

Port Hedland Green Steel Project - Stage 1

Application Number: **02203**Commencement Date:
22/12/2023Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Port Hedland Green Steel Project - Stage 1

1.1.2 Project industry type *

Manufacturing

1.1.3 Project industry sub-type

—

1.1.4 Estimated start date *

01/01/2025

1.1.4 Estimated end date *

01/06/2124

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

Overview

Port Hedland Green Steel Pty Ltd (PHGS) is progressing the development of large-scale downstream iron ore processing capability known as the Port Hedland Green Steel Project (the Proposed Action). The Proposed Action is located in the Boodarie Strategic Industrial Area (SIA) approximately 10 kilometres (km) southwest of Port Hedland in the Pilbara region. The Proposed Action's regional location is shown in Figure

1 (Att 1 Figure - Regional Location) and the indicative footprint and development envelopes are shown in Figure 2 (Att 2 Figure - DE's & IDF). The Proposed Action is made up of two development envelopes, the Plant Development Envelope (PDE) and the External Infrastructure Development Envelope (EIDE) (Att 2 Figure - DEs & IDF)

The Proposed Action will consist of a pellet plant and a hot briquetted iron (HBI) Plant, consuming approximately 3-3.5 million tonnes per annum (Mtpa) of iron ore. The first processing step is to produce iron ore pellets (3-3.5 Mtpa). Most of the pellets will be fed into the HBI plant to produce approximately 2 Mtpa HBI. The remainder of the pellets (~0.7 Mtpa) will be exported as pellets.

The infrastructure to be developed within the Boodarie SIA for the Proposed Action will include:

- Iron ore processing facility (IOPF) comprising one pellet and one HBI plant producing approximately 2 Mtpa of HBI and 0.7 Mtpa of iron ore pellets;
- Hydrogen production and storage facilities for supply to IOPF;
- Nitrogen storage facilities for supply to IOPF; and
- Supporting infrastructure such as:
 - HBI and pellet handling and storage facilities;
 - Flux storage;
 - Administration and other non-process buildings;
 - Workshops;
 - Water storage areas and pipelines;
 - Magnetite concentrate handling facilities;
 - Power management and transmission;
 - Gas supply pipeline (within Boodarie SIA)
 - Carbon capture, storage and transport infrastructure;
 - Drainage and sediment control; and
 - Access roads.

The HBI and iron ore pellets will be shipped out of the Port of Port Hedland. The scope of the Proposed Action does not include any construction works at the Port of Port Hedland or the export of pellets and HBI. The Pilbara Ports Authority holds (or will hold) the relevant approvals for marine and export facilities.

Water, power and natural gas will be supplied by third parties and subject to separate approvals by the relevant third party and therefore not part of this referral. However, the referral includes an EIDE to allow connection within the Boodarie SIA to third party suppliers, if needed, as well as development of access roads and drainage for the Proposed Action. The EIDE covers the infrastructure corridors identified in the Boodarie SIA Structure Plan. These infrastructure corridors have been established by the Department of Jobs, Tourism, Science and Innovation as part of the planning for the Boodarie SIA. The layout of the infrastructure within the EIDE will be determined once commercial arrangements with third-party suppliers have been finalised as well as consultation undertaken with the Department of Jobs, Tourism, Science and Innovation.

The Proposed Action also excludes any early works (potentially for communications infrastructure, laydown areas and access) that do not represent implementation.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

Yes

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

Yes

1.2.5 Provide information about the staged development (or relevant larger project).

The Proposed Action represents the first stage of up to six stages of development. HBI production based on 100% hydrogen technology is yet to be developed on a cost effective basis. Stage one effectively represents the proof of concept that hydrogen can replace natural gas in the process. Stage 1 needs to be proven technically feasible before stages 2-6 can be developed. Future stages of the larger project will be subject to referral under the EPBC Act as required.

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

State Government

Environmental Protection Act 1986 (WA)

The Proposed Action is being assessed under Part IV of the *Environmental Protection Act 1986* (WA; EP Act). PHGS submitted a referral under Section 38 of the EP Act to the Department of Water and Environmental Regulation on 15 September 2023. On 23 October 2023 the Environmental Protection Authority (EPA) determined that the Proposed Action would be formally assessed under the EP Act at the 'Assessment on Referral Information' level of assessment.

PHGS will not be seeking that the EPA conduct an accredited assessment for this Proposed Action if the Department of Climate Change, Energy, the Environment and Water consider it to be a 'Controlled Action'.

Works Approval and Licence is required under Part V EP Act (WA) for the construction, commissioning and operation of the Processing Plant.

Aboriginal Heritage Act 1972 (WA)

Consent under Section 18 of the *Aboriginal Heritage Act 1972* (AH Act) is required to impact any Aboriginal Heritage sites. Aboriginal heritage surveys are ongoing in the development envelopes to understand if any Aboriginal heritage sites are present which have the potential to be impacted by the Project.

Land Administration Act 1997 (WA)

The Proposed Action is to be implemented on a lease to be issued by the Government of Western Australia (WA) under the *Land Administration Act 1997* (WA). On 30th December 2022, the State Government allocated (an informal non-binding offer of land) approximately 960 ha at the Boodarie SIA (Att 3 Figure - Land Allocation) for the purpose of constructing and operating the Proposed Action. Following the land allocation, PHGS has developed the Key Terms for an Option to Lease as the first step to securing a right to negotiate a Lease with DevelopmentWA. This negotiation has commenced and will also depend on the successful negotiation of an Indigenous Land Use Agreement (ILUA) with the Kariyarra People, the Determined Traditional Owners of the Land.

In advance of the Option to Lease, an application for a Section 91 (s91) Licence under the *Land Administration Act 1997* has been approved by Department of Planning, Lands and Heritage. The s91 Licence enables limited land access for investigations on the land. The development envelopes identified earlier, lie entirely within the s91 boundary.

The development envelopes are covered by a File Notation Area (16658 and 16673) for the purposes of the Pilbara SIA (Boodarie Core Strategic Industry Zone).

Planning and Development Act 2005 (WA)

Planning approvals in the Boodarie SIA are managed under the Boodarie SIA Structure Plan (Structure Plan). The Structure Plan provides for the long term strategic industrial development of the area. The Structure Plan is intended to coordinate the detailed land use and development of the Boodarie SIA.

A Development Application will need to be submitted to the Town of Port Hedland under the *Planning and Development Act 2005 (WA)* that meets the requirements laid out in the Structure Plan. Whilst the Development Application is submitted to the Town of Port Hedland, it will be assessed by the relevant Development Assessment Panel as the mandatory value threshold for requiring Development Assessment Panel review of \$10 million will be exceeded.

Rights in Water and Irrigation Act 1914 (WA)

A Bed and Banks Permit may be required under the *Rights in Water and Irrigation Act 1914* if taking, storing or diverting water. The Bed and Banks Permit will ensure that the any disturbance of bed and banks of a watercourse minimises the impacts to the water regimes of that watercourse.

Dangerous Goods Safety Act 2004 (WA)

A Dangerous Goods Licence may be required under the *Dangerous Goods Safety Act 2004 (WA)* for the bulk storage of fuel or other dangerous goods if above specified limits.

Commonwealth Government

Environment Protection and Biodiversity Conservation Act 1999

PHGS is seeking environmental approval under the *Environment Protection and Biodiversity Act 1999* (Commonwealth) (EPBC Act). The Proposed Action is being referred under the EPBC Act, given the potential impacts to Matters of National Environmental Significance.

PHGS will not be seeking that the EPA conduct an accredited assessment for this Proposed Action.

Native Title Act 1993 (Cth)

PHGS will comply with the requirements of the *Native Title Act 1993* (Cth). Negotiations with Kariyarra Aboriginal Corporation (KAC) representing the Kariyarra Traditional Owners in respect of an ILUA have commenced and are ongoing.

National Greenhouse and Energy Reporting Act 2007

The Proposed Action meets the definition for a 'facility' as defined under the *National Greenhouse and Energy Reporting Act 2007* (Cth) (NGER Act) and will be required to comply with its requirements and the requirements of subordinate legislation including:

- National Greenhouse and Energy Reporting (Measurement Determination) 2008;
- National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 (Safeguard Mechanism Rule); and
- *Safeguard Mechanism (Crediting) Amendment Act 2023*.

PHGS will apply to the Clean Energy Regulator for registration under the NGER Act as the Proposed Action is proposed to exceed the registration thresholds. The Project will also be considered a '*Designated Large Facility*' as it will exceed the covered emissions threshold (100,000 t CO₂-e per annum) - meaning the

Safeguard Mechanism Rule will apply. A Greenhouse Gas (GHG) emission baseline will be set under the Safeguard Mechanism Rule and the Proposed Action will be required reduce its GHG emissions in line with the baseline decline rate and report on its performance under the NGERs reporting scheme.

In addition, the Australian Government's Major Projects help tool (Australian Government, 2023) was used to determine that the following Commonwealth legislation may apply:

- *Foreign Acquisitions and Takeovers Act 1975*;
- *Australian Jobs Act 2013*;
- *Migration Act 1958*;
- *Airports (Protection of Airspace) Regulations 1996*; and
- *Customs Act 1901*.

A summary of the approvals requirements for these five acts is discussed further below.

Foreign Acquisitions and Takeovers Act 1975

The Proposed Action will involve foreign investors. Foreign investments of a certain kind within defined thresholds require approvals from the Foreign Investment Review Board. Approvals are subject to national interest concerns.

Australian Jobs Act 2013

The Proposed Action will involve capital expenditure over AUD \$500 million. All major projects with capital expenditure of AUD \$500 million or more will require an Australian Industry Participation Plan under the Australian Jobs Act 2013.

Migration Act 1958

The Proposed Action will employ foreign workers. All foreign workers will require the appropriate visa that allows them to work in Australia under the *Migration Act 1958*.

Airports (Protection of Airspace) Regulations 1996

Proposed Action will impact the airspace within a 20 km radius of an airport. All activities that may cause an obstruction within 20 km of an airport or its protected airspace require approvals under the *Airports (Protection of Airspace) Regulations 1996*.

Activities or obstructions include:

- Permanent structures (e.g., buildings);
- Temporary structures (e.g., cranes); and
- Other activities causing intrusions (e.g., Air turbulence from stacks or vents).

Customs Act 1901

The Proposed Action will involve importing or exporting goods. Businesses are able to import and export goods subject to biosecurity (under the *Biosecurity Act 2015*) and taxation (under the *A New Tax System (Goods and Services Tax) Act 1999*) and customs clearances under the *Customs Act 1901*. Depending on the nature of the goods and regardless of value, importers might need to obtain permits to clear certain imported goods from customs control.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Extensive consultation has been completed across a broad range of stakeholders. The stakeholder register has been attached as Att 4 - Stakeholder Engagement Register. The following stakeholders have been consulted to-date or will be consulted with regarding the Proposed Action:

Commonwealth Government

- Australian Renewable Energy Agency;
- Department of Climate Change, Energy, the Environment and Water;
 - EPBC Act pre-referral;
 - Safeguard mechanism;
- Major Projects Facilitation Agency;
- Net Zero Authority; and
- Northern Australia Infrastructure Fund.

State Government

- Department of Jobs, Tourism, Science and Innovation;
- Department of Planning, Lands and Heritage;
- Department of Water and Environmental Regulation;
- DevelopmentWA;
- EPA;
- Pilbara Development Commission; and
- Pilbara Ports Authority.

Other

- KAC;
- Port Hedland Industries Council;
- Port Hedland International Airport; and
- Town of Port Hedland.

Kariyarra Aboriginal Corporation

The Proponent plans to undertake dedicated Social Surroundings consultation with KAC and Kariyarra Traditional Owners in 2024. An increased focus on Social Surroundings has developed under the EP Act in WA in recent times that considers social and cultural values and includes Aboriginal places, objects and cultural landscapes. Dedicated consultation will be undertaken with KAC and Kariyarra Traditional Owners to understand potential impacts to Kariyarra Social Surroundings and Aboriginal cultural and social heritage values. The Social Surroundings consultation, along with other ongoing consultation with the Kariyarra Traditional Owners, will be undertaken in consideration of the *Interim Engaging with First Nations People and Communities on Assessments and Approvals under the Environment Protection and Biodiversity Conservation Act 1999* (DCCEEW, 2023).

Where relevant, Social Surroundings consultation will also be undertaken with additional interested parties and stakeholders.

The following additional consultation will be undertaken:

- Prior to ground disturbance, heritage surveys will be completed with Kariyarra Traditional Owners in respect of the area required for the Proposed Action; and
- Dedicated consultation will also be undertaken with KAC and Kariyarra Traditional Owners to understand potential impacts to Kariyarra Social Surroundings.

Results from the Aboriginal heritage surveys and Social Surroundings consultation will be utilised to inform design the development envelopes and Proposed Action footprint to seek to minimise impact to Kariyarra Social Surroundings, including Aboriginal sites.

If impact to an Aboriginal site is proposed, the Proponent will, in consultation with KAC and Kariyarra Traditional Owners, seek consent under section 18 of the AH Act. If required, a Social, Cultural and Heritage Management Plan (SCHMP) will also be developed in consultation with KAC.

Consultation with KAC and Kariyarra Traditional Owners will be ongoing regarding the Proposed Action, including options to minimise impacts to Kariyarra Social Surroundings.

Government

PHGS has also met with a number of government agencies, including decision making authorities that are required to provide approvals for the Proposed Action. PHGS has met with State and Commonwealth Government ministers to discuss the Proposed Action. PHGS will continue to consult with decision making authorities as necessary.

PHGS meets regularly with the local Shire and is working closely with the Town of Port Hedland to consult on the proposed development and operation of the Proposed Action and how to best integrate this with the shire and local towns.

Consultation is expected to be ongoing with most of the stakeholders identified throughout the construction, operational and closure phases of the Proposed Action.

Local Community

As the Project details are becoming available, consultation with the local community will be completed. The Project is not only of interest in terms of environmental impacts and management, but as it is a long-term Project generating significant local changes and opportunities for business accommodation and employment, these will likely be of interest to the local community.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint.

Alternatively, email us at privacy@awe.gov.au.

Confirm that you have read and understand this Privacy Notice *

1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details	
ABN/ACN	85137515078
Organisation name	Preston Consulting Pty Ltd
Organisation address	Level 1, 226 Adelaide Terrace, Perth, Western Australia, 6000
Referring party details	
Name	Phoebe Ranford
Job title	Environmental Consultant
Phone	0427080869
Email	pranford@prestonconsulting.com.au
Address	Level 1, 226 Adelaide Terrace, Perth, Western Australia, 6000

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details	
ABN/ACN	80667564589
Organisation name	PORT HEDLAND GREEN STEEL PTY LTD

Organisation address Central Park Level 48 152-158 St Georges Terrace Perth WA 6000

Person proposing to take the action details

Name Troy Park

Job title Company Secretary

Phone +61 419 146 231

Email troypark@poscowa.com.au

Address Central Park Level 48, 152-158 St Georges Terrace, Perth Western Australia 6000, Australia

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

The Proposed Action is the first project being developed in Australia by PHGS. There are no current or past proceedings against PHGS and PHGS has a history of responsible environmental management to date.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

As PHGS is a new corporate entity, environmental policies and frameworks are still under development. An Environmental Policy and Environmental Management System will be in place by the time construction of the Proposed Action commences. The environmental policies and frameworks will be made available, upon request, to the Department once they have been developed.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	80667564589
Organisation name	PORT HEDLAND GREEN STEEL PTY LTD
Organisation address	Central Park Level 48 152-158 St Georges Terrace Perth WA 6000

Proposed designated proponent details

Name	Troy Park
Job title	Company Secretary
Phone	+61 419 146 231
Email	troypark@poscowa.com.au

Address

Central Park Level 48, 152-158 St Georges Terrace, Perth Western Australia
6000, Australia

1.3.4 Identity: Summary of allocation

✔ Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	85137515078
Organisation name	Preston Consulting Pty Ltd
Organisation address	Level 1, 226 Adelaide Terrace, Perth, Western Australia, 6000
Representative's name	Phoebe Ranford
Representative's job title	Environmental Consultant
Phone	0427080869
Email	pranford@prestonconsulting.com.au
Address	Level 1, 226 Adelaide Terrace, Perth, Western Australia, 6000

✔ Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	80667564589
Organisation name	PORT HEDLAND GREEN STEEL PTY LTD
Organisation address	Central Park Level 48 152-158 St Georges Terrace Perth WA 6000
Representative's name	Troy Park
Representative's job title	Company Secretary
Phone	+61 419 146 231
Email	troypark@poscowa.com.au

Address

Central Park Level 48, 152-158 St Georges Terrace, Perth Western
Australia 6000, Australia

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

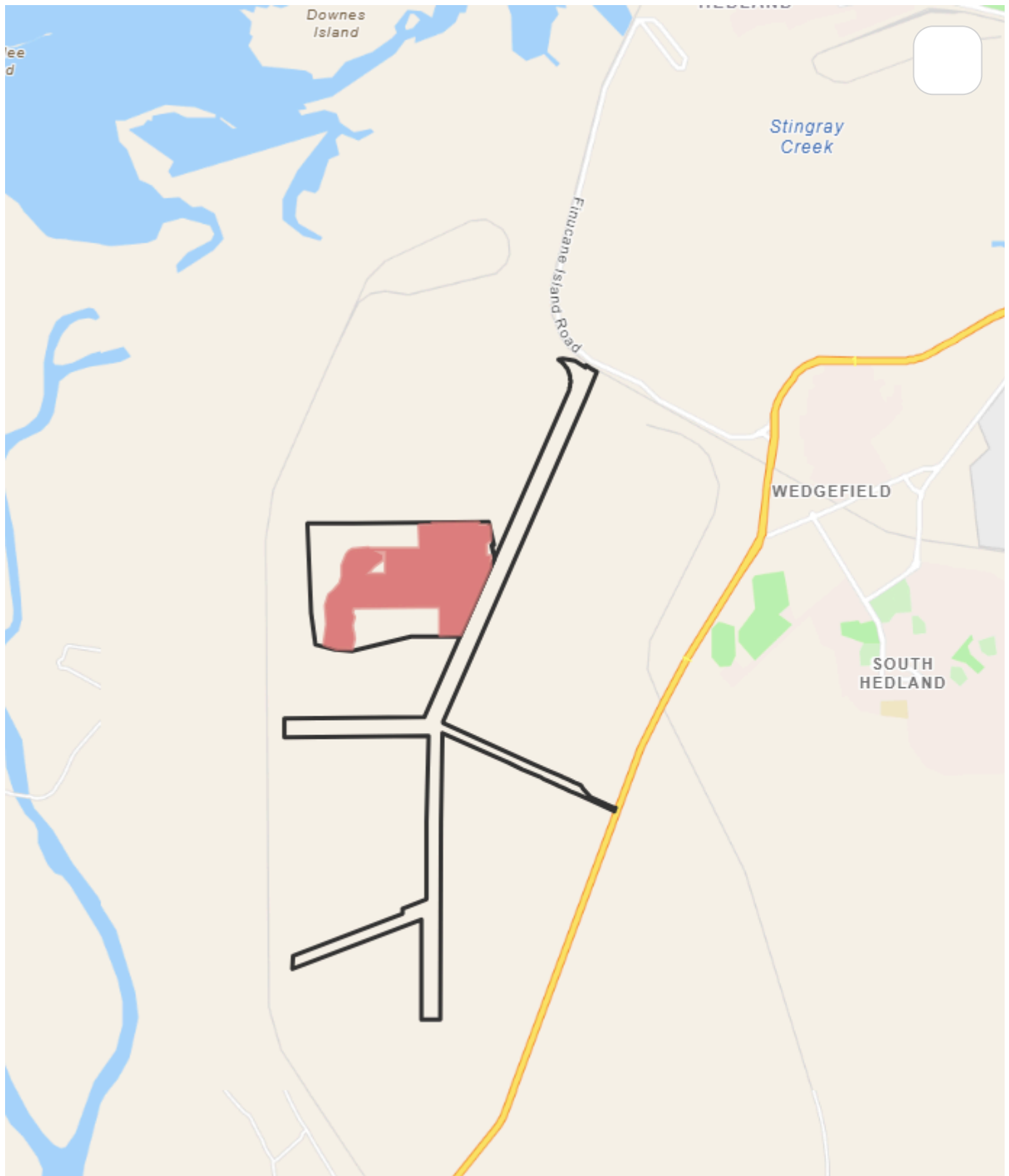
1.4 Payment details: Payment allocation

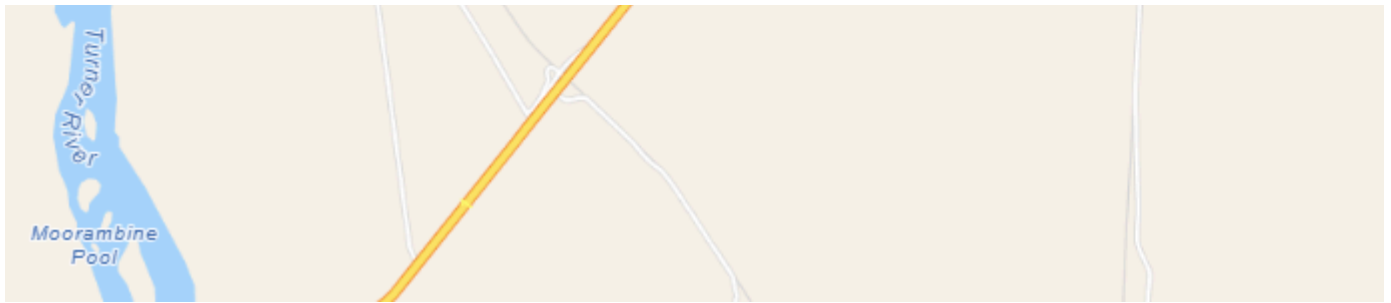
1.4.11 Who would you like to allocate as the entity responsible for payment? *

Proposed designated proponent

2. Location

2.1 Project footprint





Maptaskr © 2024 -20.427006, 118.464513

Powered By Esri - Sources: Esri, TomTom, Garmin, F...

Project Area: 986.06 Ha **Disturbance Footprint:** 300.87 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

The Proposed Action is located north of Boodarie Station Access Rd within the Boodarie SIA.

2.2.2 Where is the primary jurisdiction of the proposed action? *

Western Australia

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

Land Administration Act 1997

The Proposed Action is to be implemented on a lease issued by the Government of WA under the *Land Administration Act 1997* (WA). On 30th December 2022, the State Government allocated approximately 960 ha of land at the Boodarie SIA (Att 3 Figure - Land Allocation) for the purpose of constructing and operating the Proposed Action to PHGS. Following the land allocation PHGS will negotiate an Option to Lease and a Lease with DevelopmentWA.

In advance of the Option to Lease, an application for a Section 91 (s91) Licence under the *Land Administration Act 1997* was submitted to Department of Planning, Lands and Heritage. The s91 Licence has been granted and enables land access for investigations on the land associated with the Proposed Action.

The development envelopes are covered by a File Notation Area (16658 and 16673) for the purposes of the Pilbara SIA (Boodarie Core Strategic Industry Zone).

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The Project is located in the Boodarie SIA approximately 12 km southwest of Port Hedland, approximately 7 km west of South Hedland and approximately 6 km southwest of Wedgefield in the Pilbara region of WA.

The Boodarie SIA is currently zoned as Strategic Industry, no change to this zoning is required for the Proposed Action.

There are currently no services within the Boodarie SIA that connect to the land allocation within the SIA (roads, power, water, sewerage, drainage). These will all need to be established to service the Proposed Action. However the Boodarie SIA adjoins Great Northern Highway and the Boodarie Station Access Road runs from Great Northern Highway through the SIA, past the existing facilities within the SIA.

Infrastructure corridors have been identified by the State Government for the Boodarie SIA.

The Proposed Action is approximately 7 km (in a straight line) from Lumsden Point at the Port of Port Hedland, which is the preferred location for the Proposed Action's importation requirements and 28 km from PH1, the preferred option for exporting HBI (port approvals are not part of the Proposed Action).

The Proposed Action is located in the Roebourne subregion (PIL4) of the Pilbara bioregion which is characterised as "Quaternary alluvial and older colluvial coastal and subcoastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. pyrifolia* and *A. inaequilatera*. Uplands are dominated by *Triodia* hummock grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands. Samphire, Sporobolus and mangal occur on marine alluvial flats and river deltas." Condition (Att 10 Fauna report (Phoenix, 2023), Section 3.1, pp 6).

The Proposed Action intersects two land systems including the Uaroo Land System and the Littoral System (Att 10 Fauna Report (Phoenix, 2023), Section 3.2, pp 6).

The majority of vegetation recorded was considered to be in Very Good to Excellent Condition (Att 6 Flora Technical Memorandum, Section 3.1.1.2, pp 7). None of the weed species recorded are declared or listed as Weeds of National Significance (DPIRD, 2023).

Photos of the development envelopes that demonstrate the current condition of the area are provided in Att 5 Figure – IBRA Subregions.

3.1.2 Describe any existing or proposed uses for the project area.

The location has historically been used for pastoral activities. It is immediately adjacent to significant industrial infrastructure and activities, with iron ore unloading, stockpiling and ship loading being conducted within the lands managed by Pilbara Ports Authority. These include:

- Leases and licences issued to BHP, Roy Hill and Fortescue Metals Group for the export of iron ore;
- Port facilities owned and operated by Pilbara Ports Authority;
- Dredge spoil storage areas (being converted to industrial land); and
- Access to the above.

The development envelopes are located within the Boodarie SIA in the Town of Port Hedland. The Boodarie SIA comprises 4,000 ha of 'Strategic Industry' zoned land. The Boodarie SIA is situated 4 km west of South Hedland town site and approximately 12 km south of Port Hedland town-site in Western Australia.

A number of existing land uses occur within or near the Boodarie SIA. This includes a number of leases issued under the *Mining Act 1978* (WA) or a State Agreement Act for various purposes as noted below:

- Leases and Licences issued the BHP for iron ore processing operations;
- State Energy Commission of Western Australia has several easements running south west to north east through the Boodarie SIA;
- Newcrest Mining Ltd manages gas flows to Telfer via the Telfer Gas Pipeline;
- Epic Energy runs the Pilbara Pipeline from south west of the Boodarie SIA to the Epic Energy Compound east of the Boodarie SIA;
- The Pilbara Infrastructure Pty Ltd is the owner of rail lines which are covered by Miscellaneous License L 1SA under a State Agreement Act;
- Alinta DEWAP Pty Ltd operates a gas fired power station just south east of the PDE;
- Horizon Power has a lease for power station purposes;
- Mesa Minerals Ltd has a General Purpose Lease south of Boodarie Station Access Road for the purposes of plant sites, stock pile and residue disposal; and
- Roy Hill Infrastructure Pty Ltd has a Miscellaneous License south of the Boodarie SIA and a Special Railway License for railway and other purposes.

There are also crown reserves (historic Stock Routes) and unallocated crown land within the Boodarie SIA.

Additionally, within the Boodarie SIA the WA Government has allocated land to four other projects (in addition to the Proposed Action).

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

The development envelopes lie entirely within the Pilbara Bioregion, specifically within the Roebourne Interim Biogeographic Regionalisation of Australia (IBRA) Subregion, bordered by the Chichester IBRA subregion (Att 5 Figure - IBRA Subregions). Subregions have been described in the *Biodiversity Audit of Western Australia's 53 Biogeographical Subregions* (May & McKenzie, 2003). The Roebourne subregion covers 2,008,983 ha, and is characterised as:

- Quaternary alluvial and older colluvial coastal and sub-coastal plains with a grass savannah of mixed bunch and hummock grasses, and dwarf shrub steppe of *Acacia stellaticeps* or *A. pyrifolia* and *A. inaequilatera*. Uplands are dominated by *Triodia* hummock grasslands. Ephemeral drainage lines support *Eucalyptus victrix* or *Corymbia hamersleyana* woodlands. Samphire, *Sporobolus* and mangal occur on marine alluvial flat sand river deltas;
- Resistant linear ranges of basalts occur across the coastal plains, with minor exposures of granite. Islands are either Quaternary sand accumulations, or composed of basalt or limestone, or combinations of any of these three; and
- Climate is arid (semi-desert) tropical with highly variable rainfall, falling mainly in summer. Cyclonic activity is significant, with several systems affecting the coast and hinterland annually (May & McKenzie, 2003).

There are no significant features within the development envelopes.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The bulk of the Boodarie SIA is located on an extensive sandplain that is moderately elevated from the coastal fringe – and hence afforded some protection from coastal inundation.

The SIA is protected from the Turner River floodway by the Roy Hill Railway which now prevents flows from entering the Boodarie SIA along the western edge of the site. The western side of the PDE has a sand ridge which reaches 31.5 m Australian Height Datum (AHD) at Great Northern Highway and drops to a minimum of 10.5 m AHD at the north of the PDE. West of this ridge the land falls gently west towards the Turner River. East of the ridge the land falls northeast towards South West Creek and drops to a minimum elevation within the study area of 7.5 m AHD.

The development envelopes are largely flat and apart from the sandy ridge on the western side that will be used as a source of clean fill for site levelling, does not contain any significant landforms.

The Proposed Action does not include any works at the Port of Port Hedland or any part of the marine environment. Export facilities will be part of Pilbara Ports Authority infrastructure.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Flora and Vegetation

Phoenix Environmental Sciences Pty Ltd (Phoenix) was engaged by PHGS to undertake a detailed two season flora and vegetation survey for the Proposed Action. The primary survey was undertaken 17–22 April 2023 with the supplementary survey undertaken during 13-15 September 2023. Phoenix provided a technical memorandum which summarises the results of the primary survey (Att 6 Flora Technical Memorandum). The Study Area was approximately 1,476.3 ha and includes the development envelopes and additional areas (Att 6 Flora Technical Memorandum, Figure 1, Section 1, pp 2) (Study Area).

No Threatened species were recorded during the primary field survey.

The desktop study did not identify any Threatened Ecological Community (TEC) occurring within the development envelopes. Additionally, no TECs were identified during the primary field survey.

Numerous environmental surveys have previously been undertaken within, and in the vicinity of, the development envelopes prior to the current survey by Phoenix. These surveys also provide relevant information about the landforms, vegetation and fauna occurring on the sandplain. The details of the surveys used to characterise the environmental values of the development envelope are described below:

Port Hedland Regional Flora and Vegetation Assessment (Att 7 Flora Survey (ENV Australia, 2011))

A regional flora and vegetation assessment was undertaken by ENV Australia Pty Ltd (ENV Australia) in 2011 for BHP. The survey included the development envelopes and involved a Level Two (now 'Detailed') regional flora and vegetation assessment of the Port Hedland area, located adjacent and surrounding the town of Port Hedland in the coastal Pilbara region of WA. The total survey area was 80,874 ha.

Karratha and Boodarie Biological Surveys (Att 8 Biological Survey (360 Environmental, 2021))

360 Environmental were commissioned by Horizon Power in 2021 to undertake a reconnaissance and targeted flora and vegetation survey and a basic terrestrial vertebrate fauna survey across two survey areas (Karratha and Boodarie). The survey area in Boodarie covered an area of 175 ha and is located near the

Port Hedland Power Station and on the Great Northern Highway.

Baseline Flora and Vegetation Survey for the Port Hedland Solar Farm Project (Att 9 Flora Survey (Phoenix, 2022))

A detailed flora and vegetation assessment was undertaken by Phoenix in 2021 for Alinta Energy Development Pty Ltd (Alinta). The survey was undertaken approximately 4 km south east of the Proposed Action and involved a detailed flora and vegetation assessment. The total survey area was 670 ha.

Introduced Flora Species

A number of introduced flora (Weed) species are considered Likely or Possible to occur based on previous surveys within, and in the vicinity of, the development envelopes.

Two of these species were identified within the development envelopes (Att 6 Flora Technical Memorandum, Section 3.3, Appendix 1, pp 9), *Stylosanthes hamata* and *Cenchrus ciliaris*. None of the recorded species are declared or listed as Weeds of National Significance.

Terrestrial Fauna

A detailed terrestrial fauna survey was undertaken by Phoenix in April 2023 (Att 10 Fauna Report (Phoenix, 2023)). The Study Area was approximately 1,476.3 ha and includes the development envelopes and additional areas (Att 10 Fauna Report (Phoenix, 2023), Figure 1-1, Section 1.2, pp 2).

One EPBC listed species has previously been recorded within the development envelopes:

- Bilby, *Macrotis lagotis* (Vulnerable); recorded by DBCA (2022); one record in the west of the development envelopes from 1899. Over 100 records of secondary evidence were recorded by Phoenix (Att 11 Fauna Survey (Phoenix, 2022)) within and nearby the development envelopes.

An additional 31 significant species have been recorded within 5 km of the development envelopes, comprising one reptile, 28 birds and two mammals.

Phoenix, in the recent survey, recorded four Threatened or Migratory fauna species listed under the EPBC Act within the survey area including:

- Bilby, Vulnerable;
- Grey Falcon, Vulnerable;
- Fork-tailed Swift, Migratory; and
- Osprey, Migratory.

The Bilby was identified from multiple scats and diggings across the development envelopes. No active or inactive burrows were identified.

One pair and one fledged juvenile Grey Falcon were directly sighted perched on a transmission tower within the EIDE near Alinta's Port Hedland Power Station.

A single Fork-tailed Swift was directly sighted within the PDE.

The single Osprey was observed perching on a sign in the PDE.

The Northern Quoll, *Dasyurus hallucatus* (Endangered) is considered a possibly occurring in the Study Area as there is a relatively recent record identified 32 km and 43 km from the Study Area and a nearby record (4 km west) identified in 2012 (Att 10 Fauna Report (Phoenix, 2023), Appendix 5)

The Night Parrot, *Pezoporus occidentalis* (Critically Endangered) is considered unlikely to occur in the Study Area. Phoenix deployed recording devices at sites considered potential roosting habitat. Phoenix (Att 10 Fauna Report (Phoenix, 2023)) notes that while suitable habitat exists within the Study Area, the lack of records shows a low probability of the Night Parrot occupying the Study Area. Considering the threats to dispersal for Night Parrot, particularly feral animals and proximity to urban areas, it is unlikely the Study Area supports this species.

Fauna Habitat

Phoenix (Att 10 Fauna Report (Phoenix, 2023)) identified three broad fauna habitats within the Study Area. The majority of the Study Area (96%) is comprised of Sandplain habitat (Att 10 Fauna Report (Phoenix, 2023), Table 5-4, Section 5.2.1.1, pp 32).

- Sandplain (1,514.0 ha)– Mosaic of spinifex hummock grasslands and low *Acacia stellaticeps* shrublands on an undulating plain. Isolated Pundle trees over mixed *Acacia stellaticeps* dominant shrublands (*A. tumida* and *A. inequalatera* scattered to widely scattered) over stage 2 to 5 spinifex hummock grasslands on red orange sandy soils;
- Open Woodlands (15.4 ha) - Shallow flat depression relative to surrounding sandplain. Open low to mid Eucalyptus woodland over evenly scattered, open tussock grasses (native and buffel) with spinifex hummocks variably present. Predominantly sandy soil with a shallow sandy-clay crust. Surrounded by low sandy rise with dense mature spinifex hummocks and mixed *Acacia* dominant shrubs including *A. stellaticeps*, *A. tumida pilbarensis* and isolated *A. inequalatera*. Higher percentage cover of leaf litter than the surrounding areas, forming transported clumps; and
- Drainage Line (8.9 ha) - Small section of the Foreshore flats with intertidal water flow, predominantly dry. Low *Acacia stellaticeps* shrubland with widely scattered *Acacia tumida pilbaraenses* over stage 3 and 4 spinifex hummock grasses on red orange to orange sandplain.
- Cleared/disturbed (45.1 ha) – Cleared areas with infrastructure and roads.

Disturbance proposed to Fauna Habitat within the PDE

- Total disturbance of 300 ha:
 - 295 ha of Sandplain habitat; and
 - 5 ha of Open Woodland habitat.
- Disturbance to fauna habitat is estimated based on a conceptual layout provided in Att 2 Figure - DEs & IDF.

Disturbance proposed to Fauna Habitat within the EIDE

- Total disturbance of 90 ha:
 - 83 ha of Sandplain habitat;
 - 2 ha of Drainage Line habitat;
 - 1 ha of Open Woodland habitat; and
 - 4 ha within cleared areas.

Disturbance to fauna habitat in the EIDE was estimated based on the proportion of habitat within the EIDE. This is because there is currently no conceptual layout for the EIDE as it is dependent on finalising third party agreements for supply of water, power, gas and carbon capture and storage.

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

The majority of the development envelopes lie within the Uaroo System, with the northernmost section of the EIDE intersecting the Littoral System (Att 12 Figure – Land Systems). The development envelopes represent less than 1% of the Uaroo System and Littoral System mapped within the Pilbara Bioregion. The Uaroo System is characterised by broad sandy plains, pebbly plains and drainage tracts supporting hard and soft spinifex hummock grasslands with scattered *Acacia* shrubs (Schoknecht & Payne 2011). The Littoral land system is characterised by bare coastal mudflats (unvegetated), samphire flats, sandy islands, coastal dunes and beaches, supporting samphire low shrublands, sparse *Acacia* shrublands and mangrove forests.

Two weed species were recorded during the survey, *Stylosanthes hamata* and *Cenchrus ciliaris* (Att 6 Flora Technical Memorandum, Attachment 1, pp 9 – 10). Neither species is considered to be a Declared Pest.

There is evidence of fire across the area. The northernmost and southernmost areas appear to be more fire affected than the central region (NAFI, 2024). The vegetation types will change within the development envelopes with the passing of time as the vegetation matures depending on the occurrence and frequency of fires.

Sandplains cover the majority of the development envelopes (96%) and are characterised by red-orange sandy soils on a gently undulating plain. Open woodlands comprise only a small portion of the development envelopes (1%), occurring at two discrete locations. The soil is a red-orange sandy-clay, featuring an almost flat surface layer of shallow clay, indicative of seasonal or sporadic inundation (Att 10 Fauna Report (Phoenix, 2023), Section 5.2.2.1, pp 31).

The majority of the development envelopes (94%) are made up of vegetation association 589 (Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex), with smaller sections (6%) intersecting vegetation association 647 (Hummock grasslands, dwarf shrub steppe; *Acacia translucens* over soft Spinifex). The remaining pre-European extent of vegetation association 589 and 647 exceeds 99% and is therefore considered of Least Concern.

The primary field survey was undertaken 17-22 April 2023. Statistical analyses to delineate vegetation types are yet to be conducted awaiting the outcomes of the second season survey but broadly the vegetation types observed during the primary field survey comprised (Att 6 Flora Technical Memorandum, Section 3.1.1.2, pp 7):

- *Triodia epactia*/*T.secunda*/*T. schinzii* grasslands, single species or combinations of two or three species;
- Sparse *Acacia* spp. mid to tall shrublands over *Triodia epactia* and/or *T. schinzii* grasslands;
- Low *Acacia stellaticeps* shrublands over *Triodia epactia* and/or *T. schinzii* grasslands
- Open *Eucalyptus victrix* woodland over isolated tussock grasses;
- Open *Eucalyptus victrix* woodland over *Triodia epactia* grassland; and
- Open *Eucalyptus camaldulensis* woodland over *Triodia epactia* grassland.

The majority of the vegetation recorded was considered to be in Very Good to Excellent Condition.

No EPBC Act listed TECs are known to occur within the development envelopes.

The vegetation in the development envelopes does not represent any listed TEC. The nearest TEC is the Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula (Endangered) located approximately 470 km northeast of the Proposed Action.

3.3 Heritage

3.3.1 Describe any Commonwealth heritage places overseas or other places recognised as having heritage values that apply to the project area.

There are no Commonwealth Heritage places or other places recognised as having heritage values relevant to the development envelopes. The closest Commonwealth Heritage Listed site is the Ningaloo Marine Area – Commonwealth Waters approximately 470 km southwest of the development envelopes.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

The Proposed Action is located within the Kariyarra Native Title Determination. KAC and Kariyarra Traditional Owners are the relevant native title party to speak for this area, including Aboriginal heritage, Aboriginal sites and Kariyarra Social Surroundings (Aboriginal social and cultural heritage values).

A search of the Aboriginal Cultural Heritage Inquiry System (ACHIS) was undertaken in September 2023 and did not identify any Registered Aboriginal sites within the PDE, but did identify four Registered Aboriginal sites within the EIDE, being:

- Midden (ID: 164);
- Artefacts / Scatter, Camp, Midden, Other (ID: 764);
- Artefacts / Scatter, Midden, Shell, Water Source (ID:17023); and
- Midden, Shell (ID: 25647).

An Aboriginal Site identification assessment was undertaken by RPS in 2012 across the Boodarie SIA. The survey identified three Aboriginal sites, all of which were artefact scatters. Two of these intersect the development envelopes and were identified in the ACHIS search discussed above.

Results from the Aboriginal heritage surveys and Social Surroundings consultation will be utilised to inform design the development envelopes and Proposed Action footprint to seek to minimise impact to Kariyarra Social Surroundings, including Aboriginal sites.

If impact to an Aboriginal site is unavoidable, PHGS will, in consultation with KAC and Kariyarra Traditional Owners, seek consent under section 18 of the AH Act. If required, a Social, Cultural and Heritage Management Plan (SCHMP) will also be developed in consultation with KAC.

Consultation with KAC and Kariyarra Traditional Owners will be ongoing regarding the Proposed Action, including options to minimise impacts to Kariyarra Social Surroundings.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

GHD were engaged by the then LandCorp (now DevelopmentWA) and the then Department of State Development (now DJTSI) to conduct a hydrology study for the Boodarie SIA (Att 13 Hydrology Study (GHD, 2013)). The following hydrological information is based on the information from this study.

South West Creek, a minor ephemeral watercourse / tidal creek line, runs approximately north-south to the east of the development envelopes. The Turner River runs north-south adjacent to the western border of the Boodarie SIA (Att 13 Hydrology study (GHD, 2013), Figure 1, Section 2.2, pp 5).

The Boodarie SIA is located within the catchment of South West Creek, a minor ephemeral stream with a total catchment area of around 49,000 ha. The Boodarie SIA itself has an upstream catchment area of around 9,400 ha. The bulk of the Boodarie SIA is protected from the Turner River floodway by a sand ridge running north south within the western boundary of the site. The Turner River is a major floodway with a total catchment area of around 500,000 ha. The sand ridge reaches 31.5 m Australian Height Datum (AHD) at Great Northern Highway, south of the Boodarie SIA, and drops to a minimum of 10.5 m AHD at the north of the Study Area. West of this ridge the land falls west towards the Turner River. East of the ridge the land falls northeast towards South West Creek and drops to a minimum elevation within the Study Area of 7.5 m AHD. A path of low lying landforms a natural drainage and flood way between the southern boundary and the northeastern corner of the site.

A District Water Management Strategy was approved by Department of Water and Environmental Regulation in 2016 for the Boodarie SIA.

Stormwater management will be further considered by the Town of Port Hedland as part of the Development Application under the *Planning and Development Act 2006*. A Local Water Management Strategy is required to be submitted and approved by the Town of Port Hedland under the Boodarie SIA Structure Plan. The Local Water Management Strategy will confirm that stormwater will be managed for the Proposed Action to convey flows in a manner that minimises changes to hydrological regimes based on the final results of ongoing surface water studies.

The Proposed Action does not include the abstraction of any groundwater or discharge of excess water underground.

Based on the above, the Proposed Action does not pose any foreseeable significant risks to hydrology and will ensure that the hydrological regimes and quality of groundwater and surface water are maintained so that environmental values are protected.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes

EPBC Act section	Controlling provision	Impacted	Reviewed
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

No World Heritage sites occur within or in proximity to the development envelopes. The closest World Heritage site is the Ningaloo Coast approximately 450 km southwest of the development envelopes.

Noting that the Murujuga Cultural Landscape, which is approximately 180 km southwest of the development envelopes, has been nominated for the World Heritage List.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

No National Heritage sites occur within or in proximity to the development envelopes. The closest National Heritage site is the North Pole Dome in East Pilbara, approximately 105 km southeast of the development envelopes. The North Pole Dome is on the priority assessment list for the National Heritage List.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

No Ramsar Wetlands occur within or in proximity to the development envelopes. The closest Ramsar Wetland is Eighty Mile Beach, approximately 135 km northeast of the development envelopes.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species
No	No	Calidris canutus
No	No	Calidris ferruginea
No	No	Charadrius leschenaultii
Yes	Yes	Dasyurus hallucatus
No	No	Erythrotriorchis radiatus
Yes	Yes	Falco hypoleucos
No	No	Liasis olivaceus barroni
No	No	Macroderma gigas
Yes	Yes	Macrotis lagotis
No	No	Numenius madagascariensis
No	No	Pezoporus occidentalis
No	No	Pristis pristis
No	No	Rhinonictes aurantia (Pilbara form)

Direct impact	Indirect impact	Species
No	No	Rostratula australis

Ecological communities

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

The Proposed Action has the potential to result in direct and indirect impacts to Bilby (*Macrotis lagotis*). The potential impacts to the Bilby are described below:

Direct Impacts

- Disturbance of up to 378 ha of sandplain habitat for the life of the Proposed Action; and
- Vehicle traffic and earthmoving activities may result in death or injury from vehicle strike (most likely during the construction phase).

Indirect Impacts

- Clearing of land resulting in favourable conditions for predatory fauna and subsequently, increased predation or competition from introduced fauna;
- Vegetation clearing, vehicle traffic, earthworks and operations resulting in alterations to fire regimes, establishment or spread of weed species and hydrocarbon spills;
- Dust, light, noise or other emissions from the Proposed Action resulting in alterations to fauna behaviours (including feeding or breeding characteristics);
- Erosion of Bilby habitat through wind and surface water runoff; and
- Construction and operational activities may alter species behaviour in proximity of the activities.

The Proposed Action has the potential to result in direct and indirect impacts to the Grey Falcon (*Falco hypoleucos*). The potential impacts to the Grey Falcon are described below:

Direct Impacts

- Disturbance to up to 390 ha of potential foraging habitat.

Indirect Impacts

- Dust, light, noise or other emissions from the Proposed Action resulting in alterations to fauna behaviours (including feeding or breeding characteristics); and
- Construction activities may alter species behaviour in proximity of the activities.

The Northern Quoll (*Dasyurus hallucatus*) was identified as possibly occurring within the development envelopes. There is no suitable denning habitat within the development envelopes however there are recent records of the species in the vicinity of the Proposed Action (32 km and 43 km east) (Att 10 Fauna Report (Phoenix, 2023), Appendix 5).

Direct Impacts

- Disturbance of up to 390 ha of potential foraging habitat; and

- Vehicle traffic and earthmoving activities may result in death or injury from vehicle strike (most likely during the construction phase).

Indirect Impacts

- Clearing of land resulting in favourable conditions for predatory fauna and subsequently, increased predation or competition from introduced fauna;
- Vegetation clearing, vehicle traffic, earthworks and operations resulting in alterations to fire regimes, establishment or spread of weed species and hydrocarbon spills;
- Dust, light, noise or other emissions from the Proposed Action resulting in alterations to fauna behaviours (including feeding or breeding characteristics); and
- Construction activities may alter species behaviour in proximity of the activities.

The Curlew Sandpiper (*Calidris ferruginea*) was recorded 2.3 km east of the Study Area. This species typically occupies intertidal mudflats, sandflats and sheltered coasts. They are also known to occupy beaches, lagoons, harbours and sandy beaches. They have also been recorded occupying saline terrestrial wetlands and sewage ponds and are rarely found in freshwater swamps. The species is considered unlikely to occur within the Study Area due to a lack of suitable habitat (Att 10 Fauna Report (Phoenix, 2023), Table 5-7, pp 42). No disturbance to coastal habitat is proposed as part of the Proposed Action and therefore the Curlew Sandpiper is unlikely to be directly by the Proposal. The species may be indirectly affected as a result of noise during construction and operation resulting in altered behaviour, however the Proposed Action is located in an industrial area with numerous operations already in place with activities likely to be much noisier than that predicted for the Proposed Action.

The Eastern Curlew (*Numenius madagascariensis*) was recorded 3.3 km east of the Study Area. This species uses a variety of habitats and was considered unlikely to occur due to a lack of suitable habitat (Att 10 Fauna Report (Phoenix, 2023), Table 5-7, pp 46). The sandplain habitat within the development envelopes has not been identified as important habitat for the species and disturbance to this habitat is unlikely to have an impact on this species. The species may be indirectly affected as a result of noise during construction and operation resulting in altered behaviour, however the Proposed Action is located in an industrial area with numerous operations already in place with activities likely to be much noisier than that predicted for the Proposed Action.

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact?

*

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

Bilby (Macrotis lagotis)

At a local scale, the Proposed Action will result in disturbance of up to 378 ha of sandplain habitat (25% of sandplain habitat recorded in the Study Area) that has historically been utilised by the Bilby.

Having been previously recorded within the Study Area by Phoenix (Att 11 Fauna Survey (Phoenix, 2022), Figure 1-1, pp 3), it is no surprise that secondary evidence of the species was recorded throughout the Study Area during the 2023 survey.

While most of the secondary evidence identified was old (> 2 week), some recent Bilby sign was identified from odorous scats and loose sandy spoil associated with diggings that are indicative Bilby foraging activity. All recent scats and diggings were located near the northern boundary of the Study Area. Despite

both intensive and extensive targeted survey effort (25 x two hectare plots and seven transects searches), no Bilby burrows (old, recently active, or active burrows) were located within the Study Area (Att 10 Fauna Report (Phoenix, 2023', Section 6.1.3, pp 57).

Bilby are known to utilise relatively large, moving home ranges in response to the scarcity of food resources in the semi-arid and arid parts of their range (Att 10 Fauna Report (Phoenix, 2023), Section 6.1.3, pp 57). While the Study Area clearly forms part of a local population's home range, the absence of track sequences and wider spread of recent activity (indicative of current or very recent Bilby presence) within the Study Area, particularly the area near the northern boundary, may suggest that they have dispersed elsewhere, outside of the Study Area (Att 10 Fauna Report (Phoenix, 2023), Section 6.1.3, pp 58).

The core range of the target population is west of Great Northern Highway, based on the widespread locations of old scats recorded in the targeted survey (Att 11 Fauna Survey (Phoenix, 2022)). There are a number of existing barriers to dispersal including railways and a highway in proximity to the Project Area. Given the large, moving home-range occupied by Bilby (Dziminski et al. 2020), the portion of sandplain habitat present in the development envelopes are not regarded as important to the local population.

Grey Falcon (*Falco hypoleucos*)

The Grey Falcon typically nests and roosts along heavily wooded drainage lines. With large foraging home ranges, they predominantly prey on other bird species in flight from above. The breeding pair and single fledged juvenile were recorded perched on a transmission tower at the western end of the Study Area adjacent to the Alinta Power Station. Grey Falcons and numerous other birds of prey species frequently nest high up on transmission towers which provide nest security from predators and a vantage point from which to observe prey. The species is comprised of a single panmictic population that is distributed sparsely over extensive parts of Australia's arid and semi-arid zone, an area of about 5 million km² covering about 70% of the Australian mainland (Schoenjahn, J., Pavey, C.R., and Walter, G.H., 2022). Therefore, it is likely that the Study Area would only comprise a fraction of the resident Grey Falcons foraging home range and given the means with which they hunt their prey (on the wing). The clearing of native vegetation for the Proposed Action, which does not include any areas of heavily wooded drainage lines, and subsequent activities are unlikely to negatively impact the recorded pair of Grey Falcons.

Northern Quoll (*Dasyurus hallucatus*)

The Northern Quoll is typically found in a variety of habitats, however, rocky areas provide important denning habitat while they forage in nearby grasslands and creeklines. There is no suitable denning habitat within or in the vicinity of the Proposed Action and no Northern Quoll were recorded during the survey of the development envelopes (Att 10 Fauna Report (Phoenix, 2023)). In addition there are no structurally diverse woodlands or forest areas containing large diameter trees that would be considered habitat critical for survival of the species. The species may disperse through the development envelopes based on the recent records (Att 10 Fauna Report (Phoenix, 2023), Appendix 5) in the surrounding area. However given the Project will be located near residential areas and existing industrial facilities it is not considered dispersal habitat connecting populations important for the long-term survival of the Northern Quoll. Therefore the Proposed Action is unlikely to have a significant impact on Northern Quoll.

4.1.4.7 Do you think your proposed action is a controlled action? *

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

Bilby have been recorded within and around the development envelopes. Although no burrows have been recorded, the sandplain habitat may be considered to be supporting habitat. Supporting habitat is habitat that facilitates foraging, dispersal or water sources for the species that is not linked to known breeding

habitats. Clearing of up to 378 ha of Bilby supporting habitat may be considered a significant impact and therefore a controlled action.

A Bilby Management Plan has been developed in order to manage any impacts to Bilby as a result of the Proposed Action (Att 14 Bilby Management Plan). The information provided in the baseline and targeted surveys were used during the refinement of the Proposed Action design to minimise disturbance to protected matters and determine mitigation strategies. As a result, significant impacts to protected matters are considered unlikely. However, due to cumulative impacts in the Pilbara it is expected that the Proposed Action would be considered a Controlled Action and offsets required to counterbalance the residual impacts.

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

The Proposed Action is currently in the planning stage and as such measures to avoid or reduce the potential impacts to Matters of National Environmental Significance (MNES) will continue to be refined as studies are completed and potential impacts are fully investigated and assessed.

Industry-standard best practice management measures designed to mitigate environmental impacts that will be implemented include:

- Internal ground disturbance procedures will be developed and will continue to be refined as required prior to the commencement of ground disturbance;
- Boundaries of areas to be cleared or disturbed will be identified by GPS coordinates and maps of boundaries will be provided to onsite personnel such as dozer operators;
- Raised blade disturbance will be conducted where practicable on temporary disturbance areas;
- The disturbance footprint will be developed to the minimum required to ensure safe and adequate construction and operation;
- All incidents resulting in MNES fauna injury or death will be reported to Department of Climate Change, Energy, the Environment and Water;
- Emergency response capabilities will be maintained to prevent or control fire outbreaks where possible;
- Preparation and implementation of a Bushfire Management Plan which includes best management practices to reduce the risk of bushfires as a result of the Proposed Action;
- Surface water management and erosion protection will be incorporated into project planning and design to minimise disruption to watercourses and downstream riparian vegetation;
- Measures to manage surface water flows along tracks will be implemented to minimise downstream effects;
- Weed hygiene and management measures/procedures will be implemented to prevent spread of weeds and the introduction of new weed species as a result of construction and operation;
- Ground-engaging equipment will be cleaned prior to entering construction areas to prevent the introduction of new weed species;
- Implementation of industry-standard controls for hydrocarbon storage and handling;
- Clearing is to be conducted on an as-needed basis, followed by progressive rehabilitation of cleared areas as soon as is practicable;
- Minimise clearing by utilising existing access tracks and disturbance where practicable;
- Implement industry-standard controls for waste management, sedimentation and spillages;
- The introduction and spread of weeds will be minimised through strict operational hygiene practices; and
- Offset payments to the Pilbara Environmental Offsets Fund are likely to be required for the loss of Good to Excellent quality vegetation / fauna habitat.

To ensure that impacts to the Bilby are avoided and reduced as far as possible, a Bilby Management Plan (BMP) has been developed (Att 14 Bilby Management Plan). The BMP provides management actions and monitoring measures that will deliver conservation outcomes for the Bilby. The key outcomes for Bilby specific to the Proposed Action are:

- No direct mortality to Bilby individuals as a result of the Proposed Action;
- Progressive revegetation of areas within the Development Envelope;
- No significant indirect impacts to Bilby populations or habitat outside of the Development Envelope as a result of the Proposed Action;
- Increase understanding of the population within the Development Envelope;
- Reduction in key threats across the Development Envelope;
- Ensure the involvement of Traditional Owners in the implementation of conservation and knowledge-building actions;
- Pre-clearance surveys for active Bilby burrows which will be avoided with buffers if active;
- Incorporate impacted Bilby habitat and food resources into rehabilitation;
- Bilby monitoring within and around the development envelopes; and
- Feral fauna monitoring and control measures (if required) within and around the development envelopes.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

After the implementation of mitigation measures, the Proposed Action is predicted to have residual impacts on the Bilby as a result of clearing up to 378 ha of the 1,514 ha of sandplain habitat recorded within the Study Area, however sandplain habitat is common and widespread at a regional scale. To counterbalance the residual impacts to the Bilby, PHGS proposes to make contributions to the Pilbara Environmental Offsets Fund. This is likely to be a condition of approval as a result of the State assessment of the Proposed Action.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species
No	No	Actitis hypoleucos
No	No	Apus pacificus

Direct impact	Indirect impact	Species
No	No	Calidris acuminata
No	No	Calidris canutus
No	No	Calidris ferruginea
No	No	Calidris melanotos
No	No	Charadrius leschenaultii
No	No	Charadrius veredus
No	No	Glareola maldivarum
No	No	Hirundo rustica
No	No	Limnodromus semipalmatus
No	No	Motacilla cinerea
No	No	Motacilla flava
No	No	Numenius madagascariensis
No	No	Pristis pristis
No	No	Tringa nebularia

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.5.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

Migratory birds may possibly occur sporadically across the development envelopes while foraging. Phoenix (Att 10 Fauna Report (Phoenix, 2023), Table 5-7, Section 5.2.2, pp 41) recorded two (listed) migratory birds within the Study Area:

- Fork-tailed Swift (*Apus pacificus*), Migratory; and
- Osprey (*Pandion cristatus*), Migratory.

The likelihood of occurrence assessment undertaken by Phoenix (Att 10 Fauna Report (Phoenix, 2023), Table 5-7, Section 5.2.2, pp 40) did not identify any additional migratory species that would be considered likely or possible to occur within the Study Area.

Fork tailed swifts are an almost exclusively aerial species and are therefore not limited by the availability of specific terrestrial habitats. As such, the species will not be affected from the clearing of native vegetation or activities associated with the Proposed Action (Att 10 Fauna Report (Phoenix, 2023), Section 6.1.6, pp 58).

The Osprey observed perching on a sign in the Study Area is not considered relevant to the proposed development of the Proposed Action. Ospreys are a predominantly coastal species but also forage in mangroves and other large water bodies where they almost exclusively prey on large fish. The habitats present within the Study Area are unlikely to provide any utility to the species and therefore will not be impacted by the Proposed Action (Att 10 Fauna Report (Phoenix, 2023), Section 6.1.7, pp 58).

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action does not include any actions that would involve nuclear impacts.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action will not require any works at the Port of Port Hedland or any other area of marine environment.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action is in Western Australia.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action is not a coal mining or coal seam gas development.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

The Proposed Action will not occur within Commonwealth Land. The closest Commonwealth Land to the Proposed Action is Port Hedland International Airport, approximately 8 km northeast of the development envelopes.

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

*

No activity is being proposed in any places overseas.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

- Threatened Species and Ecological Communities (S18)

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

Yes

4.3.2 Do you have an alternative timeline you are proposing for your proposed action? *

No

4.3.3 Briefly describe why an alternate timeline for your proposed action was not possible.

*

HBI production, based on 100% hydrogen technology, is built into the Project via the selection of the Midrex Flex technology – which can operate at increasing levels of hydrogen input - up to 100% hydrogen as the reductant (rather than natural gas). The availability of hydrogen to supply 100% of demand is yet to be developed and is not part of this Action.

PHGS has the option to wait until hydrogen is available, it is technically and commercially feasible.

Emissions reductions are achieved immediately by processing the iron ore into a reduced form (HBI) in Australia - as it allows the steel making step to be completed in an electric arc furnace rather than a blast furnace (which must use coal).

The continuing use coal-fired blast furnaces with associated greenhouse gas emissions for global steel production and not address the required steps to move to Green Steel. The opportunity lost to unlock a cost-effective global climate change abatement solution, in line with the objectives of the State and Federal Government's roadmap for a low emissions future.

PHGS considers that the Proposed Action is a key pathway to accelerate the steelmaking industry's transition away from coal-reliant blast furnaces to the production of green steel.

The Proposed Action will enable immediate reductions in emissions intensity for steel making and the use of hydrogen in the iron making process will reduce cumulative global greenhouse gas emissions, which will also minimise impacts from climate change on Matters of National Environmental Significance.

4.3.4 Do you have an alternative location you are proposing for your proposed action? *

No

4.3.5 Briefly describe why an alternative location for your proposed action was not possible. *

Many countries are actively seeking to attract such projects as the Proposed Action and therefore the main alternative is the development of the Proposed Action overseas. The development of the Proposed Action overseas would result in the avoidance of all local impacts and potentially their replacement with further iron ore transport and export facilities. Attracting an iron making project such as this Proposed Action to the Pilbara positively addresses many government policies and objectives. It represents an opportunity for Australia to be part of the global emissions reduction pathway for green steel. The Proposed Action can be a catalyst for the Pilbara more widely to transform itself into a globally relevant supplier of green iron, if the opportunity is seized.

The Proposed Action is also a long-term project, which will have significant long term positive benefits for the town of Port Hedland. This will be achieved through developing strategies to source as much local employment as possible, in addition to the provision of quality permanent accommodation, designed to attract and maintain the operational workforce.

These social and economic benefits would be lost if the Proposed Action was located overseas.

The Proposed Action will adopt the hierarchy of risk management to avoid, reduce and mitigate environmental impacts that may be experienced during the development and operation of the Proposed Action.

The findings of the environmental surveys have been and will continue to be used to inform the planning and design of the Proposed Action to reduce environmental impacts.

4.3.6 Do you have alternative activities you are proposing for your proposed action? *

No

4.3.7 Briefly describe why an alternative activity for your proposed action was not possible. *

Proposed Action is utilising new best practice technology for pellet and HBI production. Emissions reductions are achieved immediately by processing the iron ore into a reduced form (HBI) in Australia - as it allows the steel making step to be completed in an electric arc furnace rather than a blast furnace (which must use coal). HBI production, based on 100% hydrogen technology, is built into the Project via the selection of the Midrex Flex technology – which can operate at increasing levels of hydrogen input - up to 100% hydrogen as the reductant (rather than natural gas). The availability of hydrogen to supply 100% of demand is yet to be developed and is not part of this Action.

HyREX technology, which is being developed by South Korean based steelmaker POSCO, is not yet available for the Proposed Action. HyREX is based on fluidised bed technology operating in Korea (as Finex) and is being developed to utilise green hydrogen. To support near-zero emissions steelmaking. It will be a technological breakthrough in green steel production that may be utilised in subsequent stages of development at the Boodarie SIA.

4.3.4 Alternatives: Impact and mitigation

4.3.4.1 Do these alternatives have a different impact, avoidance, or mitigation measure compared to what you have already provided? *

No

4.3.5 Alternatives: Considered alternatives

4.3.5.1 Do you have any other alternative actions, including not taking the action, that you have considered but are not proposing as part of this referral? *

Yes

4.3.5.2 Describe the details of this possible alternative that you have considered but are not proposing. *

No development would require the continuing use coal-fired blast furnaces with associated greenhouse gas emissions for global steel production and not address the required steps to move to Green Steel.

The no development option would see the opportunity lost to unlock a cost-effective global climate change abatement solution, in line with the objectives of the State and Federal Government's roadmap for a low emissions future.

PHGS considers that the Proposed Action is a key pathway to accelerate the steelmaking industry's transition away from coal-reliant blast furnaces to the production of green steel.

The Proposed Action will enable immediate reductions in emissions intensity for steel making and the use of hydrogen in the iron making process will reduce cumulative global greenhouse gas emissions, which will also minimise impacts from climate change on Matters of National Environmental Significance.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 1 Figure – Regional Location.pdf Att 1 Figure - Regional Location		No	High
#2.	Document	Att 2 Figure – DEs & IDF.pdf Att 2 Figure – DEs & IDF		No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3 Figure – Land Allocation.pdf Land Allocation		No	High
#2.	Link	Major projects help tool https://business.gov.au/expertise-and-advice/maj..			High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 4 Stakeholder Engagement Register (Redacted).pdf Stakeholder Engagement Register (Redacted)		No	High
#2.	Document	Att 4 Stakeholder Engagement Register.pdf Stakeholder Engagement Register		Yes	High
#3.	Link	The Interim Engaging with First Nations People and Communities on Assessments and Approvals https://www.dcceew.gov.au/environment/epbc/publi..			High

2.2.5 Tenure of the action area relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 3 Figure – Land Allocation.pdf Land Allocation		No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 10 Fauna Report (Phoenix, 2023).pdf Fauna Report (Phoenix, 2023)		No	High
#2.	Document	Att 5 Figure – IBRA Subregions.pdf IBRA Subregions		No	High
#3.	Document	Att 6 Flora Technical Memorandum.pdf Flora Technical Memorandum		No	High
#4.	Link	Weeds of National Significance https://www.agric.wa.gov.au/pests-weeds-diseases..			High

3.1.3 Natural features, important or unique values that applies to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 5 Figure – IBRA Subregions.pdf IBRA Subregions		No	High
#2.	Link	Biodiversity Audit of Western Australia's 53 Biogeographical Subregions https://library.dbca.wa.gov.au/static/FullTextFi..			High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 10 Fauna Report (Phoenix, 2023).pdf Fauna Report (Phoenix, 2023)		No	High
#2.	Document	Att 11 Fauna Survey (Phoenix, 2022).pdf Fauna Survey (Phoenix, 2022)		No	High
#3.	Document	Att 2 Figure – DEs & IDF.pdf Att 2 Figure – DEs & IDF		No	High
#4.	Document	Att 6 Flora Technical Memorandum.pdf Flora Technical Memorandum		No	High
#5.	Document	Att 7 Flora Survey (ENV Australia, 2011).pdf Att 7 Flora Survey (ENV Australia, 2011)		No	High
#6.	Document	Att 8 Biological Survey (360 Environmental, 2021).PDF Biological Survey (360 Environmental, 2021)		No	High
#7.	Document	Att 9 Flora Survey (Phoenix, 2022).pdf Flora Survey (Phoenix, 2022)		No	High

3.2.2 Vegetation within the project area

--

Type	Name	Date	Sensitivity	Confidence
#1.	Document Att 10 Fauna Report (Phoenix, 2023).pdf Fauna Report (Phoenix, 2023)		No	High
#2.	Document Att 12 Figure – Land Systems.pdf Figure – Land Systems		No	High
#3.	Document Att 6 Flora Technical Memorandum.pdf Flora Technical Memorandum		No	High
#4.	Link Land systems of the Kimberley region, Western Australia https://library.dpird.wa.gov.au/tech_bull/11/			High
#5.	Link North Australia & Rangelands Fire Information https://firenorth.org.au/nafi3/			High

3.4.1 Hydrology characteristics that apply to the project area

Type	Name	Date	Sensitivity	Confidence
#1.	Document Att 13 Hydrology study (GHD, 2013).pdf Hydrology study (GHD, 2013)		No	High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

Type	Name	Date	Sensitivity	Confidence
#1.	Document Att 10 Fauna Report (Phoenix, 2023).pdf Fauna Report (Phoenix, 2023)		No	High

4.1.4.5 (Threatened Species and Ecological Communities) Why you consider the direct and/or indirect impact to be a Significant Impact

Type	Name	Date	Sensitivity	Confidence
#1.	Document Att 10 Fauna Report (Phoenix, 2023).pdf Fauna Report (Phoenix, 2023)		No	High
#2.	Document Att 11 Fauna Survey (Phoenix, 2022).pdf Fauna Survey (Phoenix, 2022)		No	High
#3.	Link Has the Australian Endemic Grey Falcon the Most Extreme Dietary Specialization among all Falco Speci https://www.ncbi.nlm.nih.gov/pmc/articles/PMC921..			High
#4.	Link Range of the greater bilby (Macrotis lagotis) in the Pilbara Region, Western Australia https://www.rswa.org.au/publications/journal/103..			High

4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 10 Fauna Report (Phoenix, 2023).pdf Fauna Report (Phoenix, 2023)		No	High
#2.	Document	Att 11 Fauna Survey (Phoenix, 2022).pdf Fauna Survey (Phoenix, 2022)		No	High
#3.	Link	Adaptations of the rare endemic Grey Falcon Falco hypoleucos that enable its permanent residence in https://espace.library.uq.edu.au/data/UQ_355904f..	01/01/2018		High
#4.	Link	Monitoring the Abundance of Wild and Reintroduced Bilby Populations https://www.researchgate.net/publication/3472915..	01/12/2020		High

4.1.4.8 (Threatened Species and Ecological Communities) Why you think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 14 Bilby Management Plan.pdf Bilby Management Plan		No	High

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 14 Bilby Management Plan.pdf Bilby Management Plan		No	High

4.1.5.3 (Migratory Species) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att 10 Fauna Report (Phoenix, 2023).pdf Fauna Report (Phoenix, 2023)		No	High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN 85137515078

Organisation name Preston Consulting Pty Ltd

Organisation address	Level 1, 226 Adelaide Terrace, Perth, Western Australia, 6000
Representative's name	Phoebe Ranford
Representative's job title	Environmental Consultant
Phone	0427080869
Email	pranford@prestonconsulting.com.au
Address	Level 1, 226 Adelaide Terrace, Perth, Western Australia, 6000

Check this box to indicate you have read the referral form. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

By checking this box, I, **Phoebe Ranford of Preston Consulting Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	80667564589
Organisation name	PORT HEDLAND GREEN STEEL PTY LTD
Organisation address	Central Park Level 48 152-158 St Georges Terrace Perth WA 6000
Representative's name	Troy Park
Representative's job title	Company Secretary
Phone	+61 419 146 231
Email	troypark@poscowa.com.au
Address	Central Park Level 48, 152-158 St Georges Terrace, Perth Western Australia 6000, Australia

- Check this box to indicate you have read the referral form. *
- I would like to receive notifications and track the referral progress through the EPBC portal. *
- I, **Troy Park of PORT HEDLAND GREEN STEEL PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *
- I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

- Check this box to indicate you have read the referral form. *
- I would like to receive notifications and track the referral progress through the EPBC portal. *
- I, **Troy Park of PORT HEDLAND GREEN STEEL PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *
- I would like to receive notifications and track the referral progress through the EPBC portal. *