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Environmental & Social Consultants

NEOEN

PRELIMINARY CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Narrogin Wind Farm

FINAL

September 2024

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Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Neoen Australia Pty Ltd

Project Director: Rob Karelse
Project Manager: Cormac Collins
Report No. 22847/R19
Date: September 2024

This report was prepared using Umwelt's ISO 9001 certified Quality Management System.

Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

Document Status

Rev No.	Reviewer		Approved for Issue	
	Name	Date	Name	Date
V1	Cormac Collins	15/09/2024	Cormac Collins	24/09/2024

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1.0 Introduction

1.1 Introduction

Neoen is proposing the development of the Narrogin Wind Farm (the Project) approximately 7 km east of the township of Williams and 9 km west of the township of Narrogin in Western Australia. The Project will involve the construction and operation of up to 25 wind turbines, a battery energy storage system and ancillary infrastructure.

1.2 Purpose

The purpose of this Preliminary Construction Environmental Management Plan (CEMP) is to ensure Project execution and construction:

- Establish systems to minimise environmental risks to as low as reasonably practicable.
- Set management actions and monitoring requirements to meet Project specific environmental performance objectives.
- Comply with legislative requirements, relevant guidelines, and Project approvals.
- Guide the main Contractor on what they need to address in their works specific CEMP.

This Preliminary CEMP will support project approvals and be used as a foundation for the detailed CEMP which will be developed later as the Project progresses to the detailed design phase.

1.3 Scope

The scope of this CEMP primarily applies to the design and construction of the Project. Where commissioning and operational risks are known they will be addressed, however a review of this CEMP will be undertaken at the transition of construction to operations to ensure operational risks are identified and suitable mitigation measures developed.

This CEMP will be used to support approvals, guide design, provide evidence that environmental impacts are being considered and will be appropriately managed, and guide contractors on what they need to address in their specific CEMPs.

The CEMP seeks to:

- Describe the existing environment of the Study Area. The Study Area is approximately 6,344 ha in size and encompasses the area in which the flora and fauna surveys were undertaken, as well as the location of infrastructure to be constructed as part of the Project.
- Provide an overview of Neoen's Environmental Management Framework.
- Account for the environmental impacts that may occur through implementation of the Project

- Provide guidance on the management measures to be implemented to minimise adverse environmental impacts
- Ensure works are undertaken in a manner that meets relevant environmental legislation and obligations in approvals documents, including conditions and commitments
- Provide guidance on the audits and inspections to be undertaken
- Outline the environmental monitoring and reporting requirements
- Provide guidance to the main contractor in the preparation of their CEMP, and the site operator in the preparation of their Operational EMP. The primary contractors will be required to develop their own Construction and Operational EMPs specific to their activities and in accordance with the requirements of this CEMP.

2.0 Project Overview

2.1 Project Description

Neoen Australia Pty Ltd (Neoen) is proposing the development of the Narrogin Wind Farm (the Project), in the Wheatbelt region of Western Australia. The Project will have up to 25 wind turbines, a Battery Energy Storage System (BESS) and ancillary project infrastructure. It will comprise of the following key infrastructure and facilities:

- Turbines
- Turbine foundations
- Hardstands
- Electrical connections, substations and grid connection
- BESS
- Operational and maintenance facility
- Construction compound, concrete batching plant and laydown areas
- Borrow pits/quarries
- Temporary workers accommodation
- Permanent meteorological masts
- Communication towers
- External site access
- Internal access roads
- Utilities

2.2 Project Location

The Project is located approximately 160 km south-east of Perth, Western Australia (WA), in the Wheatbelt South subregion. The majority of the project infrastructure will be located within the Shire of Narrogin, with a single turbine to be located within the Shire of Williams. The Project will be located across numerous freehold properties that are primarily cleared of native vegetation and used for agriculture.

A 220 kV electrical transmission line intersects the southern boundary of the Project boundary which will provide network access.

The Project is located within the Intensive Land Use Zone, as defined by the Department of Primary Industries and Regional Development (Department of Primary Industries and Regional Development, 2016). Dryandra National Park and Lol Gray State Forest are located to the north of the Project.

For the purposes of this CEMP, the Project Area refers to the boundaries of all involved land parcels where consent has been granted for development of the Project and wherein all Project infrastructure will be contained. The Project Area is 6,344 ha and corresponds to the Study Area referenced in supporting reports.

The Indicative Project Footprint refers to the maximum area of land that will be cleared for installation of all Project infrastructure within the Project Area. It is based on the largest possible layout and has been used to calculate the maximum area of native vegetation clearing (7.41 ha of remnant native vegetation and 0.98 ha of planted native vegetation). The Indicative Project Footprint is approximately 200 ha.

The Project Area, Indicative Project Footprint and location is shown in **Figure 2.1**.

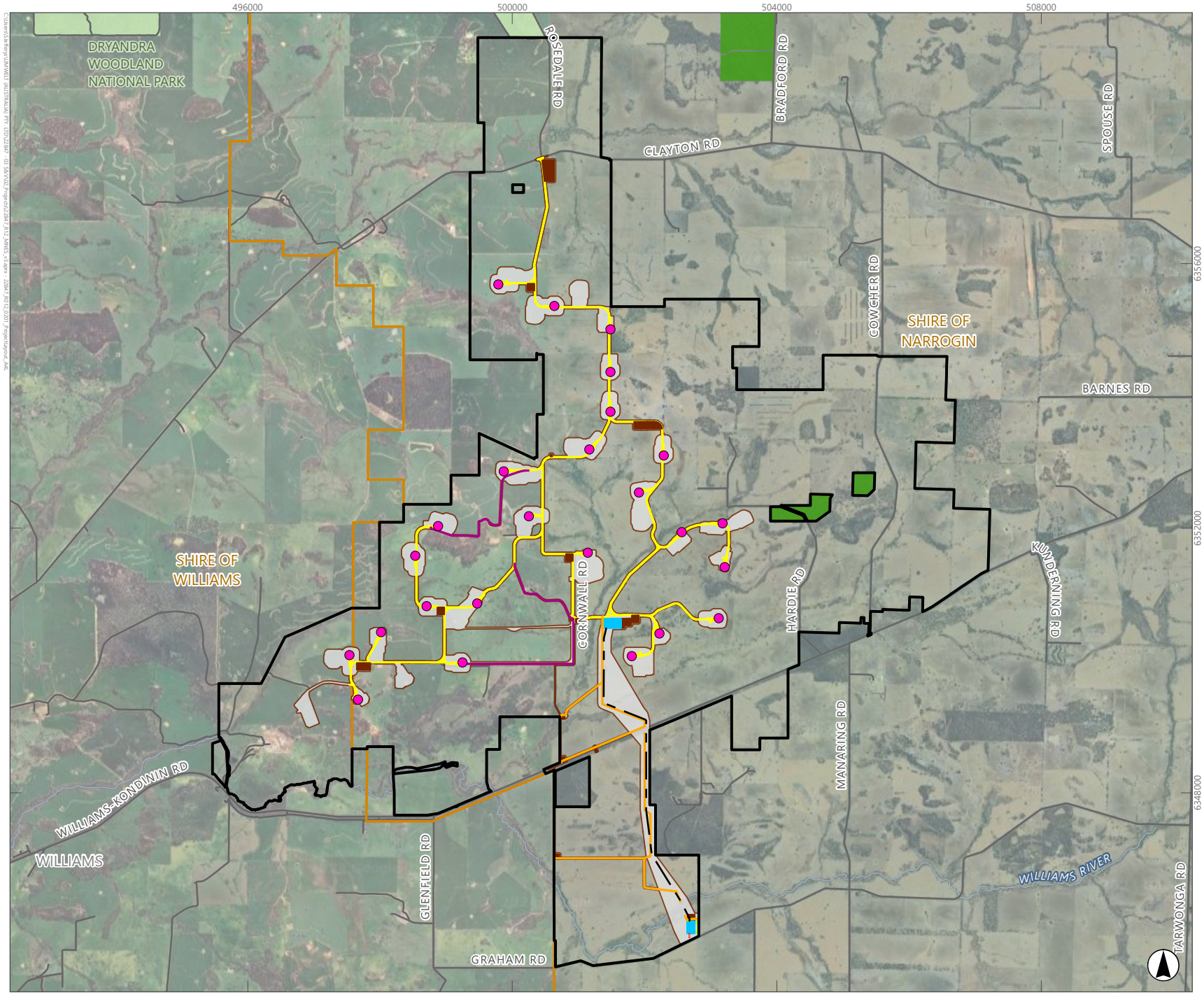


FIGURE 2.1
Project Layout

Legend

- Study Area
- Development Corridor
- Local Government Area Boundary
- Road
- Major Watercourse
- Nature Reserve
- National Park
- WTG Location
- Transmission Line WP
- Transmission Line Route
- Primary Road
- WP Terminal Road
- Access Track – Transmission Line
- Access Track – Windfarm
- Permanent Infrastructure
- Temporary Works

0 1.6 3.2

Kilometres

Scale 1:80,000 at A4
GDA2020 MGA Zone 50

Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), Neoen (2024), DBCA (2023)

2.3 Project Staging and Construction

This CEMP has been prepared primarily to address environmental risks at the design, planning, and construction phases, however where environmental risks are known for the commissioning, operations, or decommissioning phases, these will also be addressed.

Project construction will include the following activities:

- Site mobilisation.
- Site preparation including vegetation clearing and topsoil stripping where required.
- Earthworks and landscaping.
- Installation of fencing where required.
- Construction of internal access roads and car parks.
- Civil works, such as the installation of slabs for infrastructure, cables, water supply, and drainage.
- Installation of wind turbines.
- Installation of the BESS compound facility, switchyard, transformers, and substation.
- Installation of overhead powerlines and associated towers/poles.
- Installation of buildings, such as control building, offices, maintenance shed, and storage warehouse.

3.0 Existing Environment

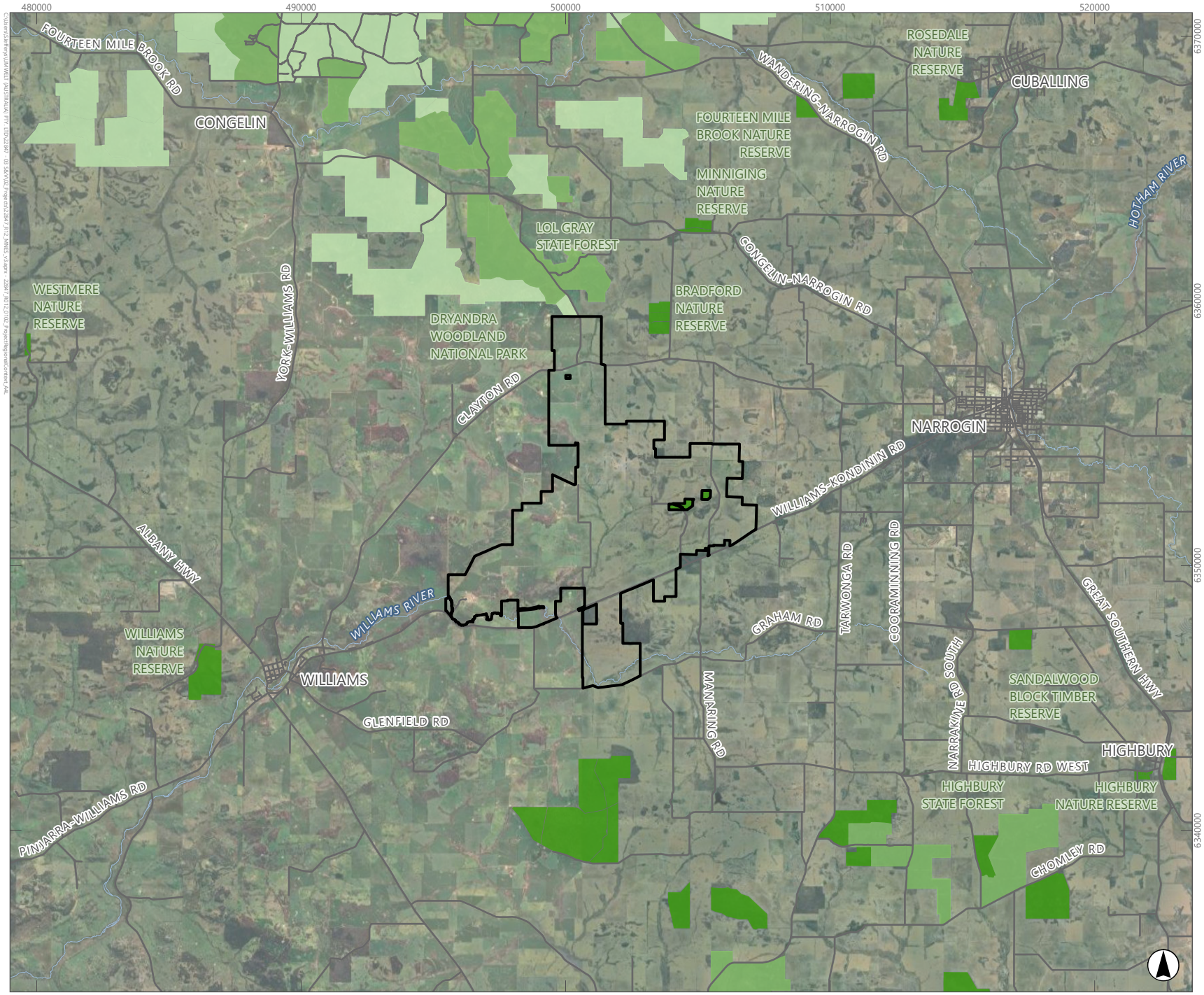
3.1 Land Use

Land use in the Project area consists of land cleared for agriculture and livestock grazing, with interspersed patches of remnant and regrowth woodland that is generally associated with hills and slopes. Key environmental and social receptors in proximity to the Project Area include (**Figure 3.1**):

- Dryandra Woodland National Park, located directly adjacent to the northern boundary of the Project Area.
- Lol Gray State Forest, located 500 m north of the Project Area which forms a mosaic of protected areas along with Dryandra Woodland National Park north of the Project Area.
- Bradford Nature Reserve, located 1.8 km east of the northern boundary of the Project Area.
- Three unnamed Nature Reserves which are surrounded by Project Area land parcels in the east of the Project Area.
- An unnamed Nature Reserve for the purposes of conservation of flora and fauna, located approximately 1.7 km south of the Project Area.
- Numerous other Nature Reserves and State Forests located to the south of the Project Area within a 20 km buffer.
- Watercourses located in the north (Mujiting Brook and Minniging Brook) and south (Geeralying Brook and Williams River) of the Project Area and numerous other non-perennial drainage lines located throughout the Project Area.
- Registered Aboriginal Heritage Sites such as a modified tree and camp site (Geeralying, Site ID 15139), a modified tree and food resource site (Manaring Road, Site ID 5826) and a burial site (Geeralying, Site ID 5888).
- The town of Williams, located approximately 7 km west of the Project Area.
- The town of Narrogin, located approximately 9 km east of the Project Area.

A 220 kV transmission line owned and operated by Western Power intersects the southern boundary of the Project Area and forms part of the South West Interconnected System (SWIS). This transmission line connects from the Narrogin South Substation, approximately 18 km to the east of the Project Area, to Muja Terminal, approximately 80 km to the west.

FIGURE 3.1
Project Regional Context



Legend

- Study Area
- Road
- Major Watercourse
- Nature Reserve
- National Park
- State Forest

0 4 8

Kilometres

Scale 1:200,000 at A4
GDA2020 MGA Zone 50

Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), Umwelt (2023), DBCA (2023)

3.2 Flora and Vegetation

Surveys of the Project Area recorded a total of 149 discrete flora taxa. Introduced flora comprised 46% of the total number of flora taxa recorded, indicating the high levels of clearing for agriculture which are present throughout the area.

Although most introduced taxa identified within the Project Area were common pasture weeds, three are listed as Weeds of National Significance (WoNS) (Invasive Plants and Animals Committee (IPAC), 2017) and Declared Pests under the Biosecurity and Agriculture Management Act (2007) (WA BAM Act):

- Bridal creeper (Asparagus asparagoides)
- Purple viper's-bugloss (Echium plantagineum)
- One-leaf Cape tulip (Moraea flaccida)

No listed significant flora were identified during the 2023 – 2024 survey.

A total of 22 Vegetation Types (VTs) were identified in the Project Area by the 2023-2024 flora and vegetation surveys. These vegetation types cover 1,146.6 ha representing 18.1% of the Project Area, with the remaining areas mapped as cleared agricultural land.

The majority of VTs have been highly modified since European settlement and are no longer considered to be intact remnant vegetation. This is a result of the long history of agricultural activities and other development in the Project Area, including direct clearing for cropping, pasture, roads and other infrastructure, and grazing by stock. A total of 5,098.9 ha of 'Cleared Land' was mapped, representing 80.4% of the Project Area.

Remnant vegetation was mapped primarily as occurring either on drainage lines, or on the tops of hills influenced by either granite or laterite; these areas being the least favoured for agricultural purposes.

The majority of the Project Area has been mapped as 'Completely Degraded' (5,221.5 ha, 82.3%). This largely consists of areas mapped as Cleared land ('Cl') and Planted ('Pl') areas. 1,120.2 ha (17.6%) of the Project Area was mapped as being in 'Degraded' condition. These areas predominately consisted of native trees over no or very little understorey taxa, and high levels of introduced (weed) taxa. A very small portion of the Project Development Envelope was mapped as being in 'Good' condition (0.4 ha, 0.008%).

A total of 41.8 ha of the *Eucalyptus Woodlands of the Western Australian Wheatbelt* Priority Ecological Community (PEC) / Threatened Ecological Community (TEC) has been identified within the Project Area across five patches and are all in Degraded condition.

3.3 Fauna

Five broad habitat types were mapped within the Project Area:

- Eucalypt woodland on laterite rise (404 ha)
- Eucalypt-Sheoak woodland with granites (181 ha)
- Creekline (563 ha)

- Planted (97 ha)
- Cleared (5,099 ha)

Field surveys within the Project Area recorded 111 fauna species, comprising 90 birds, 17 mammals (including 8 bats), 3 reptiles and 1 amphibian.

Seven listed fauna species were recorded within the Project Area:

- Carnaby's Black-Cockatoo
- Chuditch
- Forest Red-tailed Black-Cockatoo
- Peregrine Falcon
- Red-tailed Phascogale
- Inland Western Rosella
- Western False Pipistrelle

Of the 111 fauna species recorded in the Project Area, eight are introduced (three bird and five mammals), representing 7% of the total fauna recorded. The introduced fauna recorded were:

- Laughing Kookaburra
- Black Rat
- European Red Fox
- Feral Cat
- European Rabbit
- House mouse
- Domestic (Feral)
- Spotted Turtle Dove

3.4 Surface Water

The Project Area is encompassed within the Murray River System which is a Proclaimed Surface Water Area. It is intersected by the Williams River and Minniging Brook. Other named watercourses intersected by the Project Development Envelope include Geeralying Brook (tributary to Williams River) and Mujiting Brook (tributary to Minniging Brook), and several smaller drainage channels.

The Project Development Envelope does not intersect any mapped Ramsar wetlands or Wheatbelt wetlands, but contains some riparian vegetation in some areas where watercourses exist.

The nearest Drinking Water Source Protection Area is approximately 50 km to the southwest of the Project Development Envelope.

A flood study has been completed for the Proposal, and the outcomes used to inform the design of the Project to avoid and mitigate hydrological risks and impacts as far as possible.

3.5 Groundwater

The Project Development Envelope is not located within any Proclaimed Groundwater Area.

There is a lack of water bores in the Project Area which is indicative of the unreliability of the fractured rock system as a water resource. Groundwater within the region is affected by geological features causing flow systems to be discontinuous and compartmentalised.

Groundwater Dependent Ecosystems (GDEs) with a low or moderate potential for groundwater interaction are present in the Project Area, based on mapping by the Bureau of Meteorology (Bureau of Meteorology (BOM), 2024a). These mapped GDE's have been avoided as far as possible as part of the iterative Proposal design process.

3.6 Soils

Soil landscape mapping of WA has been compiled from the results of various surveys across the state by the Department of Agriculture (now the Department of Primary Industries and Regional Development [DPIRD]) (DPIRD, 2022). The Project Area is located across 14 separate soil-landscape units. The most commonly occurring soil-landscape units within the Project Area are the Noombling subsystem (Narrogin) (61.5%), Noombling subsystem (Dryandra) (12.4%), and Norrine subsystem (Narrogin) (9.6%).

3.7 Heritage

A search of the DPLH Aboriginal Cultural Heritage Inquiry System (ACHIS) found three Registered Aboriginal cultural heritage sites within the Project Development Envelope: Manaring Road (DPLH ID 5826), Geeralying, Narrogin (DPLH ID 5888), and Geeralying (DPLH ID 15139) (Archae-aus, 2024).

A search of the Heritage Council's InHerit database revealed three places of historical heritage significance that intersect the Project Development Envelope (Archae-aus, 2024). These locations have been avoided by the Proposal.

A desktop Aboriginal and historical heritage due diligence assessment of the Project Area indicates that there is potential for encountering Aboriginal Cultural Heritage (ACH) in some sections of the Project Area.

The Project Indicative Footprint has avoided all known Aboriginal and historical sites and minimised areas as having a high Aboriginal Cultural Heritage potential.

A Chance Finds Procedure and Aboriginal heritage site induction will be developed for the Project and Neoen will continue to engage Traditional Owners throughout the Project.

4.0 Preliminary Construction Methodology

The chosen Engineering, Procurement and Construction (EPC) contractor will be responsible for the detailed construction methodology for the Project. The following sections describe a typical construction methodology for a wind farm Project.

4.1 Project Delivery Timeframes

The construction period for the Project will be agreed between the EPC contractor and Neoen, and will be subject to change depending on weather conditions, availability of materials, and construction speeds. The construction timeframe is estimated to be 33 months. Subject to Project approvals, construction is expected to commence in 2025 and conclude in 2028. Commissioning of the Project is scheduled to start in 2028.

During the construction phase, works will typically occur for six days each week (Monday to Saturday), and up to 12 hours per day (06:30 to 18:30). During certain construction activities, such as foundation pours and turbine lifts, works may be required to run longer than 12 hours for safety and quality purposes. It may also be necessary for construction activities to take place on a Sunday or during the night time. In such instances, appropriate mitigation and management measures will be incorporated into the Contractor CEMP. These assumptions will be revisited and modified as necessary at the later stage.

Some enabling works will be required between approval of the Project and commencement of construction. This will include:

- Detailed site investigations for the purposes of micro-siting the turbines.
- Obtaining all necessary permits and consents for construction.

For the construction of the Project, the following activities are expected to occur:

- Site establishment (temporary site facilities, lay down areas, equipment and materials).
- Earthworks for access roads and wind turbine hardstands.
- Excavation for the foundations.
- Construction of wind turbine foundations (bolt cage, reinforcement and concrete).
- Construction of BESS, substation and ancillary infrastructure.
- Installation of electrical and communications cabling and equipment (including overhead feeders from cable marshalling points to the substation).
- Installation of wind turbine transformers, in parallel with electrical reticulation works.
- Installation of towers for the wind turbines, and delivery of the wind turbine components to the Project site.
- Erection of wind turbines, using high-level mobile cranes.

- Installation of overhead powerline and associated towers/poles.
- Commissioning of wind turbines, followed by reliability testing.

The activities listed above will predominately occur in the order listed, however some of these activities may be carried out concurrently to minimise the overall length of the construction programme.

4.2 Equipment and Machinery

The major equipment and machinery that is likely to be used for each component of construction of the Project includes:

- For site mobilisation: track loader, grader, backhoe, trucks, small crane and generators.
- For access roads and hardstands: Track loaders, excavators, graders, trucks (with trailer), water carts and rollers.
- For wind turbines: excavators, rock breaker, concrete trucks, trucks (with trailer and vacuum), larger crawlers cranes, medium crawler cranes, small crawler cranes and generators.
- For electrical reticulation works: trencher, backhoe, excavator, grader, tractor and small terrain crane.

Other equipment and machinery may be required, depending on the construction techniques nominated in the detailed design phase.

It is expected that one of each turbine component type will be delivered in a single day during the haulage operation (i.e. one blade, one tower section, nacelle, cooling tower, and turbine hub). Each individual component will be carried on a single oversize overmass vehicle.

4.3 Construction Workforce

The Project is expected to generate multiple employment opportunities. However, it is estimated that the maximum (peak) workforce will compromise up to 250 staff, throughout the 33 months construction period, with 10 permanent staff to be employed during operations.

It is expected that some of the workforce will commute from local areas such as Narrogin, Williams and Collie, and will not require additional accommodation. Other workers may be accommodated in a temporary workers accommodation facility, and temporary local rental houses, hotels and motels in the surrounding localities and towns.

4.4 Construction Water Supply

The provision of water is essential for the construction of the Project. The construction activities likely to require water are:

- Bulk earthworks and material conditioning.
- Stripping.
- Dust suppression.

- Concrete batching.

High level estimates of the water volumes that would be required over the construction period are in the range of 100 – 150 megalitres.

Water will be sourced from the existing Water Corporation main line that traverses the Project Area. Water Corporation have confirmed that there is sufficient availability to meet the project requirements.

5.0 Environmental Management Framework

5.1 Environmental Policy

Neoen have a Health, Safety and Environment (HS&E) Policy (**Appendix 1**) in place to provide a healthy and safe working environment for its employees, guarantee the integrity of the company's assets and protect the environment. Through this policy, Neoen is committed to:

- Meeting or exceeding all applicable Health, Safety & Environmental laws or regulations.
- Pursuing the objective of no harm to people, the company's assets and no damage to the environment or the local communities.
- Minimising adverse impacts to the environment and the ecosystem, optimising the social impact to the communities in the surrounding of Neoen's facilities, and preserving the local cultural heritage.
- Taking actions to prevent pollution and promoting the sustainability of the natural resources that are used.
- Managing the HS&E matters as any other critical business activity in the company, with a continuous performance improvement mindset.
- Providing guidance, support and training to Neoen personnel and contractors in order to create and maintain a best-in-class HS&E culture.

5.2 Environmental Risk Register

An Environmental Risk Register will be developed for Project. Contractors will be required to develop their own environmental risk register specific to their scope using the Project Environmental Risk Register as a guide.

5.3 Approvals and Permit

Table 5.1 provides a list of environmental licences, approvals or permits that may be required for the Project.

Table 5.1 will operate as a live register and be updated as and when required.

Table 5.1 Regulatory Approvals Obtained for the Project

Legislative Framework	Reference/Instrument No.	Duration	Conditions or commitments
Primary Project Approval			
Development Approval			
EP Act Referral			
EPBC Act Referral			
Site Access and Roads			
Main Roads WA approval to work within a Road Reserve			
Watercorp approval to work within the prescribed distance of Watercorp assets			
Aboriginal Heritage			
			1.
Vegetation			
Native Vegetation Clearing Permit			1.
Hydrology			
Bed & Banks Permit –			1.

5.4 Environmental Objectives and Targets

Environmental objectives and targets have been developed for the Project. These are included in each of the environmental management tables presented in **Section 6.0**.

5.5 Audits and Inspections

Environmental inspections will be regularly conducted on site against the requirements of this CEMP. Inspections will include daily site environmental inspections by Supervisors and weekly site environmental inspections by the Senior Environmental Advisor (or delegate).

Audits will also be undertaken on a regular basis to ensure the Project is being constructed and operated in accordance with legal and CEMP requirements. The following audits will be undertaken as a minimum throughout the Project:

- Mobilisation audits (to be undertaken within one month of Contractor mobilisation) to ensure the Contractors site has been established and work is being undertaken in accordance with this CEMP and other legal requirements.
- Quarterly audits of the Contractors site, works and systems to ensure compliance with this CEMP and legal requirements.
- Annual legal compliance audits (where required).
- Demobilisation audits of Contractors site and systems.

An audit and inspection schedule will be developed by the Senior Environmental Advisor prior to construction commencing. This will be reviewed and updated in a quarterly basis in response to new legal requirements and findings of previous audits.

Contractors will be required to develop their own audit and inspection schedule which will need to be reviewed and approved by Neoen prior to mobilising to site.

5.6 Incident Response

5.6.1 Incident Management

An environmental incident is an event with the potential to result in damage to the environment, a cultural heritage value/site, a non-compliance against a regulatory requirement or disruption to the community leading to a community concern.

In the event of an incident, management actions will be implemented immediately where safe to do so. Examples of management actions include:

- Cleaning up a hydrocarbon spill.
- Stopping work and barricading off an area where a potential heritage site has been identified.
- Ceasing works where clearing has gone outside a clearing boundary.

Once appropriate management actions have been implemented, the incident will be reported as outlined in **Section 5.6.2**.

5.6.2 Incident Reporting

All site personnel and contractors are responsible for reporting environmental incidents to the Senior Environmental Advisor.

The Senior Environmental Advisor must be verbally notified about the incident within 4 hours of the event. A written account of the event must be provided to the Senior Environmental Advisor within 24 hours of the event.

For all incidents, the Senior Environmental Advisor will verbally inform the Construction Manager, Safety Manager and Project Manager as soon as practicable. For significant environmental incidents (e.g., unauthorised clearing of a tree, hydrocarbon spill in excess of 20 L), or where required legally, the Senior Environmental Advisor will notify the relevant regulatory authorities.

Project personnel and contractors must not notify any regulatory agencies of incidents without prior approval from Neoen.

5.6.3 Incident Investigation

All incidents must be investigated, and a report detailing the incident event must be submitted in writing to the Senior Environmental Advisor, and must include the following details:

- Incident event.
- Timeline of events that led to the incident.
- Causes or contributing factors to the incident.
- Controls that would have prevented the incident from occurring.
- Corrective and preventative actions to avoid recurrence.

5.7 Emergency Response

A Project emergency management plan will be developed to address management responses to potential environmental emergencies, as well as health and safety emergencies. The plan will include but not be limited to:

- Potential environmental emergencies.
- Actions and associated procedures required to mitigate the environmental impact from emergencies.
- Emergency response training and competencies.
- Appropriate emergency response equipment.
- Communication procedures.

- Notification / emergency contact details.

Contractors are to assess potential environmental emergencies applicable to their scope of works and ensure plans, procedures, training and equipment are developed to mitigate the risks in accordance with the requirements of this CEMP.

5.8 Organisational Roles and Responsibilities

Key roles and environmental responsibilities for the Project are presented in **Table 5.2** below. Note that these roles may be adjusted based on the specific management structure of the construction contractors and site operators.

Table 5.2 Roles and Responsibilities

Role	Key Responsibilities
Project Director – Contractor	• Provide leadership to the Project Manager and the broader project team in relation to environmental management on site. • Managing environmental risks to avoid environmental harm and reputational damage. • Liaise with stakeholders and project managers to report on Project status in relation to environmental management.
Project Manager – Contractor	• Provide leadership regarding environmental management on site. • Ensure sufficient personnel, equipment and other resources to achieve Project environmental objectives and targets. • Review and approve the CEMP and key Project environmental documents.
Construction Manager – Contractor	• Oversee and direct construction projects from conception to completion. • Work with the Senior Environmental Advisor and provide leadership regarding environmental management on site. • Ensure resources are available on site to implement the CEMP, and complete required reporting.
Senior Environmental Advisor – Contractor	• Assist the Construction Manager to ensure the CEMP requirements are met in all construction activities. • Acquire Project approvals, permits and licences as required. • Undertake audits/inspections according to the audit schedule to ensure compliance with the CEMP, legal requirements and/or Project-specific objectives and/or targets. • Provide environmental inductions / training to all contractors or employees. • Ensure required environmental monitoring is undertaken according to monitoring schedule. • Investigate and report environmental incidents as required (if any).
Construction Supervisors – Contractor	• Ensure construction works are carried out in accordance with this CEMP and relevant environmental procedures. • Assist Construction Manager and Senior Environmental Advisor to implement this CEMP on site. • Ensure all employees and contractors have appropriate training and adequate understanding of the environmental requirements associated with their work activities.

Role	Key Responsibilities
Sub-Contractors	• Appoint suitably qualified and experienced contractors to carry out construction / environmental works within their scope of work. • Maintain sufficient resources to manage site environmental issues. • Report information as required by the Construction / Senior Environmental Advisor and Neoen.
All personnel	• Conduct works in compliance with this CEMP. • Follow directions given by the Construction Manager and/or Senior Environmental Advisor with regard to onsite environmental management.

5.9 Environmental Training and Awareness

Environmental inductions, trainings and meetings will be delivered throughout the Project to ensure the relevant aspects of this CEMP are communicated to the Project team including contractors and sub-contractors, and to ensure all parties understand their environmental management obligations. The following will be undertaken during the Project:

- **Project Environmental Induction**: All personnel involved in the Project will be required to attend a project environmental induction prior to undertaking any works on site. The induction will include environmental, land access and heritage information.
- **Land Clearing Training**: All personnel involved in the clearing of native vegetation will be required to attend a training package that lists all mitigation measures to be implemented prior to and during clearing activities. The training package will also include information of reporting of land clearing activities.
- **Daily Pre-Start Meetings:** These will be undertaken on a daily basis on site prior to commencing the daily activities. They will include an environmental component whereby any activities planned for the day that have potential environmental impacts will be discussed and management measures agreed upon.
- **Monthly Environmental Toolbox Talks**: These will be undertaken on site once a month and will be facilitated by the site supervisor or nominated representative. Topics will vary each month and will be relevant to the Project. Examples include, waste management, awareness of heritage sites, weed prevention.
- **Contractor Kick-off Meetings**: The agenda for Contractor kick-off meetings will include an environmental component. Items to be discussed, include, but are not limited to:
    - Key environmental factors applicable to the Project
    - Contents of the CEMP
    - Contractor CEMP requirements
    - Environmental management expectations
    - Monitoring and reporting requirements

- Audits and inspections.

5.10 Contractor Management

Following Contract award, the main Contractor(s) will be required to:

- Have appropriately qualified personnel in place to manage the environmental impacts relevant to their scope.
- Have a Project-specific CEMP approved by Neoen prior to mobilisation to site specifically for their scope of works. Contractor CEMPs are to conform with the requirements of this CEMP and any legal requirements that apply to the Project.
- Attend pre-mobilisation meeting(s) and facilitate a Risk Assessment Workshop addressing environmental risks associated with their scope.
- Ensure any design components of their scope, consider CEMP and relevant legal requirements.
- Co-operate and participate as required with Project audits and inspections. Contractors are also to develop and implement their own audit schedule to the satisfaction of Neoen.

5.11 CEMP Review

A review of the implementation and effectiveness of this CEMP will be undertaken annually should construction extend for more than 12 months, and at the transition of construction to operations. This will include a review of:

- This CEMP and supporting documents / registers.
- Applicable environmental policies.
- Performance against objectives and targets.
- Compliance with legal requirements.
- Environmental incidents.
- Corrective actions.
- Recommendation for improvement.
- The management review will be facilitated by the Senior Environmental Advisor and conducted through a meeting or workshop and will include the following personnel at a minimum:
    - Senior Environmental Advisor
    - Project Manager
    - Construction Manager
    - Project environmental personnel

- Meeting minutes will be taken and any corrective actions arising during the review will be captured in a corresponding register. Any updates to the CEMP will be communicated to relevant stakeholders.

6.0 Environmental Management Tables

This section of the CEMP comprises of a number of environmental management tables for the environmental factors relevant to the Project. Each table lists the management controls to be implemented during the Project, from the design stage through to rehabilitation. These tables will guide the Contractors on the environmental management measures they will need to align with in their CEMPs. The management measures will be reviewed and updated throughout the life of the Project to account for such items as scope changes, approval conditions, construction and operational impacts.

Environmental tables have been developed for the following:

- Surface Water Management (**Section 6.1**)
- Vegetation Clearing and Ground Disturbance (**Section 6.2**)
- Flora and Fauna Management (**Section 6.3**)
- Weed and Pest Management (**Section 6.4**)
- Aboriginal Heritage Management (**Section 6.5**)
- Air Quality and Dust Management (**Section 6.6**)
- Noise and Vibration Management (**Section 6.7**)
- Waste Management (**Section 6.8**)
- Hydrocarbon and Chemical Management (**Section 6.9**)
- Fire Management (**Section 6.10**)
- Demobilisation and Rehabilitation (**Section 6.11**)

Each environmental table details the objectives, targets, management actions and monitoring requirements for each environmental factor. Management actions may be updated when additional background information becomes available or further actions are necessary for a particular environmental factor.

6.1 Surface Water Management

Table 6.1 Surface Water Management

Surface Water Management			
Reference Documents	• *Rights in Irrigation and Water Act 1914 (WA)* (RIWI Act) • Shire of Narrogin *Local Planning Scheme No. 2* and *Town Planning Scheme No. 2* • Shire of Williams *Town Planning Scheme No. 2* • Stormwater Management Manual for Western Australia (Department of Water Environmental Regulation, 2022) • Department of Water and Environmental Regulation's *Decision Process for Stormwater Management in WA* (Department of Water and Environmental Regulation, 2017)		
Objectives	• Maintain hydrological regime of surface water bodies. • Maintain existing water quality of surface water bodies.		
Targets	• No direct impacts to riparian vegetation outside of approved clearing areas. • No discharge of pollutants or other materials into Williams Rivers and its tributary.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Design	Major project infrastructure will be located outside of 1% AEP flood areas.	Contractor	Design and planning
Design	Surface water management will be designed to separate clean stormwater from areas with potential sources of pollutants.	Contractor	Design and planning
Design	The number of new crossings will be minimised as far as practicable, and existing creek crossings used where possible.	Contractor	Design and planning
Design	Post-development flood modelling will be undertaken as part of the design process to verify that appropriate design features and mitigations will achieve the surface water management objectives.	Contractor	Design and planning
Design and Construction	Surface water and drainage management infrastructure will be designed and constructed with reference to the Stormwater Management Manual for Western Australia (Department of Water Environmental Regulation, 2022)	Contractor	Ongoing

Surface Water Management			
Construction	Sediment laden surface water will be diverted to sedimentation ponds. Typical erosion and sediment control measures such as silt fences, diversion bunds, rock check dams and construction entry/exit pads will divert rainfall runoff into the sediment basin to enable the settlement of suspended solids.	Contractor	Construction
Construction	A bed and banks permit will be obtained for creek crossings and any other works proposed within the bed and banks of creeks. Works will be undertaken in accordance with commitments and conditions of the bed and banks permits issued.	Contractor	Ongoing
Construction	Excess material generated from construction activities will be temporarily stockpiled in a location where it will not be impacted by any flood waters.	Contractor	Ongoing
Construction	Dewatering will be minimised and any discharge managed so that it does not adversely impacts the water quality of nearby surface water bodies.	Contractor	Construction
Construction	There will be no physical damage or alteration to riparian zone vegetation outside of approved clearing areas.	Contractor	Construction
Construction and operations	There will be no abstraction of surface water or groundwater unless approvals required under the RIWI Act are in place.	Contractor / Neoen	Ongoing
Construction and operations	No introduction of weeds or pests into riparian zone during construction of the Project or as part of ongoing operations of the Project.	Contractor	Ongoing
Operations	Stormwater management infrastructure will be maintained to ensure there is no restrictions to flow, in particular prior to any forecast heavy rainfall events.	Contractor / Neoen	Ongoing
Operations	Wastewater treatment plant effluent will be treated and discharged in accordance with any issued permits.	Contractor / Neoen	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Inspection	Surface water management features will be inspected and maintained to ensure effective ongoing stormwater management.	Contractor / Neoen	• Monthly • One day prior to forecast heavy rainfall events • Within one week following heavy rainfall events.

6.2 Vegetation Clearing and Ground Disturbance

Table 6.2 Vegetation Clearing and Ground Disturbance

Vegetation Clearing and Ground Disturbance Management			
Reference Documents	• *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) • *Environmental Protection Act (1986)* • *Biodiversity Conservation Act 2016* (WA) (BC Act) • Referral Guidelines for 3 Threatened Black-Cockatoo Species: Carnaby's Cockatoo, Baudin's Cockatoo & Forest Red-tailed Black-Cockatoo (Department of Agriculture, Water and the Environment, 2022)		
Objectives	• Remnant native vegetation clearing does not exceed 7.41 ha. • Planted native vegetation clearing does not exceed 0.98 ha • Minimise the total area of clearing and/or land disturbance and avoid unnecessary clearing. • Minimise the bisecting of existing patches of native vegetation		
Targets	• No clearing of native vegetation in Good condition or better • No incidents of clearing outside of approved clearing footprints. • No clearing of Rank 1 and Rank 2 Black-Cockatoo habitat trees. • No conservation listed flora or fauna are impacted by land clearing. • All topsoil removed is stockpiled and kept available for use during rehabilitation.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Pre-clearing	Personnel involved in native vegetation clearing activities will be required to undertake internal Project specific land clearing training which will outline regulatory requirements and management actions or controls to be implemented.	Contractor	Prior to mobilisation
Pre-clearing	Design will ensure that clearing of native vegetation is minimised as far as practicable and where native vegetation is required to be cleared it is within the approved areas as nominated by environmental referrals and approvals.	Contractor	Ongoing
Pre-clearing	Approved native vegetation clearing area boundaries will be demarcated prior to clearing.	Contractor	Prior to clearing activities

Vegetation Clearing and Ground Disturbance Management			
Pre-clearing	Rank 1 and Rank 2 black cockatoo nesting trees within 50 m of clearing boundaries will be clearly tagged as “No-go zone” prior to clearing.	Contractor	Prior to clearing activities
Pre-clearing	Micro-siting of infrastructure will be undertaken to further minimise native vegetation clearing where possible	Contractor	Prior to clearing activities
Pre-clearing	The number of creek crossings will be minimised as part of detailed design, and where crossings are necessary, existing crossings will be utilised where practicable to reduce the clearing of riparian vegetation	Contractor	Prior to clearing activities
Clearing	Areas planned for native vegetation clearing will be inspected for native fauna immediately prior to undertaking land clearing by a suitably qualified fauna spotter. Where conservation listed fauna are encountered, these will be reported to the Senior Environmental Advisor immediately.	Contractor	Ongoing
Clearing	The maximum area of native vegetation permitted to be cleared will not exceed 7.41 ha of remnant native vegetation and 0.98 ha of planted native vegetation.	Contractor	Ongoing
Clearing	There will be no clearing of PEC/TEC vegetation within the Project site. Clearing for PEC/TEC along the transport route will not exceed 0.2 ha.	Contractor	Ongoing
Clearing	All ground disturbance and vegetation clearing will be undertaken in accordance with the Project’s land disturbance procedure.	Contractor	Ongoing
Clearing	Fauna spotters will be present during all native vegetation clearing and clearing of trees to ensure that no trees being removed are housing listed species, chicks, or eggs, and that no conservation significant fauna species are present.	Contractor	Ongoing
Clearing	No Rank 1 (trees with activity at hollow observed) and Rank 2 (trees with hollows of suitable size with chew marks visible) are permitted to be removed.	Contractor	Ongoing
Clearing	Where trees are authorised to be cleared, they will be felled away from areas of retained native vegetation as safe and practicable. Where trees unavoidably fall into retained areas, they will be left in-situ.	Contractor	Ongoing
Clearing	Vegetation clearing will be undertaken progressively and in stages so that only a small subset of the Project footprint is impacted at any one time.	Contractor	Ongoing
Clearing	Where habitat features such as existing hollow logs cannot be retained in-situ during land clearing, they will be relocated to adjacent areas of suitable habitat if safe and practicable.	Contractor	Ongoing

Vegetation Clearing and Ground Disturbance Management			
Clearing	All controls contained in Table 6.4 regarding the management of weeds and plant pathogens will be adhered to at all times by the relevant personnel.	Contractor	Ongoing
Clearing	Topsoil stockpiles will include signage that identifies the source of the stockpile, the date it was stockpiled and the volume of the stockpile.	Contractor	Ongoing
Construction	Topsoil stockpiles will be protected with cleared scrub, vegetation or otherwise treated as required to minimise wind erosion.	Contractor	Ongoing
Post-Clearing	Following the completion of each clearing event, the location and extent of are cleared will be recorded via GPS / survey and reported within a centralised dataset.	Contractor	Monthly
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Inspection	Active clearing fronts will be inspected to verify that they are and remain within approved boundaries.	Contractor	Daily
Inspection	Topsoil stockpiles will be inspected for evidence of erosion.	Contractor	Monthly
Monitoring	Total area cleared and the location of clearing completed will be recorded within a centralised dataset and reviewed on a regular basis to ensure there is no exceedance of the permitted area to be cleared.	Contractor	Monthly
Inspection	Areas planned for clearing will be inspected for native fauna prior to undertaking land clearing.	Contractor	As required

6.3 Flora and Fauna Management

Table 6.3 Flora and Fauna Management

Flora and Fauna Management			
Reference Documents	• EPBC Act • EP Act • BC Act • Referral Guidelines for 3 Threatened Black-Cockatoo Species: Carnaby's Cockatoo, Baudin's Cockatoo & Forest Red-tailed Black-Cockatoo (Department of Agriculture, Water and the Environment, 2022)		
Objectives	• No direct impacts to listed vertebrate fauna or listed flora taxa. • Ensure the total area of listed species habitat clearing does not exceed 8.39 ha. • Minimise indirect impacts to native fauna.		
Targets	• No incidents of unauthorised clearing (particularly conservation listed fauna habitats identified for retention). • No clearing of Rank 1 and Rank 2 black cockatoo nesting trees. • No incidents of trapped or injured native fauna as a result of Project activities. • Retain microhabitats such as fallen logs in-situ wherever possible. • Undertake land clearing in a manner that allows fauna to migrate into adjacent areas and retains landscape connectivity.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Pre-clearing	All site personnel will undertake an environmental and heritage induction which will provide training on the relevant fauna and flora species which may be impacted during construction and how to meet their responsibility to minimise the risk.	Contractor	Mobilisation
Pre-clearing	An inspections of all potential black cockatoos breeding trees will be undertaken within the clearing footprint.	Contractor	Ongoing
Pre-clearing	No Rank 1 (trees with activity at hollow observed) and Rank 2 (trees with hollows of suitable size with chew marks visible) black cockatoo breeding trees will be removed, and these trees will have a no-go zone established around their perimeter if identified	Contractor	Ongoing

Flora and Fauna Management			
Pre-clearing	Where it is discovered that a Rank 3 tree has been used or is in active use for nesting by black-cockatoos, a no-go zone will be established around the tree and the tree will not be cleared until the chick has naturally fledged and the breeding pair vacated	Contractor	Ongoing
Pre-clearing	Habitat trees within the clearing footprint that can be safely retained will be marked with flagging tape and avoided.	Contractor	Ongoing
Pre-clearing	Preclearance searches of habitat will be undertaken prior to clearing by a qualified fauna spotter, with habitat features/trees clearly identified and searched for fauna. This should include denning habitat for the Chuditch and Red-tailed Phascogale	Contractor	Ongoing
Pre-clearing	Where Chuditch or Red-tailed Phascogale are found during pre-clearance surveys, a no-go zone will be established and the area avoided until the individuals have naturally dispersed	Contractor	Ongoing
Clearing	Clearing of trees will be as per the mitigation measures outlined in Table 6.2.	Contractor	Prior to clearing
Construction	On-site fencing will be installed in a way that allows the free movement of the Chuditch across the site (i.e., no barbed wire and sufficient spacing etc.) with the exception of fencing surrounding the BESS compound.	Contractor	Ongoing
Construction	Signposted speed limits will be implemented and adhered to at all times. Any fauna strikes will be immediately reported to the Senior Environmental Advisor.	Contractor	Ongoing
Construction	Clearing will be undertaken in a slow, progressive manner towards adjacent native vegetation to allow fauna to move into adjacent native vegetation ahead of the clearing activity.	Contractor	Ongoing
Construction	Construction and operation personnel will be educated on the potential presence for fauna, in particular black cockatoos, Chuditch, Red-tailed Phascogale, Peregrine Falcon, Fork-tailed Swift, Inland Western Rosella, Western False Pipistrelle, Central Long-eared Bat, Barking Owl and Masked Owl.	Contractor	Ongoing
Construction	Where native fauna is encountered, all site personnel and contractors shall keep sufficient distance to not disturb them and will not cause harm or attempt to trap them. Where injured fauna is encountered, the Wildcare Helpline (08 9474 9055) will be immediately contacted, and the Work Area Supervisor notified.	Contractor	Ongoing
Construction	Where any listed fauna species are encountered during construction, this will be immediately reported to the Senior Environmental Advisor and any activities in proximity (<100 m) to their location will cease until they are no longer present.	Contractor	Ongoing

Flora and Fauna Management			
	Handling of such fauna is not permitted unless a Section 40 approval has been granted from the Department of Biodiversity, Conservation and Attractions.		
Construction	All open water sources (e.g. sediment basins) will be designed to limit access from fauna and pests while allowing safe egress for trapped native fauna. Where trapped fauna are encountered, the Wildcare Helpful (08 9747 9055) will be contacted in the instance that the fauna cannot be confidently and safely rescued.	Contractor	Ongoing
Construction	Any excavations or trenching that is left open overnight will have ramping installed to allow egress for trapped fauna or will otherwise be secured so that fauna cannot become trapped.	Contractor	Ongoing
Construction	On-site waste will be managed in accordance with Table 6.8 to minimise attraction of fauna and ensure safe storage and disposal.	Contractor	Ongoing
Construction	Where livestock are encountered onsite during construction, the landowner will be immediately contacted to safely remove the animal/s.	Contractor	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Inspection	Any open trenches will be inspected at the start and end of each working day.	Contractor	Daily as required
Inspection	Areas planned for clearing will be inspected for native fauna prior to undertaking land clearing	Contractor	As required

6.4 Weed and Pest Management

Table 6.4 Weed and Pest Management

Weed and Pest Management			
Reference Documents	• *Biosecurity and Agriculture Management Act 2007* (WA) (BAM Act) • *Biosecurity and Agriculture Management Regulations 2013* (WA) • *Phytophthora* Dieback Management Manual (DBCA, 2020) • Declared Pest Information Sheet: Bridal Creeper (Department of Primary Industries and Regional Development, 2020) • Declared Pest Information Sheet: Paterson's Curse (Department of Primary Industries and Regional Development, 2020a) • Declared Pest Information Sheet: One-leaf Cape Tulip (Department of Primary Industries and Regional Development, 2020b)		
Objectives	• No introduction of new Weeds of National Significance and no spread of existing Weeds of National Significance [(Bridal Creeper (*Asparagus asparagoides*), Paterson's Curse (*Echium plantagineum*) and One-leaf Cape Tulip (*Moraea flaccida*))] as a result of Project activities. • No plant pathogens or diseases such as dieback (*Phytopthora cinamomi*) will be spread into or become established within the Project site as a result of Project activities.		
Targets	• All ground disturbing plant and equipment are subject to a weed and seed inspection upon arrival to site and are certified as weed free upon entry to site. • No introductions of new weed species. • No spread of existing weed species on site. • No introduction of dieback on site.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Pre-clearing	The Project site induction and land clearing training will highlight the importance of weed and pest management.	Contractor	Ongoing
Pre-clearing construction & operations	A Weed Management Procedure will be developed and implemented during construction, operations, and closure activities.	Contractor	Ongoing
Construction	All ground disturbing plant and equipment will enter site clean and free of weeds or dieback.	Contractor	Ongoing

Weed and Pest Management			
Construction	Upon arrival to site, ground disturbing plant and equipment will be subject to a weed and seed inspection prior to entry. A certificate will be issued if the plant / equipment is deemed to be weed and seed free and a copy will be kept with the plant / equipment at all times.	Contractor	Ongoing
Construction	Where plant and equipment does not pass the weed and seed inspection, the plant / equipment shall be further cleaned at a dedicated wash down area and re-inspected.	Contractor	Ongoing
Construction	Weed infested areas that are identified will be avoided where practicable.	Contractor	Ongoing
Construction	Prior to leaving weed infested areas, the plant and equipment will be brushed down.	Contractor	Ongoing
Construction	Any fill brought to site will be accompanied with a clean fill certificate. Where practicable, the fill should be from a quarry (i.e. not reused from another site) that has a Dieback Management Plan in place.	Contractor	Ongoing
Construction	Waste will be appropriately stored and managed to prevent pest fauna from accessing putrescible waste. Refer Table 6.8 for additional was management measures.	Contractor	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Monitoring	Undertake weed monitoring and inspections as per the Project Weed Management Procedure.	Contractor	Ongoing

6.5 Aboriginal Heritage Management

Table 6.5 Aboriginal Heritage Management

Aboriginal Heritage Management			
Reference Documents	• *Aboriginal Heritage Act 1972* (WA) • *Aboriginal Heritage Regulations 1974* (WA) • *Aboriginal Heritage Due Diligence Guidelines 2013* (WA)		
Objectives	• No unauthorised impacts or disturbance of known Aboriginal Heritage Sites. • All areas mapped as high ACH potential within the proposed disturbance footprint have been heritage surveyed in advance.		
Targets	• No direct impacts to known Heritage Sites. • Any potential Aboriginal cultural heritage material finds are managed in accordance with the Archaeological Chance Finds Procedure. • Traditional Owner Representatives will be consulted with throughout all phases of Project design and development. • All personnel involved in the Project will be required to attend a Project induction that includes an Aboriginal heritage component.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
All	All personnel involved in the Project will attend a Project environmental and heritage induction prior to undertaking any works on site. The induction will ensure all personnel involved in the Project understand their legal obligations, the significance of Aboriginal cultural heritage, and the procedure to follow in the event of an unforeseen discovery of archaeological material. The induction will also serve to ensure Project personal understand and are empowered to proceed with work in a culturally respectful manner.	Contractor	Ongoing
Design	Project design will avoid areas mapped as having a greater ACH potential.	Contractor / Neoen	Ongoing
Pre-clearing	An archaeological and ethnographic heritage survey is to be undertaken for zones of ACH potential within the proposed ground disturbance footprint. An archaeological and ethnographic survey should also sample survey areas outside of the zones of ACH potential in areas that will be impacted by the proposed works.	Contractor / Neoen	Ongoing

Aboriginal Heritage Management			
Pre-clearing	The heritage survey design will follow archaeological and ethnographic best practice guidelines and will be developed by the archaeologists and anthropologists before the survey and with input from the relevant Traditional Owner group during the survey.	Contractor / Neoen	Ongoing
Construction	All proposed ground disturbance areas will be subject to a heritage survey in advance.	Contractor	Ongoing
Construction	Traditional Owners will be consulted throughout all phases of Project design and development to provide information on Project developments and to actively seek input from Traditional Owners. This should include providing updates to Traditional Owners of any major design changes as soon as practicable.	Contractor / Neoen	Ongoing
Construction	Where works are proposed within 100 m of a registered Aboriginal heritage site, the boundaries of the site will be illustrated on site drawings and clearly communicated to personnel.	Contractor	Ongoing
Construction	Any cultural heritage material encountered will be managed in accordance with the Project's Chance Finds Procedure.	Contractor	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Survey	Representatives from the relevant Traditional Owner Group will be involved in the heritage surveys	Contractor / Neoen	As required
Inspection	Audits will ensure areas mapped as high ACH potential within the disturbance footprint have been heritage surveyed in advance of ground disturbance.	Contractor	Monthly

6.6 Air Quality and Dust Management

Table 6.6 Air Quality and Dust Management

Air Quality and Dust Management			
Reference Documents	• Environmental Factor Guideline – Air Quality (Environmental Protection Authority, 2020) • Draft Guideline: Dust Emissions (Department of Water and Environmental Regulation, 2021) • A Guideline for Managing the Impacts of Dust and Associated Contaminants from Land Development Sites, Contaminated Sites Remediation, and Other Related Activities (Department of Environment and Conservation, 2011)		
Objectives	• Maintain air quality and minimise emissions.		
Targets	• No complaints raised by stakeholders regarding dust emissions or air quality as a result of Project activities. • No impacts to the water quality of local water bodiesxsa as a result of dust emissions and sedimentation. • Minimise medium- and long-term storage of soil and establish stockpiles in areas that are comparatively protected and in accordance with best practice principles for dust management.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Design	Plant and equipment will be equipped with engineering controls where practicable to prevent dust emissions.	Contractor	Prior to completion of design
Construction	Project inductions will highlight the importance of minimising dust emissions.	Contractor	Ongoing
Construction	Clearing of land will be staged to minimise the area of exposed soil.	Contractor	Ongoing
Construction	Land clearing will not be undertaken in high wind conditions unless dust mitigation measures such as water tanks are being used.	Contractor	Ongoing
Construction & operations	Where dust is being generated, dust suppression will be applied to the source areas.	Contractor	Ongoing
Construction	Vehicle movements will be restricted to established roads and tracks, and speed limits will be adhered to.	Contractor	Ongoing
Construction	Dust suppression and control equipment will be regularly maintained to avoid malfunctions.	Contractor	Ongoing

Air Quality and Dust Management			
Construction	Vehicles, mobile plant, stationary plant and power generation equipment will be regularly serviced and maintained to minimise particulate emissions.	Contractor	Ongoing
Construction	Topsoil stockpiles will be constructed in an alignment that minimises the area of the stockpile face exposed to the prevailing wind.	Contractor	Ongoing
Construction	Topsoil stockpiles will be protected with cleared scrub, vegetation or otherwise treated as required to minimise wind erosion.	Contractor	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Inspection	Dust generation levels will be visually inspected and monitored at unsealed areas and at vegetation adjacent to the Project site.	Contractor	Weekly

6.7 Noise and Vibration Management

Table 6.7 Noise and Vibration Management

Noise and Vibration Management			
Reference Documents	• *Environmental Protection (Noise) Regulations 1997* (WA) • Draft Guideline: Assessment of environmental noise emissions (Department of Water and Environmental Regulation, 2021a) • Noise Regulations Fact Sheet – Regulation 13: Construction sites (Department of Water and Environmental Regulation, 2021b) • AS 2436:2010 – Guide to noise and vibration control on construction, demolition and maintenance sites		
Objectives	• To protect the health and comfort of personnel from noise impacts due to the project operations. • To avoid or minimise as much as practicable any noise emissions to nearby landowners and sensitive receptors from construction activities.		
Targets	• Noise levels at existing non-involved residential receptors do not exceed trigger levels listed in the *Environmental Protection (Noise) Regulations 1997 (WA).* • No complaints received of excessive noise and vibration as a result of Project activities.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Design	Project design and layout will be developed to ensure operational compliance with the applicable *Environmental Protection (Noise) Regulations 1997 (WA)* noise limits at existing non-involved sensitive receptors.	Contractor	Ongoing
Construction	Construction work will be undertaken between 7 am and 7 pm on any day which is not a Sunday or public holiday, and in accordance with the control of environmental noise practices in Section 4 of AS 2436:2010 – *Guide to noise and vibration control on construction, demolition and maintenance sites*.	Contractor	Ongoing
Construction	For construction work outside the above hours, such as weekday evenings, Sunday and public holidays, written notice of the proposed construction work shall be provided to the occupiers of all premises at which noise levels are likely to be above the assigned levels. Notice shall be provided at least 24 hours before commencing the construction works.	Contractor	Ongoing
Construction	The construction equipment used will be the quietest reasonably available.	Contractor	Ongoing
Construction & operations	Vehicles, mobile plant, stationary plant and power generation equipment will be regularly serviced and maintained to minimise noise and vibration levels.	Contractor	Ongoing

Noise and Vibration Management			
Construction & operations	The installation of noise enclosures / screens will be considered for fixed plant and equipment that generate high levels of noise.	Contractor	Ongoing
Construction & operations	Mufflers will be fitted to plant and equipment that have an internal combustion engine.	Contractor	Ongoing
Construction & operations	Noise and vibration complaints will be immediately investigated. Details of the complaint and the management measures implemented will be recorded in the Project's complaints register.	Contractor	Ongoing
Operations	There will be no exceedance of the applicable *Environmental Protection (Noise) Regulations 1997 (WA)* noise limits at existing non-involved sensitive receptors.	Contractor	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Monitoring	Noise monitoring will be undertaken in accordance an Operational Noise Management Plan if one is deemed required.	Contractor	As required

6.8 Waste Management

Table 6.8 Waste Management

Waste Management			
Reference Documents	• EP Act • *Environmental Protection (Controlled Waste) Regulations 2004* (WA) • *Environmental Protection (Rural Landfill) Regulations 2002* (WA)		
Objectives	• Waste is managed in a sustainable manner and all materials introduced or produced on-site are disposed of correctly.		
Targets	• Ensure compliance with the site's waste management procedure at all times. • No incidents of incorrect sorting, storage, or disposal of waste. • No complaints from nearby landowners or authorities on the management or disposal of waste by the Project.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Design	Infrastructure design will consider specific material needs to avoid over-estimating requirements and excessive waste generation.	Contractor	Prior to construction
Pre-construction	A suitable and licenced waste disposal facility will be identified and incorporated into the Waste Management Plan / Procedure.	Contractor	Prior to construction
Approvals	Approvals and Licences (i.e., Works Approval, licence to install apparatus and permit from the Local Government Authority) shall be obtained for wastewater treatment plant discharge.	Neoen	Prior to construction
Approvals and construction	Any portable temporary toilet facility shall be installed and maintained in accordance with the *Health (Temporary Sanitary Conveniences) Regulations 1997,* including servicing at least once every two weeks. Portable temporary toiles shall be emptied by an appropriately licensed Controlled Waste contractor.	Contractor	Construction
Design and construction	Any treated wastewater discharge to the environment (including treated sewerage) shall be fitted with a cumulative volume meter to record the volume of discharge to the environment.	Contractor / Neoen	Construction
Design and construction	Any portable temporary toilet facility and onsite wastewater treatment plant shall be protected with earthen or similar bunds to reduce the environmental risk of any spills or leaks and protect the system from stormwater. Tanks shall have automatic alerts in the event of faults or high tank levels.	Contractor	Construction

Waste Management			
Construction & operations	A Waste Management Plan / Procedure will be developed specifying wastes that can be disposed to landfill and all waste will be managed in accordance with this procedure.	Contractor	Ongoing
Construction & operations	Sufficient quantities of skips and bins will be available at all work areas.	Contractor	Ongoing
Construction & operations	Any skips and bins with food waste will have a closable lid in place to prevent fauna from accessing the waste.	Contractor	Ongoing
Construction & operations	Skips and bins will be colour coded and clearly labelled to facilitate the segregation of waste types.	Contractor	Ongoing
Construction & operations	Recyclable materials, including cardboard, plastics, aluminium cans, glass, batteries, timber pallets and scrap metal, shall be recycled wherever possible.	Contractor	Ongoing
Construction & operations	All wastes will be disposed / recycled at suitably licensed facilities.	Contractor	Ongoing
Construction & operations	Waste oil containers, oily wastes and similar (i.e. rags, filters, etc.) will be segregated from other wastes, appropriately labelled and stored in bunded areas prior to collection for disposal.	Contractor	Ongoing
Construction & operations	Controlled wastes such as hydrocarbons, oils, fuels, grease and oily wastewater will be transported and managed in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004* (WA).	Contractor	Ongoing
Construction & operations	Waste receipts will be recorded for all waste disposed of.	Contractor	Ongoing
Construction & operations	Use a hierarchical approach to waste management from the most preferable (reduce, reuse or recycle wastes) to the least preferable (disposal), and priority waste management strategies to avoid waste generation.	Contractor	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Inspection	Waste storage areas will be inspected weekly to ensure they are being managed in accordance with the Project's Waste Management Plan / Procedure.	Contractor	Weekly
Inspection	Temporary toilet facilities shall be inspected and serviced at least once every two weeks.	Contractor	Fortnightly
Inspection	The Project wastewater treatment plant(s) shall be inspected regularly to ensure it is operating in accordance with the licence or permit conditions (pending approval).	Contractor	Weekly

6.9 Hydrocarbon and Chemical Management

Table 6.9 Hydrocarbon and Chemical Management

Hydrocarbon and Chemical Management			
Reference Documents	• *Dangerous Goods Safety Act 2005* (WA) • *Environmental Protection (Controlled Waste) Regulations 2004* (WA) • Water Quality Protection Note 65: Toxic and hazardous substances storage and use (Department of Water and Environmental Regulation, 2015) • Water Quality Protection Note 10: Contaminant spills — Emergency Response Plan (Department of Water and Environmental Regulation, 2018) • Water Quality Protection Note 56: Tanks for fuel and chemical storage near sensitive water resources (Department of Water and Environmental Regulation, 2019)		
Objectives	• Hydrocarbons and chemicals stored and used in a manner that prevents discharge to the environment.		
Targets	• No hydrocarbon or chemical spills above 20 L during Project activities. • Hydrocarbons and chemicals are stored and handled in bunded areas only.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Construction and operations	Hydrocarbon and chemical storage will be clearly labelled, be above ground and comply with: • Water Quality Protection Note 65: Toxic and hazardous substances storage and use (Department of Water and Environmental Regulation, 2015). • Water Quality Protection Note 56: Tanks for fuel and chemical storage near sensitive water resources (Department of Water and Environmental Regulation, 2019). • Australian Standard AS 1940 – The Storage and Handling of Flammable and Combustible Liquids.	Contractor	Ongoing
Construction and operations	Hydrocarbons and chemicals will be stored outside of flood risk areas.	Contractor	Ongoing
Construction and operations	Personnel routinely working in areas containing hydrocarbons and chemicals will undergo spill response training.	Contractor	Ongoing
Construction and operations	Bulk hydrocarbon and chemical storage tanks will be protected by an earthen bund or bollards. They will be located within bunded areas with a capacity of 110% of the storage tank.	Contractor	Ongoing

Hydrocarbon and Chemical Management			
Construction and operations	Spill control management measures, which include spill clean-up procedures and spill kits will be available across work areas and in particular areas of frequent storage and handling or within 100 m of a watercourse.	Contractor	Ongoing
Construction and operations	Spills will be recorded and cleaned up as soon as practicable to mitigate ongoing pollution. Where a spill occurs within 100 m of a surface water body, the Senior Environmental Advisor will be notified.	Contractor	Ongoing
Construction and operations	Gensets will be bunded and will be subject to regular inspection and maintenance schedule.	Contractor	Ongoing
Construction and operations	Any hazardous materials bought to site will be accompanied by the relevant Material Safety Data Sheet (MSDS).	Contractor	Ongoing
Construction and operations	Refuelling pads (where proposed) will be bunded and stormwater captured for treatment in an oil / water separator.	Contractor	Ongoing
Construction and operations	All hydrocarbon and chemical wastes shall be managed in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004* (WA).	Contractor	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Inspection	Bulk hydrocarbon and chemical storage tanks will be inspected for leaks, spills and integrity issues.	Contractor	Weekly

6.10 Fire Management

Table 6.10 Fire Management

Fire Management			
Reference Documents	• Guidelines for Planning in Bushfire Prone Areas V1.4 (Department of Planning, Lands and Heritage, 2021) • Project Bushfire Management Plan		
Objectives	• Minimise any risk of bushfire ignition during construction and operations of the Project. • Minimise the risk of an externally ignited bushfire from interacting or impacting the Project.		
Targets	• No bushfire incidents caused by Project activities. • Bushfire events that originate outside of the Project are managed in accordance with the Project's Emergency Evacuation Procedure.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Construction	Signage indicating the location of hydrants or suction points will be erected as soon as they are installed and will be clearly visible on entry to the site.	Contractor	Following installation of firefighting equipment.
Construction	Any hot / hazardous works will not be undertaken during a Total Fire Ban or on a day with a Fire Danger Rating of Extreme or Catastrophic.	Contractor	Ongoing
Construction	Where any flammable / combustible material is brought onsite temporarily (construction or maintenance), the object must be positioned at a distance which is >4 times its own height from other structures and electrical infrastructure.	Contractor	Prior occupancy
Construction & operations	Works will be undertaken in accordance with the projects Bushfire management Plan.	Contractor	Ongoing
Construction & operations	All vegetation, flammable and combustible material is to be removed within 10 m of wind turbine base. This includes, but is not limited to, waste, leaf litter, machinery, grasses, vehicles, fuel, furniture, and timber. It is recommended that this 10 m buffer is sealed or compacted with concrete, compacted limestone, gravel, blue metal etc.	Contractor	Ongoing
Construction & operations	Smoking will be confined to designate smoking areas where butts and ashes can be safely extinguished and disposed of.	Contractor	Ongoing

Fire Management			
Construction & operations	Personnel will be aware of the fire danger for each day on site.	Contractor	Ongoing
Construction & operations	Fire extinguishers will be in place at high risk facilities and in site plant and vehicles.	Contractor	Ongoing
Construction & operations	Site personnel shall be trained in the use of fire extinguishers.	Contractor	Ongoing
Construction & operations	The under carriage and radiators of site plant and vehicles shall be free from vegetation.	Contractor	Ongoing
Construction & operations	There will be no burning of any material permitted on site.	Contractor	Ongoing
Construction & operations	Where hot works (e.g. welding) are required, the immediate surrounding area will be cleared of combustible material and a fire extinguisher will be located within 10 m.	Contractor	Ongoing
Construction & operations	In the event of a fire that cannot be extinguished, personnel shall notify the emergency contact numbers and evacuate to pre-arranged assembly points.	Contractor	Ongoing
Operations	The bushfire specific content of the operation's site emergency plan will be reviewed annually, and any relevant information updated or communicated to personnel to ensure all bushfire related preparation procedures are carried out.	Contractor / Neoen	Ongoing
Operations	All full-time operational personnel will undergo bushfire awareness training and at least one full-time operational personnel will have specific knowledge of the site procedures in response to bushfire. This staff member will either be regularly on-site during operations or otherwise readily contactable.	Contractor / Neoen	Ongoing
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Inspection	All fire fighting equipment and infrastructure shall be inspected accordance with Australian Standards (AS1851: Maintenance of fire protection systems) to ensure they are full and within their test date. Testing intervals shall be recorded on a label or metal tag attached to the unit.	Contractor	Six monthly
Testing	The emergency response processes shall be tested regularly to review the effectiveness of the planned response and preparedness.	Contractor	Annually

6.11 Demobilisation and Rehabilitation

Table 6.11 Demobilisation and Rehabilitation

Demobilisation and Rehabilitation			
Reference Documents	• Project Decommissioning Plan • Project Native Vegetation Clearing Permit		
Objectives	• To maximise the final area of rehabilitated or revegetated land.		
Targets	• Ensure landscaping is undertaken in a manner that provides benefits to the local environment by utilising local species and verifying seed provenance. • Utilise landscaping to reduce the overall visibility of the Project and potential for noise emissions to sensitive receptors.		
Management Actions			
Phase	**Required Action**	**Responsibility**	**Timing**
Demobilisation	All material introduced or produced on-site that is not required for the ongoing operations of the Project will be removed and disposed of appropriately. No materials or equipment will be left on-site and all areas utilised during construction will be returned to their former state.	Contractor	Post-construction
Demobilisation	Contaminated soil areas will be remediated.	Contractor	Ongoing and at demobilisation
Rehabilitation	Residual stockpiles will be incorporated into the surrounding landscape and graded wherever practicable at the end of construction.	Contractor	Post-construction
Monitoring and Inspection Requirements			
Activity	**Required Action**	**Responsibility**	**Frequency**
Inspection and monitoring	Rehabilitated areas will be inspected and monitored in accordance with the relevant permits.	Contractor	As required

7.0 Monitoring and Reporting

7.1 Monitoring

Monitoring will be performed throughout the Project, typically to meet legal and approval requirements. Known monitoring requirements are presented throughout **Section 6.0** and summarised in **Table 7.1** below. **Table 7.1** is a live register and will be updated as required.

Table 7.1 Project Monitoring Requirements

Description of Monitoring	Responsibility	Frequency
Total area cleared and the location of clearing completed will be recorded within a centralised dataset and reviewed on a regular basis to ensure there is no exceedance of the permitted area to be cleared.	Contractor	Monthly
Undertake weed monitoring and inspections as per the Project Weed Management Procedure.	Contractor	Ongoing
Dust generation levels will be visually monitored at unsealed areas and at vegetation adjacent to the Project site.	Contractor	Weekly
Noise monitoring will be undertaken in accordance with the Operational Noise Management Plan.	Contractor	As required by Plan
Rehabilitated areas will be monitored in accordance with the relevant permit.	Contractor	As required

7.2 Reporting

Reporting of progress and activities will be required to ensure compliance with the regulatory commitments and obligations of the Project. Some reporting events will be for the purposes of internal record-keeping should a future audit be required whereas others will provide evidence to regulators of compliance with licence or permit conditions. Reporting that is required as part of the Project is detailed in **Table 7.2**.

Table 7.2 Project Reporting Requirements

Report Type	Responsibility for Preparing	Timing / Frequency	Submitted to and Reviewed by:	Submitted Externally to:
Progress reports	Contractor	Weekly	PM	N/A
Native vegetation clearing shapefiles	Contractor	At completion of each round of native vegetation clearing undertaken	Senior Environmental Advisor	N/A
Native vegetation clearing report	Contractor	Annually	Senior Environmental Advisor	N/A
Waste quantity reports	Contractor	Quarterly	Senior Environmental Advisor	N/A

Report Type	Responsibility for Preparing	Timing / Frequency	Submitted to and Reviewed by:	Submitted Externally to:
Non-compliance reports	Contractor	As required	Senior Environmental Advisor	N/A
Corrective action reports	Contractor	As required	Senior Environmental Advisor	N/A
New heritage finds	Contractor	As required	Senior Environmental Advisor	DPLH

8.0 References

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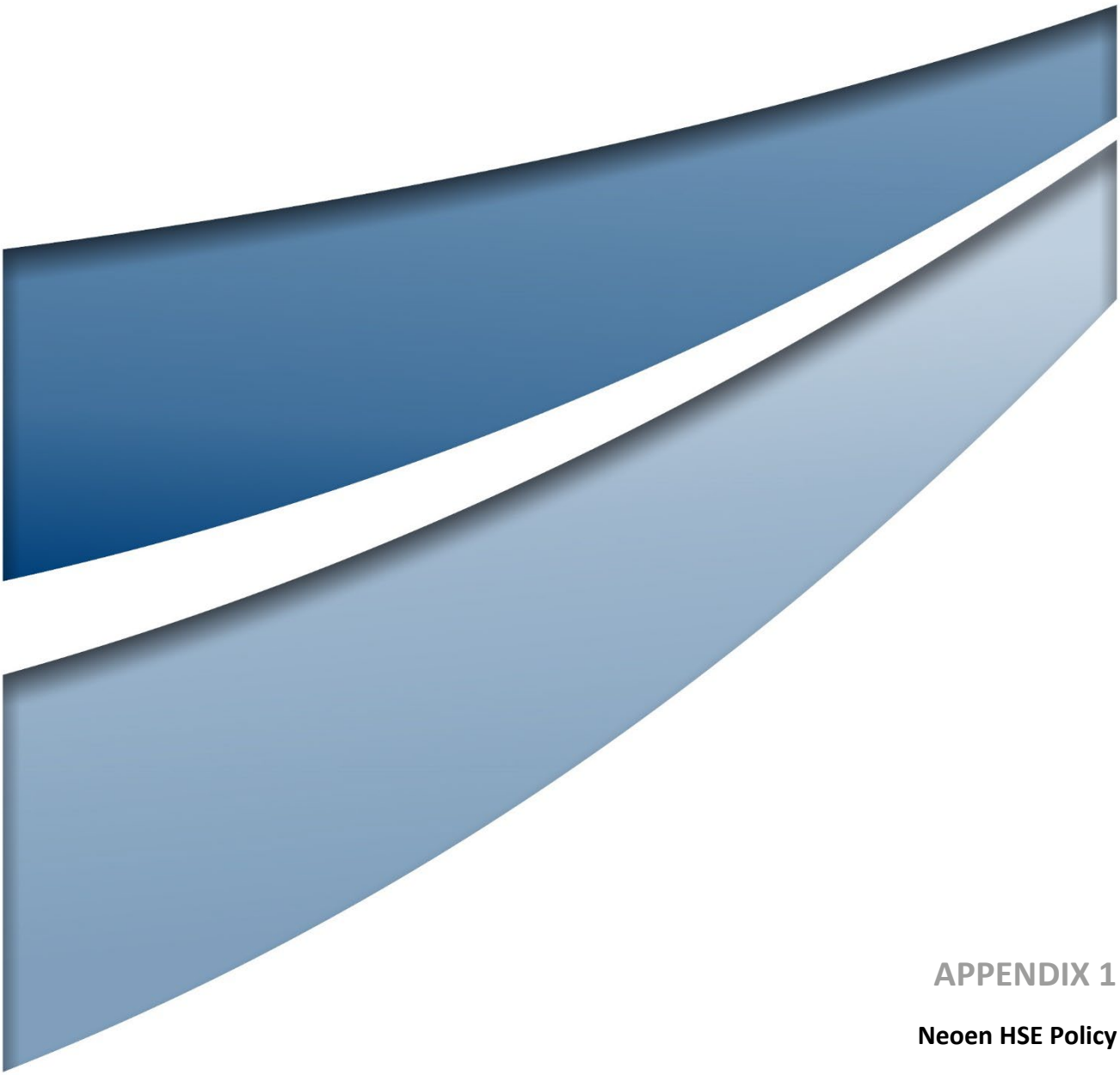

APPENDIX 1

Neoen HSE Policy

Neoen HEALTH, SAFETY & ENVIRONMENTAL (HS&E) POLICY

Neoen is committed to provide a healthy and safe working environment for its employees, guarantee the integrity of the company's assets and protect the environment.

At Neoen, we believe:

- All accidents and damages to the employees, contractors, customers, off-takers, visitors, property, the environment and surrounding communities can be avoided and we will undertake all appropriate measures with the goal of eliminating all of them.
- Health, Safety and Environmental management is a daily individual and team responsibility.
- Each company member must be dedicated to conduct all required activities in order to develop the proper attitudes and practices, with the greatest concern for employees' health & safety , the environment and local communities.
- All of us should actively contribute to HS&E programs during the development, construction and operation of Neoen's assets, and seek to achieve an accident free work environment for Neoen employees, its customers and its contractors.

Accordingly, Neoen is committed to:

- Meeting or exceeding all applicable Health, Safety & Environmental laws or regulations.
- Pursue the objective of no harm to people, the company's assets and no damage to the environment or the local communities.
- Minimize adverse impacts of our activities to the environment and the ecosystem , optimize the social impact to the communities in the surrounding of Neoen's facilities, and preserve the local cultural heritage.
- Taking actions to prevent pollution and promoting the sustainability of the natural resources that we use.
- Manage the HS&E matters as any other critical business activity in the company, with a continuous performance improvement mindset.
- Provide guidance, support and training to our personnel and contractors in order to create and maintain a best in class HS&E culture.

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