating stony ground. Disturbances to this habitat type include severe drought and grazing. There is surrounding clearing and disturbance from industry. Very little fauna species were recorded during the survey. A long domed bird nest was found in one of the tall shrubs, which may have been a finch, wren or thornbill nest. No active reptiles were recorded, but would provide suitable dispersal for some elapid snakes, lizards and arboreal geckos. The EPBC Act PMST, DBCA database and NatureMap database identified the presence/potential presence of 18 conservation significant fauna within 20 km of the Survey Area (GHD, 2023). This total does not include those species that are exclusively marine as no marine habitat is present within 20 km of the Survey Area. This total comprised 16 birds, one reptile and one mammal. A total of 17 terrestrial vertebrate species were recorded within the Gascoyne Junction Survey Area during the GHD (2023) field survey, including 16 native species and one introduced species. No Threatened fauna listed under the EPBC Act or BC Act were recorded during the GHD (2023) survey. The DE supports habitat for two significant fauna species (that were identified as likely to occur post-survey), in the form of foraging habitat. The assessment was based on species biology, habitat requirements, the quality and availability of suitable habitat (based on vegetation types present within the DE) and previous records of species in the DE. The two species are: – Grey Falcon (*Falco hypoleucos*) (Vulnerable) – Peregrine Falcon (*Falco peregrinus*) (Other Specially Protected Fauna) The conservation significant species are described below. **Grey Falcon** The Grey Falcon is an Australian endemic, usually confined to the arid inland. It inhabits *Triodia* grassland, *Acacia* shrubland, and lightly timbered arid woodland especially stony, inland plains, gibber deserts, sandridges, pastoral lands, and timbered watercourses, but seldom in driest deserts (Morcombe, 2004). This species is known to occupy a wide range of habitats. The Grey Falcon was not detected during the GHD (2023) survey and the closest DBCA record is approximately 130 km east of the DE, however the DE is within the known distribution of this species. There is limited suitable habitat within the DE, but the species might be seen flying overhead towards more suitable habitat, in or near the Gascoyne River and drainage channels (GHD, 2023). The Grey Falcon is likely to use the *Acacia* shrubland on low rise habitat within the DE on an opportunistic basis as foraging habitat. This species is therefore likely to occur at least on an occasional/opportunistic basis. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA 2022) datasets, habitat for the Grey Falcon is widespread within a 10 km radius of the DE. Clearing of up to 8.70 ha of native vegetation within the DE, represents approximately 0.03% of potential habitat available within 10 km of the DE. **Peregrine Falcon** The Peregrine Falcon is found on and near cliffs, gorges, timbered watercourses, riverine environments, wetlands, plains, open woodlands, and pylons and spires of buildings, though less frequently in desert regions (Morcombe 2004; Pizzey & Knight 2012). They are not common but can be found almost anywhere throughout WA.	likely to be at variance to this Principle.

Principle	Assessment	Outcome
	The Peregrine Falcon is likely to use the *Acacia* shrubland on low rise habitat within the DE on an opportunistic basis as foraging habitat. The Peregrine Falcon's distribution overlaps the DE and the DBCA records for this species are located more than 20 km northwest of the DE. This species is more likely to utilise riverine habitat located outside of the DE but may hawk over the DE. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA 2022) datasets, habitat for the Peregrine Falcon is widespread within a 10 km radius of the DE. Clearing of up to 8.70 ha of native vegetation within the DE, represents approximately 0.03% of potential habitat available within 10 km of the DE. **Menzies** One fauna habitat type was identified in the DE by GHD (2023): – Low chenopod shrublands on clay flats: Clay flats with some gilgai micro-relief, supporting low chenopod shrublands over a sparse grassland and forbland with occasional scattered trees and shrubs (*Acacia* and *Eremophila* species). The DE has been impacted by a long history of disturbances including previous clearing, vehicle tracks, old fencing, adjacent dam, weed invasion, grazing and old mine shafts. The old mine shafts provide habitat for a number reptile, small mammal and bird species such as the Welcome Swallow. The depression in the clay soils (gilgais) provide shelter for small reptiles and mammals which inhabit the area such as skinks, snakes, dragons and dunnarts. The EPBC Act PMST, DBCA database and NatureMap database identified the presence/potential presence of 12 conservation significant fauna within 20 km of the Survey Area. This total does not include those species that are exclusively marine as no marine habitat is present within 20 km of the Survey Area. This total comprised 10 birds, one reptile and one mammal. A total of 17 terrestrial vertebrate species were recorded within the Menzies Survey Area during the GHD (2023) field survey, including 13 native species and four introduced species. No Threatened fauna listed under the EPBC Act or BC Act were recorded during the GHD (2023) survey. The DE supports habitat for three significant fauna species (that were identified as likely to occur post-survey), in the form of foraging, dispersal and shelter habitat. The assessment was based on species biology, habitat requirements, the quality and availability of suitable habitat (based on vegetation types present within the DE) and previous records of species in the DE. The three species are: – Grey Falcon (*Falco hypoleucos*) (Vulnerable) – Peregrine Falcon (*Falco peregrinus*) (Other Specially Protected Fauna) – Woma (*Aspodotes ramsayi*) (southwest subpop.) – Priority 1 The conservation significant species are described below. **Grey Falcon** The habitat preferences of the Grey Falcon are described above in the Gascoyne Junction section. The Grey Falcon was not detected during the GHD (2023) survey and the closest DBCA record is greater than 130 km northeast of the DE, however the DE is within the known distribution of this species. The Grey Falcon is likely to use the Low chenopod shrublands on clay flats habitat within the DE on an opportunistic basis as foraging habitat. This species is therefore likely to occur at least on an occasional/opportunistic basis.	

Principle	Assessment	Outcome
	Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA 2022) datasets, habitat for the Grey Falcon is widespread within a 10 km radius of the DE. Clearing of up to 2.83 ha of native vegetation within the DE, represents approximately 0.01% of potential habitat available within 10 km of the DE. **Peregrine Falcon** The habitat preferences of the Peregrine Falcon are described above in the Gascoyne Junction section. The Peregrine Falcon was not detected during the GHD (2023) survey and the closest DBCA record is approximately 50 km southwest of the DE. It is likely this species will use the Low chenopod shrublands on clay flats habitat within DE for foraging (GHD 2023). This species is therefore likely to occur at least on an occasional/opportunistic basis. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA 2022) datasets, habitat for the Peregrine Falcon is widespread within a 10 km radius of the DE. Clearing of up to 2.83 ha of native vegetation within the DE, represents approximately 0.01% of potential habitat available within 10 km of the DE. **Woma** The Woma inhabits woodlands, heaths and shrublands, often with spinifex. It occurs in the sub-humid and arid areas across Australia's interior with a separate subpopulation occurring in the Wheatbelt and Goldfields of WA. The Woma shelters mainly in abandoned monitor and mammal burrows and in soil cracks (Wilson & Swan 2010). There is a historical DBCA record (1966) less than 100 m from the DE. The next closest DBCA record is over 100 km east of the DE. The DE is considered to be on the edge of its current known distribution. It is likely this species will use the Low chenopod shrublands on clay flats habitat within DE for foraging, distribution or shelter. This species is therefore likely to occur at least on an occasional/opportunistic basis (GHD 2023). Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA 2022) datasets, habitat for the Woma is widespread within a 10 km radius of the DE. Clearing of up to 2.83 ha of native vegetation within the DE, represents approximately 0.01% of potential habitat available within 10 km of the DE. **<u>Nullagine</u>** One fauna habitat type was identified in the DE by GHD (2023): – Low undulating hills: The DE is undulating low hills of Ironstone with areas of low exfoliating rocky ridge line and associated rocky slopes This habitat type supports limited vegetation (likely due to shallow soil profiles). However the environment supports scattered mixed shrubs of *Acacia*, *Senna* sp., *Eucalypt*., *Solanum* and *grevillea* sp. The environment had few ground covers, litter, logs or debris present. This is due to the lack of vegetative material and/or impacts by fire which the site appeared a mosaic of ages from long unburnt to within the last 12 months. Evidence of historical disturbance were present from old drill lines, soil excavation, tracks and erosion. The low rocky slopes are a mosaic of quartz and iron stone composition with scattered minor outcropping, crevasses, slopes, rock sizes and stability. No typical caves were recorded in outcropping but ground level undermined areas were recorded around some small exfoliating areas likely dug by echidna or monitors. Locally and regionally an extensive habitat type occurring to the north and east with the Nullagine Gold project to the west and town centre to the south. The EPBC Act PMST, NatureMap and DBCA Threatened Fauna databases identified the presence/potential presence of 25 conservation significant fauna within 20 km of the Survey Area (GHD, 2023). This total comprised 16 birds, three reptiles and six mammals. A total of 34	

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	terrestrial vertebrate species were recorded within the Nullagine Survey AreA during the GHD (2023) field survey, including 33 native species and one introduced species. A recently active Western Pebble-mound Mouse mound was recorded on the southern boundary of the Nullagine Survey Area (outside of the DE). The DE supports habitat for eight significant fauna species (that were identified as likely to occur post-survey), in the form of mostly dispersal and foraging habitat. The assessment was based on species biology, habitat requirements, the quality and availability of suitable habitat (based on vegetation types present within the DE) and previous records of species in the DE. The eight species are: – Grey Falcon (*Falco hypoleucos*) – Vulnerable – Peregrine Falcon (*Falco peregrinus*) – Other Specially Protected Fauna. – Western Pebble-mound Mouse (*Pseudomys chapmani*) – Priority 4 – Pilbara Olive Python (*Lialis olivaceus barroni*) – Vulnerable – Pin-striped finesnout Ctenotus (*Ctenotus nigrilineatus*) – Priority 1 – Pilbara leaf-nosed Bat (*Rhinonicteris aurantia*) – Vulnerable – Ghost Bat (*Macroderma gigas*) – Vulnerable – Northern Quoll (*Dasyurus hallucatus*) – Endangered The conservation significant species are described below. **Grey Falcon** The habitat preferences of the Grey Falcon are described above in the Gascoyne Junction section. The species was not recorded during the GHD (2023) survey and the closest DBCA record to the DE is approximately 18 km south. The Low undulating hills habitat is potential foraging and breeding habitat, although use would be opportunistic (GHD, 2023). This species is therefore likely to occur at least on an occasional/opportunistic basis. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA 2022) datasets, habitat for the Grey Falcon is widespread within a 10 km radius of the DE. Clearing of up to 1.42 ha of native vegetation within the DE, represents approximately 0.004% of potential habitat available within 10 km of the DE. **Peregrine Falcon** The habitat preferences of the Peregrine Falcon are described above in the Gascoyne Junction section. The species was not recorded during the GHD (2023) survey and the closest DBCA record to the DE is approximately 40 km south. It is likely this species will use the Low undulating hills habitat within DE for foraging (GHD 2023). This species is therefore likely to occur at least on an occasional/opportunistic basis. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA 2022) datasets, habitat for the Peregrine Falcon is widespread within a 10 km radius of the DE. Clearing of up to 1.42 ha within the DE, represents approximately 0.004% of potential habitat available within 10 km of the DE. **Western Pebble-mound Mouse** The Western Pebble-mound Mouse is restricted to the Pilbara region where it is recognised as an endemic species. Habitat for the Western Pebble-mound Mouse can be found on stony hillsides with hummock grasslands and little or no soil. It constructs large mounds of pebbles on	

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	stony slopes which cover an area of 0.5-9.0 square metres. 'Active' mounds are characterized by volcano-like cones capped by 'craters' that mark occluded entrances to subterranean burrow systems in which the mice live, often gregariously (Van Dyck and Strahan, 2008). The Low undulating hills habitat is likely to support the Western Pebble-mound Mouse as a recently active mound was recorded on the southern boundary of the Survey Area (approximately 55 m east of the DE) (GHD, 2023). The closest record to the DE from DBCA records is approximately 2 km west of the DE from 2014 and the next closest record is approximately 28 km north of the DE from 2011. The Western Pebble-mound Mouse is not considered to be abundant in the Nullagine region but the DE may be used for foraging, distribution, shelter and breeding. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA, 2022) datasets, habitat for the Western Pebble-mound Mouse is widespread within a 10 km radius of the DE. Clearing of up to 1.42 ha of native vegetation within the DE, represents approximately 0.005% of potential habitat available within 10 km of the DE. **Pilbara Olive Python** The Olive Python (Pilbara subspecies) range is restricted to the Pilbara region, north Western Australia, and the Dampier Archipelago. Habitat consists of rocky escarpments, gorges and waterholes within the Pilbara region. The preferred microhabitats for this species are under rock piles, on top of rocks, and under spinifex as well as in man-made features such as overburden heaps, railway embankments and sewerage treatment ponds. The species' breeding season occurs from June to August, with males moving long distances in search of breeding females (Wilson and Swan 2010). The Low undulating hills habitat is likely to support the Pilbara Olive Python as favourable habitat exists nearby the DE and the closest DBCA record of the species is approximately 16 km southwest of the DE. The DE may be used for foraging, distribution, shelter and breeding, however the species prefers deep gorges and water holes, which are not present within the DE (DEWHA, 2008). The closest water body to the DE is approximately 500 m southeast, and it is likely that the Pilbara Olive Python would prefer these habitats outside of the DE. Pilbara Olive Pythons are highly mobile and have been recorded having large home ranges (males travel up to 4 km in search of females; Tutt et al., 2002). Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA, 2022) datasets, habitat for the Pilbara Olive Python is widespread within a 10 km radius of the DE. Clearing of up to 1.42 ha of native vegetation within the DE, represents approximately 0.004% of potential habitat available within 10 km of the DE. **Pin-striped Finesnout Ctenotus** The Pin-striped Fine-snout Skink is known only from the Pilbara region of Western Australia. The species is known only from spinifex at the base of a granite outcrop near Woodstock in the hilly interior of the Pilbara (Wilson and Swan 2010). The Low undulating hills habitat is likely to support the species as favourable habitat exists nearby the DE and there are four DBCA records within 2.5 km of the DE. The species may use the DE as foraging, dispersal, shelter and breeding habitat. However, the species can be found in a variety of habitats and is not considered to be dependent on the DE. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA, 2022) datasets, habitat for the Pin-striped Finesnout Ctenotus is widespread within a 10 km radius of the DE. Clearing of up to 1.42 ha of native vegetation within the DE, represents approximately 0.005% of potential habitat available within 10 km of the DE. **Pilbara Leaf-nosed Bat**	

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	The Pilbara Leaf-nosed Bat roosts in deep caves or mines in the wet season and forages nearby. This species occurs in the Pilbara region where its populations are scattered and localised. There are a few known populations of this species in the western Pilbara, roosting in caves formed in gorges that dissect massive siliceous sedimentary geology. It is most often observed in flight over waterholes in gorges (Van Dyck and Strahan 2008). Optimal roosts are thought to occur in caves that form between ascending rock layers, where humidity is maintained from seeping groundwater (Van Dyck and Strahan 2008). Roosts are commonly located over pools of water, or areas deep within the mine or cave structure which provides elevated temperature and humidity. Foraging habitat includes: *Triodia* hummock grasslands covering low rolling hills and shallow gullies, with Eucalyptus camaldulensis along the creeks; over small watercourses throughout granite boulder terrain; over pools and low shrubs in ironstone gorges; and in and around gravelly watercourses with *Melaleuca leucodendron*. The Pilbara Leaf-nosed Bat was not detected during the GHD (2023) survey. No deep, complex caves with a suitable microclimate required for maternity roosts or shallow caves and overhangs for day roosting were identified within the DE. Favourable habitat exists nearby and the species has been previously recorded approximately 10 km from the DE. The Pilbara Leaf-nosed Bat is commonly encountered within 20 km of their permanent diurnal roosts (Bat Call WA, 2021a). Therefore the species may use the undulating low rocky hills habitat within the DE as foraging habitat, however given the distance to travel and forage, it is unlikely that the DE provides significant resources to this species. Therefore, any populations within the DE would be low density. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA, 2022) datasets, habitat for the Pilbara Leaf-nosed Bat is widespread within a 10 km radius of the DE. Clearing of up to 1.42 ha of native vegetation within the DE, represents approximately 0.004% of potential habitat available within 10 km of the DE. **Ghost Bat** In WA, the Ghost Bats' current range is discontinuous, with geographically disjunct colonies occurring in the Pilbara and Kimberley (including several islands). At the time of European settlement, arid zone subpopulations remained. Since then, ghost bats have contracted further northwards, with much of their arid zone distribution disappearing in the past few decades. They currently occupy habitats ranging from the arid Pilbara to tropical savanna woodlands and rainforests. During the daytime they roost in caves, rock crevices and old mines. Roost sites used permanently are generally deep natural caves or disused mines with a relatively stable temperature of 23°−28°C and a moderate to high relative humidity of 50−100 % (TSSC 2016). The Ghost Bat was not detected during the GHD (2023) survey. No deep, complex caves with a suitable microclimate required for maternity roosts or shallow caves and overhangs for day roosting were identified within the DE. Favourable habitat exists nearby and the species has been previously recorded approximately 550 m from the DE in 1976. The next closest DBCA record is approximately 9 km from the DE. The typical nightly foraging range for the species is 10 km to 15 km (Ball Call WA, 2021b). Therefore the species may forage in the undulating low rocky hills habitat within the DE, however it is not considered dependent on the habitat and any populations within the DE would be low density. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA, 2022) datasets, habitat for the Ghost Bat is widespread within a 10 km radius of the DE. Clearing of up to 1.42 ha of native vegetation within the DE, represents approximately 0.004% of potential habitat available within 10 km of the DE. **Northern Quoll** The Northern Quoll once occurred across the majority of northern Australia but its range has significantly contracted. It occurs in the Pilbara region but in disjunct populations. The Northern Quoll inhabits a range of vegetation associations but is especially abundant on dissected rocky escarpment and eucalypt woodland within 200 km of the coast. It is known to den in rock crevices and rock piles and favours rocky areas. They	

Principle	Assessment	Outcome
	are predominantly nocturnal but are occasionally active during the day, particularly during the mating season and are known to have a large home range (Van Dyck and Strahan 2008). There were no observations of the Northern Quoll during the GHD (2023) field survey and the closest DBCA record to the DE is approximately 15 km southwest. There is no habitat critical to the survival of the species within the DE as the DE lacks significant saxicoline habitat associated with the species. The undulating low rocky hills habitat is potential dispersal habitat for the Northern Quoll. If a population is present within the DE, it is likely to be very low density based on their solitary nature and large home ranges (Spencer et al., 2013; Woolley et al., 2015). Female Northern Quolls den in tree hollows, hollow logs and rock crevices, which were not identified during the GHD (2023) field survey. Therefore, it is not likely that the Northern Quoll would use the DE for breeding habitat however, the presence of vagrant individuals in the Low undulating hills habitat is possible given the presence of nearby records (GHD, 2023). Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA, 2022) datasets, habitat for the Northern Quoll is widespread within a 10 km radius of the DE. Clearing of up to 1.42 ha of native vegetation within the DE, represents approximately 0.005% of potential habitat available within 10 km of the DE. Overall, the fauna values of the DEs are highly represented on a local and regional scale (GHD, 2023) and clearing of up to 12.95 ha of fauna habitat is not considered significant for biodiversity of any specific species. The Project is therefore unlikely to be at variance with this principle.	
(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	No flora species listed as Threatened under the BC Act or EPBC Act were recorded in DEs during the GHD (2023) survey. Additionally, no Threatened flora are considered likely to occur within any of the DEs. The proposed clearing of native vegetation for the Project is therefore unlikely to be at variance with this principle.	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.	No TECs listed under the EPBC Act or BC Act were identified within the DEs during the GHD (2023) field survey. As no vegetation within the DE is representative of any TEC, the proposed clearing is not likely to be at variance to this Principle.	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.	**Gascoyne Junction** One vegetation type was identified in the DE during the GHD (2023) survey: – VT13 - *Acacia victoriae*, *Acacia tetragonophylla* and *Hakea recurva* isolated shrubs over *Rhagodia eremaea*, *Atriplex* ?*codonocarpa* and *Maireana* sp. isolated chenopod shrubs on brown loamy clay on low undulating rise with quartz. Broad scale (1:250,000) pre-European vegetation mapping of the area was completed by Beard (1976) at an association level. Vegetation association 282 is present within the DE and is described as: Wattle, teatree & other species *Acacia* spp. *Melaleuca* spp.. The current extents	Proposed clearing is not likely to be at variance to this Principle.

Principle	Assessment	Outcome
	remaining at the State, IBRA bioregion, IBRA subregion and Local Government Area (LGA) levels are 100% of their calculated pre-European extents (GoWA, 2014). **Menzies** One vegetation type was identified in the DE during the GHD (2023) survey: – VT08 - *Maireana pyramidata*, *Atriplex bunburyana*, *Maireana planifolia* and *Sclerolaena diacantha* open chenopod shrubland over, **Cenchrus ciliaris*, **Carrichtera annua* and *Sclerolaena alata* sparse grassland and forbland on orange clay flats Broad scale (1:250,000) pre-European vegetation mapping of the area was completed by Beard (1976) at an association level. Vegetation association 251 is present within the DE and is described as: Mulga *Acacia aneura* and associated species. The current extents remaining at the State, IBRA bioregion, IBRA subregion and LGA levels are greater than 99% of their calculated pre-European extents (GoWA, 2014). **Nullagine** One vegetation type was identified in the DE during the GHD (2023) survey: – VT01- Isolated Snappy Gum over *Triodia*: *Eucalyptus leucophloia* subsp. *leucophloia* isolated trees over *Acacia bivenosa*, *Senna symonii* and *Acacia hilliana* isolated shrubs over and *Triodia* spp. tussock grassland Broad scale (1:250,000) pre-European vegetation mapping of the area was completed by Beard (1976) at an association level. Vegetation association 190 is present within the DE and is described as: Hummock grassland with sparse shrubs *Triodia* spp. *Acacia* spp.. The current extents remaining at the State, IBRA bioregion, IBRA subregion and LGA levels are greater than 99% of their calculated pre European extents (GoWA, 2014). The DEs are not considered to be within areas that has been extensively cleared given they have more than 99% of pre-European extent remaining. The vegetation within the DEs form part of a large continuous tract of vegetation and have a high degree of connectivity with surrounding region, which have similar or better condition vegetation (GHD, 2023). The vegetation types identified during the surveys are not confined to the DEs and are considered well represented at the local and regional scale.	
(f) Native vegetation should not be cleared if it is growing in or in association with a watercourse or wetland.	No wetlands of International Importance (Ramsar Wetlands) or of national significance were identified within the DEs. No wetlands or watercourses were identified within the DEs during the GHD (2023) survey. VT09 was identified in the Menzies Survey Area (outside of the DE) and is associated with a minor drainage line (shown in Figure 5). As this minor drainage line is located outside of the DE, no impacts from the Project are expected. Therefore, as described above, proposed clearing at Gascoyne Junction, Menzies and Nullagine is not likely to be at variance with this principle.	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	Information regarding land capability and susceptibility to erosion for soil and landform types within each land system of the DEs was obtained from the Department of Primary Industries and Regional Development inventory and condition surveys. The potential for land degradation at each DE is summarised below: **Gascoyne Junction**	Proposed clearing is not likely to be at

Principle	Assessment	Outcome
cause appreciable land degradation.	The Gascoyne Junction DE is within the Sandiman Land System, which has mainly erosional surfaces (Payne et al., 1998). The undulating stony ground of the DE are likely to be susceptible to erosion if disturbed. The soil landscape land quality mapping (spatial dataset DPIRD-017, GoWA 2024) indicates that the DE is within the Wandagee -Byro Plains and Hills Zone, which is described as stony hills and plains. A review of ASS risk mapping (spatial dataset DWER-048; GoWA, 2024) indicates the DE has a low risk of ASS occurrence. The northern portion of the DE is immediately adjacent to a contaminated site 'Contaminated - restricted use' (spatial dataset DWER-059; GoWA, 2024), as shown in Figure 4. No activities will be conducted outside the DE and this site will not be impacted by the Project. The clearing proposed will be 8.70 ha in total, 1.69 ha of temporary clearing which will be revegetated and 7.01 ha of permanent clearing. Permanent clearing will not be bare earth but will be kept slashed for effective operation of the solar arrays. **Menzies** The Menzies DE is within the Moriarty Land System which has alluvial plains and narrow drainage tracts that are moderately susceptible to water erosion, particularly if perennial shrub cover is substantially reduced or the soil surface is disturbed (Pringle et al., 1994). The tall shrubland minor drainage line habitat type is likely to be moderately susceptible to water erosion if surface is disturbed. The soil landscape land quality mapping (spatial dataset DPIRD-017, GoWA 2024) indicates that the DE is within the Kambalda Zone, which is described as flat to undulating plains, hills and ranges on greenstone and granitic rocks of the Yilgarn Craton with Calcareous loamy earths, Red loamy earths, Salt lakes soils and some Red-brown hardpan shallow loams and Red sandy duplexes. A review of ASS risk mapping (spatial dataset DWER-048; GoWA, 2024) indicates the DE has a low risk of ASS occurrence. The DE does not intersect any contaminated sites (spatial dataset DWER-059; GoWA, 2024). The closest contaminated site is approximately 0.4 km northwest of the DE and the Project will not impact this site. The clearing proposed will be 2.83 ha in total (all of which is permanent clearing). Permanent clearing will not be bare earth but will be kept slashed for effective operation of the solar arrays. **Nullagine** The Nullagine DE is within the Mosquito Land System which mostly has low susceptibility to erosion except for some drainage floors which are moderately susceptible if vegetative cover is lost. The low undulating hills of the DE are likely to be susceptible to erosion if disturbed. The soil landscape land quality mapping (spatial dataset DPIRD-017, GoWA 2024) indicates that the DE is within the Nullagine Hills Zone, which is described as hills and ranges (with some stony plains) on volcanic and sedimentary rocks of the Pilbara Craton (including the Hamersley Basin) with Stony soils and Red shallow loams and sands. A review of ASS risk mapping (spatial dataset DWER-048; GoWA, 2024) indicates the DE has a low risk of ASS occurrence. The DE does not intersect any contaminated sites (spatial dataset DWER-059; GoWA, 2024). No known contaminated sites are recorded within 20 km of the DE. The clearing proposed will be 1.42 ha in total (all of which is permanent clearing). Permanent clearing will not be bare earth but will be kept slashed for effective operation of the solar arrays.	variance to this Principle.

Principle	Assessment	Outcome
	The DEs contain soils which may be susceptible to erosion. It is expected that hydrological regimes will be maintained through design and that standard management practices will be implemented to prevent erosion / sedimentation. Rehabilitation post construction will be undertaken to stabilise areas that are temporarily cleared, especially if there are slopes and exposed soil that increase the risk of erosion. Additionally, the DEs are located in an area which have previous disturbance, for example roads, tracks and existing facilities. The Project will incorporate standard construction management measures to reduce the risk of soil erosion and sedimentation as a result of ground disturbance and clearing (Appendix A). Any dust produced during construction will also be managed through the implementation of a CEMP. Given the small area to be cleared for the solar farms and the linear nature of the connection corridors, it is not likely that the clearing will cause appreciable land degradation that will affect the present or future use of the land. Based on the above, the proposed clearing of native vegetation for the Project is not considered to be at variance with 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.	No DBCA managed conservation areas were identified within the DEs or within 15 km of the DEs. The proposed clearing is not at variance to this principle.	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.	**Gascoyne Junction** There are no rivers or wetlands of significance located within the DE or within 16 km of the DE. The Gascoyne Groundwater Area (a Groundwater Area proclaimed under the RIWI Act) is present within the DE. The Groundwater bores at Gascoyne Junction are located along the Gascoyne River which is approximately 1 km north of the DE. The bores are drilled to less than 10 m deep (Department of Water, 2008). No impacts to groundwater are expected from the Project. No PDWSAs are present within the DE. The Gascoyne Junction Water Reserve is located 0.75 km north of the DE. The Gascoyne River and Tributaries RIWI Act Surface Water Area and overlaps the DE and there are no RIWI Act Rivers overlapping the DE. **Menzies** There are no rivers or wetlands of significance located within the DE or within 20 km of the DE. The Goldfields Groundwater Area (a Groundwater Area proclaimed under the RIWI Act) is present within the DE. The groundwater depth in Menzies ranges between 14 to 61 m below ground level (Department of Water, 2010). No impacts to groundwater are expected. No PDWSAs are present within the DE. The Menzies Water Reserve is located 0.6 km south of the DE. No Surface Water Areas or Irrigation Districts or Rivers proclaimed under the RIWI Act are present within the DE. **Nullagine** There are no rivers or wetlands of significance located within the DE or within 20 km of the DE.	Proposed clearing is not likely to be at variance to this Principle.

Principle	Assessment	Outcome
	The Pilbara Groundwater Area (a Groundwater Area proclaimed under the RIWI Act) is present within the DE. Groundwater in the Nullagine region is approximately 13 m below ground level (Water and Rivers Commission, 1999). No impacts to groundwater are expected. The DE overlaps the Nullagine Water Reserve PDWSA and the Pilbara Surface Water Area. The DE does not overlap any RIWI Act listed Rivers. It is not expected that the Project will require dewatering or groundwater abstraction within the DEs. Potential impacts to surface water quality from erosion / sedimentation / hydrocarbons will be managed. Clearing within the DEs is unlikely to cause deterioration in the quality of surface or underground water, therefore the proposal is unlikely to be at variance to this principle.	
(j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the intensity of flooding.	**Gascoyne Junction** The nearest Bureau of Meteorology (BoM) weather station with comprehensive data collection and recent historic climate data is Gascoyne Junction (no. 006022). Mean annual rainfall is 210.3 mm with June recording the highest monthly mean (31.1 mm) (BoM, 2024). **Menzies** The nearest BoM weather station with comprehensive data collection and recent historic climate data is Menzies (no. 012052). Mean annual rainfall is 249.0 mm with February recording the highest monthly mean (32.0 mm) (BoM, 2024). **Nullagine** The nearest BoM weather station with comprehensive data collection and recent historic climate data is Marble Bar (no. 004106). Mean annual rainfall is 379.8 mm with January recording the highest monthly mean (107.3 mm) (BoM, 2024). The scale of the DEs and clearing required is not likely to have an impact on the flood regimes or increase intensity of flooding in the regions. The DEs are located on a variety of different landforms including stony ground, clay flats, drainage line, grasslands and low undulating hills (GHD, 2023). It is expected that the hydrological regimes of these landforms will be maintained through design and therefore unlikely to incur flooding. Additionally, given the abundance of vegetation within the surrounding region, with over 99% pre-European vegetation remaining, the proposed clearing is not expected to increase the risk of flooding. Standard management measures for construction will be in place to mitigate against / manage erosion and associated environmental aspects. Therefore, the proposed clearing of native vegetation for the Project is not considered to be at variance with this principle.	Proposed clearing is not likely to be at variance to this Principle.

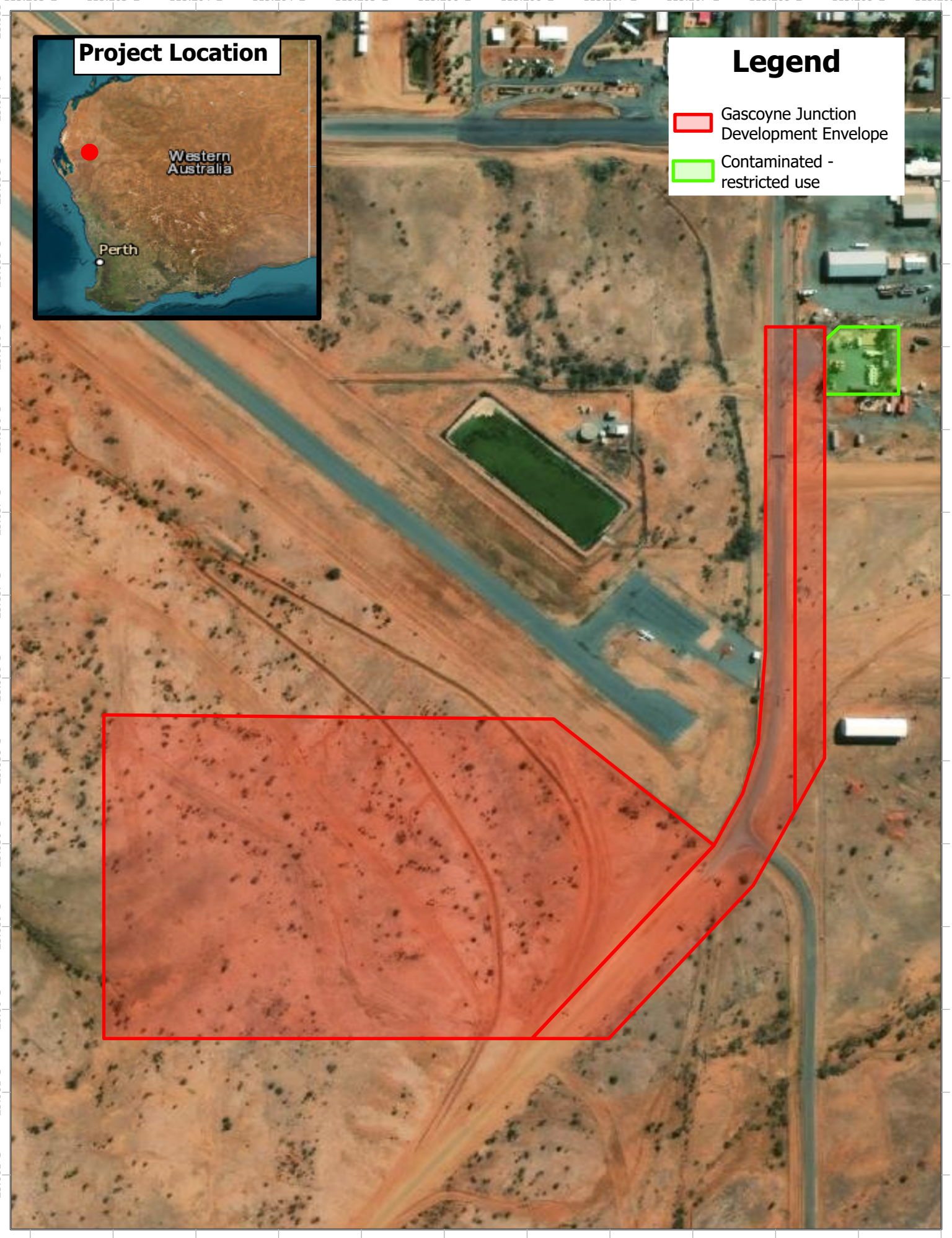

Figure 4 | Gascoyne Junction Constraints

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0 50 100 200 Meters

Scale: 1:3,500

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Figure 5 | Menzies Constraints

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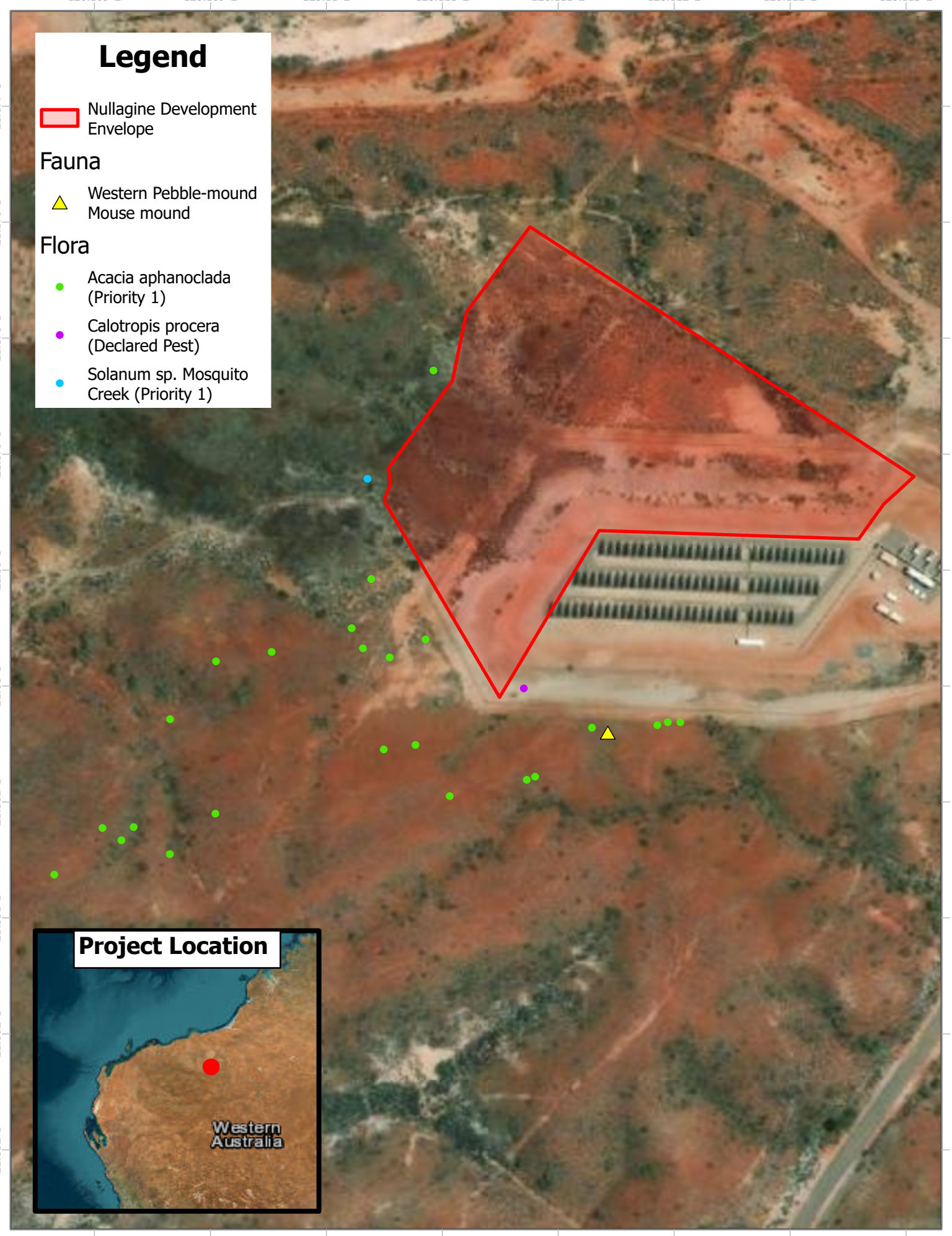

Figure 6 | Nullagine Constraints

N

0 25 50 100 Meters

Scale: 1:2,500

HORIZON POWER

9 Other matters

9.1 Land Planning

9.1.1 Approvals required under the *Planning and Development Act 2005*

The project will be considered Public Works and is expected to be exempt from development approval under Section 6 of the *Planning and Development Act 2005*, however, due regard is required with respect to:

- The purpose and intent of any planning scheme that has effect in the locality where, and at the time when, the right is exercised;
- The orderly and proper planning, and the preservation of the amenity, of that locality at that time; and
- Any advice provided by the responsible authority in the course of the consultation required.

Horizon Power has engaged with the Local Government Authorities in the selection of the DEs.

9.2 Other approvals

In considering a clearing matter under section 51O of the *Environmental Protection Act 1986* (EP Act), the DWER CEO shall have regard to any planning instrument and other relevant matters when making decisions as to clearing permits. 'Other matters' are not defined in the EP Act, and consequently are any matters the CEO considers relevant. Other matters are generally environmental issues not directly within the scope of the clearing principles, but within the object and principles of the Act. Other approvals that may apply to this Project are detailed in Table 8.

Table 8 Other approvals

Other approvals	Assessment
Referral to Environmental Protection Authority	Due to the small scale of the Project in remote locations, it is considered that all environmental impacts can be managed under Part V of the EP Act and referral to the EPA under Part IV is not considered necessary.
Referral to Department of Climate Change, Energy, the Environment and Water (DCCEEW)	***Threatened flora, fauna and ecological communities*** *Gascoyne Junction* No TECs were recorded in the Gascoyne Junction DE. Ten Threatened fauna species were identified within 20 km of the Gascoyne Junction DE. Habitat for the Grey Falcon and Southern Whiteface is present in the DE. One Threatened flora species was identified within 20 km of the Gascoyne Junction DE; *Pityrodia augustensis*. This species is unlikely to occur within the Gascoyne Junction DE (GHD, 2023). *Menzies* No TECs were recorded in the Menzies DE. Nine Threatened fauna species were identified within 20 km of the Menzies DE. Habitat for the Grey Falcon and Southern Whiteface is present in the DE. One Threatened flora species was identified within 20 km of the Menzies DE; *Ricinocarpos brevis*. This species is unlikely to occur within the Menzies DE (GHD, 2023). *Nullagine* No TECs were recorded in the Nullagine DE. 13 Threatened fauna species were identified within 20 km of the Nullagine DE. Habitat for the Grey Falcon, Southern Whiteface, Northern Quoll, Ghost Bat, Pilbara Leaf-nosed Bat and Pilbara Olive Python is present in the DE. Based on aerial imagery and the Soil Landscape Mapping (spatial dataset DPIRD-027, GoWA, 2022) and Pre-European Vegetation (spatial dataset DPIRD-006, GoWA, 2022) datasets, habitat for the Threatened fauna is widespread within a 10 km radius of the DEs. Overall, the fauna values of the DE are highly represented on a local and regional scale (GHD, 2023) and clearing of 8.70 ha at Gascoyne Junction, 2.83 ha at Menzies and 1.42 ha at Nullagine for the Project is not considered significant for any Threatened species. Given the abundance of alternative habitat, no significant impacts are expected to Threatened fauna, and referral to DCCEEW is not considered likely to be required.

Other approvals	Assessment
	Migratory fauna *Gascoyne Junction* Eight Migratory species were recorded within 20 km of the Gascoyne Junction DE. No significant habitat for these species is likely to be removed. *Menzies* Five Migratory species were recorded within 20 km of the Menzies DE. No significant habitat for these species is likely to be removed. *Nullagine* Nine Migratory species were recorded within 20 km of the Nullagine DE. No significant habitat for these species is likely to be removed. ***National heritage*** The DEs do not overlap any National Heritage Areas. No impacts to national heritage values are expected from the proposed works. ***Wetlands of international importance*** The DEs do not overlap any wetlands of national importance.
Works Approval or Licence under EP Act	No works approvals or licences are required for this project.
Groundwater or surface water licence under the *Rights in Water and Irrigation Act 1914*	Horizon Power is permitted to access water under Section 42 and 49 of *the Energy Operator (Powers) Act 1979*. Any licences required for construction water will be acquired by the construction contractor.
Notice of Intent to Clear system under the *Soil and Land Conservation Act 1945*	Not Applicable.
State and municipal heritage	No State or municipal heritage sites are within the DEs (spatial dataset DPLH-006; DPLH-008, GoWA 2024, inHerit database). The Menzies Railway Station Group (State registered place) is immediately adjacent to the Menzies DE. No impacts are expected outside of the DE.
Native title	*Gascoyne Junction* The Gascoyne Junction DE is within the boundaries of the Gnulli, Gnulli #2 and Gnulli #3 – Yinggarda, Baiyungu and Thalanyji People Native Title determination, in an area where Native Title has been determined not to exist. The Gascoyne Junction DE does not overlap any ILUAs. *Menzies* The Menzies DE is within the boundaries of the Nyalpa Pirniku Native Title determination, in an area where Native Title has been determined not to exist. The Menzies DE does not overlap any ILUAs. *Nullagine* The Nullagine DE is within the boundaries of the Nyamal Palyku Proceeding Native Title Determination, in an area where Native Title has been determined not to exist. The Nullagine DE does not overlap any ILUAs.

Other approvals	Assessment
Aboriginal Sites of Significance under the *Aboriginal Heritage Act 1972*	*Gascoyne Junction* There are no National or World Heritage Areas mapped as overlapping the DE. The DE does not overlap with any registered or lodged Aboriginal Cultural Heritage places. An Aboriginal Cultural Heritage survey of the Gascoyne Junction DE has not yet been conducted as a heritage protection agreement is still being finalised at the time of writing of this report. *Menzies* There are no National or World Heritage Areas mapped as overlapping the DE. The DE does not overlap with any registered or lodged Aboriginal Cultural Heritage places. No Aboriginal Cultural Heritage sites were identified in the DE during a heritage survey for the Project. *Nullagine* There are no National or World Heritage Areas mapped as overlapping the DE. There are two registered Aboriginal Heritage places which fall within the DE; – Aboriginal Cultural Heritage Registered Place 6636: Irrungadji, which is an 'Artefacts / Scatter; Camp; Ritual / Ceremonial; Historical' place type – Aboriginal Cultural Heritage Lodged Place 40788: Minyiburru (Seven Sisters) Site Complex, which is a 'Ritual / Ceremonial; Creation / Dreaming Narrative' place type An archaeological and ethnographic site identification heritage survey was carried out in June 2023, and during the survey, no heritage places were identified. Horizon Power has an external Aboriginal Cultural Heritage Management Policy, that details our commitment to *avoid impacting on Aboriginal Cultural Heritage whenever and wherever possible*. An Aboriginal heritage protection plan will be developed (where required), in consultation with the knowledge holders, to clearly outline any obligations on Horizon Power based on recommendations made in survey reports. As appropriate, management measures will be implemented during activities, such as the engagement of cultural heritage monitors during ground disturbing works.

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Contaminated Sites Database (DWER-059)

DBCA Statewide Vegetation Statistics

RIWI Act, Groundwater Areas (DWER-034)

Public Drinking Water Source Areas (DWER-033)

RIWI Act, Rivers (DWER-036)

RIWI Act Surface Water and Irrigation District (DWER-037)

DBCA Legislated Lands and Waters (DBCA-011)

Aboriginal Heritage Places (DPLH-001)

Heritage Council WA - State Register (DPLH-006)

Heritage Council WA - Local Heritage Survey (DPLH-008)

Acid Sulfate Soil Risk Map 100K (DWER-048)

Soil landscape land quality - Zones (DPIRD-017)

Pre-European Vegetation (DPIRD-006)

Soil Landscape Mapping - Best Available (DPIRD-027)

Soil landscape land quality - Zones (DPIRD-017)

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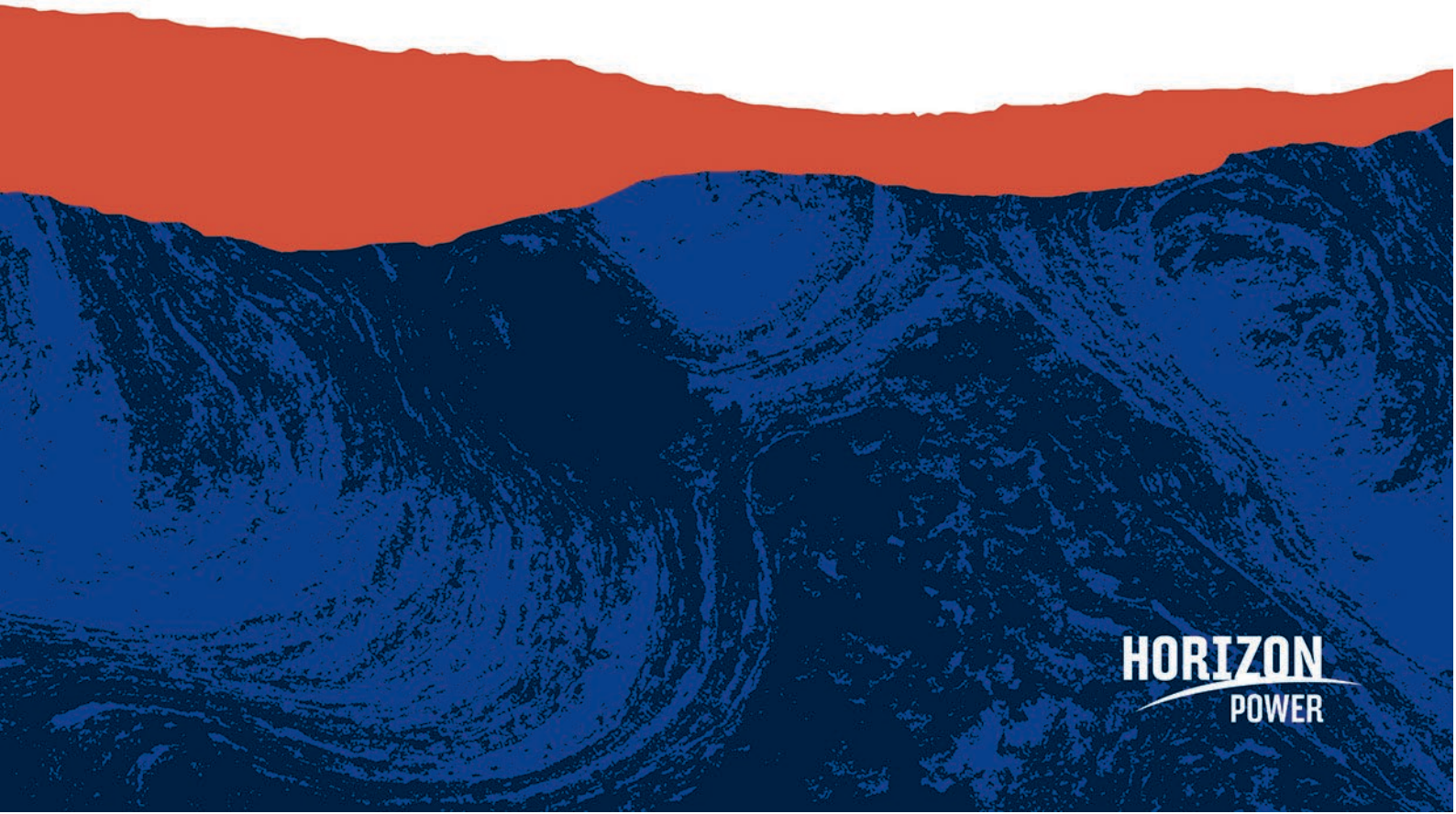
Appendix A: Construction Environmental Management Plan

PROTECTED

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.

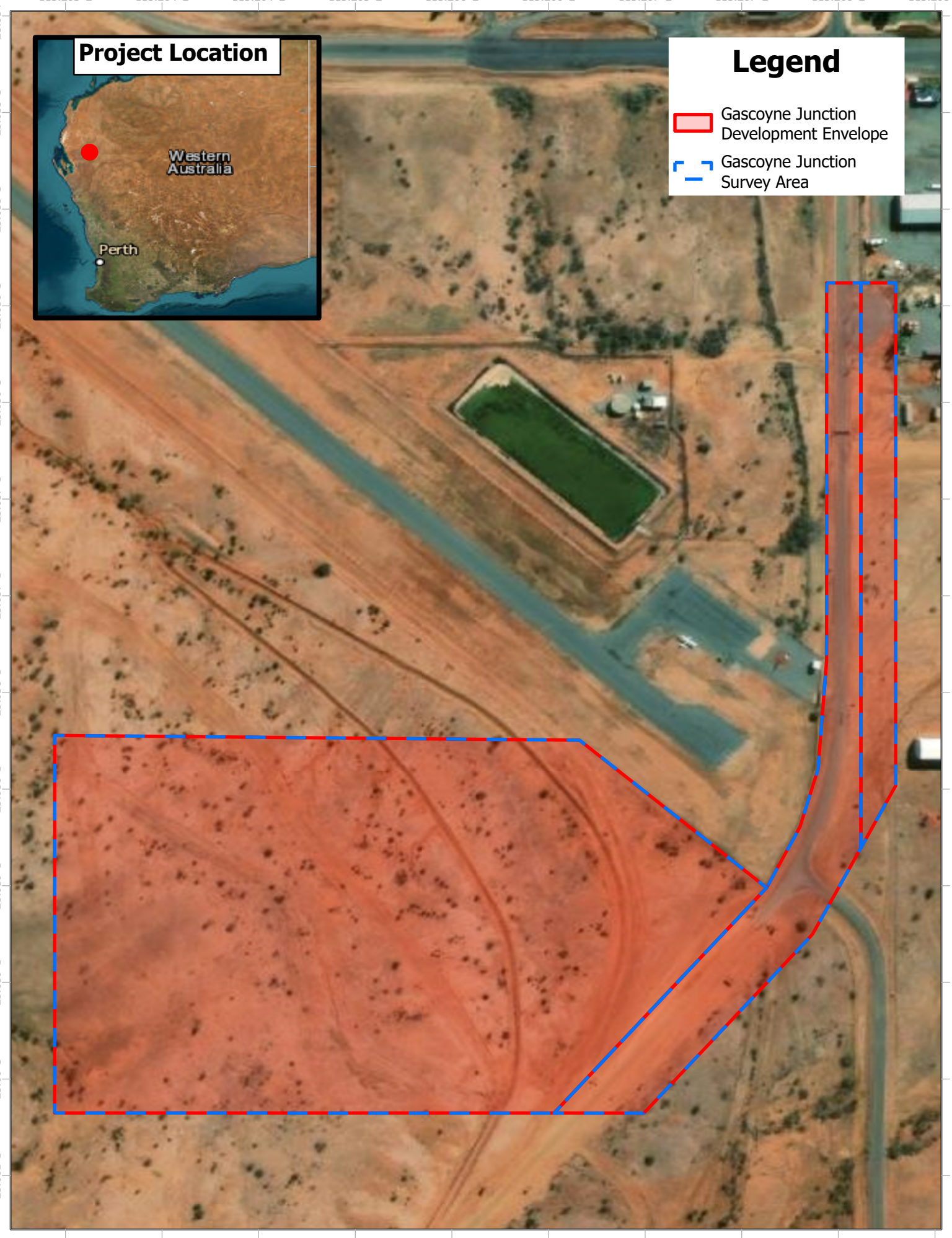


Figure 1 | Gascoyne Junction Development Envelope and Survey Area

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0 50 100 200 Meters

Scale: 1:3,000

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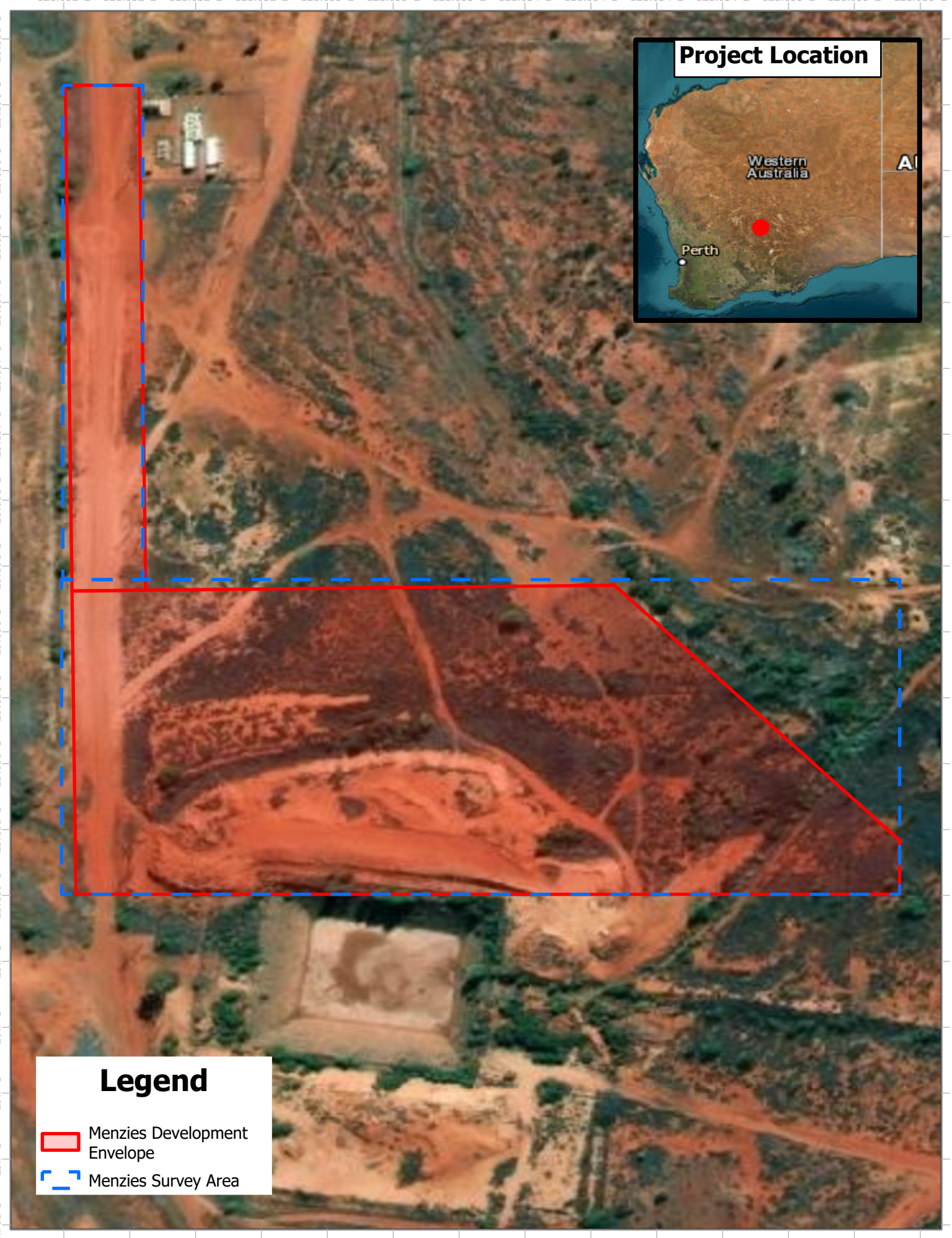

Figure 2 | Menzies Development Envelope and Survey Area

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Scale: 1:2,200

HORIZON POWER

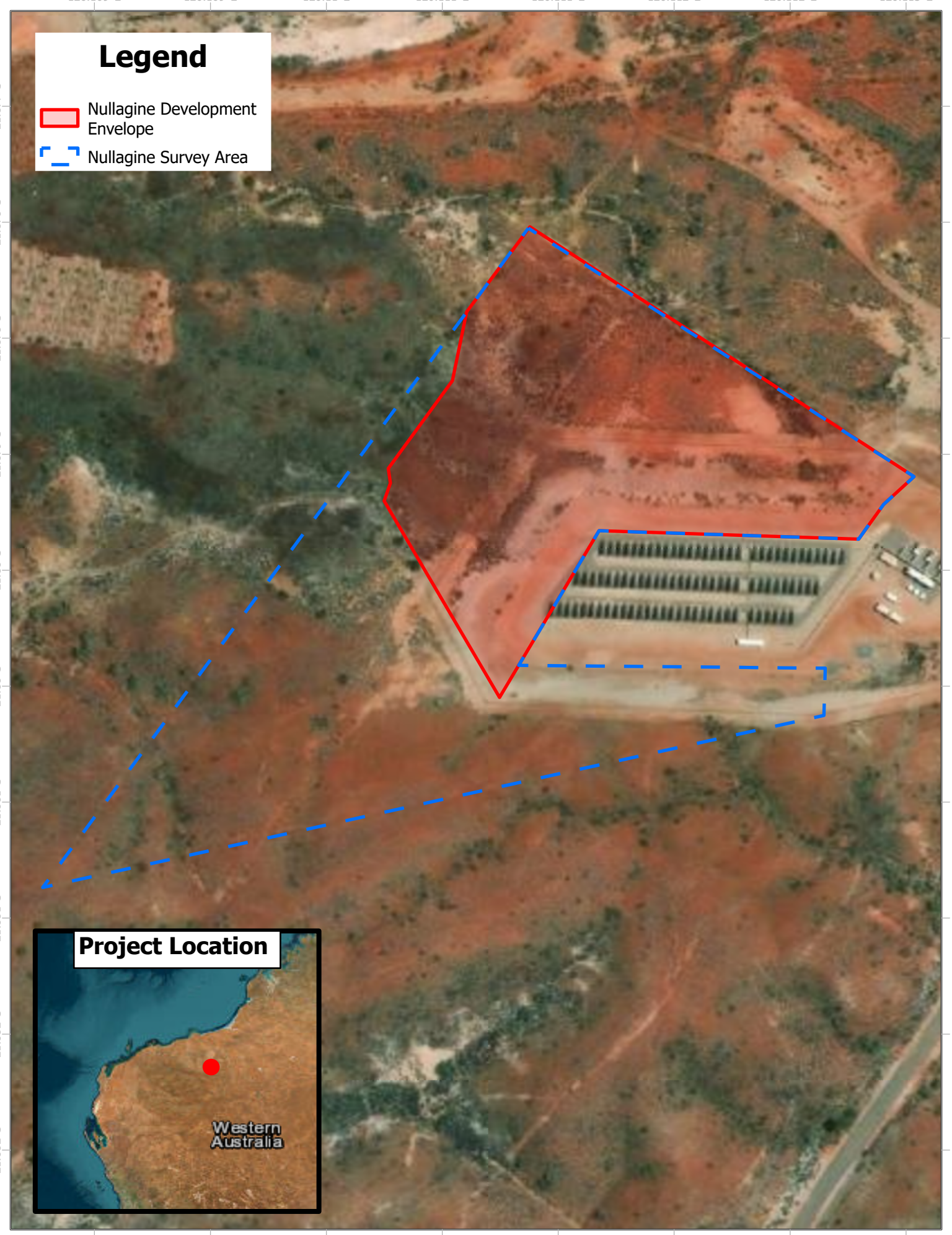

Figure 3 | Nullagine Development Envelope and Survey Area

N

0 25 50 100 Meters

Scale: 1:2,500

HORIZON POWER

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.
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