

REFERRAL OF A PROJECT FOR A DECISION ON THE NEED FOR ASSESSMENT UNDER THE ENVIRONMENT EFFECTS ACT 1978

## REFERRAL FORM

The *Environment Effects Act 1978* provides that where proposed works may have a significant effect on the environment, either a proponent or a decision-maker may refer these works (or project) to the Minister for Planning for advice as to whether an Environment Effects Statement (EES) is required.

This Referral Form is designed to assist in the provision of relevant information in accordance with the *Ministerial Guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Seventh Edition, 2006). Where a decision-maker is referring a project, they should complete a Referral Form to the best of their ability, recognising that further information may need to be obtained from the proponent.

**It will generally be useful for a proponent to discuss the preparation of a Referral with the Impact Assessment Unit (IAU) at the Department of Environment, Land, Water and Planning (DELWP) before submitting the Referral.**

If a proponent believes that effective measures to address environmental risks are available, sufficient information could be provided in the Referral to substantiate this view. In contrast, if a proponent considers that further detailed environmental studies will be needed as part of project investigations, a more general description of potential effects and possible mitigation measures in the Referral may suffice.

In completing a Referral Form, the following should occur:

- Mark relevant boxes by changing the font colour of the 'cross' to black and provide additional information and explanation where requested.
- As a minimum, a brief response should be provided for each item in the Referral Form, with a more detailed response provided where the item is of particular relevance. Cross-references to sections or pages in supporting documents should also be provided. Information need only be provided once in the Referral Form, although relevant cross-referencing should be included.
- Responses should honestly reflect the potential for adverse environmental effects. A Referral will only be accepted for processing once IAU is satisfied that it has been completed appropriately.
- Potentially significant effects should be described in sufficient detail for a reasonable conclusion to be drawn on whether the project could pose a significant risk to environmental assets. Responses should include:
  - a brief description of potential changes or risks to environmental assets resulting from the project;
  - available information on the likelihood and significance of such changes;
  - the sources and accuracy of this information, and associated uncertainties.
- Any attachments, maps and supporting reports should be provided in a secure folder with the Referral Form.
- A USB copy of all documents will be needed, especially if the size of electronic documents may cause email difficulties. **Individual documents should not exceed 10MB as they will be published on the Department's website.**

- A completed form would normally be between 15 and 30 pages in length. Responses should not be constrained by the size of the text boxes provided. Text boxes should be extended to allow for an appropriate level of detail.
- The form should be completed in MS Word and not handwritten.

The party referring a project should submit a covering letter to the Minister for Planning together with a completed Referral Form, attaching supporting reports and other information that may be relevant. This should be sent to:

Postal address

**Minister for Planning  
PO Box 500  
EAST MELBOURNE VIC 8002**

Couriers

**Minister for Planning  
Level 16, 8 Nicholson Street  
EAST MELBOURNE VIC 3002**

In addition to the submission of the hardcopy to the Minister, separate submission of an electronic copy of the Referral via email to [ees.referrals@delwp.vic.gov.au](mailto:ees.referrals@delwp.vic.gov.au) is required. This will assist the timely processing of a referral.

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## PART 1 PROPONENT DETAILS, PROJECT DESCRIPTION & LOCATION

### 1. Information on proponent and person making Referral

<b>Name of Proponent:</b>	Neoen Pty. Ltd.
<b>Authorised person for proponent:</b>	Shevy Feiglin
<b>Position:</b>	Project Manager
<b>Postal address:</b>	Level 2 / 696 Bourke Street, Melbourne VIC 3000
<b>Email address:</b>	Shevy.feiglin@neoen.com
<b>Phone number:</b>	0423 375 944
<b>Facsimile number:</b>	-
<b>Person who prepared Referral:</b>	Josh Mahon
<b>Position:</b>	Manager, Environment and Planning
<b>Organisation:</b>	Aurecon Australasia Pty. Ltd.
<b>Postal address:</b>	PO Box 23061, Docklands, Melbourne VIC Australia 3008
<b>Email address:</b>	Josh.mahon@aurecongroup.com
<b>Phone number:</b>	-
<b>Facsimile number:</b>	-
<b>Available industry &amp; environmental expertise:</b> (areas of 'in-house' expertise & consultancy firms engaged for project)	<p>Neoen Australia Pty. Ltd. (Neoen) is a developer, operator and long-term investor in renewable energy assets. Neoen has an established track record of constructing and operating renewable energy developments in Western Australia, South Australia, New South Wales and Victoria.</p> <p>Neoen has engaged Aurecon Australasia Pty. Ltd. (Aurecon) to prepare this referral. Aurecon has demonstrated Victorian experience undertaking environmental impact assessments and navigating approvals for complex infrastructure projects. The referral is supported by a number of specialist consultant reports to form a sound understanding of the existing conditions within the Navarre Green Power Hub (the Project) area.</p> <p>The following attachments are provided to assist with assessment of the Project:</p> <ul style="list-style-type: none"> <li>• Attachment A – <i>Flora, Fauna and Targeted Threatened Species Assessments</i> (Nature Advisory, 2023).</li> <li>• Attachment B – <i>Preliminary Landscape and Visual Impact Assessment</i> (Aurecon, 2023)</li> <li>• Attachment C – <i>Wind Turbine Noise Assessment</i> (Marshall Day, 2023)</li> <li>• Attachment D – <i>Heritage Due Diligence Assessment</i> (Aurecon, 2023)</li> </ul>

	<ul style="list-style-type: none"> <li>• Attachment E – <i>Preliminary Surface Water and Groundwater Assessment</i> (Aurecon, 2023)</li> <li>• Attachment F – <i>Preliminary Traffic Assessment</i> (Aurecon, 2023)</li> <li>• Attachment G – <i>Preliminary Shadow Flicker Assessment</i> (Aurecon, 2023)</li> <li>• Attachment H – <i>Preliminary Electromagnetic Interference Assessment</i> (Aurecon, 2023)</li> </ul>
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## 2. Project – brief outline

<b>Project title:</b> Navarre Green Power Hub		
<b>Project location:</b> (describe location with AMG coordinates and attach A4/A3 map(s) showing project site or investigation area, as well as its regional and local context)		
<p>The Project is located in regional Victoria approximately 190 kilometres (km) north-west of the Melbourne Central Business District (CBD) and immediately north of the township of Navarre. The Project Area comprises approximately 18,404 hectares (ha) of predominantly private land used for agricultural purposes. The Project Area consists of four (4) main sub-areas:</p> <ul style="list-style-type: none"> <li>• Wind Farm Project Area – Eastern Layout which covers an area of approximately 5,266 ha and is located to the east of Ararat Street-Arnaud Road and the west of Kara Kara National Park.</li> <li>• Wind Farm Project Area – Western Layout which covers an area of approximately 4,873 ha and is located to the west of Ararat Street-Arnaud Road and east of Morrl Morrl Nature Conservation Reserve.</li> <li>• Transmission Line Project Area – Eastern and Western Layout Connection which is an approximately 2.5 km wide corridor between the two Wind Farm Project Areas and covers an area of approximately 1,272 ha.</li> <li>• Transmission Line Project Area – Bulgana Terminal Station Connection which is an approximately 4 km wide corridor between the Wind Farm Project Area – Western Layout and Bulgana Terminal Station and covers an area of approximately 6,993 ha.</li> </ul> <p>The location of the Project is shown in Figure 1 – Location Plan and Table 1 describes the location with AMG coordinates.</p>		
<b>Table 1 Project component location with AMG coordinates</b>		
Project component location	Easting	Northing
<b>Wind Farm Project Area – Eastern Layout</b>		
Eastern Layout - northern extent	693486	5925159
Eastern Layout - eastern extent	699373	5912824
Eastern Layout - southern extent	695815	5911600
Eastern Layout - western extent	687643	5920662
<b>Wind Farm Project Area – Western Layout</b>		
Western Layout - northern extent	682898	5924442
Western Layout - eastern extent	685497	5919423
Western Layout - southern extent	679188	5915617
Western Layout - western extent	676363	5916887
<b>Transmission Line Project Area – Eastern and Western Layout Connection</b>		
Eastern and Western Layout Connection – north east corner	690774	5918234

Eastern and Western Layout Connection - north west corner	6853212	5918327
Eastern and Western Layout Connection - south east corner	690563	5916116
Eastern and Western Layout Connection - south west corner	684524	5916089
<b>Transmission Line Project Area – Bulgana Terminal Station Connection</b>		
Bulgana Terminal Station Connection – north east corner	681006	591528
Bulgana Terminal Station Connection - north west corner	677042	5915865
Bulgana Terminal Station Connection - south east corner	680752	5898533
Bulgana Terminal Station Connection - south west corner	676243	5898641

**Short project description** (few sentences):

Neoen proposes to build and operate a wind farm and battery hub near the township of Navarre in Victoria. The Project would have a nominal capacity of around 600 MW and incorporate a total of 102 wind turbines, split across two areas:

- 50 wind turbines in the Wind Farm Project Area – Eastern Layout
- 52 wind turbines in the Wind Farm Project Area – Western Layout.

The Project would include a 220 kV transmission line between the Western and Eastern Layouts and a 220 kV transmission line between the Western Layout and Bulgana Terminal Station.

In addition to the turbines and transmission lines, the Project would also include the following associated infrastructure:

Permanent

- A substation in each Wind Farm Project Area
- Hardstand and laydown areas surrounding each turbine
- Access tracks and site access points
- Operations and maintenance buildings in each Wind Farm Project Area
- A battery energy storage system (BESS) in the Wind Farm Project Area – Eastern Layout
- Meteorological monitoring masts
- Internal power collection stations
- Internal underground cabling
- Quarries to source raw material required for construction and maintenance during operations.
- Road upgrades to local roads, where required.

Temporary

- Construction offices and compounds.
- Concrete batching plants.

### 3. Project description

**Aim/objectives of the project** (what is its purpose / intended to achieve?):

The objective of the Project is to develop a viable source of renewable energy to store and export to the transmission network and support Victorian and national energy needs.

The Project would also contribute to:

- Supporting Victoria's Renewable Energy Target legislated in the *Renewable Energy (Jobs and Investment) Act 2017* which has the goal of reaching 40% renewable penetration by 2025, 50% renewable penetration by 2030 and 95% renewable penetration by 2035.
- Supporting initiatives within the Victorian *Climate Change Act 2017* to assist in meeting a greenhouse gas emissions reduction target of net zero emissions by 2050.
- Supporting the Australian Government commitment to achieve its 2030 climate change target, to reduce greenhouse gas emissions by 26% - 28% to 2005 levels by 2030.
- Aligning with the Australian Energy Market Operators 2022 Integrated System Plan by proposing a wind energy facility within the Western Victorian Renewable Energy Zone (REZ) (see also section 19 of this referral form).

**Background/rationale of project** (describe the context / basis for the proposal, eg. for siting):

Neoen has been working in the Northern Grampians region during recent years through their development, construction, and operation of the nearby Bulgana Green Power Hub. This local knowledge helped Neoen identify the hills to the east and west of Navarre as potential locations for wind turbines due to the consistently strong winds. Other key factors contributing to the suitability of the site were associated with minimising the impact on the surrounding environment and community and included:

- The very low population density of the surrounding area.
- Previous disturbance from agricultural land uses.
- Supportive host landowners.
- Large land holdings.

The Navarre area is also well suited due to its proximity to the Bulgana Terminal Station. This would allow the Project to connect to the local electricity network and is expected to be further strengthened once the Western Renewables Link is built by Ausnet Services, which includes a new 220kV double circuit line from Bulgana to a new terminal station north of Ballarat and a 500kV double circuit line from the new Ballarat terminal station to a new terminal station at Sydenham (expected to be completed in mid-2027)<sup>1</sup>.

**Main components of the project** (nature, siting & approx. dimensions; attach A4/A3 plan(s) of site layout if available):

The main components of the Project are presented in Figure 2 – Indicative development plan and summarised below.

**Wind turbines**

The Project would include up to 102 turbines, 50 in the Wind Farm Project Area – Eastern Layout and 52 in the Wind Farm Project Area – Western Layout. An extensive micro-siting process has been undertaken to locate the turbines in the most suitable positions on the site with consideration of wind resources, dwelling locations, waterways, cultural heritage considerations and flora and fauna values. It is anticipated that further micro-siting will occur as more detailed technical investigations are carried out.

<sup>1</sup>About - Western Renewables Link (<https://www.westernrenewableslink.com.au/about/>)

Specific turbine details will be developed following a tendering process which will take place once planning approvals have been granted. At this stage, the turbines are proposed to meet the following metrics:

- tip height of up to 270 metres above ground level.

### **Transmission lines**

The Project will consist of an underground and / or overhead transmission line to connect the Eastern and Western Wind Farm Layouts and to connect the Project to the electricity grid (see Figure 3 – Project overview). Currently, a development envelope for the transmission line options provides flexibility for the selection of the preferred route, which will be defined in response to environmental, land use and topographical constraints, landholder negotiations and technical and operational requirements. This approach is critical as it also allows for flexibility in response to the final design of the wind farm and the corresponding electrical requirements.

### **Battery Energy Storage System**

The Project will also include a BESS. The dimensions of the battery storage will be approximately 350 metres in width, 350 metres in length and around six metres in height (with some items such as lightning protection being taller) subject to detailed design. The battery storage facility will be located within the Wind Farm Project Area – Eastern Layout. The Project is anticipated to have a total BESS capacity of up to 600 MW.

### **Other infrastructure**

In addition to the turbines, transmission lines and BESS, supporting infrastructure will also be required. This includes access tracks, hardstands, foundations, power transformers, substations, control buildings, quarries, and monitoring towers.

Some temporary infrastructure will also be required during construction this would include concrete batching plants and construction offices and compounds.

**Ancillary components of the project** (eg. upgraded access roads, new high-pressure gas pipeline; off-site resource processing):

The Project will seek to use existing access points to facilitate the delivery of wind turbines and other components. These intersections and access points would be upgraded to accommodate wind farm traffic. There would also be a requirement for new site access points to be built where existing access points do not exist or a new access point will allow for avoidance of impacts. Indicative locations of site access points are shown in Figure 2 – Indicative development plan. The locations of these will be subject to detailed design of the Project.

Raw materials for the Project are anticipated to be sourced from on-site quarries. A detailed analysis of the raw materials for the Project will be carried out during the preparation of the planning application. This will include assessment of potential impacts on the public road network.

### **Key construction activities:**

Construction of the Project will generally involve the following key construction activities:

- The preparation of the Project Area including clearing trees from selected land, removal and storage of topsoil for future use
- Establishment of quarry
- Access road and public intersection upgrades
- Construction of internal access tracks (where existing roads are unavailable)
- Establishment of concrete batching plants and construction of site buildings and construction compounds
- Construction of hard stands and laydown areas

- Excavation of turbine foundations and form work
- Construction of cable trenches and power pole foundations, laying bedding materials, cables and engineered backfill, replacement of topsoil
- Construction of terminal sub-station, collector stations, and operation and maintenance buildings involving excavation and pouring of building foundations and concrete pads at switchyard and transformer locations
- Installation of towers, turbines, collector stations, terminal sub-station, battery storage facility cabling and overhead powerlines and other ancillary electricity infrastructure
- Progressive rehabilitation of the site and landscaping.

It is expected that construction activities will be undertaken over a two-year period with a workforce of approximately 240 full-time equivalent employees directly engaged on the Project.

**Key operational activities:**

The operational life of the wind farm and the battery storage facility is expected to be 30 years. During this period, operational, maintenance and monitoring of the wind farm will include (but not be limited to):

- Service of wind turbines, the battery storage facility and associated infrastructure
- Maintenance of internal access tracks and electrical infrastructure
- The use and maintenance of buildings and plant, including the operational control room
- Ongoing environmental monitoring in accordance with relevant approval conditions.

**Key decommissioning activities (if applicable):**

At the end of the operational life of the Project, the wind farm and the battery storage facility will either be decommissioned or upgraded (repowered) with new turbines and/or ancillary infrastructure. Upgrading the Project will extend the operational period of the Project.

Key decommissioning activities will include:

- Removal of all above ground non-operational equipment
- Removal and clean up any residual contamination
- Rehabilitation of all storage areas, construction areas, access tracks and other areas affected by the decommissioning of the turbines (if those areas are not otherwise useful to the ongoing use or decommissioning of the wind farm).

The Project will comply with any relevant requirements for decommissioning as prescribed under any planning approval or subsequent permit or licence.

**Is the project an element or stage in a larger project?**

No  Yes If yes, please describe: the overall project strategy for delivery of all stages and components; the concept design for the overall project; and the intended scheduling of the design and development of project stages).

**Is the project related to any other past, current or mooted proposals in the region?**

No  Yes If yes, please identify related proposals.

**What is the estimated capital expenditure for development of the project?**

The Project has an estimated capital expenditure of \$1 billion.



## 4. Project alternatives

**Brief description of key alternatives considered to date** (eg. locational, scale or design alternatives. If relevant, attach A4/A3 plans):

There is no alternative to the proposed site currently under consideration for the Project. Neoen's selection of the Project site was informed by the following key considerations:

- Availability of wind resource.
  - Wind resource as a crucial factor in determining the feasibility and performance of a wind farm. Appropriate wind resource enables a reliable and efficient energy production over the long term.
- Proximity to existing transmission network and connection to Bulgana Terminal Station to minimise losses and associated costs.
- Engagement with the relevant stakeholders and the feedback received during consultation to ensure any concerns are addressed early in the process.
- Site access and environmental and planning considerations outlined in the *Development of Wind Energy Facility Guidelines* (DELWP, 2019), including:
  - Land use and tenure
  - Locations of dwellings and other sensitive receptors
  - The boundaries of National Parks and State Parks
  - Areas of significant landscape values
  - Areas of ecological sensitivity
  - Areas of Aboriginal cultural heritage sensitivity.

An iterative risk-based approach has been implemented from the outset of the Project's development, incorporating both company and industry learnings from previous wind farm projects. As a result, the Project's design has already had multiple iterations to respond to environmental sensitivities. The main design changes to date have focussed on reducing the impacts to ecological values, prioritising values in the following order:

- threatened communities and threatened species
- large trees and high-quality patches
- scattered trees and remaining patches.

The iterations over the design lifecycle are summarised below:

### **Initial design**

The initial wind farm layout was prepared in November 2020. The layout comprised a total of 94 turbines (51 in the Eastern Layout and 43 in the Western Layout) with a total disturbance footprint of approximately 469 ha. Calculations of the disturbance footprint were limited to wind farm layouts only.

### **Interim design**

The interim design was completed in early 2022. The layout comprised a total of 104 turbines (51 in the Eastern Layout and 53 in the Western Layout) with a total disturbance footprint of approximately 425 ha, a reduction of 44 ha since November 2020. Since the initial design, changes to the design were made predominantly in response to ecological values and included:

- Micro siting of turbines and access tracks to avoid and/or minimise impacts to ecological values.
- Relocation of a series of turbines in the northwest portion of the Western Layout to avoid habitat buffers associated with the surrounding nature reserves. These turbines were relocated further south to flatter, less constrained land.

- Removal and relocation of turbines in the southeast of the Western Layout to avoid impacts to a *Flora and Fauna Guarantee Act 1988* (FFG Act) listed threatened ecological community (Grey Box – Buloke Grassy Woodland) and numerous FFG Act listed Buloke (*Allocasuarina luehmannii*) trees.
- Removal of access along Bennett Road and Hannelts Road to avoid numerous large trees.

The interim design also incorporated a detailed review of constructability so that the impacts proposed in the design were realistic (i.e. considerate of the varying and at times steep topography of the project area). In some locations, this resulted in a wider impact than previously considered.

### **Current design**

The current design, presented in this referral, comprises a total of 102 turbines (50 in the Eastern Layout and 52 in the Western Layout) and includes a total disturbance footprint of approximately 411 ha, a further reduction of 14 ha since early 2022. Further changes to the design were made between the interim design and the current design, again predominantly to avoid and/or minimise impacts to ecological values. Design changes between the interim design and current design included:

- Micro siting of turbines and access tracks to avoid and/or minimise impacts to ecological values.
- Removal of a turbine in the northwest portion of the Western Layout to avoid numerous large trees.
- Removal of access from Barkly Gap Road to avoid native vegetation.
- Relocation of a turbine in the northern portion of the Eastern Layout to avoid impacts to an *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed threatened ecological community (Grey Box Woodland).
- Relocation of a turbine in the southern portion of the Eastern Layout to avoid impacts to a FFG Act listed threatened ecological community (Grey Box – Buloke Grassy Woodland).
- Removal of the connecting access track between two turbines in the Eastern Layout to avoid Grassy Woodland (Ecological Vegetation Class (EVC) 175) and large trees.
- Removal of a turbine in the southeast of the Eastern Layout to avoid impacts to Grassy Dry Forest (EVC 22).

Further evolution of the Project may occur during detailed design. This may include refinements to the number and location of turbines and other project-related infrastructure in response to ongoing technical, environmental, commercial and constructability assessments.

### **Brief description of key alternatives to be further investigated (if known):**

No alternative sites are being considered for the Project.

The final choice of wind turbine and BESS components will be determined by what is available on the market at the time of procurement through a detailed tendering process. The timing of this tendering process is necessarily driven by the dates of any environmental approvals.

Further, the micro-siting of wind turbines and ancillary infrastructure will be determined as part of a future detailed design process and in consideration of ongoing technical, environmental, commercial and constructability assessments.

## **5. Proposed exclusions**

### **Statement of reasons for the proposed exclusion of any ancillary activities or further project stages from the scope of the project for assessment:**

No ancillary activities or further Project stages are proposed to be excluded.

## 6. Project implementation

**Implementing organisation** (ultimately responsible for project, ie. not contractor):

Neoen Pty. Ltd.

Founded in 2008, Neoen is France's leading and one of the world's most dynamic renewable energy companies. Neoen is active in France, Australia, El Salvador, Zambia, Jamaica, Portugal, Mexico, Mozambique, Finland and Argentina and has assets in more than 16 countries.

Neoen operates France's largest solar power plant in Cestas (300 MWp), Finland's largest onshore wind farm in Mutkalampi (404 MW), the world's first big battery (150 MW / 194 MWh) in Hornsdale, Australia and one of the world's most competitive solar power plants at El Llano (Mexico, 375 MWp).

Neoen Australia began operations in 2012. Over the last eleven years, the company has initiated the development of close to 3GW of solar, wind, and storage projects through organic growth, local partnerships, and strategic acquisitions. Neoen develops renewable energy projects to own and operate them – not to on-sell them. With over 2.5GW of operating projects connected to Australia's National Electricity Market (NEM), our asset and operations team play an important role in managing our power plant.

Neoen also owns four grid-scale batteries in Australia including the world's largest lithium-ion battery: the Victorian Big Battery.

**Implementation timeframe:**

An indicative timeline for the implementation of the Project comprises:

- 2025 – Secure all planning and environmental approval
- 2026 – Construction commencement, to occur over a period of around 2 years
- 2027 – Commission the Project.

**Proposed staging** (if applicable):

No staging is proposed at this point in time and approval is being sought for the Project as a whole.

## 7. Description of proposed site or area of investigation

**Has a preferred site for the project been selected?**

No  Yes If no, please describe area for investigation.

If yes, please describe the preferred site in the next items (if practicable).

**General description of preferred site**, (including aspects such as topography/landform, soil types/degradation, drainage/ waterways, native/exotic vegetation cover, physical features, built structures, road frontages; attach ground-level photographs of site, as well as A4/A3 aerial/satellite image(s) and/or map(s) of site & surrounds, showing project footprint):

The Project Area consists of predominantly agricultural land used for grazing and cereal production. The Project Area also includes a network of existing roads and built infrastructure associated with farming such as sheds and access tracks.

The topography of the Project Area typically consists of gentle to undulating rises and shallow valleys that vary from 230 m to 400 m AHD. The Project Area is typically dominated by duplex soils, with an abrupt textural contrast between the surface soil horizons and the subsurface.

The Project Area is located within both the Wimmera Catchment Management Authority (WCMA) region and North Central CMA region. Both catchments form part of the Murray-Darling Basin. The southern portion of the Project Area drains directly into Wattle Creek, which is a tributary of the Wimmera River.

<p>The northern portion of the Project Area drains to the Avon River through its tributaries such as Paradise Creek and Reedy Creek.</p> <p>The Kara Kara National Park borders the proposed Project Area along the eastern boundary. The Project is within the Bioregion of Goldfields and Wimmera. Box Ironbark Forest, Heathy Dry Forest and Grassy Dry Forest ecosystems dominate the lower slopes or poorer soils. The granitic and sedimentary terrain is dominated by Grassy Woodlands much of which has been cleared. Cleared areas contain exotic grasses and crops for grazing.</p> <p>Figure 3 – Project overview shows the location of key features and constraints on and near the Project site.</p>
<p><b>Site area</b> (if known):</p> <p>The Project Area is 18,404 ha. The total disturbance footprint for the windfarm (including land to be disturbed for the development of turbines, laydowns and access tracks) totals 411 ha. The transmission line connecting the Project to the Bulgana Terminal Station has an estimated disturbance footprint of 23 ha (assuming a 10-metre-wide disturbance footprint along the entire length of the transmission line and a 40-metre-wide disturbance footprint where the transmission line will cross woody vegetation along road reserves or watercourses). This route is undergoing an options assessment and is yet to be confirmed.</p> <p>A preferred route for the transmission line connecting the eastern and western layouts of the wind farm is undergoing an options assessment and is yet to be determined. As a result, the disturbance footprint is not currently able to be estimated.</p>
<p><b>Current land use and development:</b></p> <p>The Project Area is predominantly undeveloped agricultural land used for grazing and cereal production. There are six dwellings located within the Project Area.</p>
<p><b>Description of local setting</b> (eg. adjoining land uses, road access, infrastructure, proximity to residences &amp; urban centres):</p> <p>The Project is surrounded by land predominantly used for agricultural purposes as shown in Figure 3 – Project overview. There are also National Parks (NP) and Nature Conservation Reserves (NCR) adjacent to the Project Area, including Kara Kara NP (east), Morri Morri NCR (west) and Mount Bolangum Nature NCR (north). There is a network of roads around and within the Project Area (refer Figure 4 – Road network plan).</p> <p>Navarre is the nearest township, located immediately south of the Project Area, situated at the junction of roads to Ararat, Stawell, St Arnaud and Avoca. It comprises residential dwellings on large lots, a primary school, public hall, two churches, a recreation reserve and a general store. At the 2021 Census, a population of 99 residents was recorded. It is a farming community, surrounded by agricultural land. Other nearby settlements include Paradise, Tottington, Greens Creek and Barkly. These settlements typically comprise intersecting roads, a dwelling and a church or hall.</p> <p>Navarre Airport is located south of the Project Area. This airport is used for general aviation, including recreational flying, flight training and agricultural aviation. No commercial airlines serve the Navarre Airport.</p>
<p><b>Planning context</b> (eg. strategic planning, zoning &amp; overlays, management plans):</p> <p>Preliminary Environmental and Land Use Assessments were undertaken to assist with informing the suitability of the proposed Project Area. Details of the Land Use Assessment are presented below.</p> <p>The Project Area is predominantly located within the municipal boundaries of the Northern Grampians Shire Council, with a small portion of the Project Area located within the Pyrenees Shire Council area. As such, the Project is subject to the provisions of the Northern Grampians and Pyrenees planning schemes, enacted under the <i>Planning and Environment Act 1987</i>. Planning schemes set out the relevant</p>

planning policies that a responsible authority must consider when administering the use and development of land as discussed below.

### Planning Policy Framework

The Planning Policy Framework (PPF) is the policy content of the Planning Schemes and is presented in a three-tier integrated policy structure as follows:

- **State-wide (S):** State policies that apply in all planning schemes in Victoria
- **Regional (R):** Regional policies that apply to planning schemes based on geographic and thematic policy groupings.
- **Local (L):** Local policies that apply in an individual local planning scheme.

The responsible authority must take into account the relevant policies when assessing a proposed development.

Table 2 sets out the state policies within the PPF and associated sub-clauses that are most relevant to the Project.

**Table 2 Relevant state policies of the PPF**

State Clause	Sub-clause
12.01 Biodiversity	12.01-1S Protection of biodiversity 12.01-2S Native vegetation management
12.03 Water bodies and wetlands	12.03-1S River and riparian corridors, waterways, lakes, wetlands and billabongs
13.02 Bushfire	13.02-1S Bushfire planning
13.03 Floodplains	13.03-1S Floodplain management
13.04 Soil degradation	13.04-2S Erosion and landslip
13.05 Noise	13.05-1S Noise management
13.06 Air quality	13.06-1S Air quality management
13.07 Amenity, human health and safety	13.07-1S Land use compatibility
14.01 Agriculture	14.01-1S Protection of agricultural land
14.02 Water	14.02-1S Catchment planning and management 14.02-2S Water quality
14.03 Earth and energy resources	14.03-1S Resource exploration and extraction
15.03 Heritage	15.03-1S Heritage conservation 15.03-2S Aboriginal cultural heritage
17.01 Employment	17.01-1S Diversified economy
18.01 Land use and transport	18.01-1S Land use and transport integration 18.01-2S Transport system
18.02 Movement networks	18.02-4S Roads
19.01 Energy	19.01-1S Energy supply 19.01-2S Renewable energy

Table 3 sets out the regional and local policies within the PPF and associated sub-clauses that are most relevant to the Project.

**Table 3 Relevant regional and local policies of the PPF**

Planning Scheme	Regional and local policies of the PPF
<b>Northern Grampians</b>	02.03-2 Environmental and landscape values 02.03-3 Environmental risks and amenity 02.03-5 Built environment and heritage 02.03-7 Economic development

	12.01 Biodiversity 12.01-1R Protection of biodiversity
	13.03 Floodplains Floodplain management – Northern Grampians
	14.01 Agriculture 14.02-2R Agricultural productivity – Wimmera Southern Mallee
	17.01 Employment 17.01-1R Diversified economy – Wimmera Southern Mallee
	19.01 Energy 19.01-2R Renewable energy – Wimmera Southern Mallee
<b>Pyrenees</b>	02.03-2 Environmental risks and amenity 02.03-3 Natural resource management
	12.01 Biodiversity 12.01-1L Biodiversity
	12.03 Water bodies and wetlands 12.03-1L Waterways
	13.04 Soil degradation 13.04-2L Erosion and landslip in Pyrenees Shire
	14.01 Agriculture 14.01-1L Agriculture in Pyrenees Shire
	14.02 Water 14.02-1L Catchment management in Pyrenees Shire 14.02-2L Water quality in Pyrenees Shire
	17.01 Employment 17.01-1R Diversified economy – Central Highlands

### Land Use Terms

In accordance with Clause 73.03 (Land Use Terms) of the Planning Scheme, the Project elements are defined as follows:

- A wind farm, a connection to the electricity grid and battery storage facility is classified as a wind energy facility, of which is defined as:

*'land used to generate electricity by wind force. It includes land used for:*

- a) Any turbine, building or other structure or thing used in or in connection with the generation of electricity by wind force*
- b) An anemometer.*

*It does not include turbines principally used to supply electricity for domestic or rural use of the land.'*

A connection to the electricity grid is classified as a utility installation. A utility installation is defined as:

*'land used:*

- a) for telecommunications;*
- b) to transmit or distribute gas, oil or power;*
- c) to collect, treat, transmit, store, or distribute water; or*
- d) to collect, treat, or dispose of storm or flood water, sewage, or sullage.*

*It includes any associated flow measurement device or a structure to gauge waterway flow.'*

The utility installation land use term will apply to the transmission line proposed to connect the Project to the electricity network.

### Planning Permit requirements for the Project

Under Clause 53.32-2 a permit is required to use and develop land for a Wind Energy Facility. An assessment of the relevant zones and overlays that will apply to the Project has been undertaken to identify additional permit triggers.

### Zones and Overlays

The Project Area is affected by the zones and overlays under the Northern Grampians and Pyrenees planning schemes as set out in Table 4. Refer to Figure 5 – Planning zones and Figure 6 – Planning overlays for the zone and overlay controls applicable to the Project.

Table 4 Zones and overlays

Project Area	Planning Scheme	Zones	Overlays
Wind Farm Eastern Layout	Northern Grampians	Farming Zone (FZ) Transport Zone 2 (TRZ2)	Bushfire Management Overlay (BMO) Floodway Overlay (FO) Land Subject to Inundation Overlay Schedule 1 (LSIO1)
	Pyrenees	FZ	BMO Design and Development Overlay Schedule 1 (DDO1) Restructure Overlay Schedule 1 (RO1) RO2
Wind Farm Western Layout	Northern Grampians	FZ Public Conservation and Resource Zone (PCRZ)	BMO FO LSIO1
Transmission Line - Eastern and Western Layout Connection	Northern Grampians	FZ TRZ2	BMO
Transmission Line - Bulgana Terminal Station Connection	Northern Grampians	FZ PCRZ TRZ2	BMO FO LSIO1 Specific Controls Overlay Schedule 2 (SCO2)

### Clause 35.07 – Farming Zone

The majority of the Project Area is contained within the FZ. Objectives of the FZ relevant to the Project include:

- *“To encourage the retention of productive agricultural land.*
- *To ensure that non-agricultural uses, including dwellings, do not adversely affect the use of land for agriculture.”*

The use of the land for a wind energy facility and utility installation is classified as a Section 2 use, which requires a permit. Further, a permit is required to construct or carry out buildings and works associated with a Section 2 use of this clause.

### Clause 36.03 - Public Conservation and Recreation Zone

The Western Layout includes a portion of the land zoned PCRZ, however, no project infrastructure is anticipated to intersect with the PCRZ. Of relevance to the Project, PCRZ includes an objective to protect and conserve areas of significance where appropriate.

A wind energy facility is a Section 2 use under this clause and therefore requires a permit for use and buildings and works. However, the use:

- Must not be located on land described in a schedule to the *National Parks Act 1975*.
- Must meet the requirements of Clause 52.32 (Wind Energy Facility).

The investigation area for the Transmission Line – Bulgana Terminal Station Connection incorporates some areas that are zoned PCRZ. Permit requirements associated with a utility installation are to be considered further in consultation with the public land manager and the responsible authority.

#### Clause 36.04 – Transport Zone

The Eastern Layout as well as both investigation areas for the Transmission Line include some portions of the land zoned TRZ2. The TRZ2 is relevant to the Principal Road Network.

No buildings and works for the wind energy facility are occurring within this zone, however, a permit is still required for the use of this land for a wind energy facility as it is classified as a Section 2 use.

A utility installation is a Section 1 use if undertaken by or on behalf of a relevant transport manager. Given the Project does not meet this condition, proposed utility installation is classified as a Section 2 use under the TRZ and therefore requires a permit. A permit is also required to construct a building or construct or carry out works for a Section 2 use. As a result, a permit will be required for both the use and development of a utility installation.

#### Clause 43.02 Design and Development Overlay

A portion of the Eastern Layout within the Pyrenees Shire Council area is affected by the DDO1 that applies to 'potentially flood-prone areas'. Of relevance to the Project, DDO1 aims:

- *“To provide a discretionary control mechanism for preventing inappropriate development from occurring on land affected by flooding or drainage problems.*
- *To ensure that development maintains the free passage of any likely flood waters and is compatible with local drainage conditions.”*

Under Clause 2 of the DDO1, a permit is required for buildings and works associated with a wind energy facility.

#### Clause 44.03 – Floodway Overlay

Some portions of the eastern and westerns layout as well as the investigation area for connection to the Bulgana Terminal Station are affected by FO. Of relevance to a proposed development, FO includes the following objectives:

- *“To ensure that any development maintains the free passage and temporary storage of floodwater, minimises flood damage and is compatible with flood hazard, local drainage conditions and the minimisation of soil erosion, sedimentation and silting.*
- *To ensure that development maintains or improves river and wetland health, waterway protection and flood plain health.”*

Under the FO a permit is required to construct a building or construct or carry out works and as a result a permit would be required for buildings and works associated with both wind energy facility and utility installation. Further, under Clause 44.03-2, a permit is required for any potential roadworks that would be undertaken within the FO.

#### Clause 44.04 – Land Subject to Inundation Overlay

LSIO1 applies to the Project Area, mainly towards its western end. LSIO's objectives relevant to the Project include:

- *“To ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, responds to the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity.*
- *To minimise the potential flood risk to life, health and safety associated with development.*



- *To ensure that development maintains or improves river, marine, coastal and wetland health, waterway protection and floodplain health.”*

Under the LSI01, a permit is required to construct a building or construct or carry out works associated with both the wind energy facility and the utility installation. Further, under Clause 44.04-2, a permit is required for any potential roadworks that would be undertaken within the LSI0.

#### Clause 44.06 – Bushfire Management Overlay

The BMO, amongst others, aims to ensure development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.

Buildings and works for both the wind energy facility and the utility installation are within this overlay, however, buildings and works associated with these land uses do not require a planning permit under this overlay.

#### Clause 45.05 Restructure Overlay

The purpose of a Restructure Overlay is generally to identify inappropriate subdivisions which are to be restructured. Within the Pyrenees Planning Scheme, the RO1 applies to the Wattle Creek environs, to the east of Navarre and RO2 applies to the Wattle Creek environs, including the former Crown Township of Barkly and extending south to the northern end of the Pyrenees Range. No permit requirements under the RO1 or RO2 applies to the Project.

#### Clause 45.12 Specific Controls Overlays

The SCO2 in the Northern Grampians Planning Scheme relates to the ‘East Grampians Rural Pipeline Project Incorporated Document, December 2021’. The SCO2 impacts a relevantly small portion of the investigation area for the proposed Bulgana Terminal Station Connection towards its south-eastern end. Neoen will undertake appropriate consultation as the design of the transmission line progresses.

### **Particular Provisions**

The following Particular Provisions are of relevance to the Project:

#### Clause 52.17 Native Vegetation

The purpose of Clause 52.17 is to ensure no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is achieved by applying the following three step approach in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning, 2017) (the Guidelines):

1. *Avoid the removal, destruction or lopping of native vegetation.*
2. *Minimise impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.*
3. *Provide an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.*

*To manage the removal, destruction or lopping of native vegetation to minimise land and water degradation.*

Under Clause 52.17-1, a permit is required to remove, destroy or lop native vegetation, including dead native vegetation. The Project will result in impacts on native vegetation and therefore requires a permit under Clause 52.17.

Pursuant to Clause 52.17-5, the biodiversity impacts from the removal, destruction or lopping of native vegetation must be offset in accordance with the Guidelines. The offset requirements associated with the Project will be determined once the design is finalised.

#### Clause 52.29 Land Adjacent to the Principal Road Network

Relevant to the Project, this clause aims to ‘*ensure appropriate access to the Principal Road Network or land planned to form part of the Principal Road Network*’.

Under Clause 52.29-2, a permit is required, amongst others, for creation or alteration of access to a road in a TRZ2. The Project proposes access points to a road zoned TRZ2 and therefore a permit is required.

#### Clause 52.32 Wind Energy Facility

Clause 52.32 aims to '*facilitate the establishment and expansion of wind energy facilities, in appropriate locations, with minimal impact on the amenity of the area*'.

In accordance with Clause 52.32-2 (Use and Development of Land), a permit is required to use and develop land for a wind energy facility. However, use and development for a wind energy facility is prohibited on the following locations:

- On land where any turbine is within 1 km of an existing dwelling unless meets the requirements of Clause 52.32-3 (discussed below)
- Land described in a schedule to the *National Parks Act 1975* – The Project Area does not incorporate such land and therefore this does not apply
- Land declared a Ramsar wetland under the EPBC Act - The Project Area does not incorporate such land and therefore this does not apply
- Land listed in a schedule to Clause 52.32-2 – The schedules to Clause 52.32-2 in Northern Grampians and Pyrenees planning schemes do not contain any land and therefore this does not apply to the Project.

Under Clause 52.32-3 (Turbine with one kilometre of a dwelling), an application including a proposed turbine within one kilometre of an existing dwelling must be accompanied by:

- A plan showing all dwellings within one kilometres of a proposed turbine
- Written consent of any owners as at the date of the application.

Clause 52.32-4 (Application Requirements) outlines information that must be contained within a planning permit application for a Wind energy facility including site and context analysis, and design response, and mandatory noise assessment.

#### **General Provisions**

##### Clause 66 Referral and Notice Provisions

The Project will be required to be referred to the relevant person or body as a referral authority in accordance with Section 55 of the *Planning and Environment Act 1987*.

The Project will likely require to be referred to the following referral authorities:

- Clause 66.02-2: Secretary to DELWP (now DEECA) as the recommending referral authority for an application to remove, destroy or lop native vegetation in the Detailed Assessment Pathway as defined in the *Guidelines for the removal, destruction or lopping of native vegetation* (Department of Environment, Land, Water and Planning, 2017)
- Clause 66.03:
  - Secretary to the Department of Energy, Environment and Climate Action (DEECA) as the determining referral authority for works within the PCRZ
  - Relevant floodplain management authority being Wimmera and North Central Catchment Management Authorities as the recommending referral authority for works within the FO and LSIO
  - Owner of, or the acquiring authority for, the adjacent land in the TRZ2 as the determining referral authority informed by Clause 52.29-4

Notice of an application of the kind listed in Clauses 66.05 and 66.06 must be given in accordance with section 52(1)(c) of the Act to the person or body specified as a person or body to be notified. However, this might not apply if, in the opinion of the responsible authority, the proposal satisfies requirements or conditions previously agreed in writing between the responsible authority and the person or body to be notified. The following notice requirements are likely relevant to the Project under Clause 66.05:

- Clause 35.07 – For an application to use or develop land for accommodation within 1 km from the nearest title boundary of land subject to an application for a permit for a wind energy facility, a notice must be given to the owners and occupiers of land subject to:
  - A permit for a wind energy facility; or
  - An application for a permit for a wind energy facility; or
  - An incorporated document approving a wind energy facility; or
  - A proposed wind energy facility for which an action has been taken under section 8(1), 8(2), 8(3) or 8(4) of the *Environment Effects Act 1978*.
- Secretary to DELWP (now DEECA) (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987) for an application to remove, destroy or lop native vegetation under clause 52.17 which, except for the provisions of clause 67.01, would be made to the Minister in accordance with section 96 of the *Planning and Environment Act 1987*. This does not apply if the application must be referred to the Secretary under section 55 of the Act.

### **Operational Provisions**

#### Clause 72.01 Responsible Authority for this Planning Scheme

In accordance with Clause 72.01-1 (Minister is Responsible Authority) the Minister for Planning is the responsible authority for the use and development of land for a:

- Energy generation facility with an installed capacity of 1 megawatt or greater
- Utility installation used to transmit or distribute electricity.

### **Preliminary Planning Assessment**

Table 7.3 and the section above identifies the zones and overlays within the Project Area and associated sub-areas that apply to the Project. This analysis has identified that the key planning approval under the relevant planning schemes that will be required for the Project include:

- Use and development of land for a wind energy facility under Clause 35.07 (FZ), Clause 36.03 (PCRZ) and Clause 52.32
- Buildings and works associated with a wind energy facility under Clause 36.04 (TZ), Clause 43.02 (DDO), Clause 44.03 (FO) and Clause 44.04 (LSIO)
- Use and development of land for a utility installation under Clause 35.07 (FZ) and Clause 36.04 (TZ)
- Buildings and works associated with a utility installation under Clause 44.03 (FO) and Clause 44.04 (LSIO)
- Potential roadworks within Clause 44.04 (LSIO)
- Removal, destruction or lopping of native vegetation under Clause 52.17
- Creation or alteration of access to a road in a TRZ2 under Clause 52.29.

#### **Local government area(s):**

Northern Grampians Shire Council and Pyrenees Shire Council.

## **8. Existing environment**

**Overview of key environmental assets/sensitivities in project area and vicinity** (general description of project site/study area under section 7):

The Project is located in central Victoria, approximately 37 km northeast of Stawell and immediately north of Navarre, within the Northern Grampians and Pyrenees local government areas. The majority of the

Project Area is cleared of vegetation, with scattered trees throughout and a higher density of trees in patches throughout the Project Area.

The Project Area is located on the drainage divide between the Wimmera Catchment (south) and the Avon-Richardson Catchment (north). Both catchment areas form part of the Murray-Darling Basin. The main waterways within the Project Area include Avon River, Paradise Creek, Morl Creek, Bolangum Creek, Reedy Creek, Wattle Creek, Howard Creek, Green Creek, Wimmera River and Six Miles Creek. There are also several minor smaller unnamed channels/waterways. Most of the waterways in the Project Area are ephemeral and only flow following rainfall events or in the wetter months. The Project Area also contains one natural wetland classified as seasonal freshwater marshes on inorganic soils, mapped in the Victorian Wetland inventory database. This wetland is periodically inundated, depending on rainfall.

The Project Area is primarily within the Goldfields bioregions but also includes a small area of the Wimmera bioregion. The Project Area supports two dominant ridge lines, undulating hilly country and flat plains. One of the ridge lines runs north to south along the eastern boundary of the Project Area (to the west of Barkly Gap Road) and includes an arm that runs to the west and north-west towards Hannet Road and Supple Road. The other ridge line is lower in elevation and runs north-west to south-east (to the east of Bolangum Inn Road) towards the western boundary of the Project Area, with an arm extending north-east (west of Basin Road). The majority of the remainder of the Project Area supports low undulating hills and flat plains, with the flattest country occurring west of Batcocks Scour Road.

## **Ecological Values**

### Native Vegetation and Fauna Habitat

The study area for the survey of ecological values totalled 855 ha. This initially comprised a 50m wide corridor along proposed access tracks and a 100m radius area around proposed turbine locations, with the final study area expanding to incorporate additional areas throughout the design process.

Due to a land use history of gold mining and agricultural use leading to the clearing of extensive areas of trees, the large sections of the Project Area support native vegetation in the form of derived native understory. These were interspersed with cleared and partially cleared agricultural areas, leading to a largely modified landscape with sparse and scattered patches of trees and patches of habitat.

Patches of native vegetation with tree cover was mostly Grassy Dry Forest on the eastern range, Hillcrest Herb-rich Woodland on the lower-lying western range, Box Ironbark Forest on the undulating hills, Grassy Woodland on the plains, undulating hills and lower slopes (widespread but fragmented) and Plains Woodland (fragmented occurrence to the south-west of Navarre).

As a result of site based native vegetation surveys undertaken by Nature Advisory, a total of 214 patches of native vegetation were recorded in the study area, totalling an area of 516 ha, and including 1,242 large trees in patches. An additional 423 scattered trees (269 large and 154 small) were recorded in the study area.

Fauna habitat within the study area and surrounds comprise remnant treed habitats, rocky outcrops, native derived grasslands and linear creek-line and roadside habitats. There are also areas of revegetation that provide habitat for fauna species and have helped prevent large scale erosion that has occurred across the region. However, due to past land use, the habitats on site are generally sparse and dispersed over the study area.

### Threatened Ecological Communities

Three threatened ecological communities listed under the EPBC Act or the *Flora and Fauna Guarantee Act 1988* (FFG Act) occur within the ecological study area including:

- Grey Box Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (EPBC Act: Endangered) (174.029 ha)
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (EPBC Act: Critically Endangered) (20.982 ha)
- Grey Box – Buloke Grassy Woodland Community (FFG Act: Threatened) (48.75 ha).

Woodland bird species recognised as members of the Victorian Temperate Woodland Bird Community (FFG Act: Threatened) have also been identified within the Project Area. Further assessment is required to determine the presence of the community and potential impacts associated with the Project.

#### Threatened flora species

Twenty threatened flora species listed under the FFG Act and/or EPBC Act were initially considered to have potential to occur within the Project Area due to the presence of potential habitat based on desktop studies (Nature Advisory, 2023). Targeted surveys for threatened flora were conducted in October to November 2021 and September and November 2022. Two FFG Act listed threatened species were recorded in the Project Area during the targeted surveys, namely Buloke (*Allocasuarina luehmannii*) and Golden Cowslips (*Diuris behrii*). Several individuals of Sun-orchid (*Thelymitra sp.*) were also recorded during targeted surveys, though were not able to be identified to species as they were not flowering at the time of the survey. There is potential that the un-identified Sun-orchids recorded may be listed under the EPBC Act or FFG Act, this will be confirmed through further targeted surveys. No EPBC Act listed threatened flora species were recorded in the Project area.

#### Threatened Fauna Species

Seventeen threatened fauna species listed under the FFG Act and/or EPBC Act were recorded or were considered to have potential to occur in the study area based on desktop studies.

Of these, three were recorded during Bird Utilisation Surveys, namely Hooded Robin, Diamond Firetail and Brown Treecreeper. These species are generally confined to areas in or adjacent to woodland and they are not expected to fly at rotor swept area (RSA) height. Impacts to threatened woodland birds from the development and construction of Project are unlikely to be significant.

Targeted surveys were undertaken in and around the Project Area for threatened fauna species considered to be potentially susceptible to impacts, namely Swift Parrot, Powerful Owl, Barking Owl, Brush-tailed Phascogale, Squirrel Glider and Pink-tailed Worm-Lizard. No Barking Owl, Brush-tailed Phascogale, Squirrel Glider or Pink-tailed Worm-Lizard were recorded in the Project Area during targeted surveys and therefore have since been considered unlikely to occur.

Swift Parrot and Powerful Owl were recorded in adjacent reserves but were not recorded in the Project Area boundary, as summarised below:

- Swift Parrot (EPBC Act: critically endangered, FFG Act: critically endangered) – Targeted surveys did not record this species within the Project Area boundary, though a pair was recorded within the Big Tottington Nature Reserve to the north of the Project Area. This species is not expected to move across the Project Area on a regular basis due to the lack of high-quality habitat on the Project Area.
- Powerful Owl (FFG Act: vulnerable) – This species was not recorded within the Project Area boundary, though was recorded in three locations, all beyond the Project Area boundary, including to the west at Morri Morri Conservation Reserve, to the northwest at Mount Bolangum Nature Conservation Reserve and to the southeast in Kara Kara National Park. It is not expected there would be any regular movement of this species from surrounding areas into the Project Area, owing to a lack of high-quality or extensive habitat that would support this species.

Golden Sun Moth has been assumed as present in the Project Area given the presence and extent of suitable grassy habitats (this will be confirmed through targeted surveys).

#### Migratory birds

Two birds listed as migratory under the EPBC Act are considered to potentially occur in the study area:

- White-throated Needletail – as the Project Area is at the inland edge of its range with only few records within the search region, impacts to this species from Navarre Wind Farm are considered to be negligible.
- Fork-tailed Swift – any impacts are likely to have a negligible impact on this widespread, mobile species, that may occur in the study area only a few days per year. Impacts to this species from Navarre Wind Farm are considered to be negligible.

#### Bird utilisation surveys

Two bird utilisation surveys were undertaken in Spring 2020 and Autumn 2021. Species richness at the impact survey points was relatively consistent and characterised by reasonable diversity with a total of 47 species recorded during the spring and 50 species during autumn. Three threatened birds were recorded during Bird Utilisation Surveys, namely Hooded Robin, Diamond Firetail and Brown Treecreeper. These threatened woodland species are recognised as members of the Victorian Temperate Woodland Bird Community. Wedge-tail Eagles were the most common raptor recorded, with 11 Wedge-tailed Eagle nests recorded across the Project Area.

#### Bat utilisation surveys

Across two bat survey periods in Spring 2020 and Autumn 2021 at least nine species were positively identified, together with three species complexes. One FFG Act listed species, Eastern Bentwing Bat was recorded during the Autumn 2021 survey with two calls being positively attributed to this species and a further 21 calls assigned to the species complex. No EPBC Act listed bat species were recorded in the Project Area.

Refer to Attachment A – Flora, Fauna and Targeted Species Assessments (Nature Advisory, 2023) for more details regarding ecological values.

#### **Aboriginal and Historic Heritage Values**

The Project Area intersects with areas of Cultural Heritage Sensitivity (CHS) associated with several waterways, specifically Avon Creek, Reedy Creek, Sandy Creek, Paradise Creek, Wattle Creek, Howard Creek, Heifer Station Creek, Greens Creek, Wimmera River, Six Mile Creek, Morri Morri Creek, and Bolangum Creek.

An Aboriginal place is also an area of CHS. There are 16 known Aboriginal places within the Project Area, comprising ten earth features, four scarred trees, and two Low Density Artefact Distributions (LDADs).

Further, there are 161 registered Aboriginal places, comprising 311 components, within 10 kms of the Project Area. The Aboriginal places comprise 63 scarred trees, 43 artefact scatters, 34 earth features, 158 low density artefact distributions (LDADs), nine quarries, one stone feature, one Aboriginal cultural place, and one object collection. Known Aboriginal places identified are generally located within 200 m of a waterway

There are no historic heritage places or values within or adjacent to the Project Area. The closest registered historic heritage place is situated approximately 2.7 km north of the Project Area, the 'Woolshed, Tottington Homestead and Stone Cottage' which is listed on the Victorian Heritage Register (VHR), Register of the National Estate (RNE), Northern Grampians Heritage Overlay (HO) and National Trust (NT) registers. However, there is potential for historic heritage elements or values to be present within the Project Area given it has remained relatively undeveloped. The most likely site types of historic heritage present within the Project Area will be houses, homesteads and infrastructure associated with the region's history of pastoralism and cultivation.

Refer to Attachment D – Heritage Due Diligence Assessment (Aurecon, 2023) for more details regarding Aboriginal and historical heritage values.

## **9. Land availability and control**

### **Is the proposal on, or partly on, Crown land?**

No  Yes If yes, please provide details.

Most of the Project is located on freehold land. Some parts of the Project (including electricity infrastructure) will be located on, over or under Crown land (including open / public road reserves and unused Government (paper) roads).

The relevant lease and licence arrangements (where applicable) will be finalised with DTP once planning consent for the Project is obtained. The wind turbines and BESS would not be constructed on Crown land.

**Current land tenure** (provide plan, if practicable):

The land required for the wind farm and the battery storage facility is freehold land.

The land which falls within the development envelopes for the transmission line routes are predominantly freehold land. Some parts of the transmission line development envelopes will be located on, over or under Crown land (including open / public road reserves and unused Government (paper) roads).

**Intended land tenure** (tenure over or access to project land):

The private freehold land required for the Project will be leased or purchased from the landholders through commercial land leases and purchase agreements with individual landowners.

Relevant lease and licence arrangements for elements of the Project on Crown land will be finalised with DTP following planning approvals being obtained.

**Other interests in affected land** (eg. easements, native title claims):

Neoen will have an easement over the private landholdings associated with the transmission line connection. Lease and/or licence arrangements will be entered into with the relevant land manager for sections of the transmission line that cross over or under Crown land.

The schedule of Native Title determination applications, the registered applications for Native Title, the current Native Title determination outcomes and Indigenous Land Use Agreements has been reviewed. There are no current Native Title applications or determinations within the Project Area. However, there is a registered Indigenous Land Use Agreement (Tribunal No. VI2004/008) covering most of the Project Area, which was made by the Wotjobaluk, Jaadwa, Jadawadjali, Wergaia and Jupagulk Peoples on 11 November 2005.

## 10. Required approvals

**State and Commonwealth approvals required for project components** (if known):

**Commonwealth**

The proposal is being referred under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for a decision as to whether it is a 'controlled action' requiring approval under the EPBC Act.

**State**

The proposal will require the following approvals:

- approvals pursuant to the *Planning and Environment Act 1987*.
- approval of a Cultural Heritage Management Plan (CHMP) pursuant to the *Aboriginal Heritage Act 2006*.

The proposal may also require the following approvals:

- permit pursuant to the FFG Act for removal of protected ecological communities, and fauna and flora species
- authorisation pursuant to the *Wildlife Act 1988* for taking of wildlife
- permit pursuant to the *Water Act 1989* for works on waterways
- consents under the *Road Management Act 2004*.

**Have any applications for approval been lodged?**

No  Yes If yes, please provide details.

**Approval agency consultation** (agencies with whom the proposal has been discussed):

Neoen has undertaken consultation with the following approval agencies:

- Department of Climate Change, Energy, the Environment and Water (Commonwealth)
- Department of Transport and Planning (Victoria)
- Department of Energy, Environment and Climate Action Grampians Region (Victoria)
- Department of Energy, Environment and Climate Action (Victoria)
- Wimmera Catchment Management Authority
- North Central Catchment Management Authority.

**Other agencies consulted:**

Neoen has also commenced consultation with the following other stakeholders:

- Northern Grampians Shire Council
- Pyrenees Shire Council

In addition, Neoen conducted three community drop-in sessions: in May 2022 at Navarre and in May 2023, at Navarre and Paradise. The purpose of these drop-in sessions was to introduce the Project to the community and to seek input and feedback on the Project and the existing environment, to assist with detailed design and environmental and planning assessments.

Neoen is committed to continuing close consultation with Project stakeholders and the community as the Project develops.



## PART 2 POTENTIAL ENVIRONMENTAL EFFECTS

### 11. Potentially significant environmental effects

**Overview of potentially significant environmental effects** (identify key potential effects and comment on their significance and likelihood, as well as key uncertainties):

An initial review of the Project against the *Ministerial guidelines for assessment of environmental effects under the Environment Effects Act 1978* (DSE, 2006) and the Policy and planning guidelines for development of wind energy facilities in Victoria was undertaken to determine the initial environmental assessments required to identify and evaluate the potential effects that could arise as a result of the construction, operation and decommissioning of the Project. Based on the review, the following assessments were undertaken:

#### **Environmental Assessments**

##### Flora and Fauna Assessment

The Flora and Fauna Assessment, presented as Attachment A, was required as part of early investigations to inform the feasibility analysis and to guide the layout of the proposed wind farm in a manner that avoids and minimises impacts on ecological values to the most practicable extent. The assessment was based on a desktop evaluation of available information on the flora, fauna habitat and ecological communities of the study area and its surrounds and was accompanied by detailed field assessments to ground truth the actual or potential occurrence of these matters.

Potential effects identified by the assessment included:

##### *Removal of native vegetation*

Despite a land use history of gold mining and agricultural use leading to the clearing of extensive tree cover, most of the study area was found to support native vegetation in the form of derived native understorey. Ecological field assessments undertaken over the study area identified 516 ha of native vegetation in patches (including 1,242 large trees in patches) and 423 scattered trees (269 large and 154 small). Due to the size of the Project Area (18,404 ha), only the Study Area, i.e. where infrastructure is proposed, has been assessed in detail for native vegetation. This is where native vegetation has been mapped, classified to EVC and assessed as per the VQA manual. Due to this, the total area of native vegetation over the Project Area is not available.

A variety of exercises including collaborative, cross-discipline and constructability workshops have been held with the aim of avoiding and minimising impacts to native vegetation. Through these exercises the amount of native vegetation proposed to be removed has been reduced to **134.746 ha**. This includes:

- **55.119 ha** of native vegetation loss in the Wind Farm Project Area – Western Layout. This comprises 51.996 ha of native vegetation in patches (including 111 large trees in patches); and 52 scattered trees (namely 38 large scattered trees and 14 small scattered trees).
- **72.371 ha** of native vegetation loss in the Wind Farm Project Area – Eastern Layout. This comprises 69.528 hectares of native vegetation in patches (including 212 large trees in patches) and 52 scattered trees (namely 36 large scattered trees and 16 small scattered trees).
- **7.256 ha** of native vegetation loss in the Transmission Line Project Area – Bulgana Terminal Station Connection (including 13 large trees), noting the impacts noted for this transmission line are based on a worst-case scenario, and are likely to be reduced as the design for the transmission line is progressed with the aim to avoid/minimise impacts to native vegetation.

Notably, of the above native vegetation proposed to be removed, a total of 9.92 ha (<10 ha) of native vegetation has a bioregional conservation status (BCS) of endangered as detailed in the Native Vegetation Removal Reports (NVRs) that have been prepared for the three parts of the project (Nature Advisory, 2023).

It is expected that further refinement of the design and construction methodologies will enable reductions in the amount of vegetation required to be cleared. Mitigation measures and best practice construction methodologies will also be implemented so the potential for further adverse effects are minimised.

*Potential effects on EPBC Act/FFG Act-listed threatened communities and species*

The wind farm layout will result in the following losses to threatened ecological communities:

- 23.371 ha of *Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia* (EPBC Act: Endangered) (13% of that recorded in the study area)
- 5.627 of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (EPBC Act: Critically Endangered) (27% of that recorded in the study area).
- 3.105 ha of *Grey Box – Buloke Grassy Woodland* (FFG Act: Threatened) (6% of that recorded in the study area).

While the impacts to EPBC Act listed Threatened Ecological Communities (TECs) would potentially be considered significant, the small proportional removal (6%) of FFG Act listed Grey Box-Buloke Grassy Woodland in the study area is not considered to be significant.

Woodland bird species recognised as members of the Victorian Temperate Woodland Bird Community (FFG Act: Threatened) have also been identified within the Project Area. Further assessment is required to determine the presence of the community and potential impacts associated with the Project.

The proposed development will result in the removal of two FFG Act listed threatened flora species, namely Buloke (five individuals) and Golden Cowslips (two individuals). These impacts are not considered to be significant. Several individuals of Sun-orchid (*Thelymitra sp.*) were also recorded during targeted surveys, though were not able to be identified to species as they were not flowering at the time of the survey. There is potential that the un-identified Sun-orchids recorded may be listed under the EPBC Act or FFG Act.

Threatened bird species recorded during Bird Utilisation Surveys in the study area, namely Hooded Robin, Diamond Firetail and Brown Treecreeper, are generally confined to areas in or adjacent to woodland and they are not expected to fly at RSA height. Impacts to threatened woodland birds from the development and construction of the Project are unlikely to be significant.

The Swift Parrot was recorded within the Navarre Wind Farm study area during targeted surveying conducted from April to August 2021. The species was however found in a public land reserve to the north of the wind farm, on 12th April 2021 (2 birds at Big Tottington Nature Conservation Reserve). Owing to the lack of high-quality or extensive habitat on the wind farm site that would support these species, it is not anticipated that regular movements of the Swift Parrot would occur across the wind farm site. Instead, it may be expected that the occasional individuals of Swift Parrot may visit the wind farm temporarily when food resources may attract them into the site. Such occasional visits by the species are considered unlikely to have a significant impact on their overall populations. Acknowledging the presence of suitable habitat for Swift Parrot in the adjoining nature reserves, Neoen have implemented a 1 km turbine free buffer from all adjoining nature reserves with the aim to reduce collision risk to Swift Parrot from the wind farm.

The Powerful Owl and Barking Owl were not recorded within the Navarre Wind Farm study area during targeted surveying conducted in late April 2021, however Powerful Owl was recorded in adjacent reserves, namely 1 heard in Mt Bolangum NCR, 1 seen and heard at Morri Morri NCR and a pair seen and heard at Kara Kara National Park. It is not expected there would be any regular movement of these species from surrounding areas onto the Project Area, owing to a lack of high-quality or extensive habitat that would support this species. Instead, it may be expected that the occasional individual may visit the Project Area temporarily when food resources may attract them into the site. Such occasional visits by the two species are considered unlikely to have a significant impact on their overall populations. Acknowledging the presence of suitable habitat for Powerful Owl in the adjoining nature reserves, Neoen have implemented a 300m turbine free buffer from all adjoining nature reserves with the aim to reduce impacts to the species. This buffer is incorporated into the Swift Parrot buffer area.

One EPBC Act and FFG Act listed invertebrate, the Golden Sun Moth, is considered to have the potential to occur in the Project Area. Golden Sun Moth have previously been recorded in the wider search area and it has been recorded in degraded grassland areas near Ararat by ecologists of Nature Advisory and could occur in similarly degraded grassy areas within the Project Area. Suitable habitat is present within

the Project Area in form of native grassland and the presence of this species has therefore been assumed within these habitats. There is 68.377 ha of potential Golden Sun Moth habitat within the Project layout. This extent of suitable grassy habitat will be surveyed to confirm the presence of the species in the study area. The Commonwealth Conservation Advice for the Golden Sun Moth (DAWE 2021) notes the Area of Occupancy for the Golden Sun Moth is at least 1,596 km<sup>2</sup>, which equates to 159,500 ha. The removal of approximately 69 ha of potential habitat would therefore equate to less than 0.05% of the habitat remaining for the species across its range. This is well less than 1% and therefore unlikely to be considered a significant proportion of habitat for the species.

#### *Potential effects on migratory species*

Two EPBC Act listed migratory bird species are considered to potentially occur within the Project Area, the White-throated Needletail and the Fork-tailed Swift.

- White-throated Needletail – as the Project Area is at the inland edge of its range with only few records within the search region, impacts to this species from Navarre Wind Farm are considered to be negligible.
- Fork-tailed Swift – Any impacts are likely to have a negligible impact on this widespread, mobile species, that may occur in the study area only a few days per year. Impacts to this species from Navarre Wind Farm are considered to be negligible.

#### Preliminary Landscape and Visual Impact Assessment

A Preliminary Landscape and Visual Impact Assessment (PLVIA), presented as Attachment B, was undertaken to inform the development of the Project. As part of this assessment, relevant planning policies and legislation was reviewed to understand any specific landscape or visual designations relating to the study area and a desktop study was undertaken to understand the various physical elements that combine to create landscape and visual character.

Potential effects identified by the assessment included:

#### *Landscape character impacts*

The landscape character types identified within the study area include rural farmland, bushland reserves and towns and settlements. These landscape character types have a moderate to high ability to absorb the change as proposed by the Project.

There is a low potential for effects to be experienced by rural farmland. While the turbines will be visible from a large area, this area is a small portion of what is a widely distributed and expansive landscape character type. There is also a lack of any specific scenic value and planning controls attributing special value to this landscape.

There are no character effects anticipated to bushland reserves or towns and settlements within the study area.

#### *Visual impacts*

The assessment identified 16 viewpoints within the study area representative of potential highly sensitive receptors. Impacts to these sensitive receptors being rural dwellings and rural villages are representative of impacts to the entire study area. Eight of these viewpoints have potential for experiencing high to moderate visual impacts where the receptor (rural dwelling) has potential views of proposed turbines within foreground views and/or these views have limited intervening vegetation. The remaining viewpoints are likely to have low to negligible visual impacts.

Preliminary cumulative impacts have also been assessed. The Project is located north of the existing Bulgana and Crowlands wind farms and north of the proposed Watta Wella wind farm. There are eight rural dwellings within 8 km of Navarre and Watta Wella wind farms. A desktop analysis of these dwellings indicates existing intervening vegetation or farm structures, will likely screen views towards one of the wind farms, reducing the potential for cumulative impacts.

The ongoing design and development of the Project, along with further assessment, would be undertaken so that the Project is appropriately sited and visual impacts are appropriately mitigated in consideration of the surrounding landscape conditions and relevant policy and guidelines.

### Wind Turbine Noise Assessment

A preliminary assessment of operational noise associated with the wind turbines of the Project, presented as Attachment C, was undertaken in accordance with *New Zealand Standard 6808:2010 Acoustics – Wind farm noise*, as required by the *Environment Protection Regulations 2021* and the Victorian Wind Energy Guidelines.

#### *Operational noise effects*

The assessment found that operational noise emissions from the Project are expected to comply with relevant guidelines at all noise sensitive locations across all wind speeds. Cumulative noise impacts associated with the operation of the Bulgana Green Power Hub were also considered, however no effects were identified due to the significant separation distance between the two wind farm developments. The Project is therefore not expected to have significant operational noise impacts on noise sensitive locations.

Potential impacts associated with construction noise will be assessed once further details regarding construction methodologies are available. Following this, appropriate mitigation measures will be developed so that such impacts are minimised as much as practicable.

### Heritage due-diligence assessment

A Heritage Due Diligence Assessment, presented as Attachment D, was prepared to assist in identifying potential effects to Aboriginal cultural heritage and historic heritage and that may arise as a result of the Project and to determine whether further approvals or assessments are required.

Potential effects identified by the assessment included:

#### *Damage to registered or unidentified Aboriginal cultural heritage*

The assessment identified registered Aboriginal places within the Project Area and also found that there is the potential for unidentified Aboriginal cultural heritage material to be present within the Project Area, particularly within 200m of waterways. To manage potential effects, a mandatory cultural heritage management plan (CHMP) would be prepared under the *Aboriginal Heritage Act 2006*.

#### *Damage to unrecorded historic heritage*

The assessment did not identify any historic heritage places within the Project Area. While there are currently no registered historic heritage places located within the Project Area, there is the potential for unrecorded historic values including historic archaeological sites to be present within the Project Area.

To avoid or minimise harm to unrecorded archaeological heritage and to ensure compliance with the Heritage Act, further assessment of the Project Area would be undertaken including a site visit and preparation of a Historic Heritage Assessment. It is anticipated that if heritage places are identified during the further assessment, impacts could be managed through avoidance during the detailed design process or through established permitting processes with Heritage Victoria and construction management practices.

### Preliminary Surface Water and Groundwater Assessment

A Preliminary Surface Water and Groundwater Assessment, presented as Attachment E, was undertaken to inform the development of the Project, particularly for siting of project infrastructure. The assessment comprised a desktop review of publicly available information in relation to the hydrology, hydrogeology, and catchment conditions of the Project Area.

The assessment found that many activities associated with the construction and operation of the Project have the potential to impact on water values within and surrounding the Project Area. Potential effects on water values identified by the assessment included:

- Increases in flood potential due to Project infrastructure
- Physical damage to waterways and waterbodies
- Changes to hydrology
- Inflow of pollutants and increased sediment loads

- Vegetation clearance

The assessment found that all effects should be able to be mitigated through the appropriate siting of Project infrastructure along with the implementation of appropriate management controls during construction and operation. Most Project infrastructure is currently located away from major and minor overland flow paths, however due to site constraints some may be sited within or near a 100-year ARI flood extent, or near a watercourse. If Project infrastructure is required to be located near a 100-year ARI flood extent or near a watercourse, further assessment may be required to quantify impacts.

#### Traffic and Transport

A Preliminary Traffic Assessment, presented as Attachment F, was undertaken and included a desktop assessment of the anticipated traffic and transport effects of the proposed Project. The assessment included consideration of the existing condition of the Project Area and surrounding transport network, estimates of traffic volumes generated during construction phase and their distribution and a preliminary review of the delivery route of oversize and/or overmass components to the site.

The potential effect identified by the assessment was:

#### *Increases in traffic volumes during construction*

The Project will result in an increase in traffic during the construction period. Main roads surrounding the Project Area, Escort Street, Stawell-Avoca Road and Ararat-St Arnaud Road, are C-Class arterial roads and are equipped to handle the increased traffic volumes. Some roads, however, are currently unsealed and/or narrow allowing one-way traffic at a single time only. Road improvements and upgrades (including intersection upgrades) may be required to support the traffic volumes and heavy vehicles expected. A Traffic Management Plan would be prepared in accordance with relevant guidelines and in consultation with key stakeholders to manage these potential effects.

#### Preliminary Shadow Flicker Assessment

A Preliminary Shadow Flicker Assessment, presented as Attachment G, was undertaken calculate the theoretical number of hours of shadow flicker that would be experienced at a residence. The assessment found that all non-host residences have zero hours of theoretical duration and are not expected to be affected by the Project.

Although not subject to the same requirements as non-host residences, three host residences are affected by shadow flicker.

#### Electromagnetic Interference

A Preliminary Electromagnetic Interference Assessment, presented as Attachment H, was undertaken to assess the potential effect that the wind turbines would have on the telecommunication paths (point-to-point or microwave telecommunications) between existing radio-telecommunication equipment, specifically those that may pass through the Wind Farm Project Areas.

The assessment found that no effects to existing telecommunication paths are expected as a result of the Project and no mitigation measures are required to be implemented.

#### **Significance of environmental effects**

Upon completion of the environmental assessments and based on an understanding of the Project scope and other available information (public or provided by stakeholders/community), the potential environmental effects, and associated studies, were categorised into priority groups. The groups are based on the significance of the potential effect and the likely complexity of that associated study and environmental management measures (based on available information).

The Priority Groups are as classified as follows:

Priority Group A - potential significant environmental effect that requires an in-depth assessment as activity is not commonly undertaken (higher level of uncertainty of impact) and environment management procedures are potentially complex.

No environmental effects were identified as being categorised under this group type.

Priority Group B - potential significant environmental effect, activity is known (level of certainty of impact is better known) and standard environment management procedures may require site-specific environmental procedures for construction and/or operation.

Additional assessment is likely required to define the nature and significance of some potential effects, and to devise the most appropriate and effective mitigation measures. A targeted approach to each assessment would be considered to focus on those areas of higher significance. Potential environmental effects in this priority group include those associated with:

- Fauna and Flora
- Landscape and visual.

Priority Group C - potential environmental effect, activity is well understood (level of certainty of impact is well understood) and environmental management procedures are well understood and standard environmental procedures for construction and/or operation.

These are effects which are unlikely to be significant, as the nature of these effects are typical for projects of this nature, well understood by regulators and stakeholders, and can readily be managed through conventional management and mitigation measures. Neoen will continue undertaking further technical evaluations to refine its mitigation techniques as the design and construction methods are further developed.

Potential environmental effects within this priority group include those associated with:

- Noise, both operational and construction
- Heritage, both Aboriginal cultural heritage and historic heritage
- Traffic and transport
- Surface water and groundwater
- Land use
- Social and community disruption
- Contaminated land
- Soils
- Air quality
- Aviation
- Bushfire
- Shadow flicker.

## 12. Native vegetation, flora and fauna

### Native vegetation

**Is any native vegetation likely to be cleared or otherwise affected by the project?**

NYD  No  Yes If yes, answer the following questions and attach details.

The land use history of gold mining and agricultural use has led to the clearing of extensive tree cover across the site. The study area was found to support native vegetation in a range of forms, predominately in the form of derived native understorey, where tree canopy cover has been removed, but understorey is predominately native. Treed areas of native vegetation are generally sparse due to previous land uses, with patches of intact vegetation scattered throughout the Project Area.

The area of native vegetation proposed to be removed for the Project totals **134.771 ha** (including 128.309 ha of native vegetation in patches, 329 large trees in patches and 113 scattered trees). This includes:

- **55.119 ha** of native vegetation loss in the Wind Farm Project Area – Western Layout. This comprises 52.129 ha of native vegetation in patches (including 111 large trees in patches) and 52 scattered trees (namely 38 large scattered trees and 14 small scattered trees).
- **72.396 ha** of native vegetation loss in the Wind Farm Project Area – Eastern Layout. This comprises 69.548 ha of native vegetation in patches (including 214 large trees in patches) and 52 scattered trees (namely 36 large scattered trees and 16 small scattered trees).
- **7.256 ha** of native vegetation loss in the Transmission Line Project Area – Bulgana Terminal Station Connection (comprising 6.632 ha of native vegetation including 4 large trees in patches and 9 scattered), noting the impacts noted for the transmission line are based on a worst case scenario, and are likely to be reduced as the design for the transmission line is progressed with the aim to avoid/minimise impacts to native vegetation.

It is noted that the area of removal proposed for the Transmission Line Project Area – Bulgana Terminal Station Connection is based on preliminary assessment of the potential impacts arising from the preferred transmission line route with the following assumptions (it is expected that these disturbance footprints would be further refined and reduced as the Project progresses):

- 10-metre-wide disturbance footprint along the entire length of the transmission line
- 40-metre-wide disturbance footprint where the transmission line will cross woody vegetation along road reserves or watercourses, to allow for clearance associated with electrical safety guidelines.

A broad corridor has been identified for a transmission line which will connect the Eastern and Western Layouts of the Wind Farm (Transmission Line Project Area – Eastern and Western Layout Connection). To date this area has been considered as part of an early ecological constraints assessment. A preferred route is yet to be determined and will be informed by discussions with landowners. Once a preferred route and corridor is determined, a detailed assessment of ecological values, namely impacts to native vegetation will be undertaken for the Transmission Line Project Area – Eastern and Western Layout Connection.

**What investigation of native vegetation in the project area has been done?** (briefly describe)

A detailed native vegetation assessment of the Project has been undertaken and is fully detailed in the Flora, Fauna and Targeted Species Assessment (Nature Advisory, 2023). The following documents were reviewed and informed the Flora and Fauna assessment:

- Northern Grampians Planning Scheme
- Pyrenees Planning Scheme
- The Victorian *Policy and planning guidelines – Development of wind energy facilities in Victoria* (DELWP 2017)
- Kara Kara Conservation Management Network: Strategic Plan
- Nature Advisory 2019, *Navarre Wind Farm Overview flora and fauna constraints assessment - Report No. 19222 (1.0)*, Nature Advisory Pty Ltd
- Nature Advisory 2021, *Navarre Wind Farm Overview biodiversity constraints assessment - Report No. 19222 (3.0)*, Nature Advisory Pty Ltd
- Relevant EVC benchmarks for the Goldfields and Wimmera bioregions<sup>2</sup> (DSE 2004a)
- *NatureKit* (DELWP 2022a)
- *Victorian Biodiversity Atlas* (VBA), a database administered by DELWP (DELWP 2022d)
- EPBC Act *Protected Matters Search Tool* (DAWE 2022a).

<sup>2</sup> A bioregion is defined as “a geographic region that captures the patterns of ecological characteristics in the landscape, providing a natural framework for recognising and responding to biodiversity values”. In general bioregions reflect underlying environmental features of the landscape (DNRE 1997).

Detailed assessment of native vegetation across both the Wind Farm Project Area – Western Layout and the Wind Farm Project Area – Eastern Layout, as well as preliminary native vegetation assessment along the Transmission Line Project Area – Bulgana Terminal Station Connection was undertaken.

The native vegetation assessment covered a 'study area' larger than the Project Area. Field assessments were conducted across multiple surveys periods including:

- 12th – 16th October 2020
- 9th – 13th November 2020
- 5th – 8th, 11th – 15th and 25th – 29th September 2021
- 15th – 19th November 2021
- 19th – 23rd and 26th – 30th September 2022.

During these assessments, the study area was surveyed initially by vehicle and areas supporting native vegetation were inspected in more detail on foot. Where property access was not provided for the assessment of the transmission line, assessment in these areas utilised binoculars from the closest suitable vantage point.

#### **What is the maximum area of native vegetation that may need to be cleared?**

NYD  No  Yes      Estimated area: 134.771 (hectares)

Impacts to native vegetation have been calculated based on a conservative yet realistic assessment of the area required to support the development of the Project and includes assessment of the modelled cut and fill requirements around hardstands and access tracks.

The study area for the assessment of native vegetation totalled an area of 855 ha and contained 516 ha of native vegetation in patches (including 1,242 large trees in patches) and 423 scattered trees (269 large and 154 small). Of the 516 ha of native vegetation that has been identified, a total of **134.771 ha** (or 26%) is proposed for removal. The native vegetation proposed to be removed comprises:

- 128.309 ha of native vegetation in patches
- 329 large trees in patches (out of 1,242 large trees in patches)
- 113 scattered trees (out of 423 scattered trees).

A breakdown of this value over the Project Area is as follows:

- **55.119 ha** of native vegetation loss in the Wind Farm Project Area – Western Layout. This comprises 52.129 ha of native vegetation in patches (including 111 large trees in patches) and 52 scattered trees (namely 38 large scattered trees and 14 small scattered trees).
- **72.396 ha** of native vegetation loss in the Wind Farm Project Area – Eastern Layout. This comprises 69.548 ha of native vegetation in patches (including 214 large trees in patches) and 52 scattered trees (namely 36 large scattered trees and 16 small scattered trees).
- **7.256 ha** of native vegetation loss in the Transmission Line Project Area – Bulgana Terminal Station Connection (comprising 6.632 ha of native vegetation including 4 large trees in patches and 9 scattered trees (all large scattered trees)).

A small amount of additional native vegetation will likely be required to be removed for the Transmission Line Project Area – Eastern and Western Layout Connection. To date this area has been considered as part of an early ecological constraints assessment, as a preferred route is yet to be determined. Once a preferred route and corridor is determined, a detailed assessment of ecological values, namely impacts to native vegetation will be undertaken for the Transmission Line Project Area – Eastern and Western Layout Connection.

Notably, of the above native vegetation proposed to be removed, a total of 9.92 ha (<10 ha) of native vegetation has a bioregional conservation status (BCS) of endangered as detailed in the Native Vegetation Removal Reports (NVRs) that have been prepared for the three parts of the project (Nature Advisory, 2023).



**How much of this clearing would be authorised under a Forest Management Plan or Fire Protection Plan?**

N/A ..... approx. percent (if applicable)

**Which Ecological Vegetation Classes may be affected?** (if not authorised as above)

NYD  Preliminary/detailed assessment completed. If assessed, please list.

Native vegetation is proposed to be removed from the following EVCs:

- Heathy Dry Forest (EVC 20)
- Grassy Dry Forest (EVC 22)
- Box Ironbark Forest (EVC 61)
- Creek line Grassy Woodland (EVC 68)
- Hillcrest Herb-rich Woodland (EVC 70)
- Swampy Riparian Woodland (EVC 83)
- Low Rises Grassy Woodland (EVC 175\_61)
- Riparian Woodland (EVC 641)
- Plains Woodland (EVC 803).

Further details are provided in the Native Vegetation Removal Reports (NVRRs) (see Appendices 11-13 of the Flora, Fauna and Targeted Species Assessment (Nature Advisory, 2023)):

**Have potential vegetation offsets been identified as yet?**

NYD  Yes If yes, please briefly describe.

The total offsets required to compensate for the proposed removal of native vegetation from the Project Area equals 70.208 general habitat units. It is noted that no species-specific offsets are required. This offset requirement has been determined based on separate Native Vegetation Removal Reports (NVRRs) for the Wind Farm Project Area – Western Layout, the Wind Farm Project Area – Eastern Layout and the Transmission Line Project Area – Bulgana Terminal Station Connection. Offset requirements have considered all sections in the NVRRs (Nature Advisory 2023). Details of the offset requirements for each Project sub-area is as follows:

- Wind Farm Project Area – Western Layout: 28.720 general habitat units with following requirements:
  - Minimum strategic biodiversity value (SBV) of 0.405
  - Occur within the North Central or Wimmera CMA boundary, or the Northern Grampians Shire Council municipal district.
  - Include protection of at least 149 large trees.
- Wind Farm Project Area – Eastern Layout: 37.188 general habitat units with following requirements:
  - Minimum strategic biodiversity value (SBV) of 0.401
  - Occur within the North Central or Wimmera CMA boundary, or the Northern Grampians Shire Council municipal district.
  - Include protection of at least 250 large trees.
- Transmission Line Project Area – Bulgana Terminal Station Connection: 4.314 general habitat units with following requirements:
  - Minimum strategic biodiversity value (SBV) of 0.372

- Occur within the Wimmera CMA boundary, or the Northern Grampians Shire Council municipal district.
- Include protection of at least 13 large trees.

Under the Guidelines all offsets must be secured prior to the removal of native vegetation.

The offset target for the current proposal would be achieved via a third-party offset. An online search of the Native Vegetation Credit Register (NVCR) has shown that the required general offset requirement is currently available for purchase from multiple native vegetation brokers. Evidence that the required offset is available is provided in Appendix 14 of the Flora, Fauna and Targeted Species Assessment (Nature Advisory, 2023).

It is noted that additional native vegetation offsets are likely to be required for vegetation to be removed for the Transmission Line Project Area – Eastern and Western Layout Connection.

**Other information/comments?** (eg. accuracy of information)

Refer to *Flora, Fauna and Targeted Threatened Species Assessments* included in Attachment A.

NYD = not yet determined

## Flora and fauna

**What investigations of flora and fauna in the project area have been done?**

(provide overview here and attach details of method and results of any surveys for the project & describe their accuracy)

A desktop review of available information on the flora, fauna habitat and ecological communities of the study area and its surrounds was undertaken based on the following:

- Northern Grampians Planning Scheme
- Pyrenees Planning Scheme
- The Victorian *Policy and planning guidelines – Development of wind energy facilities in Victoria* (DELWP 2017)
- Kara Kara Conservation Management Network: Strategic Plan
- Nature Advisory 2019, *Navarre Wind Farm Overview flora and fauna constraints assessment - Report No. 19222 (1.0)*, Nature Advisory Pty Ltd
- Nature Advisory 2021, *Navarre Wind Farm Overview biodiversity constraints assessment - Report No. 19222 (3.0)*, Nature Advisory Pty Ltd
- Relevant EVC benchmarks for the Goldfields and Wimmera bioregions<sup>3</sup> (DSE 2004a)
- *NatureKit* (DELWP 2022a)
- *Victorian Biodiversity Atlas* (VBA), a database administered by DELWP (DELWP 2022d)
- EPBC Act *Protected Matters Search Tool* (DAWE 2022a).

Detailed field assessments were undertaken during the following time periods shown in Table 5 below. All surveys described below were undertaken on foot. Full details of the methods and results from each of these surveys is provided in Attachment A.

<sup>3</sup> A bioregion is defined as “a geographic region that captures the patterns of ecological characteristics in the landscape, providing a natural framework for recognising and responding to biodiversity values”. In general bioregions reflect underlying environmental features of the landscape (DNRE 1997).

**Table 5 Detailed field assessments**

Survey – field assessment	Date
<b>Flora and vegetation assessments</b>	
<p><b>Native vegetation assessments and targeted surveys for threatened ecological communities and listed flora species</b></p> <p>Native vegetation was mapped, classified to EVC and assessed as per the VQA manual. Trees were mapped and assessed. Targeted surveys for threatened flora were undertaken. Two FFG Act listed threatened flora species were confirmed in the Project area – Buloke and Golden Cowslips.</p>	<ul style="list-style-type: none"> <li>• 5–8, 11–15 and 25–29 September 2021</li> <li>• 25–29 October 2021</li> <li>• 15–19 November 2021</li> <li>• 19–23 and 26–30 September 2022</li> <li>• 14–18 November 2022</li> </ul>
<b>Fauna assessments</b>	
<p><b>Fauna habitat assessment/surveys</b></p>	<ul style="list-style-type: none"> <li>• 12–16 October 2020</li> <li>• 9–13 November 2020</li> </ul>
<p><b>Bird utilisation surveys</b></p> <p>Three listed threatened species (Brown Treecreeper, Hooded Robin and Diamond Firetail) were recorded during the bird utilisation surveys. Wedge-tailed Eagle was the most common raptor recorded. 11 Wedge-tailed Eagle nests were recorded across the Wind Farm Boundary.</p>	<ul style="list-style-type: none"> <li>• 14–17 October 2019 (spring)</li> <li>• 20–23 April 2021 (autumn)</li> </ul>
<p><b>Swift Parrot surveys</b></p> <p>A pair of Swift Parrots were recorded to the north of the Project Area in Big Tottington Reserve. No Swift Parrots were recorded in the Project area.</p>	<ul style="list-style-type: none"> <li>• 12 to 15 April 2021</li> <li>• 10 to 13 May 2021</li> <li>• 14 to 18 June 2021</li> <li>• 12 to 16 July 2021</li> <li>• 9 to 13 August 2021</li> </ul>
<p><b>Barking Owl and Powerful Owl surveys</b></p> <p>Powerful Owl were recorded in three locations outside the Project area (in nearby reserves). No Powerful Owl or Barking Owl were recorded in the Project area.</p>	<ul style="list-style-type: none"> <li>• 26 to 29 April 2021</li> <li>• 23 to 26 August 2021</li> </ul>
<p><b>Bat utilisation surveys</b></p> <p>One FFG Act listed species, Eastern Bentwing Bat was recorded during the autumn 2021 survey with two calls being positively attributed to this species and a further 21 calls assigned to the species complex. No EPBC Act listed bat species were recorded at the Navarre Wind Farm site.</p>	<ul style="list-style-type: none"> <li>• 13 October – 30 November 2020 (spring)</li> <li>• 11 March – 29 April 2021 (autumn)</li> </ul>
<p><b>Pink-tailed Worm-lizard survey</b></p> <p>Extensive rock rolling surveys were undertaken in suitable habitat. Pink-tailed Worm-lizard was not recorded in the wind farm study area.</p>	<ul style="list-style-type: none"> <li>• 25–26 October 2021</li> <li>• 1–3 December 2021</li> </ul>
<p><b>Targeted surveys for Squirrel Glider and Brush tailed Phascogale</b></p> <p>Targeted surveys (25 hair-tubes) were undertaken in 2021 for both species within suitable habitat along road side vegetation. These involved fortnightly checks, tape change and re-baiting of hair-tubes. No camera traps were deployed. Subsequently hair samples were analysed by a specialist. No presence of Brush-tailed Phascogale or Squirrel Glider was detected within suitable habitat and these are considered unlikely to occur.</p>	<ul style="list-style-type: none"> <li>• 18th October to 14th December 2021</li> </ul>

Neoen have previously had discussions with DEECA, including members of the DEECA Grampians Region to procure feedback on an early ecological study program. DEECA provided feedback which was incorporated into the ecology study program.

**Have any threatened or migratory species or listed communities been recorded from the local area?**

NYD  No  Yes If yes, please:

- List species/communities recorded in recent surveys and/or past observations.
- Indicate which of these have been recorded from the project site or nearby.

## Flora

### Wind Farm Project Area

VBA records and the EPBC Protected Matters Search Tool indicated that within the search region there were records of, or there occurred potential suitable habitat for 24 species listed under the Commonwealth EPBC Act and 39 listed under the state FFG Act, including 21 listed under both Acts.

The likelihood of occurrence in the study area of species listed under the EPBC Act and FFG Act was undertaken. This analysis indicated that 20 listed flora species were likely to occur or had the potential to occur. Further details of the likelihood of occurrence assessment can be found in Attachment A.

Targeted surveys for the 20 listed flora species that were likely to occur or had the potential to occur were conducted in October and November 2021 as well as in September and November 2022. Surveys were undertaken on foot along transects spaced 5 metres apart within areas of suitable habitat. The locations of any target species were recorded using a hand-held device with the Field Maps application (ESRI), accurate to approximately 5 metres.

The following flora species were recorded during the targeted surveys and have the potential to be impacted by the Project:

- *Thelymitra sp.* (Sun-orchid, FFG Act protected, potentially FFG Act listed and potentially EPBC Act listed) – 340 individuals recorded
- *Diuris behrii* (Golden Cowslips, FFG Act: Endangered) – two individuals recorded
- *Allocasuarina luehmannii* (Buloke, FFG Act: Vulnerable) – five individuals recorded.

It should be noted that all Sun-orchids are unidentified as they had not yet flowered during the September surveys and had finished flowering during the November surveys. As such, we have taken a precautionary approach in assuming that threatened Sun-orchids could be present.

No other threatened flora species were recorded during the surveys.

### Transmission Line Project Area – Bulgana Terminal Connection

VBA records and the EPBC Protected Matters Search Tool indicated that within the search region there were records of, or there occurred potential suitable habitat for 24 species listed under the Commonwealth EPBC Act and 39 listed under the state FFG Act, including 21 listed under both Acts.

The likelihood of occurrence in the study area of species listed under the EPBC Act and FFG Act was undertaken and indicated that 10 listed flora species are likely to occur or have the potential to occur. Details of these species are presented in Table 6. Further details of the likelihood of occurrence assessment can be found in Attachment A.

Targeted surveys have not been undertaken within the Transmission Line Project Area – Bulgana Terminal Connection.

Table 6 Likelihood of occurrence in the Transmission Line Project Area (flora)

Common Name	Scientific name	EPBC	FFG	FFG-P	Likelihood of occurrence
Buloke	<i>Allocasuarina luehmannii</i>		VU	P	Numerous trees recorded in the study area during the field assessment. <b>Does occur</b>
River Swamp Wallaby-grass	<i>Amphibromus fluitans</i>	VU			Study area crosses multiple streams and areas potentially prone to inundation, and species is known to opportunistically establish. No nearby records, but species distribution poorly defined. <b>Potential to occur.</b>
Tawny Spider-orchid	<i>Caladenia fulva</i>	EN	EN	P	Overview survey indicates majority of habitat sub-optimal and degraded, but nearby records and potential for small pockets of higher quality habitat occur. <b>Potential to occur.</b>

Golden Cowslips	<i>Diuris behrii</i>		EN	P	Majority of soils throughout study area are known to be skeletal and well-draining, but nearby records and potential for small pockets of suitable habitat occur. <b>Potential to occur.</b>
Pale-flower Crane's-bill	<i>Geranium sp. 3</i>		EN		Overview survey indicates majority of habitat sub-optimal and degraded, however treed roadside vegetation and some derived grassland still provide habitat. <b>Potential to occur.</b>
Common Beard-heath	<i>Leucopogon virgatus var. brevifolius</i>		EN	P	No deep sands known to occur in study area, but nearby records occur and some pockets of suitable habitat may be identified in detailed site assessment. <b>Potential to occur.</b>
Green-striped Greenhood	<i>Pterostylis chlorogramma</i>	VU	EN	P	No nearby records, but range poorly understood and records occur both east and west of study area. Some suitable Box-Stringybark forest occurs. <b>Potential to occur.</b>
Hairy Tails	<i>Ptilotus erubescens</i>		CE	P	Recorded within Navarre wind farm site during detailed survey. Woodland and derived grassland communities known to occur. <b>Potential to occur.</b>
Tiny Bog-sedge	<i>Schoenus nanus</i>		EN		Study area crosses multiple streams and areas potentially prone to inundation, and species is known to opportunistically establish. Nearby records. <b>Potential to occur.</b>
Fringed Sun-orchid	<i>Thelymitra luteocilium</i>		VU	P	At least some suitable soils occur throughout study area, and distribution is not well understood. Nearby records and potential for small pockets of suitable habitat occur. <b>Potential to occur.</b>

**Notes:**

CE = critically endangered; EN = endangered; VU = vulnerable, P = protected.

Fauna

**Wind Farm Project Areas – Eastern and Western Layouts**

VBA records and the EPBC Protected Matters Search Tool indicated that within the search region there were records of, or there occurred potential suitable habitat for a total of 64 fauna species including 40 species listed under the Commonwealth EPBC Act and 50 listed under the state FFG Act.

The likelihood of occurrence in the study area of species listed under the EPBC Act and FFG Act was undertaken. This analysis indicated that 16 listed fauna species were likely to occur or had the potential to occur. These species comprised:

- 12 birds (Barking Owl, Black Falcon, Bush Stone-curlew, Diamond Firetail, Fork-tailed Swift, Hooded Robin, Painted Honeyeater, Powerful Owl, Speckled Warbler, Square-tailed Kite, Swift Parrot).
- Two mammals (Brush-tailed Phascogale, Squirrel Glider)
- One reptile (Pink-tailed Worm-Lizard)
- One invertebrate (Golden Sun Moth)

Further details of the likelihood of occurrence assessment can be found in Attachment A.

Detailed field assessments were undertaken for the 16 listed fauna species that were likely to occur or had the potential to occur.

### *Bird utilisation surveys*

Bird utilisation surveys were undertaken in Spring 2020 and Autumn 2021. Three threatened birds were recorded during Bird Utilisation Surveys, namely:

- Hooded Robin
- Diamond Firetail
- Brown Treecreeper.

Wedge-tail Eagles were the most common raptor recorded, with 11 Wedge-tailed Eagle nests recorded across the Project Area.

### *Bat utilisation surveys*

Bat utilisation surveys were undertaken in Spring 2020 and Autumn 2021. At least nine species were positively identified, together with three species complexes. One FFG Act listed species, Eastern Bentwing Bat was recorded during the Autumn 2021 survey with two calls being positively attributed to this species and a further 21 calls assigned to the species complex. No EPBC Act listed bat species were recorded in the Project Area.

### *Targeted surveys*

#### *Swift Parrot surveys*

Swift Parrot surveys included one habitat survey undertaken in April 2021 and four targeted surveys undertaken in May, June, July and August 2021. Swift Parrot surveys were undertaken using methods consistent with the DSE Biodiversity Precinct Planning Kit, modified according to habitat patch size (i.e., less time required in smaller patches or those with limited flowering of the key species of eucalypts). These consisted of roaming surveys for up to one hour in each suitable patch of habitat.

Targeted surveys did not record Swift Parrot within the Project Area boundary, although a pair was recorded within the Big Tottington Nature Reserve to the north of the Project Area.

#### *Barking Owl and Powerful Owl surveys*

Owl surveys were undertaken in April and August 2021. The threatened owl survey was undertaken using methods consistent with the DELWP guidelines. This consisted of call playback, listening and spotlighting surveys for up to 45 minutes in each site with suitable habitat.

Barking Owl was not recorded in the Project Area. Powerful Owl was also not recorded in the Project Area boundary, although was recorded in three locations, all beyond the Project Area Boundary, including to the west at Morri Morri Conservation Reserve, to the northwest at Mount Bolangum Nature Conservation Reserve and to the southeast in Kara Kara National Park.

#### *Pink-tailed Worm-lizard survey*

Surveys were undertaken in late spring (October 2021) and in early summer (December 2021). Extensive rock rolling surveys were undertaken in suitable habitat. Pink-tailed Worm-lizard was not recorded during these surveys and is therefore considered unlikely to occur within the Project Area.

#### *Targeted surveys for Squirrel Glider and Brush tailed Phascogale*

Targeted surveys (hair-tubes) were undertaken in 2021 for both species within suitable habitat along roadside vegetation. These involved fortnightly checks, tape change and re-baiting of hair-tubes. Subsequently hair samples were analysed by a specialist.

No presence of Brush-tailed Phascogale or Squirrel Glider was detected during the surveys and these species are therefore considered unlikely to occur.

#### *Golden Sun Moth*

Golden Sun Moth has been assumed as present in the Project Area given the presence and extent of suitable grassy habitats. This will be confirmed through targeted surveys during the next phases of the Project.

## Transmission Line Project Areas

Listed fauna species have not specifically been investigated for the transmission lines to date but are assumed to be similar to investigations for the Wind Farm Project Areas. Once a detailed layout of the transmission line is finalised, impacts to listed fauna species will be assessed in more detail.

### Listed Communities

#### Wind Farm Project Areas – Eastern and Western Layouts

The EPBC Protected Matters Search Tool indicated that seven ecological communities listed under the EPBC Act had the potential to occur in the search region. Their occurrence in the study area was determined through native vegetation assessments using published descriptions and condition thresholds for these communities.

The following two EPBC Act listed ecological communities were recorded in the study area:

- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia – listed as Endangered (174.029 ha of this TEC was recorded in the study area); and
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – listed as Critically Endangered (20.982 ha of this TEC was recorded in the study area).

Grey Box – Buloke Grassy Woodland Community listed as threatened under the FFG Act was also recorded in the study area (48.75 ha recorded in the study area).

Woodland bird species (Hooded Robin, Diamond Firetail and Brown Treecreeper) recognised as members of the Victorian Temperate Woodland Bird Community (FFG Act: Threatened) have also been identified within the Project Area. Further assessment is required to determine the presence of the community.

## Transmission Line Project Areas

The EPBC Protected Matters Search Tool indicated that six ecological communities listed under the EPBC Act had the potential to occur in the search region (Table 7). Their likely occurrence in the study area was determined based on findings from assessments in adjacent areas.

**Table 7 Ecological communities listed under the EPBC Act with the potential to occur in the Transmission Line Project Areas**

Ecological Community	EPBC status	Occurrence in the study area
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions	EN	Does not occur.
Grey Box ( <i>Eucalyptus microcarpa</i> ) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	EN	Likely to occur.
Mallee Bird Community of the Murray Darling Depression Bioregion	EN	Does not occur.
Natural Grasslands of the Murray Valley Plains	CE	Unlikely to occur.
Plains mallee box woodlands of the Murray Darling Depression, Riverina and Naracoorte Coastal Plain Bioregions	CE	Does not occur.
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	CE	Likely to occur.

**Notes:**

CE = Critically Endangered, EN = Endangered.

In addition, the Grey Box – Buloke Grassy Woodland Community listed as threatened under the FFG Act is considered likely to occur given its presence in the wider wind farm area and the abundance of Buloke and Grey Box throughout the Transmission Line study area.

Further assessment is required to determine the presence of Victorian Temperate Woodland Bird Community (FFG Act: Threatened).

Further details of this assessment can be found in Attachment A.

**If known, what threatening processes affecting these species or communities may be exacerbated by the project?** (eg. loss or fragmentation of habitats) Please describe briefly.

The following threatening processes have been considered through the Flora and Fauna Assessment and preliminary environmental management approaches to understand if impacts will occur:

- Alteration to the natural flow regimes of rivers and streams.
- Degradation of native riparian vegetation along Victorian rivers and streams.
- Alteration to the natural flow regimes of rivers and streams.
- Increase in sediment input into Victorian rivers and streams due to human activities.
- Infection of amphibians with Chytrid Fungus, resulting in chytridiomycosis.
- Input of toxic substances into Victorian rivers and streams.
- Invasion of native vegetation by 'environmental weeds'.
- Loss of coarse woody debris from Victorian native forests and woodlands.
- Loss of hollow-bearing trees from Victorian native forests.
- Prevention of passage of aquatic biota as a result of the presence of instream structures.
- The spread of *Phytophthora cinnamomi* from infected sites into parks and reserves, including roadsides under the control of a state or local government authority.
- Use of *Phytophthora*-infected gravel in construction of roads, bridges and reservoirs.

It is expected that all can and would be managed based on implementation of appropriate environmental management measures during the relevant phases of the project (namely during construction).

**Are any threatened or migratory species, other species of conservation significance or listed communities potentially affected by the project?**

NYD  No  Yes If yes, please:

- List these species/communities:
- Indicate which species or communities could be subject to a major or extensive impact (including the loss of a genetically important population of a species listed or nominated for listing)  
Comment on likelihood of effects and associated uncertainties, if practicable.

As discussed in Section 11, the Project has the potential to effect listed threatened communities and species. Details are summarised below, with further information provided in Attachment A.

#### **Modelled species important habitat**

Based on modelling, the current proposal footprint would not have a disproportionate impact on any habitat for any rare or threatened species.

#### **Listed flora species**

A summary of the potential impacts to listed flora species is provided in Table 8 below and described below.



**Table 8 Potential impacts to listed flora species**

Threatened flora	Conservation status		Potential number of individuals removed	Estimated species habitat/ individuals remaining in Victoria	Significant impact
	EPBC Act	FFG Act			
Sun-orchid ( <i>Thelymitra</i> sp.)	Potentially Listed <sup>(1)</sup>	Potentially Listed	340	N/A	To be confirmed
Golden Cowslips ( <i>Diuris behrii</i> )		EN	2	30,400 ha (≈500,000 mature individuals) <sup>(2)</sup>	Unlikely
Buloke ( <i>Allocasuarina luehmannii</i> )		VU	5	577,700 ha (≈100,000 mature individuals) <sup>(3)</sup>	Unlikely

Notes:

EN = endangered; VU = vulnerable.

1 – Based on the timing of the flora assessment, a large number of Sun-orchid individuals were observed prior to flowering and due to the lack of flowering material, the species could not be identified to genus level. As such, a conservative assumption was undertaken, therefore it was considered that the EPBC Act threatened Sun-orchid could be present within the study area.

2 – DELWP (2021c) *Threatened Species Assessment* *Diuris behrii* Golden Cowslips. Department of Environment, Land, Water and Planning (DELWP). Available from: [https://bio-dev-naturekit-public-data.s3-ap-southeast-2.amazonaws.com/species\\_assessments/Diuris\\_behrii\\_501061.pdf](https://bio-dev-naturekit-public-data.s3-ap-southeast-2.amazonaws.com/species_assessments/Diuris_behrii_501061.pdf)

3 – DELWP (2021d) *Threatened Species Assessment* *Allocasuarina luehmannii* Buloke. Department of Environment, Land, Water and Planning (DELWP). Available from: [https://bio-dev-naturekit-public-data.s3-ap-southeast-2.amazonaws.com/species\\_assessments/Allocasuarina\\_luehmannii\\_500678.pdf](https://bio-dev-naturekit-public-data.s3-ap-southeast-2.amazonaws.com/species_assessments/Allocasuarina_luehmannii_500678.pdf)

The analysis of the likelihood of occurrence of listed flora species and targeted surveys identified that the following species could be impacted by any development in the study area:

- *Thelymitra* sp. (Sun-orchid, FFG Act and potentially EPBC Act listed) – 340 individuals recorded, some species may be threatened
- *Diuris behrii* (Golden Cowslips, FFG Act: Endangered) – two individuals recorded, this presents a very minor proportion of the remaining population in Victoria.
- *Allocasuarina luehmannii* (Buloke, FFG Act: Vulnerable) – five individuals recorded, this presents a very minor proportion of the remaining population in Victoria.

A large number of individuals in the Sun Orchid genus (*Thelymitra* spp.) were observed prior to flower development or after setting of seed and could therefore be identified to genus level only due to a lack of identifiable features. As such, a precautionary approach was undertaken in assuming that threatened Sun-orchids could be present, until further targeted surveys can be undertaken.

Listed flora species have not specifically been investigated for the transmission lines to date. Once a detailed layout of the transmission line is finalised, impacts to listed flora species along the transmission line route will be assessed in more detail.

### Listed fauna species

A summary of the potential impacts to listed fauna species is provided in Table 9 below and described below.

**Table 9 Potential impacts to listed fauna species**

Threatened fauna	Conservation status		Significant impact
	EPBC Act	FFG Act	
Swift Parrot	CE	CE	Unlikely
Powerful Owl		VU	Unlikely
White-throated Needletail	VU, M	VU	Negligible

Fork-tailed Swift	M		Negligible
Golden Sun Moth	VU	VU	Unlikely
Brown Treecreeper	VU		Unlikely
Hooded Robin	EN	VU	Unlikely
Diamond Firetail	VU	VU	Unlikely

**Notes:**

CE = critically endangered, EN = endangered, VU = vulnerable, M = migratory.

The following EPBC Act listed species have the potential to occur in the study area occasionally or within areas of suitable habitat. The susceptibility of these species to possible impacts from any development is discussed below.

- **Swift Parrot** - While a pair of Swift Parrot were within the Big Tottington Nature Conservation Reserve to the north of the Project Area, none were recorded in the Project Area boundary. This species is not expected to move across the Project Area on a regular basis due to the lack of high-quality foraging habitat within the Project Area. Individuals are more likely to move and forage through high-quality habitats in adjacent reserves. Occasionally, individuals of Swift Parrot may visit the Project Area temporarily when food resources may attract them into the site. Such occasional visits by the species are considered unlikely to have a significant impact on their overall populations.
- **Powerful Owl** – While Powerful Owl was recorded in adjacent reserves, Powerful Owl were not recorded within the Project Area during targeted surveys. It is not expected there would be any regular movement of Powerful Owl from surrounding areas onto the Project Area, owing to a lack of high-quality or extensive habitat that would support these species, with food and habitat resources readily available in these adjacent conservation reserves. Instead, it may be expected that the occasional individual may visit the Project Area temporarily when food resources may attract them into the site. Such occasional visits by the species are considered unlikely to have a significant impact on their overall population.
- **Migratory species**
  - **White-throated Needletail** – The Project Area is at the inland edge of the species range with only few records within the search region and was not observed during ecological surveys. As such impacts to this species from the Project are considered to be negligible.
  - **Fork-tailed Swift** – This is a widespread, mobile species that is only expected to potentially occur within the study area a few days per year. As a result, impacts to this species from the Project are considered to be negligible.
- **Golden Sun Moth** – Golden Sun Moth have previously been recorded in the wider search area and is considered to have the potential to occur in the Project Area. Suitable habitat is present within the Project Area in form of native derived grassland and the presence of this species has been assumed within these habitats. This will be confirmed through targeted surveys. The current proposed wind farm layout would impact 68.377 ha of potential Golden Sun Moth habitat. The Commonwealth Conservation Advice for the Golden Sun Moth (DAWE 2021) notes the Area of Occupancy for the Golden Sun Moth is at least 1,596 km<sup>2</sup>, which equates to 159,500 ha. The removal of approximately 69 ha of potential habitat would therefore equate to less than 0.05% of the habitat remaining for the species across its range. This is well less than 1% and therefore unlikely to be considered a significant proportion of habitat for the species.
- **Brown Treecreeper, Hooded Robin and Diamond Firetail** were recorded during detailed field assessments and are members of the Victorian Temperate Woodland Bird Community (FFG Act: Threatened). These species are generally confined to areas in or adjacent to woodland and they

are not expected to fly at RSA height. Impacts to these species from the development and construction of the Project are unlikely to be significant.

### Listed Communities

A summary of the potential impacts to listed communities is provided in Table 10 below and described below.

**Table 10 Potential impacts to listed communities**

Threatened ecological communities (TEC)	Conservation status		Significant impact
	EPBC Act	FFG Act	
Grey Box Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	CE		Likely
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	CE		Likely
Grey Box – Buloke Grassy Woodland Community		T	Unlikely

**Notes:**

CE = critically endangered, T = threatened.

The wind farm development footprint will result in the following losses to TECs:

- 23.371 ha of *Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia* (EPBC Act: Endangered) (13% of that recorded in the study area)
- 5.627 of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (EPBC Act: Critically Endangered) (27% of that recorded in the study area).
- 3.105 ha of *Grey Box – Buloke Grassy Woodland* (FFG Act: Threatened) (6% of that recorded in the study area).

While the impacts to EPBC Act listed Threatened Ecological Communities (TECs) would potentially be considered significant in accordance with EPBC Act policy, the small proportional removal (6%) of FFG Act listed Grey Box-Buloke Grassy Woodland that is present in the study area is not considered to be significant.

Woodland bird species recognised as members of the Victorian Temperate Woodland Bird Community (FFG Act: Threatened) have also been identified within the Project Area. Further assessment is required to determine the presence of the community and potential impacts associated with the Project.

### Is mitigation of potential effects on indigenous flora and fauna proposed?

NYD  No  Yes If yes, please briefly describe.

The Project design has considered the potential impacts to indigenous flora and fauna within the Project Area. Nature Advisory have engaged with Aurecon and Neoen in an extensive, iterative design process to include the findings of native vegetation and targeted species surveys. This process has focussed on avoiding and minimising impacts to listed communities and threatened species as the highest priority, followed by avoiding large trees and high-quality patches, and then avoiding scattered trees and remaining patches based on score.

Efforts to avoid and minimise impacts to native vegetation and other significant ecological values has occurred for the following:

- Implementation of threatened fauna species habitat buffers, specifically a 300 m turbine free buffer around Powerful Owl habitat, 1 km turbine free buffer around Swift Parrot habitat and 300 m turbine free buffer around all Wedge-tailed Eagle nests.

- Four turbines, S1.01, S1b.01, S1.03 and S1b.16, have been removed to avoid impacts to sensitive areas of native vegetation. This has resulted in a reduction of impacts to at least 3.126 hectares of native vegetation.
- Turbines W.1, W.7, W.10, W.9, W.22, W.26, W.43, W.52, E.8, E.9, E.14, E.34, E.39, E.41 and E.44 have been relocated to minimise impacts to native vegetation. This has resulted in an overall reduction of impacts to 4.347 hectares of native vegetation, and a reduction of impacts to 6.053 ha of the EPBC Act listed Grey Box Grassy Woodland listed ecological community.
- The planned access track from Ararat-St Arnaud Road utilising Bennett Road has been removed and relocated to Bolangum Inn Road to minimise impacts to sensitive roadside native vegetation.
- The planned access track from Hannet Road has been removed and relocated to Ararat – St Arnaud Road to minimise impacts to roadside native vegetation.

Avoidance and mitigation of potential effects on indigenous flora and fauna has been a consideration in the Project design and siting. This has included:

- Minimised removal of indigenous remnant patch vegetation
- Minimised removal of scattered trees
- Turbines sites sited away from native vegetation
- Access tracks micro-sited to avoid and minimise native vegetation impacts
- Transmission line works sited at least 30 m from wetlands and waterbodies, and towers should be sited at least 50 m from the edge of waterways
- Use of different transmission tower structures to increase span length or height across waterway areas
- Works when wetlands are dry or the risk of altering the ground surface is lowest, if they cannot be avoided

There is potential for indirect impacts to native vegetation and habitat for threatened and migratory species. This would be managed through best practice construction environmental management.

Native vegetation removal required would be offset in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP, 2017).

The recommended mitigation will be documented in future application documents and will be developed in consultation with DTP and other relevant authorities.

**Other information/comments?** (eg. accuracy of information)

Refer to *Flora, Fauna and Targeted Threatened Species Assessments* included in Attachment A.

### 13. Water environments

**Will the project require significant volumes of fresh water (eg. > 1 GL/yr)?**

NYD  No  Yes If yes, indicate approximate volume and likely source.

Water will be required during construction, primarily for road construction, dust suppression and turbine foundations. The volume of water is expected to be significantly less than 1 GL/yr over the anticipated two-year construction period.

Operational water requirements are expected to be substantially less than 1GL/yr.

Water to be used during construction and operation will be sourced from either, or a combination of, on-site storages, on site tanks, on site bores or from potential off-site locations. Water sources for the construction and operation of the Project will be confirmed during detailed design.

**Will the project discharge waste water or runoff to water environments?**

NYD  No  Yes If yes, specify types of discharges and which environments.

There is the potential for small volumes of water to be discharged to receiving water environments during construction. This would primarily be run-off from hardstand and access track surfaces during rainfall events. There would be relatively low volumes of waste water generated during construction and discharge to water environments is not expected to occur.

To manage potential run off and potential spills, appropriate sediment and erosion controls, spill controls and bunding measures would be implemented in line with industry standard guidelines.

**Are any waterways, wetlands, estuaries or marine environments likely to be affected?**

NYD  No  Yes If yes, specify which water environments, answer the following questions and attach any relevant details.

The Project Area is located on the drainage divide between the Wimmera Catchment (south) and the Avon-Richardson Catchment (north). Both catchment areas form part of the Murray-Darling Basin. The southern portion of the Project Area drains directly into Wattle Creek, which is a tributary of the Wimmera River. The Wimmera River flows generally northwards from the Pyrenees Ranges and discharges into the terminal lake/wetland systems of Lake Hindmarsh and Lake Albacutya. The northern portion of the Project Area drains to the Avon River through its tributaries such as Paradise Creek and Reedy Creek. The Avon River flows in a northerly direction until it joins the Richardson River. The Richardson River flows into Lake Buloke.

Project infrastructure has been sited to avoid any designated waterways. The Project Area, however, intersects with several waterways, specifically Avon Creek, Reedy Creek, Sandy Creek, Paradise Creek, Wattle Creek, Howard Creek, Heifer Station Creek, Greens Creek, Wimmera River, Six Mile Creek, Morri Morri Creek, and Bolangum Creek. There are also several minor smaller unnamed channels/waterways and one natural wetland (Wetland ID 40858) mapped in the Victorian Wetland Inventory Database. Most of the waterways in the Project Area are ephemeral and only flow following rainfall events or in the wetter months.

Physical damage to waterways and/or waterbodies may occur as a direct result of construction activities throughout the Project Area, however agricultural land use of the site has already caused some degradation of these waterways. It is expected that impacts arising from the Project can be controlled through design and through compliance with industry standard guidelines during construction.

**Are any of these water environments likely to support threatened or migratory species?**

NYD  No  Yes If yes, specify which water environments

Water environments are not anticipated to support threatened or migratory species. Most of the waterways in the Project Area are ephemeral and only flow following rainfall events or in the wetter months. Due to the low rainfall of the region and ephemeral nature of water sources, it is assumed fauna species that are dependent on suitable aquatic habitat are unlikely to occur. Further assessments would be undertaken to confirm this and determine the potential for impacts on threatened or migratory species.

**Are any potentially affected wetlands listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'?**

NYD  No  Yes If yes, please specify.

The Project does not intersect with any wetlands listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'.

The nearest Ramsar sites, Kerang Wetlands (to the north east), Lake Albacutya (to the north west) and Western District Lakes (to the south), are 100 to 150 km away from the Project Area. The closest

nationally important wetland is Lake Buloke Wetlands (55 km north of the Project Area). Significant impacts to these wetlands as a result of the Project are not anticipated due to the separation distance.

**Could the project affect streamflows?**

NYD  No  Yes If yes, briefly describe implications for streamflows.

The construction of the Project would result in an increase in the area of impervious surfaces compared to the current conditions which could result in higher flow peaks and shorter flow durations during rainfall events. The construction of any Project infrastructure either within or immediately adjacent to waterways or ephemeral waterbodies could also change water flows and increase flood levels.

As shown in Figure 6 – Planning overlays, a land subject to inundation overlay (LSIO) is located over areas of the southern portion of the western windfarm layout and along the Bulgana transmission line. Due to the nature of wind farm developments, infrastructure is typically sited on ridgelines and away from areas of inundation. This means that minimal infrastructure is located in the LSIO. These are all located within the western wind farm layout and include one turbine and associated hardstand and minor sections of access tracks (approximately 2 km of the 98 km of track on the western wind farm layout). Sections of the Bulgana transmission line would also be located within the LSIO however actual length will be determine once the options assessment has been undertaken and the route is confirmed.

Any infrastructure that intersects with waterways (including the LSIO) would need to be designed and constructed to meet the relevant requirements of the CMA under the *Water Act 1989*. Most Project infrastructure is currently sited away from major and minor overland flow paths, however due to site constraints some may be sited within or near a 100-year ARI flood extent, or near a watercourse.

Where culverts, bridges or ford crossings are required to cross waterways, the design and construction of these structures would be undertaken in a way that minimises the potential to increase flood levels.

**Could regional groundwater resources be affected by the project?**

NYD  No  Yes If yes, describe in what way.

The Project will require significant excavation works and there is a potential that excavations may intercept the shallow groundwater that can be present in the Project Area, however it is unlikely that regional groundwater resources would be affected. Regional groundwater resources are expected to be at depths greater than 5 m below ground level. Design of the turbine foundations will need to consider the depth to groundwater across the Project Area and potential impacts will need to be managed accordingly.

Based on data obtained from Visualising Victoria's Groundwater, there appear to be groundwater dependant ecosystems (GDEs) within and near the Project Area. These are associated with Sandy Creek, Avon River, Avon Creek, Paradise Creek and Anderson Creek. Groundwater interaction with surface water bodies is not likely to be impacted as Project infrastructure is located away from these GDEs, with only one turbine located within 500 m of a GDE (approximately 340 m from Sandy Creek).

**Could environmental values (beneficial uses) of water environments be affected?**

NYD  No  Yes If yes, identify waterways/water bodies and beneficial uses (as recognised by State Environment Protection Policies)

Based on data obtained from Visualising Victoria's Groundwater, groundwater salinity across the Project area ranges between 1,000 and 35,000 mg/L (as total dissolved solids). To be conservative, the lower end of the range has been used to classify the water quality, which has been classified as Segment A2 for groundwater within the EPA Environment Reference Standard (ERS). Environmental values (previously known as beneficial uses) associated with Segment A2 include:

- Water dependent ecosystems
- Potable water supply (acceptable)
- Potable mineral water supply

- Agriculture and irrigation (stock watering)
- Industrial and commercial use
- Water-based recreation (primary contact recreation)
- Traditional Owner cultural values
- Buildings and structures
- Geothermal properties.

According to the ERS, surface waters within and surrounding the Project Area are classified as part of the Murray and Western Plains segment. Environmental values associated with this segment include:

- Water dependent ecosystems and species that are slightly to moderately modified
- Agriculture and irrigation
- Human consumption of aquatic foods
- Industrial and commercial
- Water-based recreation (primary contact, secondary contact, and aesthetic enjoyment)
- Traditional Owner cultural values.

Further assessments would be undertaken to determine the potential for impacts on groundwater and surface environmental values, including biodiversity values. Depths to groundwater and siting of infrastructure away from surface water bodies would be considered in the detailed design phase of the Project to ensure environmental values are not affected. Construction methodologies to avoid or minimise impacts to surface water environments would also be considered and implemented where possible.

**Could aquatic, estuarine or marine ecosystems be affected by the project?**

NYD  No  Yes If yes, describe in what way.

Aquatic, estuarine and marine ecosystems are not anticipated to be affected by the Project. Most of the waterways in the Project Area are ephemeral and only flow following rainfall events or in the wetter months. Due to the low rainfall of the region and ephemeral nature of water sources, it is assumed fauna species that are dependent on suitable aquatic habitat are unlikely to occur. Further assessments would be undertaken to confirm this and determine the potential for impacts, particularly on downstream aquatic ecosystems.

**Is there a potential for extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems over the long-term?**

No  Yes If yes, please describe. Comment on likelihood of effects and associated uncertainties, if practicable.

The Project is not anticipated to have major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems over the long term. There is potential for short term, minor impacts during the construction period, however long-term effects are not expected to occur. Any short-term impacts will be minimised through the implementation of appropriate controls.

**Is mitigation of potential effects on water environments proposed?**

NYD  No  Yes If yes, please briefly describe.

In line with best practice environmental management hierarchy, mitigation measures to avoid or minimise impact on water environments have been proposed for the Project and include:

- Project infrastructure would be sited to avoid floodplain areas, major drainage lines and riparian zones. Due to site constraints some infrastructure may be sited within or near a 100-year ARI flood extent, or near a watercourse.
- Culverts and bridges on access roads across creeks and major drainage lines would need to be designed to minimise potential increases in flood levels.
- Appropriate sediment and erosion control measures, spill controls and bunding measures would be implemented through construction and operation of the Project.
- During construction any clean stormwater would be diverted away from the parts of the site where the soil will be disturbed, to not contaminate clean stormwater.

These measures will be further developed as the Project design development process progresses.

In general, these measures can be achieved through compliance with all industry standard guidelines relating to construction, sediment and erosion control. Permits such as “works on waterways” permits may be required by the Catchment Management Authority and would include standard conditions for issue and guidelines to avoid damage and ensure permit compliance.

**Other information/comments?** (eg. accuracy of information)

Refer to *Preliminary Surface Water and Groundwater Assessment* attached in Attachment E.

## 14. Landscape and soils

### Landscape

**Has a preliminary landscape assessment been prepared?**

No  Yes If yes, please attach.

A *Preliminary Landscape and Visual Assessment* is attached in Attachment B.

**Is the project to be located either within or near an area that is:**

- **Subject to a Landscape Significance Overlay or Environmental Significance Overlay?**

NYD  No  Yes If yes, provide plan showing footprint relative to overlay.

The Project Area is not located within any areas subject to a Significant Landscape Overlay (SLO) and/or an Environmental Significance Overlay (ESO).

There are a number of ESOs located south of the Project Area. None of these ESOs are located within 2 km of the Project Area.

- **Identified as of regional or State significance in a reputable study of landscape values?**

NYD  No  Yes If yes, please specify.

The Project Area is not identified as of regional or State significance in a reputable study of landscape values.

The siting of the Project is consistent with section 2.1.4 of the Development of Wind Energy Facility Guidelines which requires the wind energy facilities to be located outside of National Parks, State Parks and Coastal Parks and other high quality environmental and landscape locations in the State. The ongoing design and development of the Project, along with the impact assessment will ensure the Project is appropriately sited in consideration of the surrounding landscape conditions and relevant policy and guidelines.



• **Within or adjoining land reserved under the *National Parks Act 1975* ?**

NYD  No  Yes If yes, please specify.

The Project Area is not located within land reserved under the *National Parks Act 1975*. However, Kara Kara National Park is adjoining the Eastern Layout of the Project Area which is listed under 'Schedule Two' of the *National Parks Act 1975*.

• **Within or adjoining other public land used for conservation or recreational purposes?**

NYD  No  Yes If yes, please specify.

The following public land used for conservation or recreational purposes are located within the Project Area:

- A section of Boldangum Creek and surrounding land located within the Western Layout adjacent to Morrl Morrl Nature Conservation Reserve
- A section of Greens Creek and surrounding land within the Bulgana Terminal Station Connection near Stawell Avoca Road.

Areas of public land adjacent to the Project Area include Kara Kara National Park to the east, Morrl Morrl Nature Conservation Reserve to the west and Mount Bolangum Nature Conservation Reserve to the north-west.

Other public land within vicinity of the Project Area mainly relate to nearby waterways including Avon Creek, Reedy Creek, Sandy Creek, Paradise Creek, Wattle Creek, Howard Creek, Heifer Station Creek, Greens Creek, Wimmera River, Six Mile Creek, Morrl Morrl Creek, Bolangum Creek and Indigo Creek.

**Is any clearing vegetation or alteration of landforms likely to affect landscape values?**

NYD  No  Yes If yes, please briefly describe.

The Project is not expected to affect landscape values as a result of vegetation clearing or alteration of landform.

The Project is proposed on two hill ranges, however these are fairly low-lying undulating hills which do not form significant features in the broader area. Any changes to these landforms are not expected to impact upon existing landscape values.

The Project Area is also highly modified and has been largely cleared of vegetation for agricultural purposes. Any additional removal of vegetation as the result of the Project is unlikely to have a considerable impact on landscape values.

**Is there a potential for effects on landscape values of regional or State importance?**

NYD  No  Yes Please briefly explain response.

The Project does not include any landscape values of regional or State importance and, therefore, no impacts to such landscape values are expected.

**Is mitigation of potential landscape effects proposed?**

NYD  No  Yes If yes, please briefly describe.

Mitigation measures would be implemented to avoid and minimise the potential landscape effects that may arise as a result of the Project. Mitigation measures would be further developed as design progresses and further detailed investigations are undertaken and would include requirements like developing screening solutions for the viewpoints assessed with moderate to high visual impacts.

**Other information/comments?** (eg. accuracy of information)

N/A

Note: A preliminary landscape assessment is a specific requirement for a referral of a wind energy facility. This should provide a description of:

- The landscape character of the site and surrounding areas including landform, vegetation types and coverage, water features, any other notable features and current land use;
- The location of nearby dwellings, townships, recreation areas, major roads, above-ground utilities, tourist routes and walking tracks;
- Views to the site and to the proposed location of wind turbines from key vantage points (including views showing existing nearby dwellings and views from major roads, walking tracks and tourist routes) sufficient to give a sense of the overall site in its setting.

## Soils

### Is there a potential for effects on land stability, acid sulphate soils or highly erodible soils?

NYD  No  Yes If yes, please briefly describe.

Detailed investigations into land stability, acid sulfate soils or highly erodible soils are yet to be undertaken.

A desktop assessment was undertaken as part of the *Surface Water and Groundwater Assessment* to gain an understanding of the soil types across the Project Area. The assessment found that while there is limited information available about soil characteristics of the Project Area, it was possible to determine that the Project Area is typically dominated by duplex soils, with an abrupt textural contrast between the surface soil horizons and the subsurface. Soils in the Project Area may be vulnerable to salinity and erosion. Across the Project Area erosion risk varies with sheet and rill erosion present throughout much of the Project Area, and gully erosion being more prevalent on lower slopes where there is a greater depth of unconsolidated material.

A review of the Australian Soil Resource Information System (ASRIS) indicates that the Project Area has a low to extremely low probability of occurrence of acid sulphate soils.

While there is the potential for the Project to effect land stability and erodible soils, it is considered that through design and compliance with all industry standard guidelines relating to construction and sediment and erosion control, these impacts can be controlled.

### Are there geotechnical hazards that may either affect the project or be affected by it?

NYD  No  Yes If yes, please briefly describe.

Geotechnical investigations are proposed to be undertaken during the next phase of project development to identify potential hazards. Potential geotechnical hazards that may affect the Project or be affected by it include:

- Variable strength materials
- Shallow groundwater
- Data gaps, insufficient ground investigation data.

### Other information/comments? (eg. accuracy of information)

Data on soils informing this referral is based solely on desktop assessment. At a minimum, intrusive soil and groundwater investigations are proposed to inform the design.

## 15. Social environments

**Is the project likely to generate significant volumes of road traffic, during construction or operation?**

NYD  No  Yes If yes, provide estimate of traffic volume(s) if practicable.

The Project is unlikely to generate significant volumes of road traffic during the construction, operation or decommissioning phases.

### **Construction**

During construction of the Project, there would be a temporary increase in traffic volumes. However, this level of increase is expected to be relatively insignificant with no considerable impacts on the nearby road network.

It is expected that construction activities will be undertaken over a two-year period with a peak workforce of approximately 240 full-time equivalent employees engaged on the Project. Construction is anticipated to occur seven days a week, with the proposed hours of 7:00 am – 6:00 pm. The peak traffic generation for light vehicles is up to 240 vehicles to site in the morning and afternoon peak hours (equating to up to 480 light vehicle movements per day). The average daily heavy vehicles have been conservatively estimated, based on previous projects, as 240 vehicles two-ways for deliveries and other tasks.

### **Operation**

Traffic volumes during operation would be negligible. Following construction, operational traffic to and from the Project would be negligible.

### **Decommissioning**

Potential traffic volume generated during decommissioning is expected to be significantly less than that of the construction phase. The Project lifespan is expected to be 30 years and, therefore, a separate future Traffic Impact Assessment will be required to determine the traffic volumes during decommissioning.

For further information, refer to the *Preliminary Traffic Assessment* attached in Attachment F.

**Is there a potential for significant effects on the amenity of residents, due to emissions of dust or odours or changes in visual, noise or traffic conditions?**

NYD  No  Yes If yes, briefly describe the nature of the changes in amenity conditions and the possible areas affected.

The Project is unlikely to result in significant effects on the amenity of residents due to emissions of dust or odours or changes in visual, noise or traffic conditions. Amenity effects are anticipated during construction, however these are expected to be manageable through typically mitigation measures. The agricultural settings also means that a reasonable distance between proposed infrastructure and dwellings can be maintained and there are minimal residents that can be affected.

### **Dust and odour**

Construction activities are not expected to generate significant odour emissions.

Construction activities associated with the Project such as trenching, earthworks, vehicle movements and the handling and transfer of spoil can generate dust emissions. Significant effects on the amenity of residents due to the generation of dust is unlikely due to the agricultural setting, Effects associated with dust are also typically well understood and are able to be managed through accepted and effective management and mitigation measures being implemented during construction.

There are no expected emissions to air from the Project once operational.

### **Noise**

An assessment of operational noise concluded that the Project can be designed and developed to achieve Victorian policy requirements concerning operational wind turbine noise. Noise emissions from

the Project are expected to comply at all noise sensitive receivers, both involved and non-involved (refer to Figure 7 for location of sensitive receivers). Further, cumulative assessment of noise levels from the proposed Project and other surrounding wind farm(s) indicated that a significant impact is not expected.

Potential impacts associated with construction noise will be assessed once further details regarding construction methodologies are available. Following this, appropriate mitigation measures will be developed to ensure such impacts are minimised as much as practicable.

For further information, refer to *Wind Turbine Noise Assessment* attached in Attachment C.

### **Traffic**

The Project will seek to use / upgrade existing access points where available to facilitate delivery of Project components and to minimise disruptions to the road network. Suitable road improvements and upgrades will be investigated and implemented to support the traffic volumes and heavy vehicles.

Effects on traffic conditions will be limited to the construction phase and will not create ongoing long-term impacts during operation. In order to manage potential traffic impacts, a Traffic Management Plan would be prepared in accordance with relevant guidelines and in consultation with key stakeholders including DTP, Northern Grampians Shire Council and Pyrenees Shire Council.

For further information, refer to the *Preliminary Traffic Assessment* attached in Attachment F.

### **Visual**

A preliminary assessment of a number of representative viewpoints surrounding the Project Area identified the potential for moderate to high visual effects to occur at certain locations as the result of the Project. Turbines positioned at higher elevations than the viewpoints have the potential to be fully visible above existing trees or structures. Mitigations measures such as landscape screening solutions would be developed to manage these impacts.

For further information, refer to the *Preliminary Landscape and Visual Impact Assessment* attached in Attachment B.

### **Shadow flicker**

An assessment was undertaken to calculate the theoretical number of hours of shadow flicker experienced at each residence. The assessment found that three host residences would be affected by shadow flicker, however as these landholders are involved with the Project, the theoretical limits are not applicable. No other residences were identified as being affected.

It should be noted that as the design progresses, appropriate mitigation measures will be developed so that the potential shadow flicker effects are minimised to the most practicable level.

For further information, refer to the *Preliminary Shadow Flicker Assessment* attached in Attachment G.

### **Is there a potential for exposure of a human community to health or safety hazards, due to emissions to air or water or noise or chemical hazards or associated transport?**

NYD  No  Yes If yes, briefly describe the hazards and possible implications.

The Project is not anticipated to expose the community to any health or safety hazards associated with chemicals, air or water.

### **Noise**

As stated above, the Project can be designed and developed to achieve Victorian policy requirements concerning operational wind turbine noise and noise emissions are expected to comply at all noise sensitive receivers, both involved and non-involved.

### **Traffic**

As stated above, road improvements and upgrades will be investigated and implemented to support the traffic volumes and heavy vehicles. All works would need to be undertaken in accordance with a Traffic Management Plan that would be prepared in accordance with relevant guidelines and in consultation with key stakeholders including DTP, Northern Grampians Shire Council and Pyrenees Shire Council.

**Is there a potential for displacement of residences or severance of residential access to community resources due to the proposed development?**

NYD  No  Yes If yes, briefly describe potential effects.

The Project will not displace any residents or sever access to community resources.

**Are non-residential land use activities likely to be displaced as a result of the project?**

NYD  No  Yes If yes, briefly describe the likely effects.

The Project Area is primarily agricultural land used for grazing. Wind energy facilities are considered a highly compatible land use when located with agricultural uses. On average, agricultural operations will lose around 1-3% of land due to displacement from the footprint of wind turbines and associated infrastructure. The remaining land can continue to operate for agricultural purposes, both during the construction and operation phase of the wind farm.

**Do any expected changes in non-residential land use activities have a potential to cause adverse effects on local residents/communities, social groups or industries?**

NYD  No  Yes If yes, briefly describe the potential effects.

The Project is not expected to result in changes in non-residential land use as less than 3% of the 18,404 ha Project Area is lost to agricultural operations and the remaining land can continue to be used for agricultural operations during the construction, operational and decommissioning phases. New and upgraded tracks often provide for better access around properties for agricultural operations and (when necessary) for firefighting. This change is also not expected to cause adverse effects on local residents/communities, social groups or industries since there will be little direct physical interaction between these people or groups and the Project, especially once operational.

**Is mitigation of potential social effects proposed?**

NYD  No  Yes If yes, please briefly describe.

Potential social effects of the Project are proposed to be managed via appropriate mitigation measures as the design progresses. The impacts are expected to be managed in accordance with best practice and industry standards. Potential amenity-related impacts would be mitigated through implementation of a Construction Environmental Management Plan and a Traffic Management Plan alongside active, regular engagement with the local community.

Further assessment of potential social impacts will be undertaken, with the development of tailored mitigation measures specific to the Project and local region to manage potential social effects.

**Other information/comments?** (eg. accuracy of information)

N/A

## Cultural heritage

**Have relevant Indigenous organisations been consulted on the occurrence of Aboriginal cultural heritage within the project area?**

No If no, list any organisations that it is proposed to consult.

Yes If yes, list the organisations so far consulted.

The Project Area is within two appointed RAP areas:

- Barengi Gadjin

- Dja Dja Wurrung.

The Project Area also includes a land component where an appointed RAP does not currently exist. This part of the Project would be evaluated by the First Peoples-State Relations (FP-SR), the State government administrative body.

Consultation with members of the Barengi Gadjin Land Council initially occurred in 2020, with additional consultation undertaken in July 2023. Consultation with members of the Dja Dja Wurrung Clans Aboriginal Corporation was also undertaken in July 2023.

Consultation is also proposed to be undertaken during the next phases of the Project and during development of the Cultural Heritage Management Plan(s) for the Project.

**What investigations of cultural heritage in the project area have been done?** (attach details of method and results of any surveys for the project & describe their accuracy)

A heritage due diligence assessment has been prepared to assist in identifying potential impacts to Aboriginal cultural heritage and historic heritage that may arise as a result of the Project and to determine whether further approvals or assessments are required. The due diligence assessment comprised:

- A review of background information including results of Aboriginal and historical heritage register searches.
- Creation of predictive statements identifying Aboriginal places, areas of cultural heritage sensitivity, and historical heritage sites likely to be located within the Project Area.
- Identification of any legislative requirements to undertake further assessment.
- Recommendations and mitigation.

Further details on the investigation of cultural heritage can be found in Attachment D.

**Is any Aboriginal cultural heritage known from the project area?**

NYD  No  Yes If yes, briefly describe:

- Any sites listed on the AAV Site Register
- Sites or areas of sensitivity recorded in recent surveys from the project site or nearby
- Sites or areas of sensitivity identified by representatives of Indigenous organisations.

The Project Area intersects with areas of cultural heritage sensitivity (CHS) associated with:

- being located within 50 m of a VAHR place.
- being located within 200 m of a waterway.

A search of the VAHR shows that 16 registered Aboriginal places occur within the Project Area, comprising of ten earth features, four scarred trees, and two LDADs.

The Project also intersects areas of CHS associated with waterways, specifically Avon Creek, Reedy Creek, Sandy Creek, Paradise Creek, Wattle Creek, Howard Creek, Heifer Station Creek, Greens Creek, Wimmera River, Six Mile Creek, Morri Morri Creek, Bolangum Creek and Indigo Creek.

**Are there any cultural heritage places listed on the Heritage Register or the Archaeological Inventory under the *Heritage Act 1995* within the project area?**

NYD  No  Yes If yes, please list.

Currently, there are no cultural heritage places listed on the Victorian Heritage Register (VHR) or the Victorian Heritage Inventory (VHI) under the *Heritage Act 2017* within the Project area.

**Is mitigation of potential cultural heritage effects proposed?**

NYD  No  Yes If yes, please briefly describe.

Mitigation of potential cultural heritage effects is proposed, however further assessment is required to confirm recommended measures.

A Cultural Heritage Management Plan (CHMP) will be required under the *Aboriginal Heritage Act 2006*. Development of the CHMP would involve participation with Barengi Gadjin, Dja Dja Wurrung and First Peoples State Relations to develop appropriate mitigation measures for potential impacts to cultural heritage.

A historic heritage assessment of the Project Area is also proposed to be undertaken to avoid or minimise harm to unrecorded archaeological heritage. It is anticipated that if heritage places are identified during the assessment process, impacts could be managed through avoidance during the detailed design process or through established permitting processes with Heritage Victoria and construction management practices.

**Other information/comments?** (eg. accuracy of information)

Refer to *Heritage Due Diligence Assessment* attached in Attachment D.

**16. Energy, wastes & greenhouse gas emissions**

**What are the main sources of energy that the project facility would consume/generate?**

- Electricity network. If possible, estimate power requirement/output .....
- Natural gas network. If possible, estimate gas requirement/output .....
- Generated on-site. If possible, estimate power capacity/output .....
- Other. Please describe.

Please add any relevant additional information.

The aim of the Navarre Green Power Hub Project is to generate renewable energy to supplement Victorian and Australian energy supply, through the development of a viable wind energy facility.

The proposed wind farm will have up to 102 turbines. As the candidate turbine model has not yet been selected, the exact generation per turbine is unknown. It is anticipated each turbine would generate approximately 8 MW, and that overall, the project would have around 600 MW installed capacity.

**What are the main forms of waste that would be generated by the project facility?**

- Wastewater. Describe briefly.
- Solid chemical wastes. Describe briefly.
- Excavated material. Describe briefly.
- Other. Describe briefly.

Please provide relevant further information, including proposed management of wastes.

Most of the waste generated by the Project would be during construction and would primarily comprise excess fill material from on-site excavations. Detailed design will be used to optimise cut and fill balances and maximise on-site reuse for site rehabilitation. There may, however, be small quantities of excavated material to be removed from site which would be disposed of to a suitably licensed landfill facility at the completion of the construction works.

Wastewater generated on-site will be limited to sewage from on-site facilities for the construction workforce. Temporary onsite sewage collection and storage facilities that would be installed and pumped out for off-site disposal at an appropriate facility to avoid any risks to ground water.

General refuse generated would be managed in accordance with relevant management plans that would be implemented during construction.

Operational waste will be managed through an Operational Environmental Management Plan. This would be developed in accordance with Neoen's standard operating procedures and it is proposed that specific management measures will be confirmed as design is developed and further assessment is undertaken.

**What level of greenhouse gas emissions is expected to result directly from operation of the project facility?**

- Less than 50,000 tonnes of CO<sub>2</sub> equivalent per annum
- Between 50,000 and 100,000 tonnes of CO<sub>2</sub> equivalent per annum
- Between 100,000 and 200,000 tonnes of CO<sub>2</sub> equivalent per annum
- More than 200,000 tonnes of CO<sub>2</sub> equivalent per annum

Please add any relevant additional information, including any identified mitigation options.

Non-material levels of greenhouse gas emissions would occur during the operation of the Project through the use of vehicles, plant and equipment. This generation would be significantly offset by the production of clean energy.

## 17. Other environmental issues

**Are there any other environmental issues arising from the proposed project?**

- No  Yes If yes, briefly describe.

**Aviation**

There is the potential for the Project to impact aviation operations. An assessment would be undertaken during the next phases of the Project and investigate the locations of nearby airfields and local aircraft movements to determine the potential impact on aviation operations and the need for mitigation to be incorporated into the design.

**Bushfire**

In accordance with the Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria (DELWP, 2021), development of wind energy facilities must be undertaken in consideration of potential bushfire risks.

The Project Area is fully within the Bushfire Prone Areas (BPA) and, as outlined in Section 7, some portions of it are subject to the BMO. However, at this preliminary stage and based on the concept design, the Project is not deemed to result in increasing the bushfire risks in the landscape. This is mainly due to the cleared state of the Project Area and multiple waterways and waterbodies within and surrounding it. Further, the road network serving the Project Area is relatively well-established increasing accessibility and shortening response time in event of a fire.

As the design progresses and details around specific components (i.e. office building) are determined, a bushfire risk assessment would be undertaken to assess the Project's potential impacts in detail. The Project will investigate the options to mitigate bushfire risks as much as practicable, such as (but not limited to):

- Placing the powerlines underground
- Equipping the wind farms with built in fire suppression and alarm systems
- Greater surveillance



- Provision of additional static water supply as relevant.

## 18. Environmental management

**What measures are currently proposed to avoid, minimise or manage the main potential adverse environmental effects? (if not already described above)**

- Siting: Please describe briefly
- Design: Please describe briefly
- Environmental management: Please describe briefly.
- Other: Please describe briefly

Add any relevant additional information.

### Siting and design

Neoen's selection of the Project site was informed by an understanding of the available wind resource, the proximity of an electricity transmission network connection point into Bulgana Terminal Station, site access and environmental and planning constraints including:

- Land use and tenure
- Locations of dwellings and other sensitive receptors
- The boundaries of National Parks
- Areas of ecological sensitivity
- Areas of cultural heritage sensitivity.

As indicated in previous sections in this referral, the Project will be refined following the completion of further environmental investigations. At this stage, Neoen is committed to ongoing active consideration of siting and design responses that will avoid or minimise potential significant impacts.

### Environmental management

Neoen has an ISO 14001:2015 certified Environmental Management System (EMS). Through the life of the Project, Neoen would implement their EMS to identify and control the environmental impact of the activities, products and services associated with the Project and to continually seek to improve environmental performance.

It is also anticipated that an Environmental Management Framework (EMF) would be prepared during the approval process and would be informed by environmental impact assessments and relevant legislative requirements including Neoen's General Environmental Duty (GED) under the *Environment Protection Act 2017*. The EMF would provide transparent governance of the environmental aspects of design, construction and operation of the Project. The framework would include the roles and responsibilities for the Project, the environmental management requirements for the approvals, the compliance and monitoring requirements and would provide further information on the relevant sub plans that would need to be prepared.

The subplans would be put in place to help avoid, minimise and manage potential adverse environment effects through:

- Site visits and reviews of the Project land pre-construction, during and post construction.
- Management measures for planning the design of permanent and temporary works in accordance with regulatory approval conditions
- Site inspections to be undertaken at all active work fronts to ensure that implemented controls (from subplans) are complied with.
- Regular audits to be conducted for compliance with management measures in the subplans.

## 19. Other activities

**Are there any other activities in the vicinity of the proposed project that have a potential for cumulative effects?**

NYD  No  Yes If yes, briefly describe.

The Project is located within the Western Victoria Renewable Energy Zone (REZ). The REZ is a designated area of Victoria that is being developed to support the transition to renewable energy and there are several other renewable energy projects within the vicinity of the Project Area. The development of renewable energy projects in this area, including VNI West and the Western Renewables Link has the potential to create cumulative effects that could be either beneficial or adverse.

Other wind farms in the region include the proposed Watta Wella Renewable Energy Project (approximately 16.5 km southwest of the Project), Bulgana Green Energy Hub (approximately 19.5 km south of the Project) and Crowlands wind farm (approximately 23 km south of the Project). Cumulative effects have been considered in the PLVIA, Noise Assessment and Transport Assessment and initial findings indicate that there is a negligible potential for cumulative effects.

Potential cumulative effects would be assessed further through the next phases of the Project.

## 20. Investigation program

### Study program

**Have any environmental studies not referred to above been conducted for the project?**

No  Yes If yes, please list here and attach if relevant.

All environmental studies undertaken for the Project to date have been referred to in this referral.

**Has a program for future environmental studies been developed?**

No  Yes If yes, briefly describe.

A program for future environmental studies is currently under development by Neoen.

All studies undertaken to inform this referral will be updated and progressed to a greater level of detail to inform project approvals and reflect the next phases of design. Additional studies will also be undertaken where required.

### Consultation program

**Has a consultation program conducted to date for the project?**

No  Yes If yes, outline the consultation activities and the stakeholder groups or organisations consulted.

Neoen have in place a Community Engagement Strategy which stages engagement with the community throughout the Project lifecycle, from site selection through to decommissioning.

Outcomes from community consultation activities undertaken to date by Neoen have been reviewed and consolidated to understand the range of community views, concerns, interests, and feedback provided on the Project.

Engagement and consultation with stakeholders for the purposes of this assessment have consisted of several mechanisms including:

- personal meetings and interviews

- community information sessions
- community feedback survey
- local business and service provider survey.

Engagement was conducted across several different platforms and mechanisms to increase capacity to engage with the Project. Efforts to increase accessibility of engagement included:

- A geographical spread of engagements across Navarre, Paradise, to increase access to in-person meetings.
- Neoen's employment of a nearby consultant.
- Provision of on-line and in-person events and engagement opportunities.
- Direct engagement with Traditional Owners.

A timeline of key events and engagement activities relating to the Project, has been compiled in Table 11.

**Table 11 Engagement Timeline**

Time	Engagement
<b>June 2020</b>	First briefing with North Grampians Council Contact with host landholders (n=13) and neighbouring landholders (n=9) Traditional Owners Aboriginal Corporation site tour Areas of interest pointed out for EES
<b>Oct 2020</b>	Discussions with surrounding neighbours initiated in person
<b>Q1 2021</b>	Feb/March 2021 Meetings with 10 families Meetings with neighbours and potential stakeholders involved with the transmission line route.
<b>2021</b>	Members brought on board as local community representatives to continue discussions while Covid was occurring.
<b>May 2022</b>	1st Community meeting held at Navarre Football club with approx. 40 attendees Day was advertised widely to surrounding neighbours and stakeholders. Website established for the project.
<b>Q2 2023</b>	April/May: Transmission line route discussions initiated. May: 2nd Community Information Day, 2 sessions approx. 40 attendees

**Has a program for future consultation been developed?**

NYD  No  Yes If yes, briefly describe.

Table 12 outlines the measures for delivering ongoing, consistent engagement for the Project. Measures have been designed in consideration of the expectations of all stakeholders engaged to date and aim to specifically mitigate social impacts and ongoing stakeholder concerns.

**Table 12 Community Engagement Plan**

Activity	Description / Format / Tools / Resources	Target Stakeholders	Purpose	Timeframe	Responsibility
Stakeholder mapping	Revisit Project Stakeholder list and update. Confirm relationships and level of influence / interest measures are current.	Project Team	Inform	Ongoing	Community Engagement Advisor Project Manager
Re-initiation briefings	Re-engage with key stakeholders to confirm expectations and concerns – update in register. Utilise these	Council MPs Traditional Owners	Involve	Ongoing	Community Engagement Advisor Project Manager

	meetings to consult on shared benefit preferences and provide update on project approach and timing.				
Landholder engagement	Re-engage with host landholders to address any emerging issues or concerns, update on timelines and seek input to community engagement	Landholders	Involve	Ongoing	Community Engagement Advisor Project Manager
Neighbour consultation	Engage with near neighbours specifically in lead up to construction and utilise these meetings for the purpose of establishing neighbour payments	Neighbours out to 500 m	Involve	Ongoing	Community Engagement Advisor Project Manager
Neighbour meetings	Community meeting/s for Navarre neighbours out to 3km to provide updates on project in lead up to construction	Neighbours	Involve	Ongoing	Community Engagement Advisor Project Manager
E-newsletter	Produce further editions of e-newsletter (bimonthly) to provide update on Project timing and approach. Invite feedback and offer further opportunities to engage (2-3 means).	Adjacent neighbours Navarre community Key stakeholders	Involve	Ongoing	Community Engagement Advisor
E-database	Include promotion of website function for subscription to email updates and stakeholder comms as required.	All	Inform	Ongoing	Community Engagement Advisor
Website	Update project website to include recent information on planning and pre-construction works, include relevant planning documents as required.	All	Inform	Ongoing	Project Manager
Project Fact sheet	Update Project Fact Sheet, provide during stakeholder and neighbour meetings or as required.	All	Inform	Ongoing	Project Manager
Local business community information session	Host and run an information session for local businesses to find out about supply packages and provide support to tailor tenders. Potentially coordinate in conjunction with Council.	Local businesses (suppliers)	Collaborate	Ongoing	Project Manager
Media	Set up media monitoring to track coverage of project construction and development.	All	Inform	Ongoing	Project Manager
Community survey	Implement a further round of postal community survey with selected recipients that are representative of the	Neighbours Navarre community	Involve		Community Engagement Adviser

	local community. Utilise deliberative polling to confirm current sentiments towards the project and provide feedback to construction team, to inform approaches to ongoing engagement and issues management.	Key stakeholders			
Stakeholder Register	Maintain Stakeholder Register.	Project Team	Inform	Ongoing	Community Engagement Adviser Project Manager
Enquiries and Complaints Register	Maintain Enquiries and Complaints register. Include current Enquiries and Complaints Procedure on project website. Monitor 1800 Project number.	Project Team	Inform	Ongoing	Project Manager
Local Investment Register	Establish and maintain a detailed register of direct/indirect economic investment and employment metrics for ongoing use in communicating the positive impact of the project (i.e. in response to Ministerial/media enquiries)	Project Team	Inform	Ongoing	Project Manager
Traditional Owners	Engage further with Traditional Owners for purposes of sharing details of detailed planning outcomes on cultural heritage. Investigate options for delivery of works via RAP employment arms (e.g. landscaping, civils, etc.).	Traditional Owners	Collaborate	Ongoing	Community Engagement Adviser
Social Impact Assessment	Complete updated Social Impact Assessment and utilise findings to refine engagement and social benefit approach.	Project Team	Inform	Ongoing	Project Manager
Agency engagement	Facilitate required meetings with local agencies for purposes of compiling remaining technical studies and reports prior to construction.	Regulatory Authorities EPA	Involve	Ongoing	Project Manager
EPC Input	Host pre-tender workshops for potential EPCs to understand Neoen social procurement requirements. Prepare a 'Community Context' fact sheet for EPC contractor and subcontractor to ensure they are informed of local community, context and key issues.	EPC	Inform	Ongoing	Project Manager

Social procurement	Initiate engagement with key stakeholders to identify opportunities the project can offer to Aboriginal Victorians, Disadvantaged groups and Women.	Community groups, local businesses and networks	Collaborate	Ongoing	Community Engagement Adviser Project Manager
Special interest groups	Continue to engage with relevant groups to provide updates and identify any opportunities for collaboration.	Community energy groups Landcare AWISE Tomorrow Today Foundation	Involve	Ongoing	Community Engagement Adviser

**Authorised person for proponent:**

I, **Shevy Feiglin, Project Manager**, confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature Shevy Feiglin Date 06/09/2023

**Person who prepared this referral:**

I, **Josh Mahon, Manager, Environment and Planning**, confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature Josh Mahon Date 06/09/2023

**Figures**

- Figure 1 Location Plan
- Figure 2 Indicative development plan
- Figure 3 Project overview
- Figure 4 Road network plan
- Figure 5 Planning zones
- Figure 6 Planning overlays
- Figure 7 Sensitive receivers

**Attachments**

- Attachment A. Flora, Fauna and Targeted Threatened Species Assessments (Nature Advisory, 2023)
- Attachment B. Preliminary Landscape and Visual Assessment (Aurecon, 2023)
- Attachment C. Wind Turbine Noise Assessment (Marshall Day, 2023)
- Attachment D. Heritage Due Diligence Assessment (Aurecon, 2023)
- Attachment E. Preliminary Surface Water and Groundwater Assessment (Aurecon, 2023)
- Attachment F. Preliminary Traffic Assessment (Aurecon, 2023)
- Attachment G. Preliminary Shadow Flicker Assessment (Aurecon, 2023)
- Attachment H. Preliminary Electromagnetic Interference Assessment (Aurecon, 2023)