Goyder North Wind Farm Project

Significant Impact Assessment

under the *Environment Protection and Biodiversity Conservation Act 1999*

LATHWIDA ENVIRONMENTAL

Neoen

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Final Report

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Project details

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The sole purpose of this report and the associated services performed by Lathwida is to document the expected significant impact assessment for the Goyder North Wind Farm Project. This document and associated data may support the development of primary approval documentation required for the Goyder North Project in South Australia. The report is based on a desktop review of available data and reports outlining survey findings within the survey area and buffers for Neoen. The scope of services, as described in this report, was developed in collaboration with Neoen.

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Where possible, information contained in this Document is up to date as at December 2025. This was not possible for supporting appendices, and information based on those appendices, which were prepared by third parties (as discussed in the second paragraph in the Disclaimer above) prior to the Document being finalised.

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Executive summary

ES1 Project background

Neoen Australia Pty Ltd (Neoen) is developing the Goyder North Wind Farm (GNWF) (the Action, the Project), approximately 5 kilometres (km) north-east of Burra, and approximately 150 km north of Adelaide, in the Mid North of South Australia. The GNWF would occur over approximately 17,700 hectares (ha) of both private freehold land and crown land. The GNWF is comprised of the Wind Farm (WF) area, inclusive of up to a maximum of 99 Wind Turbine Generators (WTGs), a single Overhead Transmission Line (OTL), and Battery Energy Storage System (BESS), and an extension of the existing Bundey Substation near Bundey. The Project will generate approximately 600 MW of wind and up to 225 MW / 900 megawatt hours (MWh) within the BESS.

The GNWF will be an integral part of Neoen's broader Goyder Renewables Zone (GRZ), which is wholly located in the Mid North of South Australia. The broader GRZ includes both the Goyder South Project (approved and under construction) and the proposed GNWF. The GNWF forms part of which was previously proposed as the Goyder North Renewable Energy Facility (GNREF), a now superseded larger design and concept for the Project. However, the Project has since been redesigned and refined over time to what is now known as the GNWF. The GNWF is the subject of this assessment, and no further stages are planned for the Project.

The GNWF will result in a total Disturbance Footprint of approximately 536.82 ha required for the safe and efficient construction and operation of Project (inclusive of the WF and OTL, noting the total Disturbance Footprint is comprised of both temporary and permanent disturbance areas).

ES2 Significant Impact Assessment

To support the Project, a significant impact assessment (SIA) was undertaken to assess the significance of potential residual impacts of Neoen's proposed GNWF on Matters of National Environmental Significance (MNES) protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). The SIA has taken into consideration all expected disturbance activities (temporary and permanent) associated with the Project, including access roads, underground cabling (power and communications), development of up to 99 WTGs and associated hardstand areas, meteorological (met) masts, operations and maintenance buildings, concrete batching plants, an OTL, collector substation/expansion of the existing Bundey Substation, an on-site BESS, and additional temporary facilities and infrastructure to enable construction.

The assessment focuses on the ecological and non-ecological MNES relevant to the Project Area as identified in a Protected Matters Search Tool (PMST) report generated on 21 August 2025 (inclusive of the OTL), which captures the most recent listing event dated 20 August 2025.

The PMST report identified a total of four Threatened Ecological Communities (TECs), 34 threatened species (13 flora, 15 birds, two fish, two reptiles, one mammal and one amphibian), and nine migratory species (three of which are listed as both threatened and migratory species) that may be relevant to the Project Area. One Ramsar Wetland of International Importance, and one National Heritage Place were also identified as potentially relevant MNES within the PMST report.

A likelihood of occurrence assessment was undertaken for all species identified in the PMST report to determine the potential for interactions with the Project. The likelihood assessment considered information presented within an extensive library of new and existing reports and other information available at the time of preparation, including habitat and vegetation descriptions and on-ground survey data arising from baseline ecological surveys and assessments, principally undertaken between 2022 to 2025, including eight bird and bat utilisation surveys (BBUS), targeted threatened species surveys, MNES-specific management plans, and a revised comprehensive ecological assessment report summarising the findings of a series of reports prepared for the GNWF (and its previous design iterations).

Following the likelihood of occurrence assessment, where a community or species was considered as known to be present, considered likely to occur, or considered as potentially occurring within the Project Area, an SIA was undertaken of residual impacts against the significant impact criteria outlined in the Matters of National Environmental Significance: Significant Impact Guidelines 1.1 (DotE 2013a).

From the total of four TECs, two were considered to potentially interact with the Project; the Iron-grass Natural Temperate Grassland of South Australia, where significant residual impacts have been considered likely to occur as a result of the Project, and the Mallee Bird Community of the Murray Darling Depression Bioregion, where no significant residual impacts area expected.

From a total of 13 threatened flora, the Project was assessed as potentially interacting with seven flora species, however, following the SIA, significant residual impacts were assessed as unlikely for these species, principally as the Project has been refined over time to avoid known locations (if present) and potential habitat for these species, based on a number of recent targeted surveys within the Disturbance Footprint and portions of the Development Envelope. These species include *Acacia glandulicarpa* (Hairy-pod Wattle), *Acacia spilleriana* (Spiller's Wattle), *Codonocarpus pyramidalis* (Slender Bell-fruit), *Dodonaea procumbens* (Trailing Hop-bush), *Dodonaea subglandulifera* (Peep Hill Hop-bush), and *Olearia pannosa* subsp. *pannosa* (Silver Daisy-bush) and *Senecio megaglossus* (Superb Groundsel).

From a total of 21 threatened fauna species, the Project was assessed as potentially interacting with seven fauna species, however, following the SIA, significant residual impacts were assessed as likely for a single species; *Tiliqua adelaidensis* (Pygmy Blue-tongue Lizard, known to occur).

Whilst one migratory species; *Apus pacificus* (Fork-tailed Swift) has been previously recorded as an aerial/fly-over species, potential impacts to the species did not trigger significant impact criteria for migratory species. All other migratory species were discounted during the likelihood of occurrence assessment based upon a lack of suitable habitat within the Project Area, as well as a noted absence of records for these species within the area.

No non-ecological MNES will be impacted as a result of the Project.

ES2.1 Iron-grass Natural Temperate Grassland of South Australia

The Iron-grass Natural Temperate Grassland (INTG) TEC has been recorded extensively across the GNWF Project Area, with total area of approximately 1,931.24 ha of *Lomandra* Grassland (VA6) (all condition classes) mapped within the Wind Farm (WF) Area (particularly in the central and eastern portions), as well as areas with the OTL. Approximately 6.14 ha of Class B INTG TEC will be impacted within the Disturbance Footprint (comprising 2.43 ha of Permanent Disturbance and 3.72 ha of Temporary Disturbance), representing approximately 0.41% of the total INTG (1,498.09 ha) within the GNWF, equating to approximately 0.12% of this TEC and up to 0.02% of the Lomandra Grassland (all condition classes) estimated to occur in the region. Whilst the Disturbance Footprint may be considered to be relatively small (i.e. 0.32% of the total INTG within the GNWF), and noting Project elements have been micro sited to avoid significant impacts, three significant impact criteria are potentially triggered for this TEC: a reduction in the extent of the TEC, fragmentation of the TEC (due to clearance of native vegetation), and adversely affecting habitat listed as critical to the survival of the TEC.

ES2.2 *Tiliqua adelaidensis* (Pygmy Blue-tongue Lizard)

Multiple targeted field surveys undertaken in 2024 and 2025 recorded a total of 186 individual Pygmy Blue-tongue Lizards (PBTL) in the Project Area, with 52 of those occurring within the current Disturbance Footprint). An estimated 206 individuals may be impacted within the Disturbance Footprint during the construction phase, based on densities identified within currently surveyed areas. No PBTL were recorded along the OTL outside of the WF, and the species is considered unlikely to be present in the OTL corridor outside of the WF boundary of the Project Area.

All known and future habitat is considered critical to the survival of the species, with critical habitat including the Area of Occupancy (AOO) for all known populations, all areas of the species' historical occurrence, and all areas of potential habitat throughout its geographical and ecological range. Impacts listed as temporary, which require the removal of/disturbance to topsoil are likely to be equivalent in impact to permanent clearance for this species, and ground disturbance is likely to alter soil conditions and preclude development of appropriate spider burrows for the medium to long term. A total of approximately 11,154.12 ha of potentially suitable habitat in the broader GNWF Project Area has been mapped, of which a maximum of 368.10 ha (or 3.3% of the known and likely habitat in the Project Area) is inside the Disturbance Footprint and potentially impacted by the Project, noting the south-central portion of the WF Area is deemed to be of the highest habitat suitability. As such, impacts to the PBTL as a result of the Project (within the Disturbance Footprint within WF) are considered to trigger several of the significant impact criterion.

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1 Introduction

This document presents an assessment of the significance of residual impacts which may arise as a result of Neoen Australia Pty Ltd's (Neoen's) proposed Goyder North Wind Farm (GNWF) Project (the Project) on key Matters of National Environmental Significance (MNES) protected under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). The report provides an assessment of the potential for the Project to result in significant impacts to MNES and is intended as a supporting document for Neoen's Preliminary Documentation (Neoen 2025) under the EPBC Act.

The Project is part of a larger concept to be developed under Neoen, known as the Goyder Renewables Zone (GRZ), which includes the Goyder South Hybrid Renewables Energy Project (Development Approval granted in 2021, currently under construction), and the GNWF. The GNWF represents the Project, previously proposed as the Goyder North Renewable Energy Facility (GNREF). However, the Project has since been redesigned and refined over time to what is now known as the GNWF.

The GNWF, representing the Action, which is seeking approval under the EPBC Act, is inclusive of all expected disturbance activities associated with the development, construction and operation of the Project. This includes a network of roads to connect infrastructure and provides site access, underground cabling (power and communications), up to 99 Wind Turbine Generators (WTGs), operations and maintenance buildings, concrete batching plants, an Overhead Transmission Line (OTL), collector substation, expansion of the existing Bundey Substation, a Battery Energy Storage System (BESS), and temporary construction facilities (compound/laydown areas) (Table 1.1). The OTL will connect the GNWF to the Bundey Substation, which is currently being built as part of the South Australia-New South Wales (SA-NSW) Interconnector Project EnergyConnect (PEC).

The assessment herein describes all potentially relevant ecological and non-ecological MNES, and focuses on the MNES identified as relevant to the Project, i.e. those identified in a Protected Matters Search Tool (PMST) report generated in August 2025, and subsequently considered relevant to the Project Area, which includes recently listed species (i.e. inclusive of the most recent listing event dated 20 August 2025).

The assessment utilises updated and refined habitat mapping and vegetation descriptions and on-ground survey data, principally undertaken between 2022 to 2025 by Umwelt (Australia) Pty Ltd (previously EBS Ecology (EBS)), arising from baseline ecological surveys and assessments (EBS 2022; EBS 2023a; EBS 2023b), an ecological risk assessment summarising previous survey work (EBS 2023c), bird and bat utilisation surveys (EBS 2024a; EBS 2024b; Umwelt 2025e), targeted MNES surveys (EBS 2024c; EBS 2024e; Umwelt 2025b; Umwelt 2025c; Umwelt 2025d), two comprehensive ecological assessment reports summarising the findings of a series of reports prepared for the GNWF and broader GNREF (EBS 2024e, Umwelt 2025a), and MNES-specific management plans (Umwelt 2025f; Umwelt 2025g).

This assessment focuses upon the proposed activities associated with the Project, inclusive of multiple design refinements, and the associated Disturbance Footprint, as described within Section 1.1.

1.1 The Goyder North Wind Farm

The Project is located north-east of Burra and east of the Mount Bryan township in the Mid North of South Australia, approximately 150 km north of Adelaide (Figure 1.1). The Project will comprise up to 99 WTGs, an associated OTL which will connect the Wind Farm (WF) to the Bundey Substation. The Project will accommodate approximately 600MW of wind generation (dependent on the technology used with a decision yet to be finalised), and up to 225MW / 900 MWh of battery energy storage capacity within the BESS.

The Project would be developed on a large number of freehold (privately owned) land parcels, up to five parcels of Crown Land and would utilise a number of local road reserves (collectively known as the Project Area). The Project Area covers approximately 17,700 hectares (ha) of land, most of which is categorised as rural agricultural land and is predominantly used for cattle and sheep grazing, and grain cropping. The Project's Disturbance Footprint is approximately 536.82 ha. The Project will include:

- Access roads, including road shoulders and drainage
- Underground cabling (power and communications)
- Up to 99 WTGs
- Several temporary and permanent meteorological (met) masts
- Operations and maintenance buildings
- Concrete batching plants
- A 48 km OTL
- A collector substation within the WF and expansion of Bundey Substation
- On-site BESS
- Temporary facilities and infrastructure to enable construction.

A comparison of the GNREF referral design to the revised GNWF design is provided in Table 1.1.

1.2 Background of previous EPBC Referrals associated with the Goyder developments

1.2.1 South Australian Planning Consent

The Project received planning consent under the name GNREF by the Government of South Australia in October 2024 under the *Planning, Development and Infrastructure Act 2016* (SA) (PDI Act) (Planning Approval reference 23036148). The GNREF referred to the development of renewable energy facilities and associated facilities including 135 WTG and associated OTL, three substations, three BESS, temporary construction facilities and six permanent meteorological masts over a Project Area of approximately 21,500 ha, having the ability of producing up to 1,000 MW of wind generation and 900 MW / 3,600 MWh of battery energy storage capacity.

At the time, it was proposed that the GNREF would be constructed in a number of stages. Since the GNREF received state planning consent, the Project has since been redesigned and refined over time to accommodate both economic, socioeconomic and ecological considerations, with the product being the

GNWF. There is no current plan to develop further stages, but if additional stages were to be progressed in future, they would be subject to their own approval process and stakeholder engagement.

While the Project has received state approval under the name GNREF, the Project herein refers solely to the GNWF which is proposed to be developed within a smaller Project Area boundary and infrastructure design.

GNWF's sister project, the Goyder South Hybrid Renewable Energy Facility (REF) received planning consent by the Government of South Australia in 2021 under the PDI Act.

1.2.2 EPBC Referrals and controlled action determination

The GNREF Stage 1 was referred under the EPBC Act (EPBC 2024/09929) to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in July 2024. This early iteration of the GNREF Project incorporated a proposed Project Area of 15,400 ha, inclusive of 92 WTGs and two proposed routes for an OTL (noting that only one option would be constructed).

On 23 August 2024, DCCEEW requested further clarification on certain aspects of the GNREF Project. The referral was updated and resubmitted in October 2024. After which Neoen received a "Notification of referral decision and designated proponent – controlled action and assessment approach" in November 2024. DCCEEW outlined that the proposed Action was determined to be a controlled action and would require further assessment via way of Preliminary Documentation, and approval under the EPBC Act before it can proceed.

As such, a Request for Additional Information Required for Assessment on Preliminary Documentation (hereafter referred to as the RFI) was issued in December 2024 by DCCEEW (Appendix A of Neoen 2025). The RFI outlined a number of aspects of the Project that required further information, including additional specifics regarding the Project's potential impacts to MNES, including information based upon additional targeted species surveys.

Subsequent to the referral (for 92 turbines) and the receipt of the RFI, the Project was redesigned to incorporate a total of up to 99 WTGs. Refinement of the Project (now known as GNWF) has enabled removal of 36 WTGs from the northern-most portion of the originally proposed broader GNREF and refinement of the existing project boundary (i.e. the subject of the Variation Letter), to facilitate an addition of up to 7 WTGs. A request for Variation under the Environment Protection and Biodiversity Conservation Regulations 2000 (Cth), Regulation 5.08: Information for a request to vary a proposal to take an action, was submitted to DCCEEW in April 2025. The Variation decision was accepted in June 2025, inclusive of:

- expansion of the proposed action area (approximately 2,300 ha)
- addition of up to 7 WTG's (i.e. total of up to 99 WTGs) – located to the north of White Hill Road
- removal of an OTL option from the proposal (referred to as the Overhead Transmission Line Alternative/OTL-Alt)
- changes to layout of WTG's and infrastructure components
- addition of meteorological masts.

Variation updated Project elements have been updated and reflected throughout this SIA.

Timeline of EPBC Referrals associated with Goyder developments

Neoen's sister project, the Goyder South Hybrid REF was referred and approved in 2021. Elements of the Goyder South Hybrid REF were previously referred to the DCCEEW in four discrete packages as outlined below:

- EPBC 2021/8957 Goyder South Hybrid REF – Wind Farm 1B, 5 km south of Burra (1 September 2021)
  Approval decision: Approved with controlling provisions (Listed Threatened Species and Communities (Section 18 and Section 18A), Listed Migratory Species (Section 20 and Section 20A))
- EPBC 2021/8958 Goyder South Hybrid REF – Wind Farm 1A, 10 km south of Burra (1 September 2021)
  Approval decision: Approved with controlling provisions (Listed Threatened Species and Communities (Section 18 and Section 18A), Listed Migratory Species (Section 20 and Section 20A))
- EPBC 2021/8959 Goyder South Hybrid REF – OTL and Substation, Worlds End (1 September 2021)
  Approval decision: Approved with controlling provisions (Listed Threatened Species and Communities (Section 18 and Section 18A))
- EPBC 2021/8960 Goyder South Hybrid REF – Battery, 5 km north Robertstown (1 September 2021)
  Referral decision: Not a controlled action.

Key EPBC Referral information and requests associated with GNREF (now the GNWF) are as follows:

- The Project referral (EPBC 2024/09929) was submitted to the DCCEEW (8 July 2024), which was subsequently updated (10 October 2024) following a request for clarification. Referral decision: Controlled Action (assessment via Preliminary Documentation).
- EPBC (2024/09929) RFI requested for preliminary documentation for Goyder North Renewable Energy Facility Stage 1, Burra (5 December 2024).
- EPBC (2024/09929) Variation Letter (9 April 2025) was submitted to the DCCEEW to outline the variation design for the Project.
- EPBC (2024/09929) Variation Letter acceptance 4 June 2025.
- EPBC (2024/09929) Re-issued RFI required for preliminary documentation for Goyder North Renewable Energy Facility Stage 1, Burra (26 September 2025).
- EPBC (2024/09929) Notification from DCCEEW that the Preliminary Documentation was considered acceptable for publication (16 October 2025)
- EPBC (2024/09929) Neoen published the notification of publication of the GNWF Public Documentation, including an invitation for public comments for a period of 20 business days to Wednesday 19 November 2025.
- EPBC (2024/09929) Neoen's formal response to public comments, including incorporation of further information (e.g. clarification on project design elements), with further information relevant to MNES incorporated into preliminary documentation supporting documents, including herein.

1.3 Key project elements and definitions

Key elements of the Project assumed for this assessment are summarised in Table 1.1 below. The Project current infrastructure layout is presented in Figure 1.3.

Key terms used throughout this assessment report include the following.

The Project: The Goyder North Wind Farm Project (GNWF Project), representing the Action seeking approval under the EPBC Act, as described in Section 1.1.

Goyder North Renewable Energy Facility (GNREF): The entire Goyder North proposed development, incorporating the GNWF (referred to herein as the Project).

Project Area / Goyder North Project Area (GNWF Project Area): defined as the area encompassing the proposed GNWF Project Area, which is the portion of the broader GNREF Project which occurs south of White Hill Road proposed to be developed as part of the GNWF, and which is the focus of this assessment. The GNWF Project Area includes all wind generation infrastructure and associated infrastructure, including access roads, underground cables, substation, OTL, construction and operation compounds and met masts, required to transmit and connect into existing Bundey Substation. The GNWF Project Area incorporates the OTL to transfer energy. The Project Area comprises approximately 17,700 ha of rural land located within South Australia's Mid North Region. The area lies entirely within the Regional Council of Goyder and contains mainly freehold farmland, five Crown land parcels, and local road reserves. Land use is predominantly dryland cropping and grazing, with some remnant vegetation across varied, but mostly hilly, terrain.

Disturbance Footprint: The total initial clearance area (536.82 ha) within the Project Area required for safe and efficient construction of the Project, including both Permanent Disturbance and Temporary Disturbance for construction buffers, laydown areas, stockpile areas and construction access routes for the Wind Farm Generation Components and the OTL. Further to this, Neoen have defined:

- **Permanent Disturbance:** represents the area which will not be rehabilitated following construction and are elements required for the life of the Project, requiring either land acquisition and / or agreements which will likely result in changes to existing land use. Permanent Disturbance represents 307.56 ha of the total Disturbance Footprint
- **Temporary Disturbance:** disturbed areas which are only required to support the construction phase of the Project and will be rehabilitated to meet or exceed their original condition following construction, where it is practical and reasonable to do so. Temporary Disturbance represents 229.26 ha of the total Disturbance Footprint.

Development Envelope: A 'buffered' version of the Disturbance Footprint that represents the outer spatial extents within which the Disturbance Footprint will occur. Design is well developed and optimised to minimise cut and fill, avoid known sites of significance or value, and to minimise the Disturbance Footprint. The Development Envelope is an extra measure to enable final adjustments to the Disturbance Footprint in alignment with the Mitigation Hierarchy to avoid or minimise impacts on environmental values, cultural heritage or any other potential constraints that emerge during design finalisation and construction.

Overhead Transmission Line (OTL): Overhead Transmission Line, which originates within the Project Area at the substation, and then traverses approximately 48 km south, connecting to Bundey Substation at the intersection of Powerline Road and Sutherlands Road. On-ground field surveys have been undertaken for the length of this alignment.

Wind Farm Components (WF): An indicative boundary around all infrastructure required for energy capture, storage and transmission at the WF area that is required, excluding the corridor defined for the

OTL. Infrastructure includes WTGs, access roads, underground cables, substation at the WF, BESS, and construction and operation compounds. Arterial site access road options that extend from the western boundary of the WF and connect into Barrier Highway are excluded from this definition on figures to indicate their optionality.

Access to the Project will be via the Barrier Highway with supporting use of existing roads including White Hill Road and Belcunda Road. Newly established roads and access roads within the Project Area are to be constructed to support ongoing WF operations and infrastructure maintenance requirements and are part of the Project's Disturbance Footprint (Figure 1.6) and will utilise a number of existing roads and tracks where practical and possible to do so.

Water supply requirements (including concrete batching plant requirements) for Project construction and operation is anticipated to be accessed at the site through transportation tanks that will be stored at various facilities. The viability of a number of privately owned groundwater bores across the Project Area is currently being investigated.

Table 1.1: Key Project details – Goyder North Wind Farm

Component	Referred GNREF Design	Revised GNWF Design
Wind Farm Construction and Operations		
WTGs, generators, hardstands	Maximum number: 92 Minimum swept height: approximately 25 m Maximum swept height: approximately 240 m Maximum blade length: approximately 90 m Maximum rotor diameter: approximately 180 m Maximum speed of rotation: approximately 9 to 10 revolutions per minute (confirmed as detailed design progresses) Footings may be either a mass concrete footing (raft style), piled type rock anchors, or a combination of both at approximately 30 m in diameter.	Maximum number: 99 Minimum swept height: approximately 20 m Maximum swept height: approximately 240 m Maximum blade length: approximately 95 m Maximum rotor diameter: approximately 190 m Maximum speed of rotation: approximately 9 to 10 revolutions per minute (confirmed as detailed design progresses) Roads to each WTG including turnarounds. The Disturbance Footprint for WTGs includes internal wind farm roads which will be required for WTG construction and operation for the life of the asset based on a typical 5.5 m surface road width in straight sections. The Disturbance Footprint also includes batter and drainage design based on 3D civil modelling, with the final permanent road width therefore varying significantly across the site depending on slope; however, for the purpose of the assessment can be assumed to be approximately 11 m wide on average. In addition, 5 m of temporary disturbance allowed on either side of the outer permanent footprint for road construction which overlaps with a high proportion of the medium voltage cable (MV Cable) temporary disturbance footprint located on either side of the road. Footings may be either a mass concrete footing (raft style), piled type rock anchors, or a combination of both at approximately 30 m in diameter. Permanent and temporary hardstand areas will be required for construction and operation of the Project. These are improved/stabilized areas with a prepared surface where plant and cranes can operate, vehicles can be parked, and material can be stored. Each WTG will have a crane hardstand area of approximately 78 m x 48 m to support crane operations during the erection of the towers and wind turbine components. These will also be used for scheduled maintenance activities during the wind farm operational and decommissioning phases. The final hardstand configuration at each WTG site will be determined by the topography and terrain. Each WTG will also have a laydown area and crane boom area at its base (both temporary infrastructure pads) which would be approximately 90 m x 20 m and 140 m x 17 m, respectively. These are required during construction for laydown of components and materials, as well as providing adequate space for the cranes to operate safely.

Component	Referred GNREF Design	Revised GNWF Design
		Disturbance footprint allows for WF access roads and 5 m temporary civil construction disturbance buffer that overlaps a high proportion of the MV underground cable temporary Disturbance Footprint, located either side of the road.
Electrical substations and operation and maintenance facilities	One fenced compound of approximately 200 m x 200 m within the WF. An expansion of the existing Bundey substation of approximately 220 m x 440 m including substation and ancillary equipment.	Two fenced compounds of approximately 150 m x 150 m and 80 m x 180 m within the wind farm. An extension of the Bundey Substation of approximately 220 m x 440 m, including substation and ancillary equipment. Operation and maintenance facilities have a footprint of approximately 70 m x 50 m.
Construction and Operations Compounds and Facilities	~36 ha including: • 150 m x 150 m laydown areas x 7 • 150 m x 150 m construction facilities x 3 • 150 m x 150 m site office facilities x 3 • 300 m x 180 m storage facility storage area x 1 • 100 m x 100 m batch plant x 1 Approximately 6 ha (OTL Primary): • 320 m x 150 m OTL compound x 1 • 100 m x 100 m OTL batch plant Approximately 7 ha (OTL ALT) • 150 m x 150 m OTL ALT compound x 1 • 150 m x 150 m OTL ALT batch plant x 1	Approximately 38 ha of footprint for construction Facilities associated with the WF: 150 m x 150 m Laydown Areas x 1 100 m x 100 m Laydown Areas x 3 150 m x 150 m Construction Compounds x 3 100 m x 100 m site security facility x 1 150 m x 150 m batch plants x 4 200 m x 50 m stockpile areas x 16 Approximately 7 ha additional for construction facilities associated with the OTL. 300 m x 150 m OTL compound x 1 150 m x 150 m OTL batch plant x 1
Meteorological (Met) Masts	Several met masts will likely be installed during the construction phase. These will be a similar height to the turbine hub height with a small disturbance footprint. Exact locations are still to be determined but are intended to be sited to avoid impacts to any MNES.	Up to 15 meteorological masts (nine temporary and six permanent) to calibrate wind speed across the site. Masts will be up to 140 m in height and nine guy wires anchored at a radius of around 120 m.
Access roads and tracks, including road shoulders and drainage	Tracks to each infrastructure component. Tracks will be a permanent width of approximately 11 m, with temporary clearance expected to average around 21 m in width. After construction, tracks will be rehabilitated back to a width of less than 11 m. Within the OMZ, where existing access roads don't exist, there is a 6 m access track allowance for	Access roads are required for access to the wind turbines and substations for all project phases including construction, operation and maintenance, and decommissioning, with the most onerous use of the roads occurring during construction phase. Access roads to the OTL towers will be mainly required during the construction phase, with design tailored to ongoing operational and maintenance needs for the remainder of the life of the project.

Component	Referred GNREF Design	Revised GNWF Design
	construction of the OTL which will be incorporated as temporary disturbance. Ongoing access to the OTL during the life of the project will be via the stringing corridor. Allowances for access roads for the OTL Primary and OTL-Alt options are itemised as 20 ha and 21 ha, respectively.	Design of all access tracks have utilised existing tracks and roads as much as possible, following approximately 40 km of existing routes across the wind farm and the OTL. Across the Wind Farm, the required access road clearance will be wider than the required final road width, constituting a permanent trafficable surface, road shoulder features and drainage. Cut and fill requirements are also included as permanent disturbance however in reality, in many cases, fill or road batters will be allowed to naturally rehabilitate. Where reasonable, safe and beneficial, Neoen may support rehabilitation in these areas through seed spray to stabilise slopes and encourage revegetation in appropriate locations. While Neoen suggest referring to the shapefile for the proposed road disturbance, a typical permanent road cross section in a straight road section could be nominally assumed to be approximately 10-12.5 m, excluding cut and fill, based on the following: • 5.5 m width trafficable road surface • 1 m of road shoulder allowance • Up to 3 m x 2 drains along a flat road, noting that in many instances drainage features may only be required on one side of the road. Batter and drainage design was incorporated into the permanent road width's 3D civil modelling across the WF. Based on this modelling the road width is required to vary across the site, depending on topographical requirements. For the purposes of this assessment the typical road width across the WF is assumed to be nominally 11 m, excluding the temporary disturbance corridor either side of the road's outer extents, and noting that in steeper road sections this will be higher due to cut and fill requirements. Drainage adjacent roads across the WF are designed specific to the gradient and conditions and will be finalised in detailed design phase. For steep road sections, such as when gradients exceed 8%, fully rock lined channels will likely be proposed. At gradients lower than this, which is expected characterise the majority of the access road network, a combination of grass lined channels and appropriate rock checks at varying spacing are proposed in drainage channels. In addition to the permanent road footprint described above a 5 m temporary disturbance is allowed at either external batter edge or edge of the Permanent Disturbance for access roads, for the purpose of road construction. The additional 5 m temporary construction corridor either side of the outer extents of the permanent road footprint has been minimised as much as possible and has also been designed to overlap with the placement of the underground MV cable in most locations to further reduce the Disturbance Footprint. Access roads to access each transmission tower along the OTL have not been progressed to 3D design maturity yet and are instead based on a surface width of 6 m, with the total

Component	Referred GNREF Design	Revised GNWF Design
		Disturbance Footprint correlated with the slope across each track. Wherever possible, these tracks have utilised public roads, farmers' tracks, or access tracks installed for the Goyder South transmission line to minimise any further disturbance. Temporary cleared area for road construction will be rehabilitated following construction, and the roads, including batter and drainage, will be retained to meet operational, maintenance and decommissioning requirements for the life of the project. The ongoing operational and maintenance requirements for the OTL access tracks are typically reduced relative to WTG access roads. Landholders and the local South Australian Country Fire Service will be consulted with to ensure that access is also suitable for their ongoing requirements, including fire-fighting equipment.
Underground cabling	Underground cabling for transmission (33-66 kV) and communications (fibre). Trench width approx. 0.5 m per circuit and depth approx. 1.2 m (0.9 mm coverage on top). Impact areas of 6 m width for cabling aligned with access tracks and 10 m width for cabling that is not road aligned.	Underground cabling for transmission (33-66 kV) and communications (fibre). Medium voltage cable preferentially placed adjacent to roads, within the 5 m civil construction buffer either side of the road (temporary disturbance footprint area for civil works). Up to four MV cables can be placed within the civil disturbance footprint for the access roads (two on either side). For cases where there are more than four cables, an additional 2 m per cable has been added to the Disturbance Footprint where they are aligned with the access roads. Where it is not practical for cables to run adjacent with roads, a 7 m wide corridor will be disturbed for up to three cables, with an additional 2 m for each cable thereafter. Trench widths will be approximately 0.5 m per circuit and a depth of approximately 1.2 m (0.9 m minimum typical coverage). All Disturbance Footprint associated with cable trenching and laying (including overlapping temporary civil construction buffer) will constitute temporary disturbance and will be rehabilitated after installation.
Site Access	Primary access route from Barrier Highway. Three options considered including White Hill Road, Gum Hill Road and Belcunda Road. Will require widening in some locations and trimming of taller vegetation to enable transport of heavy machinery and large infrastructure components.	Primary access route from Barrier Highway, utilising existing roads. Two access roads are included – White Hill Road and Belcunda Road. Site access roads will require widening in some locations and trimming of taller vegetation (limited to amenity vegetation only) to accommodate the transport of heavy machinery and large infrastructure components. The Disturbance Footprint includes areas at several intersection upgrade locations along the Barrier Highway to allow for upgrades and blade sweep. This represents estimated area where vegetation clearing and/or trimming may be required for the transport of equipment to site. An 11 m wide corridor has been allowed for, noting that this includes the existing 7 m wide road. The Project Area also includes land allocated for blade sweep.

Component	Referred GNREF Design	Revised GNWF Design
Battery Energy Storage System (BESS)		
Goyder North Stage 1 BESS	Maximum total capacity – 225MW/900MWh One fenced compound of approximately 9.8 ha.	Approximate capacity of 225 MW/900 MWh. A fenced compound of one approximately 5 ha within the wind farm area. This area also doubles up as a central construction laydown area in the first instance to avoid additional clearance. Construction sequence would therefore stagger construction of BESS to occur following the main use of the central temporary laydown.
Overhead Transmission Line (OTL)		
OTL (inc. stringing corridor, towers, construction road access, brake and winch sites)	275 or 330 kV multi-circuit overhead line connecting the WF substation to the Bundey Substation (approximately 48 km). Transmission towers of up to 65 m height with a footprint of approximately 27 m x 27 m. Spaced approximately 200-400 m apart.	A 275kV or 330kV multi-circuit OTL connecting the wind farm substation to the Bundey Substation approximately 48 km south. Transmission lines would also connect the battery to the wind farm substation (approximately 400 m). Transmission towers on either would be up to 65 m high with a permanent footprint of approximately 27 m x 27 m enclosed with a 50 m x 50 m temporary construction footprint, spaced approximately 300 m-500 m apart. To minimise ecological impacts the OTL will employ practises of non-conventional conductor stringing negating the need for a stringing corridor. Some OTL tower heights will be increased (or optimally placed through detailed design phase) to achieve sufficient clearance from vegetation to negate the need for the Inner and Outer Maintenance Zones for the life of the project. Access tracks for the OTL are required for construction and operational access to each transmission tower. Tracks have been designed to have a width of approximately 6 m where topography is flat, with the required Disturbance Footprint increasing through areas of rugged terrain to account for cut and fill requirements. Where possible, there have utilised existing tracks including public roads, farmers tracks, or existing access tracks installed for the Goyder South Transmission Line. The footprint is based on concept design tower placement and access tracks to be further optimised for civil and ecological outcomes in detailed design phases. Disturbance Footprint totals include brake and winch sites, tower pads, access tracks and helicopter landing pads. Construction facilities for the transmission lines are itemised separately under Construction Compounds and Facilities below.

Component	Referred GNREF Design	Revised GNWF Design
Key demands and supplies		
Power	Electrical connection to the existing grid via Bundey Substation Extension.	Electrical connection to the existing grid via Bundey Substation Extension.
Water	Water to be transported in and stored at various compounds. Opportunities to source water from groundwater bores will also be explored.	Water to be transported in and stored at various compounds. Opportunities to source water from groundwater bores will also be explored.
Workforce and Workforce Accommodation	Workforce TBC. Currently in prefeasibility stage, with an accommodation village potentially located on the outskirts of Burra.	Workforce TBC. Currently in prefeasibility stage, with an accommodation village potentially located on the outskirts of Burra.

1.3.1 Wind turbine components

The Project is comprised of up to 99 WTGs, each with a maximum tip height of approximately 240 m. The final size will depend on specific wind resource characteristics of each portion of the site and the requirements of individual power purchasers and may be less than these maximums. The footprint of each wind turbine will depend on the unique topographical condition at each WTG location and are best represented in the spatial layer based on 3D civil design but the permanent footprint is typically approximately 0.4 ha per turbine, with a temporary footprint of just over 0.4 ha.

1.3.2 BESS

As part of GNWF, Neoen is proposing to build one BESS with a total capacity around 225 MW / 900 MWh to be located near to the collector substation and connected via an OTL. The BESS would comprise of a fenced compound located approximately 400 m southwest of the collector substation. Construction of the BESS would be scheduled to occur following the main use of the central temporary laydown, as the BESS site is designed to double up as a central construction laydown area in the first stage of construction to minimise clearance.

1.3.3 OTL

The proposed Action requires an electrical connection to the grid through construction of an OTL. This will allow the export of electricity from the wind turbines, transmitting approximately 600 MW for the Project. An OTL of approximately 48 km in length will transfer the energy from the collector substation at the wind farm to the proposed substation extension at Bundey, an ElectraNet substation which was constructed as part of PEC. There will be a multi-circuit 275 kV or 330 kV OTL.

Construction of the OTL will employ practises of non-conventional conductor stringing. Non-conventional conductor stringing methods include:

- Laying out the conductor using light vehicles, with manual guidance via guide wires and brake-and-winch equipment
- Aerial stringing, either using drones or helicopters
- String shooting – a method where a pilot line is rapidly deployed across spans using devices such as compressed air guns, which is then used to pull the main conductor into place.

Some tower heights will be increased or towers optimally placed during detailed design to achieve sufficient clearance from vegetation. By analysing the vegetation regulation guidelines for maintaining vegetation below OTLs and assessing the type of vegetation present beneath sections of the line, it was concluded that the approach outlined above removes the need for vegetation maintenance below the line. This can be achieved by optimising tower placement, height, and hence conductor sag to maintain the required clearance between conductors and vegetation.

1.3.4 Collector substation

The Collector Substation will be located centrally within the WF area. The footprint of the substation has been developed to encompass the substation itself, along with the switchyard, control room(s), switch room(s), and maintenance shed(s). The substation itself would be comprised of two fenced compounds adjacent to each other. Additional land near this substation has been included within the Disturbance Footprint to accommodate operations and maintenance facilities and temporary construction-phase facilities. The operations and maintenance facilities will include buildings (office, staff amenities etc.), car park areas, workshops, and laydown areas. Supporting services would be small scale and involve standard electricity supply, waste connection (where available) or water tanks and wastewater disposal.

1.3.5 Bundey Substation extension

The transmission line will connect to the existing ElectraNet Bundey Substation via a proposed substation extension.

1.3.6 Access roads, including road shoulders and drainage

Access roads are required for access to the wind turbines and substations for all project phases including construction, operation and maintenance and decommissioning, with the most onerous use of the roads occurring during construction phase. Access roads to the OTL towers will be mainly required during the construction phase, with design tailored to ongoing operational and maintenance needs for the remainder of the life of the Project.

Design of all access tracks have utilised existing tracks and roads as much as possible, following approximately 40 km of existing routes across the wind farm and the OTL.

The main access to the site will be via the Barrier Highway onto Belcunda Road and then following Lines Road to the north before heading east onto Gum Hill Road along the southern boundary of Mokota CP. Up to 90% of traffic will be directed through this route to minimise potential for indirect impacts, such as dust deposition, more widely. White Hill Road will also be utilised as a minor access road to the site. Neoen have also endeavoured to incorporate the use of existing roads / farm tracks for construction throughout the Project Area where possible to reduce the need for additional clearance.

Across the Wind Farm, the required access road clearance will be wider than the required final road width, constituting a permanent trafficable surface, road shoulder features and drainage. Cut and fill requirements are also included as permanent disturbance however in reality, in many cases, fill or road batters will be allowed to naturally rehabilitate. Where reasonable, safe and beneficial, Neoen may support rehabilitation in these areas through seed spray to stabilise slopes and encourage revegetation in appropriate locations. While Neoen suggest referring to the shapefile for the proposed road disturbance, a typical permanent road cross section in a straight road section could be nominally assumed to be approximately 10-12.5 m, excluding cut and fill, based on the following:

- 5.5 m width trafficable road surface
- 1 m of road shoulder allowance

- Up to 3 m x 2 drains along a flat road, noting that in many instances drainage features may only be required on one side of the road.

The additional width included in the permanent footprint is based on a range of site-specific factors largely based on topography and cut and fill design. The spatial data which represents the Disturbance Footprint being sought is based on a 3D model and design that incorporates these factors, showing the fluctuating road width across the full extent of the road. These roads are designed for the hydrological conditions in the area and to be of an acceptable gradient, and horizontal and vertical curvature to accommodate the transportation of over-sized over-mass turbine and electrical components. Given the variability outlined, while Neoen recommends referring to the Disturbance Footprint for the site-specific representation of the permanent road disturbance allowance, for the purposes of this assessment the road width is assumed to be nominally 11 m, noting that in steeper road sections this will be higher due to cut and fill requirements.

Drainage adjacent roads across the wind farm are designed specific to the gradient and conditions and will be finalised in detailed design phase. To conceptualise typical drain design and specifications for the purposes of the assessment, an indicative cross-section of a grass lined drainage channel with drain scour/rock check installation details has been provided for reference. As indicated in this figure, steep road sections, such as when gradients exceed 8%, fully rock lined channels will likely be proposed. At gradients lower than this, which is expected characterise the majority of the access road network, a combination of grass lined channels and rock checks at varying spacing are proposed in drainage channels. In the instances where extensively long, steep (>8% gradient) road sections that overlap with important fauna habitat where safe passage for crossing was identified as important, then the option to fill in voids of rocks with some ballast or other smaller material to create a smother surface profile in targeted sections to enable safe passage of targeted fauna could be explored. There would also be some minor sedimentation following rainfall events that would likely cause some infill of these rock voids that might enable this following construction regardless.

In addition to the permanent road footprint described above a 5 m temporary disturbance is allowed at either external batter edge or edge of the Permanent Disturbance for access roads, for the purpose of road construction. The additional 5 m temporary construction corridor either side of the outer extents of the permanent road footprint has been minimised as much as possible and has also been designed to overlap with the placement of the underground MV cable in most locations to further reduce Disturbance Footprint.

Access roads to access each transmission tower along the OTL have not been detailed to 3D design maturity yet and are instead based on a surface width of 6m, with the total Disturbance Footprint correlated with the slope across each track. Wherever possible, these tracks have utilised public roads, farmers' tracks, or access tracks installed for the Goyder South transmission line to minimise any further disturbance.

Following construction, temporary cleared area for road construction will be rehabilitated but roads, including batter and drainage will be retained to meet operational, maintenance and decommissioning requirements for the life of the project. The ongoing operational and maintenance requirements for the OTL are typically less than those required across the Wind Farm and therefore the OTL tower access tracks will be maintained accordingly. Landholders and the local South Australian Country Fire Service will be

consulted with to ensure that access is also suitable for their ongoing requirements, including fire-fighting equipment.

1.3.7 Underground cabling

Underground MV cables are required to connect the wind turbines to the collector substations for transmission and communications (fibre). These are generally located adjacent (within 5 m) to the access road to overlap with the temporary construction footprint and minimise the Disturbance Footprint.

All Disturbance Footprint associated with cable trenching and laying (including that which overlaps with the temporary civil construction buffer) will constitute temporary disturbance and will be rehabilitated after installation.

1.3.8 Temporary construction facilities

Temporary construction facilities will be installed for the construction phase of the WF but will be decommissioned after construction is complete and, where practicable, areas will be rehabilitated.

One of the central construction facilities is designed to be utilised during construction phase of the WF, and later to be used as the proposed BESS site, minimising overall Disturbance Footprint.

1.3.9 Meteorological masts

Up to fifteen meteorological masts will be installed during construction phase for wind monitoring and calibration of wind speeds across the site. It is estimated that nine of these masts will be located in positions where turbines will be installed later in construction, with the remaining six masts remaining in their location for the duration of the Project as part of the operational protocols.

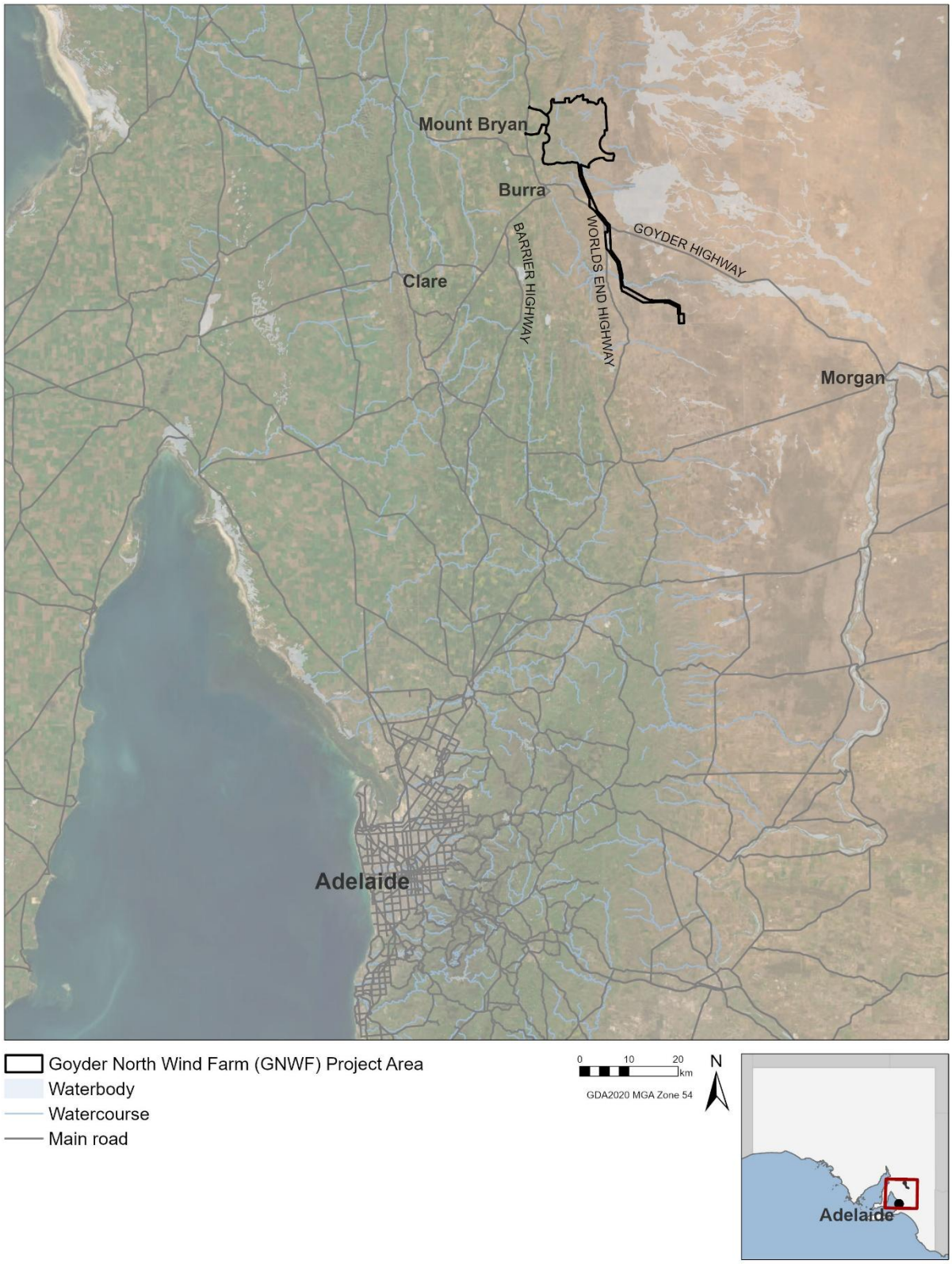

Figure 1.1: Location of the Goyder North Wind Farm Project Area

Acknowledgement: Figure developed by Umwelt.

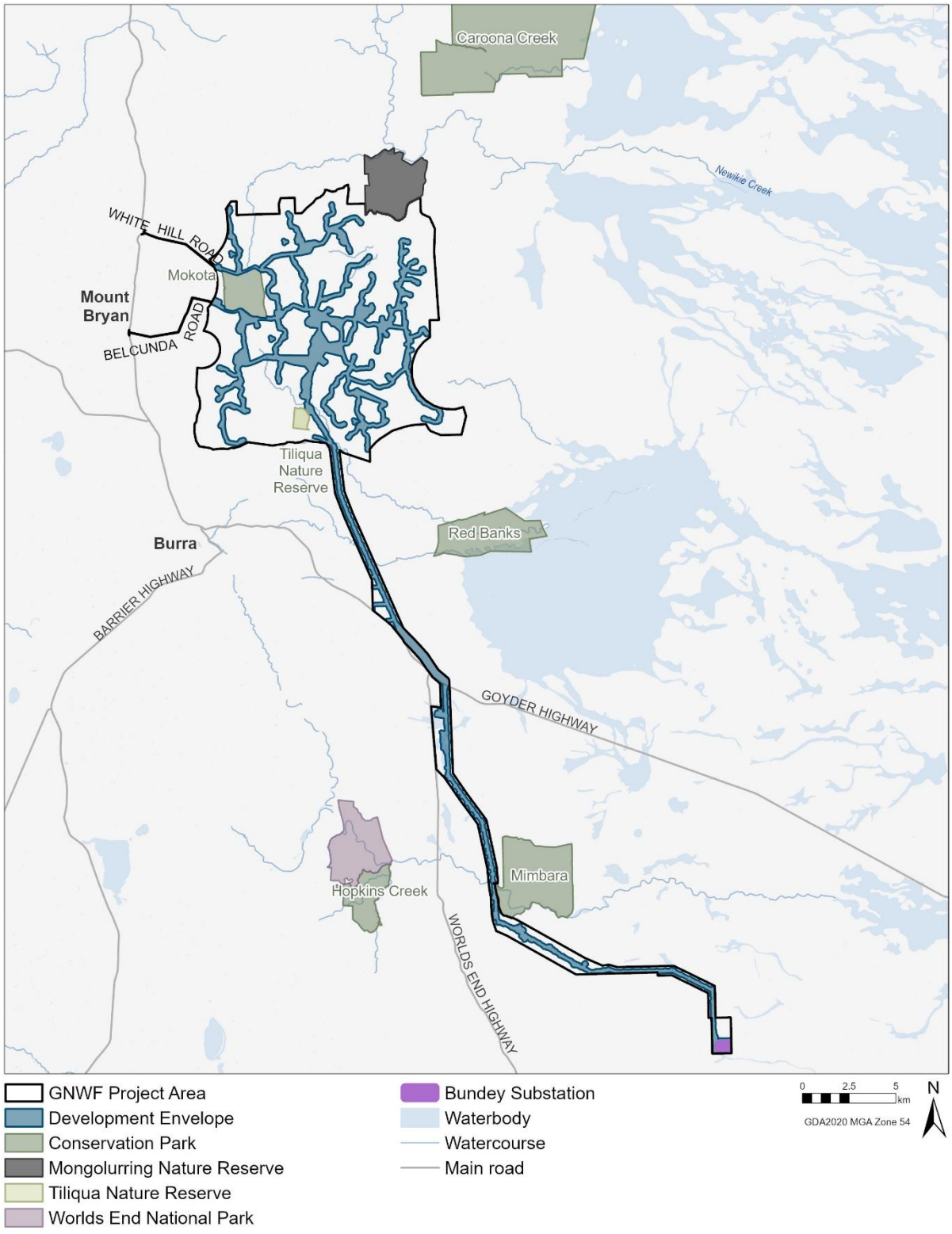

Figure 1.2: Goyder North Wind Farm Project Area

Acknowledgement: Figure developed by Umwelt.

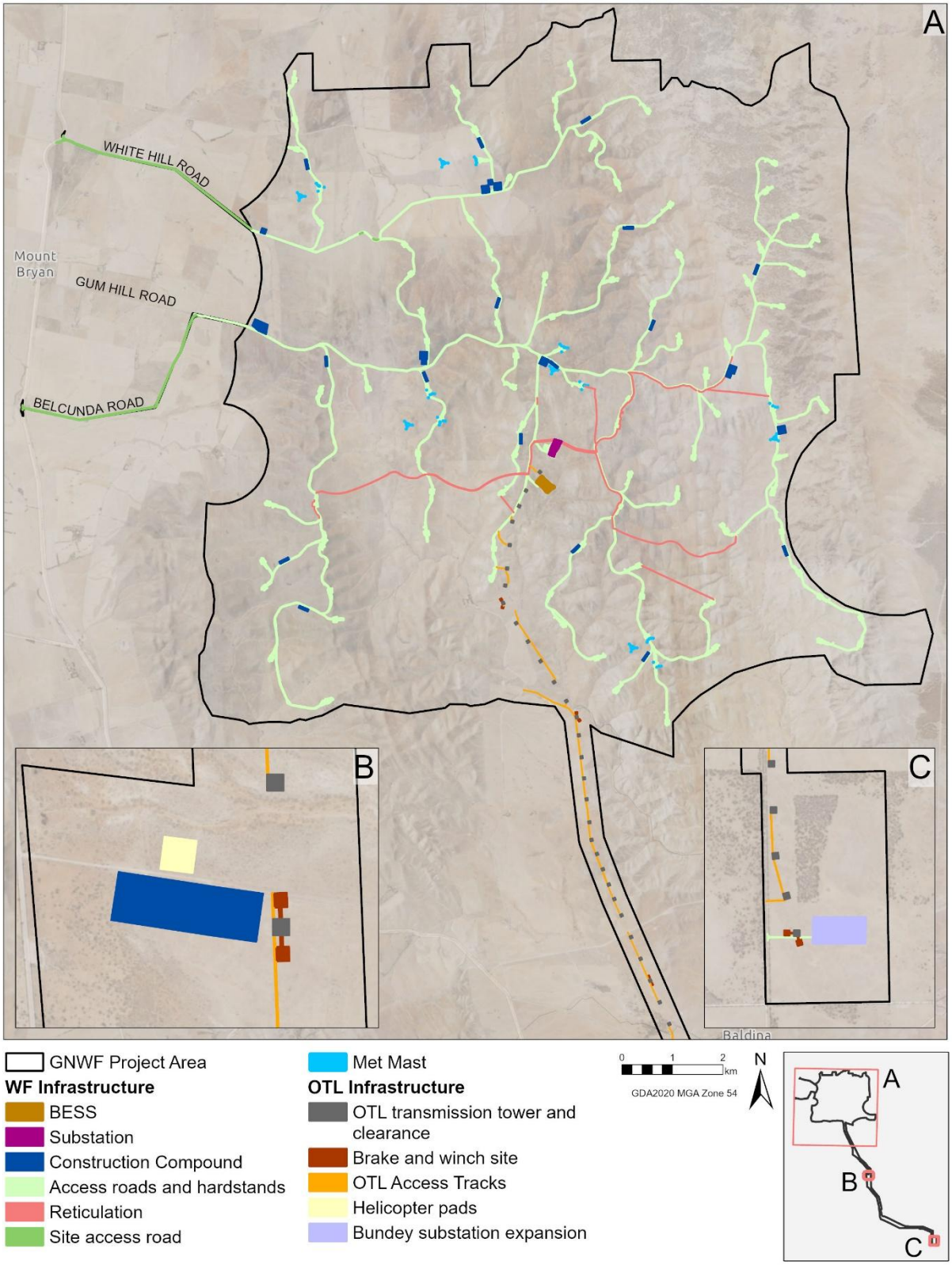

Figure 1.3: Project Infrastructure Layout

Acknowledgement: Figure developed by Umwelt.

1.4 Goyder North Disturbance Footprint

A total Disturbance Footprint of approximately 536.82 ha will be required for the Project (excluding areas of pre-existing disturbances associated with agricultural and pastoral activities). This is comprised of WTGs, access roads and tracks, underground cables, a substation at the WF, BESS, construction and operation compounds, OTL and an expansion at existing substation Bundey. This includes both permanent and temporary clearance areas, laydown areas, stockpile areas and construction access routes for the WF Generation Components and the OTL.

The Disturbance Footprint can be broken down into the following categories (noting allowance for rounding):

- WTGs, generators, hardstands and access roads (including Bundey Substation connection) 378 ha
- BESS including access road 6 ha
- OTL including access road, brake and winch, helicopter landing pad and tower pads 63 ha
- Electrical substation and operation and maintenance facilities, 7 ha for the WF including access road and 10 ha at Bundey Substation including access road
- Construction compounds and facilities 45 ha
- Underground cabling for temporary clearance for MV cable that is additional to which will overlap with 5 m civil construction footprint 19.5 ha
- Meteorological masts 1.5 ha
- Site access 7 ha.

The total Disturbance Footprint for the Project represents direct impacts to native vegetation and habitat. Other direct impacts as a result of the Project include potential impact pathways such as vehicle strike / WTG blade strike to fauna, and bird collision with power lines once operational. Additional indirect impacts are also plausible, such as weed introduction resulting in reduced habitat quality, or noise or vibration disturbance resulting in avoidance of habitat or less successful breeding. All plausible impact pathways (both direct and indirect) are considered where relevant in this assessment.

Of note, the total initial maximum Disturbance Footprint required for safe and efficient construction of the proposed Project is approximately 536.82 ha. This compares with a total Disturbance Footprint of 607 ha for the originally referred design and is the result of extensive effort in design and construction method optimisation to reduce the Disturbance Footprint. Interrogation of the revised design against the original EPBC referred design reveal the following because of these optimisation efforts[1]:

- an approximate reduction of 11% of disturbance per WTG in the revised design excluding the OTL component
- an approximate reduction of 41% in the OTL Disturbance Footprint
- an overall footprint reduction of 11% despite an 8% increase in the number of WTGs

[1] Note that these calculations exclude primary site access for both the revised and original design due to the change in way that this item has been accounted for in the revised design.

- a 23.82 % reduction in native vegetation impact from 595.78 ha in the Referred design to 453.87 ha in the current design

Minor adjustments to the final layout will be contained within a defined Development Envelope, which is a buffered version of the revised GNWF design Disturbance Footprint representing the maximum spatial extent in which the Disturbance Footprint will occur. The Development Envelope allows for minor flexibility in the final positioning of the project infrastructure, enabling further refinements in design to reduce ecological impacts, and to allow for any unforeseen on ground construction related alterations which may be required once the contract for supply and construction has been awarded. Despite the function for flexibility of the Development Envelope, the Disturbance Footprint total area is proposed as the upper limit not to be exceeded through detailed design and construction.

1.5 Existing environment description

The Interim Biogeographic Regionalisation for Australia (IBRA) describes land for conservation under Australia's Strategy for the National Reserve System (Thackway and Creswell 1995, Environment Australia 2000). The IBRA classifies Australia into 89 bioregions and 419 subregions. Each bioregion is a distinct area characterised by geology, landform patterns, climate, ecological features, and plant and animal communities.

The Project overlaps two main Bioregions and three subregions as classified by the IBRA system. The Project is principally situated within the Flinders Lofty Block (FLB) region, with a portion of the Disturbance Footprint (OTL) extending east into the Murray Darling Depression (MDD) region. Within the FLB, the Project overlaps two IBRA Subregions, including Broughton and the Olary Spur within which four environmental associations occur: Burra Hill, Hansen (Broughton), Terowie and Mongolata (Olary Spur). Within the MDD, the Project Area is within the Murray Mallee subregion, and Sutherlands environmental association at the southernmost end of the OTL.

The FLB Bioregion is categorised as temperate to arid Proterozoic ranges, alluvial fans and plains, and some outcropping volcanics, with the semi-arid to arid north supporting native cypress, black oak (belah) and mallee open woodlands, *Eremophila* and *Acacia* shrublands, and bluebush/saltbush chenopod shrublands on shallow, well-drained loams and moderately deep, well-drained red duplex soils. The increase in rainfall to the south corresponds with an increase in low open woodlands of *Eucalyptus obliqua* and *E. baxteri* on deep lateritic soils, and *E. fasciculosa* and *E. cosmophylla* on shallower or sandy soils.

The MDD Bioregion is categorised as an extensive gently undulating sand and clay plain of Tertiary and Quaternary age frequently overlain by aeolian dunes. Vegetation consists of semi-arid woodlands of Black Oak / Belah, Bullock Bush/Rosewood and *Acacia* spp., mallee shrublands and heathlands and savanna woodlands. Substantial areas of mallee remain today in the western aeolian dunes, mainly in South Australia and but also western NSW. Clearing has also been widespread in the northeastern portion of the bioregion in NSW particularly on the undulating plains and relict river channels and lakes associated with the Murray and Darling Rivers.

The land has a rich history of agriculture and sheep and cattle grazing post-European settlement and is currently used for a combination of agricultural and pastoral activities across the different land parcels.

The Project Area is wholly within the Northern and Yorke Landscape Management Region and is managed by the Northern and Yorke Landscape Management Board (NYLB). The area is governed by the Regional

Council of Goyder, and the Project Area overlaps the border of Goyder's Line, the line of demarcation between areas suitable for agriculture based upon annual rainfall, and the border where rainfall prevents cropping activities (though low intensity grazing practices may still be supported) (RCoG 2024).

Numerous habitat and vegetation assessments have been undertaken across the broader GNREF area which have identified a total of 23 native vegetation associations, and a total of 268 species of native plants (EBS 2024e, Umwelt 2025a) (Figure 1.4). Native vegetation across the Project Area is comprised predominantly of grasslands, with large areas of Iron-grass (*Lomandra* spp.) in the central and eastern portions of the GNREF. Remnant mallee woodland associations occur along the eastern side of the Project Area, where the vegetation changes into typical chenopod-dominated plains. The OTL traverses a variety of landscapes, and includes native vegetation including *Austrostipa* grassland, *Lomandra* grassland, Chenopod shrubland, and Mallee woodland. Vegetation was assessed according to the South Australian BAM.

Each vegetation association is correlated with different landforms and soil characteristics, and therefore representing different habitat types which are potentially suitable to support EPBC listed threatened and migratory species.

No groundwater dependent ecosystems have been identified in any studies undertaken to date, and the Project is not anticipated to impact groundwater in the region.

Disturbance Footprint area calculations per TEC and vegetation association associated with the Project are provided in Table 1.2 and Table 1.3.

Iron-grass Natural Temperate Grassland and Mallee Bird Community of the Murray Darling Depression Bioregion TECs overlain with the Project's Development Envelope are shown on Figure 1.5.

Vegetation associations within the Project Area, shown with the Project's Disturbance Footprint overlain are shown on Figure 1.6, Figure 1.7, and Figure 1.8.

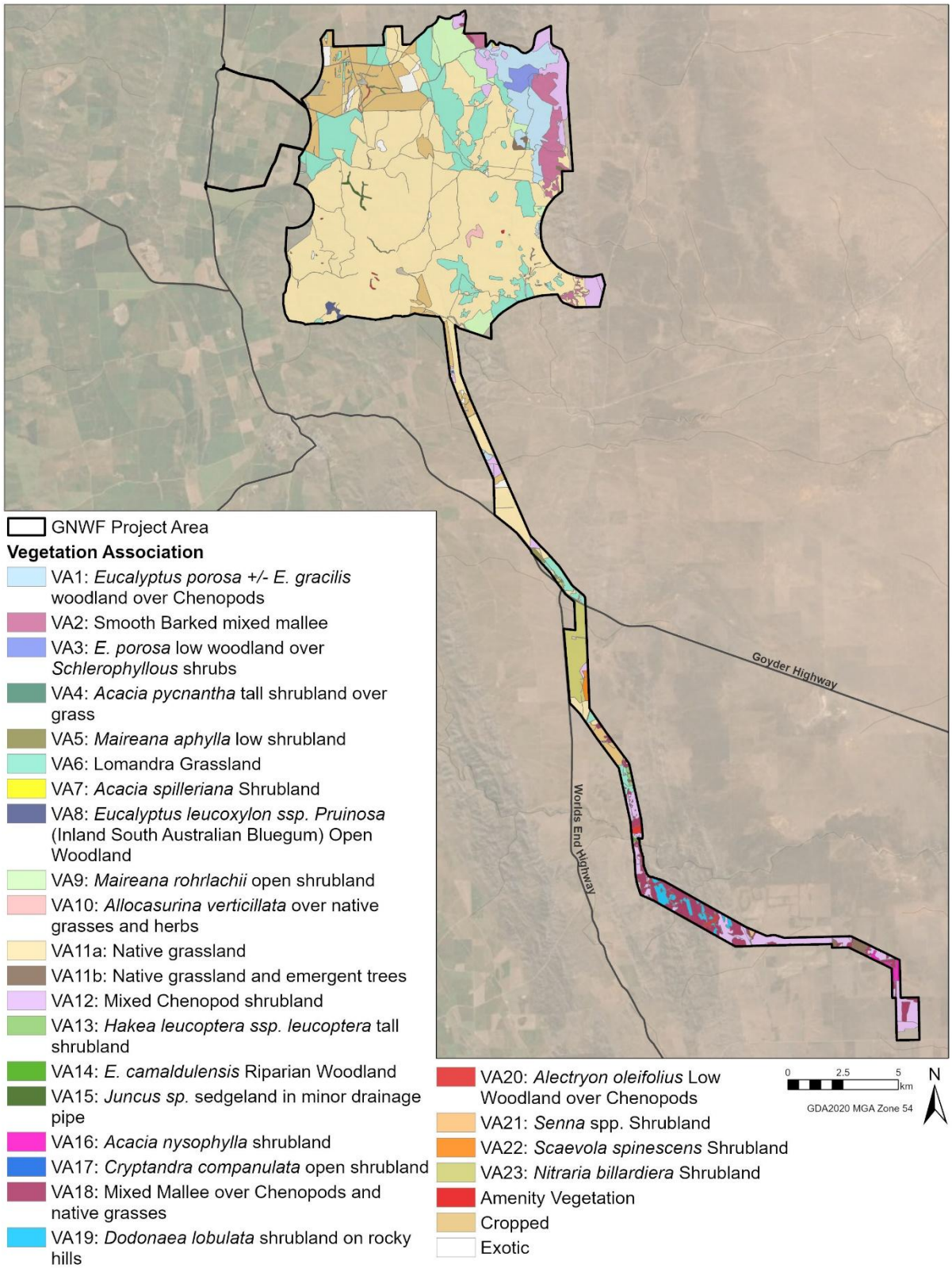

Figure 1.4: Vegetation Associations within the Goyder North Wind Farm Project Area

Acknowledgement: Figure developed by Umwelt.

Table 1.2: Approximate areas of TECs within Disturbance Footprint (both temporary and permanent) within the GNWF

Threatened Ecological Community	Approximate Disturbance Footprint within the Project Areas (ha)[1]	
	WF Project Area	Overhead Transmission Line
Iron-grass Natural Temperate Grassland	6.14	-
Mallee Bird Community of the Murray Darling Depression Bioregion	-	0.76

[1] Source Umwelt 2025a

Table 1.3: Approximate areas of vegetation associations within Disturbance Footprint (both temporary and permanent) within the GNWF

VA	Vegetation Association description	Permanent Disturbance (ha)	Temporary Disturbance (ha)	Total direct impact (ha)
VA1	*Eucalyptus porosa* plus/- *E. gracilis* / *E. brachycalyx* Woodland over Chenopods	11.96	7.60	19.56
VA2	Smooth-barked Mixed Mallee *(E. gracilis* plus/- *E. brachycalyx* plus/- *E. dumosa* plus/- *E. leptophylla* plus/- *E. socialis*) over Chenopods	4.24	1.10	5.34
VA3	*E. porosa* Woodland over *Senna artemisioides* sp. *coriacea* and *Sclerophyllous* Shrubs	0.81	0.68	1.49
VA4	*Acacia pycnantha* Tall Shrubland plus/- *Austrostipa* spp. plus/- *Cymbopogon ambiguus* in rocky creek	0.03	0.03	0.06
VA5	*Maireana aphylla* Shrubland over native and exotic grasses	0.30	0.39	0.69
VA6	*Lomandra* spp. Grassland	3.57	5.02	8.59
VA7	*Acacia spilleriana* Shrubland	0.99	0.18	1.17
VA8	*E. leucoxylon* ssp. *pruinosa* plus/- *E. odorata* (Peppermint Box) Very Open Woodland over exotic grasses	10.15	6.39	16.54

VA	Vegetation Association description	Permanent Disturbance (ha)	Temporary Disturbance (ha)	Total direct impact (ha)
VA9	*Maireana rohrlachii* open shrubland over *Austrostipa* sp. and exotics plus/- *Lomandra* spp.	0.30	0.37	0.67
VA10	*Allocasuarina verticillata* over *Cymbopogon ambiguus* and herbs on steep rocky slopes	0.30	0.37	0.67
VA11a / VA11b	VA11a: Mixed *Austrostipa* spp. and *Rytidosperma* spp. Grassland VA11b: plus/- emergent *Eucalyptus* (*E. porosa* / *E. socialis*) trees	202.40	146.68	349.08
VA12	Mixed Chenopod Shrubland of *Maireana pyramidata* and *Atriplex stipitata* over native and exotic grasses plus/- *Lomandra* spp.	0.90	0.61	1.50
VA13	*Hakea leucoptera* ssp. *leucoptera* Shrubland	18.41	8.94	27.35
VA14	*Eucalyptus camaldulensis* Riparian Woodland over reeds and sedges	0.07	0.14	0.22
VA15	*Juncus* spp. Sedgeland plus/- *Typha domingensis* plus/- *Phragmites australis* associated with minor drainage lines and creeks	0.00	0.05	0.05
VA16	*Acacia nyssophylla* shrubland	0.01	0.01	0.02
VA17	*Cryptandra* spp. Shrubland plus/- *Lomandra* spp.	0.58	1.02	1.61
VA18	Mixed Mallee (inc. *E. oleosa* dominant) over Chenopods and native grasses	2.92	3.99	6.92
VA19	*Dodonaea lobulata* Shrubland plus/- Scattered Mallee *Eucalyptus* spp.	1.01	0.83	1.84
VA20	*Alectryon oleifolius* Low Woodland over Chenopods	0.27	0.63	0.91
VA21	*Senna* spp. Shrubland	0.02	0.07	0.09
VA22	*Scaevola spinescens* Shrubland over Grass	0.13	0.14	0.27

VA	Vegetation Association description	Permanent Disturbance (ha)	Temporary Disturbance (ha)	Total direct impact (ha)
VA23	*Nitraria billardiera* Shrubland	2.21	7.69	9.91
Total Native Vegetation		**261.31**	**192.55**	**453.87**
Amenity	Vegetation planted for shelterbelts, revegetation or ornamental purposes	0.03	0.03	0.05
Exotic	Pastures dominated by exotic grasses (i.e., *Hordeum vulgare*, Barley Grass)	8.07	9.66	17.73
Cropped	Agricultural land currently or historically utilised for cropping	11.56	17.30	28.85
Cleared / Unsurveyed	Existing cleared land such as roads or infrastructure which have not been surveyed for native vegetation.	26.60	9.72	36.32
Total Non-Native Vegetation		**46.25**	**36.71**	**82.95**
Total (Combined Native Vegetation and Cropped)		**307.56**	**229.26**	**536.82**

[1] Source Umwelt 2025a

[2] Note. Minor discrepancies are due to rounding of numbers.

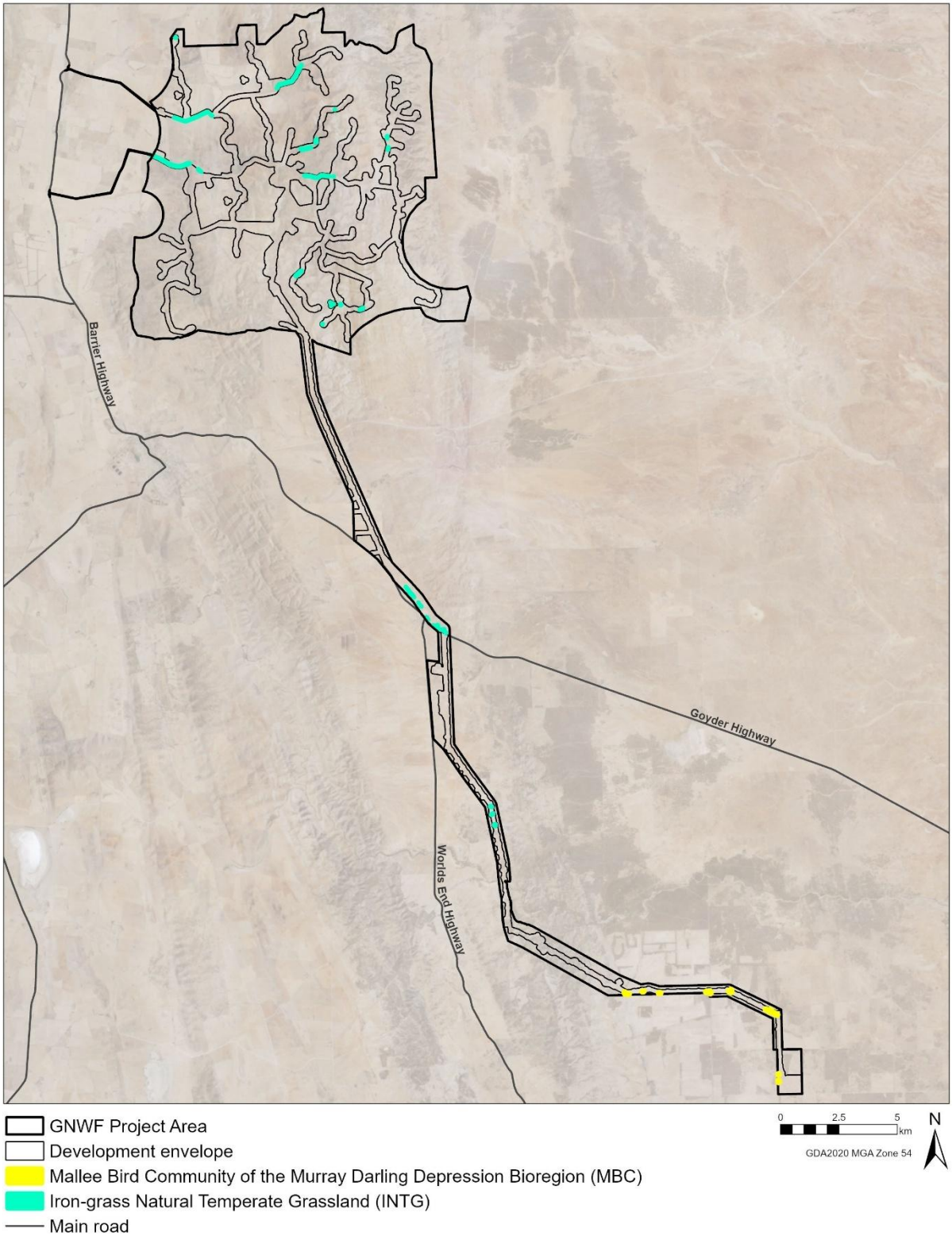

Figure 1.5: Approximate Areas of TECs within Development Envelope (both temporary and permanent)

Acknowledgement: Figure developed by Umwelt.

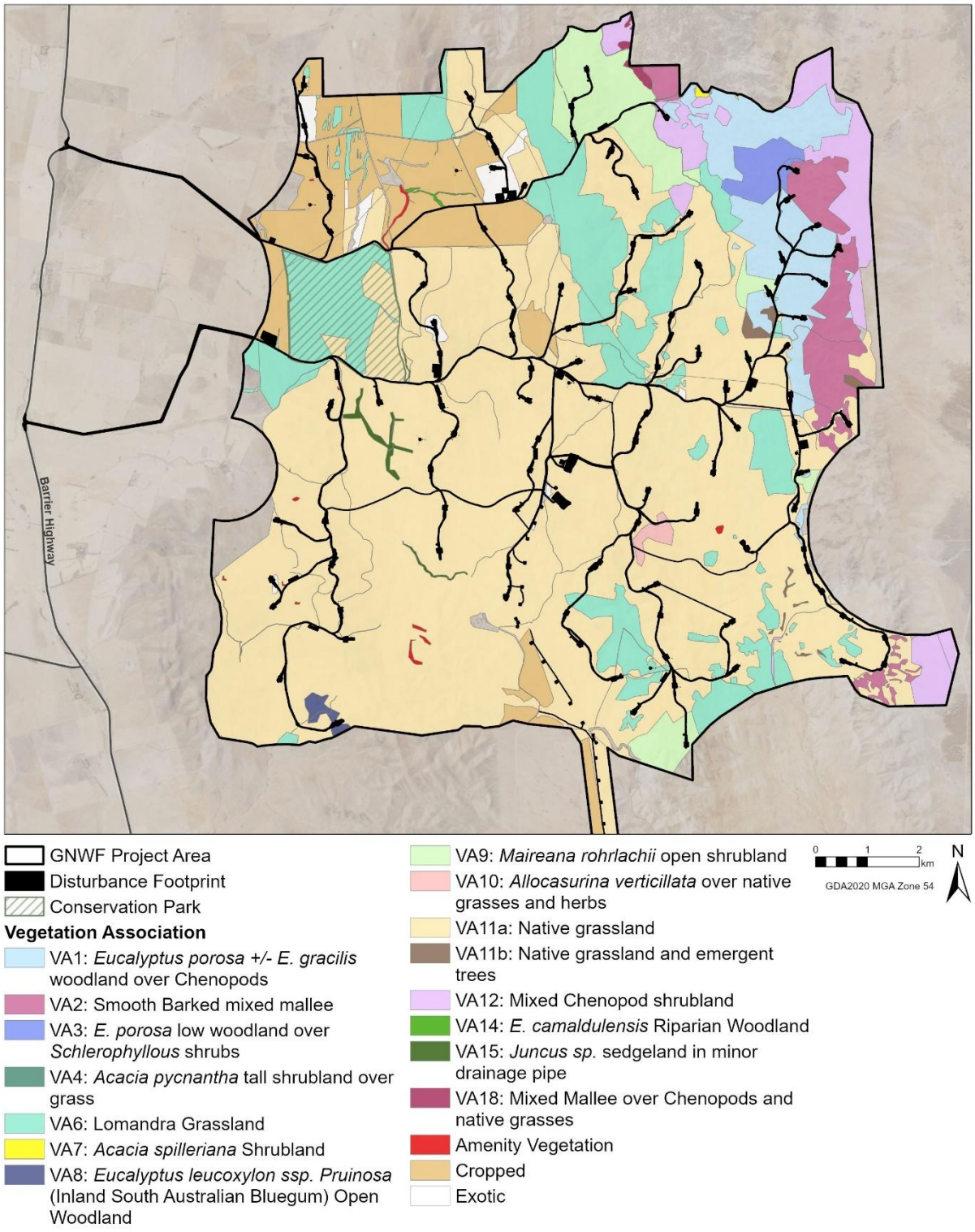

Figure 1.6: Vegetation Associations with the Disturbance Footprint (WF)

Acknowledgement: Figure developed by Umwelt.

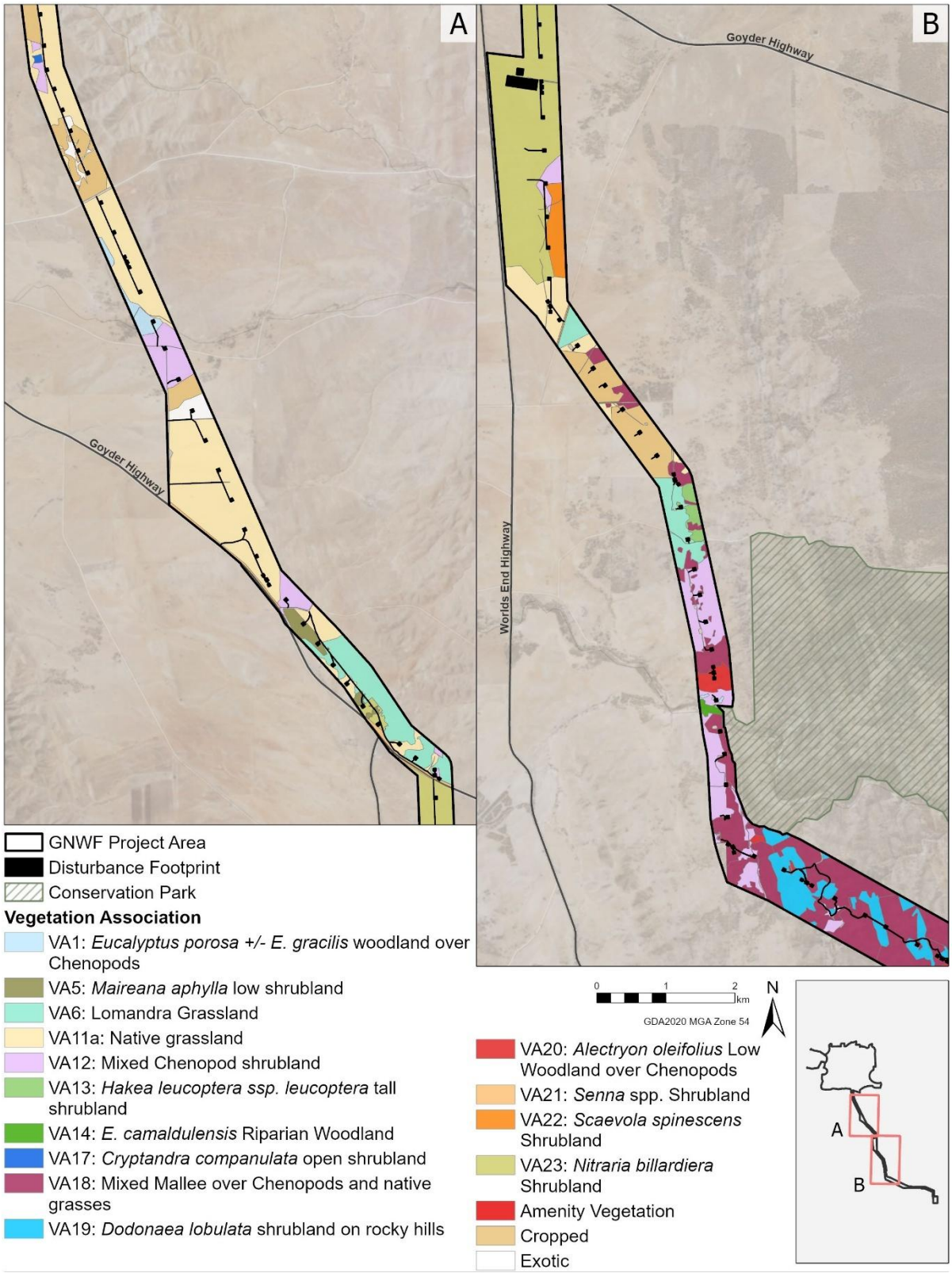

Figure 1.7: Vegetation Associations with the Disturbance Footprint (OTL northern and mid extent)

Acknowledgement: Figure developed by Umwelt.

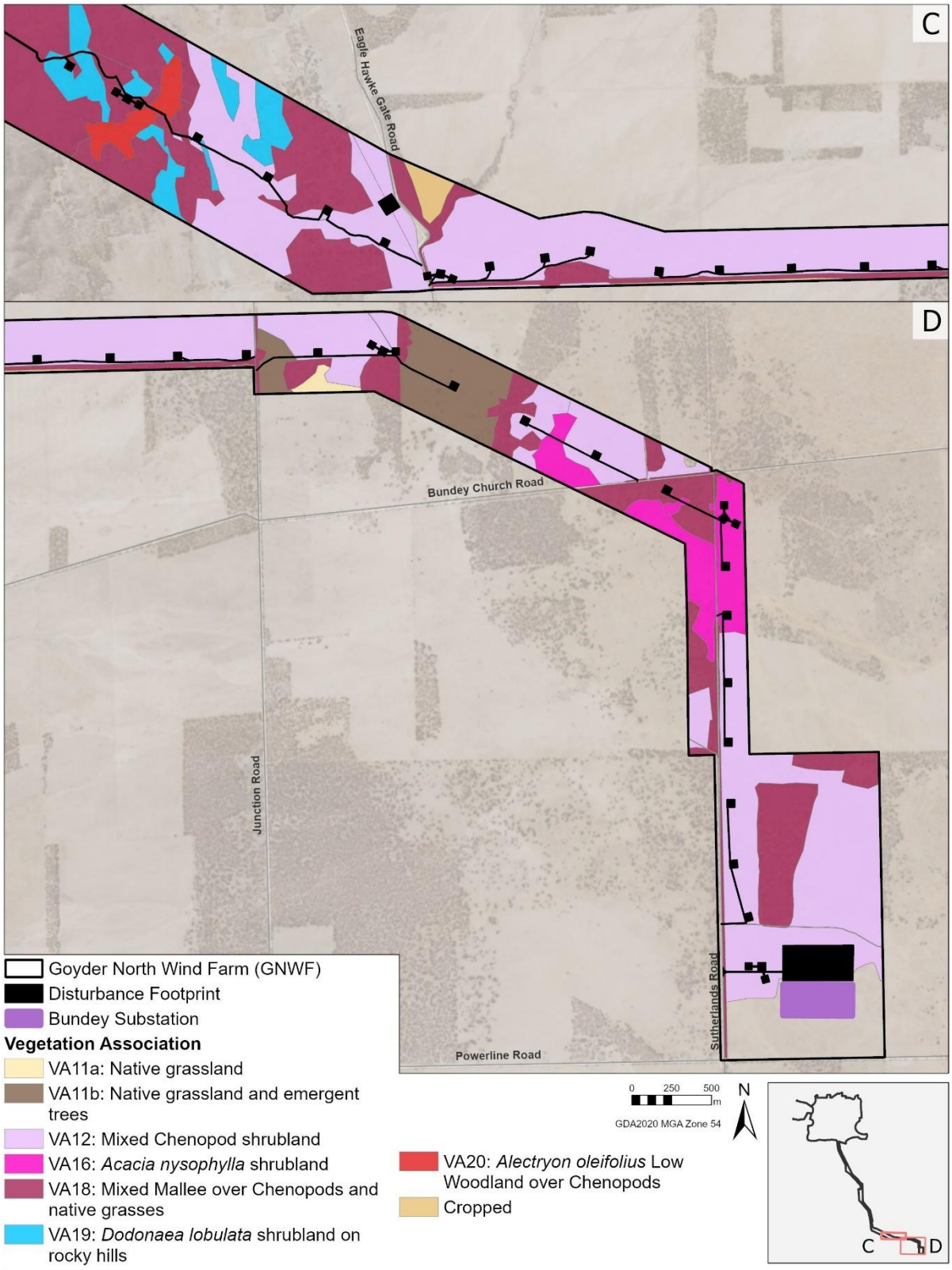

Figure 1.8: Vegetation Associations with the Disturbance Footprint (OTL southern extent)

Acknowledgement: Figure developed by Umwelt.

2 Methodology

2.1 Approach to Significant Impact Assessment

This document draws upon information available at the time of preparation, including habitat and vegetation descriptions and on-ground survey data, principally undertaken between 2022 to 2025 by Umwelt (and previously EBS), arising from baseline ecological surveys and assessments (EBS 2022; EBS 2023a; EBS 2023b), an ecological risk assessment summarising previous survey work (EBS 2023c), bird and bat utilisation surveys (EBS 2024a; EBS 2024b; Umwelt 2025e), targeted MNES surveys (EBS 2024c; EBS 2024e; Umwelt 2025b; Umwelt 2025c; Umwelt 2025d), two comprehensive ecological assessment reports summarising the findings of a series of reports prepared for the GNWF and broader GNREF (EBS 2024e, Umwelt 2025a), and MNES-specific management plans (Umwelt 2025f; Umwelt 2025g). The assessment also utilises a range of information available at the time of preparation, including recovery plans, Conservation Advice, species profile and threat databases, public datasets, Department of Environment and Water (DEW) records accessed via NatureMaps or the Atlas of Living Australia, and other relevant government datasets).

This data and information were used to inform the likelihood of occurrence assessment and the significant impact assessment to MNES by applying the significant impact criteria as outlines by DotE (2013a).

For the purpose of this assessment, a PMST output inclusive of a 5 km buffer surrounding the GNWF Project Area (inclusive of OTL), was undertaken on 21 August 2025 (Appendix A). A 5 km buffer was applied and in keeping with requirements set out within the South Australian Native Vegetation Council (NVC) Regulations and Bushland Assessment Manual (NVC 2024a; NVC 2024b). The PMST output has formed the basis of this assessment and includes species updates to capture recently listed MNES under the EPBC Act.

Reference reports were used in conjunction with information sourced from publicly available documents and datasets, along with the outcomes from reports referenced in Table 2.1 to assess whether the Project is considered likely to have a significant impact on MNES.

Impacts related to National Heritage Places utilised information included within the Biosis (2024) report.

2.2 Existing studies and field surveys

A number of desktop studies and field surveys have been completed for the Project which provide the current understanding of vegetation, habitat and existing ecological values within the Project Area. A summary of previous studies undertaken is provided in Table 2.1 below. These studies have been each been used to support the assessment outlined in Section 4.

Table 2.1: Summary of key studies and reference reports used in this assessment

Report	Target Area/Description	Assessment
EBS 2022 (in draft)	GNREF on-ground flora assessment (GN1, GN2)	Desktop assessment including early ecological constraints identification and on-ground broad flora survey and fauna habitat assessment.
EBS 2023a (in draft)	GNREF OTL Desktop Flora and Fauna Assessment	Desktop flora and fauna assessment. Report scope covered three proposed OTL options.
EBS 2023b	GNREF Ecological constraints mapping	Desktop summary of known ecological constraints to guide wind farm design process.
EBS 2023c	GNREF and Overhead Transmission Line Ecological Risk Assessment Summary	EBS provided a short, consolidated report summarising previous ecological studies (flora and fauna) in the area associated with the broader proposed GNREF Project (i.e. Stage 1 and Stage 2) undertaken on behalf of the then project proponent Investec), with past on-ground surveys occurring in 2010, 2012, and 2019, and desktop assessments for species listed under the EPBC Act (and NPW Act (SA)) occurring in 2023. The assessment included an updated on-ground survey which was undertaken from 12 to 16 September 2022, noting this occurred prior to finalisation of the wind turbine layout, with recommendations provided to guide future design of the WTG layout. Flora assessments were conducted using the Native Vegetation Council (NVC) (SA) Bushland Assessment Method (BAM) and Scattered Tree Assessment Method (STAM) in accordance with (NVC 2020a, 2020b and 2020c). Findings of the report indicated several EPBC listed species were known to occur or are likely to occur within the Project Area, including known to occur species the PBTL (*Tiliqua adelaidensis*) and the Flinders Ranges Worm Lizard (*Aprasia pseudopulchella*). In addition, the desktop assessment indicated seven then-listed EPBC plant species may occur within the Project Area.
EBS (results incorporated into both EBS 2024d and EBS 2024e)	GNREF on-ground flora assessment (Spring 2023)	Targeted GN1 and OTL native vegetation assessment.
EBS 2024a	GN1 Project Area Bird and Bat Assessment (Spring 2023)	An inaugural bird and bat utlisation survey (BBUS) was undertaken from 20 to 24 November 2023 in accordance with DCCEEW's Draft Onshore Wind Farm Guidance (DCCEEW 2024e), as part of a proposed two-year survey package (including a total of eight short summary documents), which are intended to feed into a Bird and Bat Monitoring Program (BBMP) for the Project. Nine bird monitoring sites (each site 2 ha) and three bat monitoring sites were established across a range of habitats across the GN1 Area (noting no threatened bat species are known to occur within the Project Area). Avian surveys were in accordance with Birdlife Australia Systematic Bird Survey methodology and recorded species observed, number of individuals, flight height above ground (minimum and maximum where relevant) and behaviour. In addition, opportunistic observations were also recorded. AnaBat recorders were deployed at each of the three bat monitoring sites for one night per site.

Report	Target Area/Description	Assessment
		A total of 33 species of birds (comprised of 413 individuals) were recorded during the survey, comprising 29 native species and three introduced species. Of note, only one species listed under the EPBC Act was recorded: the Southern Whiteface (*Aphelocephala leucopsis leucopsis*, Vulnerable), where 12 individuals were recorded at Site 5.
EBS (results included within EBS 2024e)	GNREF targeted Mallee Bird Community (MBC) surveys	On-ground targeted spring MBC bird surveys within suitable patches of mallee vegetation along the OTL within the MDD Bioregion. A total of seven MBC sites were surveyed over four days in Spring 2023 (15 November and 20 to 23 November 2023). An alignment of approximately 9.5 km in the south of the OTL alignment was determined to be within the MDD Bioregion, in which mallee vegetation patches meet certain criteria which may qualify as a nationally listed TEC – MBC of the Murray Darling Depression Bioregion. It was noted unsurveyed areas of mallee vegetation along the OTL-Alt are also likely to qualify as MBC.
EBS 2024b	GN1 Project Area Bird and Bat Utilisation Survey (Summer 2024)	Following on from the inaugural BBUS survey (EBS 2024a), an additional seven bird monitoring sites were established during the Summer 2024 survey undertaken from 13 to 16 February 2024, bringing the total bird monitoring sites to 16. A total of 35 species of birds (comprised of 648 individuals) were recorded during the survey, comprised of 33 native species and two introduced species. Of note: • The Southern Whiteface was once again recorded (Vulnerable), where 24 individuals were recorded at Site 10 (noting none were recorded at Site 5 as per previous survey). • Two Migratory species were recorded: the Fork-tailed Swift (*Apus pacificus*, Migratory Marine), where a single individual was recorded at Site 12, and the Rainbow Bee-eater (*Merops ornatus*, Migratory Marine, where a single individual was recorded opportunistically on the eastern edge of the WF near Site 16. The Fork-tailed Swift was recorded at a maximum height of approximately 50 m and considered an 'at-risk movement'[1] species.
EBS 2024c	GN1 Project Area Targeted Pygmy Bluetongue Lizard Survey Report	An initial survey period was conducted over 20 days between 12 February 2024 and 8 March 2024, in survey blocks (5 days per survey). A total of 15,534 potential burrows were searched during the survey, with 136 burrows confirmed to contain PBTL, including one burrow which contained three individuals (one adult and two juveniles), bringing the total count of PBTLs detected to 138 individuals. Despite widespread distribution of PBTLs, the survey identified several areas of higher PBTL density, particularly surrounding: • WTG 015 (nine individual PBTLs), WTG 087 and WTG 092 (both densely populated particularly along access track and/or hardstand areas), WTG 090 and WTG 091 (three individuals within each hardstand area), access track to WTG 059 and WTG 086 (seven individuals), WTG 098 (cluster of 13 individuals in atypical *Maireana rohrlachii* shrubland over grass habitat), OTL (within boundary of GNREF, 19 records/individuals along direct route area), BESS site (three individuals). A follow-up survey period was conducted over five days between 18 and 22 March 2024, focussed on several potential micro-siting locations and road access options. Of these sites, a total of 15 burrows were confirmed to contain PBTLs, including one burrow which contained two individuals (one adult and one juvenile), bringing the total count of PBTL detected to 16 individuals. In summary:

Report	Target Area/Description	Assessment
		• PBTLs were not detected along the proposed access road (Belcunda Road) or at several micro-sited locations (WTG126-Alt, WTG121-Alt / WTG121-Alt, WTG120-Alt). • PBTLs were detected at site WTG015-Alt (two individuals, in difficult terrain) • PBTLs were detected at site WTG098-Alt (11 occupied burrows, 12 individuals within the WTG hardstand location, and two additional PBTLs in the surrounding area between the vehicle track and the proposed location). The majority of burrows (i.e. 116 burrows) containing PBTLs were recorded within VA11a (Mixed *Austrostipa* spp. and *Rytidosperma* spp. Grassland) / VA11b (Mixed *Austrostipa* spp. and *Rytidosperma* spp. Grassland plus/- emergent *Eucalyptus* (*E. porosa* / *E. socialis*) trees). Other PBTL occupied burrows were located in VA9 (i.e. 26 occupied burrows in *Maireana rohrlachii* open shrubland over *Austrostipa* sp. and exotics plus/- *Lomandra* spp.) or VA6 (i.e. four occupied burrows in *Lomandra* spp. Grassland). A further two occupied burrows were located in agricultural land (currently or historically used for cropping), and a further three occupied burrows occurred in areas that have not been mapped for vegetation associations previously, typically occurring on road edges, but represent VA11 Grassland. No PBTLs were found to occur along the OTL, noting habitat in this area is predominantly chenopod shrubland and mallee woodland with a limited grassy understory component.
EBS (results included within EBS 2024e)	GNREF targeted EPBC listed threatened plant surveys (WF, OTL)	On-ground targeted threatened plant searches along proposed infrastructure layout (WF, OTL).
EBS 2024d	GNREF Flora and Fauna Assessment	An ecological assessment, including desktop fauna and on-ground flora assessment (undertaken between 12 to 16 September 2022) was undertaken, with the study focussed upon native vegetation surveys on additional proposed access and infrastructure areas for GN1 and OTL (White Hill Road, Gum Hill Road, Belcunda Road, OTL remaining/ adjusted alignment). As per EBS 2023c, flora assessments were conducted using the Native Vegetation Council (NVC) (SA) Bushland Assessment Method (BAM) and Scattered Tree Assessment Method (STAM) in accordance with (NVC 2020b and 2020c).
EBS 2024e	GNREF Ecological Assessment Report	Consolidated ecological assessment report summarising a range of previous desktop and ecological studies undertaken by EBS, including a summary of all native vegetation mapped to date, a summary of previous desktop assessments highlighting species considered as known to occur or potentially occur within the WF and both OTL and OTL-Alt alignments, a summary of targeted species surveys (including BBUS, Mallee Bird Community (MBC) of the Murray Darling Depression Bioregion, TEC survey, PBTL survey and threatened flora surveys, and identification of potential ecological constraints relevant to the Project. In summary: • 23 native vegetation association have been previously mapped across the Project Area, incorporating 241 species of native plants and 84 weed species. Of note: ○ Two EPBC listed plant species have been recorded within the Project Area; *Acacia spilleriana* (Spillers Wattle, Endangered) planted trees specimens located on the southern side of the road, however, not proposed to be impacted (although do occur within the Development Envelope), and *Dodonaea procumbens* (Trailing Hop-bush, Vulnerable) where a population is known to occur in Mokota Conservation Park directly adjacent to the Disturbance Footprint, with at least two historical records within the Development Envelope.

Report	Target Area/Description	Assessment
		○ One TEC; Irongrass Natural Temperate Grassland of South Australia was mapped within the Project Area. Approximately 3,122.23 ha of *Lomandra* Grassland (VA6) is known to occur within the entire GNREF Project Area, however, only a small portion of this vegetation association would be impacted (approximately 11.93 ha of permanent disturbance and 17.71 ha of temporary disturbance within the Project Area, representing approximately 0.95% of the total area of INTG mapped in the entire GNREF Project Area). ○ An additional TEC; Mallee Bird Community of the Murray Darling Depression Bioregion, is known to occur within the southern portion of the OTL. A total of 36 bird species were identified at MBC survey sites during the field survey, including three species listed in the Approved Conservation Advice (DAWE 2021) as mallee dependent species; *Microeca fascinans* (Jacky Winter), *Nesoptilotis leucotis* (White-eared Honeyeater), and *Ptilotula ornata* (Yellow-plumed Honeyeater). • A total of 112 fauna species have been recorded comprising 94 species of bird (including four introduced), 10 mammals (six introduced), three native frogs, four native reptiles and one species of crustacean. Of note: ○ Four EPBC listed threatened species; *Aphelocephala leucopsis leucopsis* (Southern Whiteface), *Melanodryas cucullata cucullata* (Hooded Robin), *Stagonopleura guttata* (Diamond Firetail), and *Tiliqua adelaidensis* (Pygmy Bluetongue Lizard). ○ One EPBC listed migratory species; *Apus pacificus* (Pacific Swift) ○ Targeted surveys were undertaken across the southern portion of the OTL, in accordance with MBC survey guidelines; identifying three MBC dependent bird species, therefore qualifying suitable mallee vegetation as a MBC of the Murray Darling Depression Bioregion. It was noted surveyed areas of mallee along the OTL-Alt would likely also qualify as a MBC based on the proximity of historical and EBS survey records.
Umwelt 2025a	Goyder North Wind Farm Ecological Assessment Report	An updated ecological assessment report prepared for the revised GNWF Project Area as per the EPBC Variation, inclusive of survey effort across the Disturbance Footprint associated with the change from 92 WTG as per the EPBC Referral, to 99 WTG as per the EPBC Variation, (i.e. incorporating both Goyder North Stage 1 and Stage 2, also referred to as GNWF). The report was updated to reflect additional on-ground survey effort specific to the Request for Information (RFI) from DCCEEW to Neoen in the RFI letter dated 5 December 2024, including further information relating to relevant MNES, including 4 species of bird, 2 species of reptiles, 7 species of plants, and two TECs.
Umwelt 2025b	Goyder North Wind Farm Iron-grass Natural Temperate Grassland of South Australia Threatened Ecological Community Assessment	Report condensing nine on-ground field survey results undertaken between 2022 and 2024 to assess vegetation and map the condition of patches of INTG identified as intersecting the infrastructure / Disturbance Footprint or Development Envelope of the proposed GNWF. The INTG TEC condition on-ground assessment was undertaken between 14 to 18 October 2024, and as per the criteria outlined in EPBC Act policy statement 3.7 – Peppermint Box (*Eucalyptus odorata*) Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia (DEWR 2007). Of note, a large bushfire in January 2023 had previously affected up to 2,000 ha across the GNWF area. Where this area was previously mapped as being Lomandra grassland but no longer appeared to meet minimum 10% coverage of Lomandra tussocks, mapping had not been changed. Surveys were undertaken in unaffected pockets within the burnt area. Other specific disturbance factors were also noted, such as grazing, slashing. A total of 23 sites were surveyed for INTG condition class within the GNWF. Results are as follows:

Report	Target Area/Description	Assessment
		• One site was determined to be Class A INTG • 14 sites were determined to be Class B INTG • The remaining 8 sites were determined to be Class C INTG Of note: • One site (LOM12) did not meet the criteria for listing as INTG, as it did not contain a high enough level of coverage of *Lomandra* spp. (>10%). • One site (LOM22) was mapped as Class C INTG due to the high relative cover of *Lomandra* spp. however the site did not meet the typical structural description of the community, having high cover (>10%) of chenopod shrub species including Maireana rohrlachii and Maireana brevifolia, with intermittent dense patches of Hakea leucoptera. The precautionary principle was applied to two sites which came close to meeting the condition criteria for listing as Class B INTG. LOM10 met all criteria except the number of disturbance resistant broad-leaf herb species, containing only two of the three required to meet the criteria for Class B INTG. A total of 6.14 ha of INTG Class be impacted by the current Disturbance Footprint within the WF, which includes approximately 2.43ha of Permanent Disturbance and 3.72 ha of Temporary Disturbance. No INTG Class A or B is impacted within the OTL.
Umwelt 2025c	GNWF Targeted PBTL Assessment Report	A report compiling the results of multiple targeted FRWL surveys undertaken in the Project Area between 2023 and April 2025. Field surveys included targeted surveys in the Disturbance Footprint (February 2024), multiple smaller micro siting surveys to inform infrastructure placement, micro siting surveys for early works including geotechnical investigations and met mast installation, and additional targeted PBTL surveys within the Disturbance Footprint of the varied design (north of White Hill Road). Notable findings are as follows: • A total of 21,641 spider burrows were surveyed in which 186 individual PBTL were recorded. • PBTL were found in the following vegetation associations (Lomandra grassland, *Maireana rohrlachii* Shrubland, Native grassland +/- scattered trees, cropped areas and existing cleared areas (such as roads). • No PBTL were found on the OTL outside of the WF boundary. • Known and likely habitat was mapped based on the findings of the survey in combination with vegetation and habitat mapping. A total of 11,154.12 ha of known or likely habitat was mapped in the GNWF Project Area.
Umwelt 2025d	GNWF Targeted FRWL Assessment Report	A targeted FRWL survey was undertaken in April 2025, with the aim to map potentially suitable FRWL habitat in the Project Area, and to determine the occurrence and distribution of FRWL across areas of suitable habitat. The resulting report summarises the findings of the targeted field assessment, detailing the findings of search effort at 52 quadrats in which 150 to 200 rocks 'suitable' rocks were overturned. Notable findings are as follows: • Five live FRWL were recorded from an estimated 9,300 to 12,400 rocks overturned • Twenty FRWL skins were recorded in the same survey area. • A total of 3,152.81 ha within the Project Area was mapped as known or possible PBTL habitat.

Report	Target Area/Description	Assessment
Umwelt 2025e	Various; collectively GNWF seasonal BBUS reports (1 to 8)	A total of eight (from eight proposed) seasonal BBUS surveys have been completed over 24 months within the GNWF Project Area, commencing in spring 2023. BBUS reports have been compiled for each survey session, summarising the results of that survey, for a total of eight short reports.
Umwelt 2025f	Goyder North Wind Farm INTG Management Plan	Sub-plan of GNWF CEMP, which details management actions specific to avoiding and minimising impacts to retained INTG in the Project Area during construction and operation of the Wind Farm.
Umwelt 2025g	Goyder North Wind Farm PBTL Management Plan	Sub-plan of GNWF CEMP, which details management actions specific to avoiding and minimising impacts to PBTL and PBTL habitat in the Project Area during construction and operation of the Wind Farm. Includes a micro siting and relocation procedure.
Protected Matters database, accessed via the online Protected Matters Search Tool (DCCEEW 2025a, Appendix A)	GNWF Project Area (plus 5 km buffer)	To support this significant impact assessment, the Australian Government's DCCEEW PMST was used to produce a list of MNES potentially relevant to the GNWF Project Area (plus a buffer of 5 km (Figure 1.6). The PMST output was undertaken on 21 August 2025 to inform MNES species relevant to the Project and ensures recently listed species as well as listing changes were included within this significant impact assessment. Results of the PMST search (Appendix A) are summarised in Table 3.1 along with Other Matters Protected by the EPBC Act.

[1] For the purposes of this report, flight heights of 20 metres (m) and above are considered 'at-risk movement' given that this airspace corresponds with the rotor-swept zones of the proposed WTG (EBS 2024a).

3 Overview of PMST assessment

A summary of the number of MNES identified from the 21 August 2025 PMST output is provided in Table 3.1.

Table 3.1: Summary of the PMST assessment

MNES	August 2025 PMST Results
Listed Threatened Ecological Communities	4
Listed Threatened Species	34
Listed Migratory Species	9*
Wetlands of International Importance (Ramsar)	1
Commonwealth Marine Areas	None
World Heritage Properties	None
National Heritage Places	1
The Great Barrier Reef Marine Park	None

* Note three species: *Calidris acuminata* (Sharp-tailed Sandpiper), *Calidris ferruginea* (Curlew Sandpiper), *Gallinago hardwickii* (Latham's Snipe) appear in both Listed Threatened Species and Migratory Species categories, however, are only assessed once within this report in accordance with the species threatened listing criteria.

MNES identified as potentially present within the Project Area or surrounding buffers are further examined in Table 4.6. This table provides a summary of the potential impacts to the MNES from the proposed Project, the realistic and achievable mitigation measures which would be applied to avoid or reduce potential impacts, and an assessment of the residual significance of any potential impact against the significant impact criteria (as outlined in Section 4.2, Section 4.3 and Section 4.4).

Section 4.5 contains an assessment of the significance of residual impacts to ecological MNES, which is the primary focus of this report. A high-level summary of the assessment of significance of residual impacts for ecological MNES relative to the GNWF Project Area (including the OTL) is provided in Section 4.6.

Section 5 of this assessment addresses other matters protected under the EPBC Act that may be applicable to the Project.

4 Assessment of ecological MNES

4.1 Likelihood of occurrence criteria

This section assesses the significance of residual impacts predicted for EPBC-listed ecological MNES which have been identified in the most recent PMST output as potentially present within the GNWF Area. This includes Listed TECs, Threatened Species (both flora and fauna) and Listed Migratory Species which were considered as known to be present, those which are considered likely to occur, or those which potentially occur in the area, and are therefore potentially influenced by the GNWF.

In support of the significant impact assessment, an initial assessment has been made regarding each species likelihood of occurrence. The likelihood of occurrence was determined for the overall area of the GNWF using utilising updated habitat mapping and vegetation descriptions and on-ground survey data arising from baseline ecological surveys and assessments (EBS 2022; EBS 2023a; EBS 2023b), an ecological risk assessment summarising previous survey work (EBS 2023c), bird and bat utilisation surveys (EBS 2024a; EBS 2024b; Umwelt 2025e), targeted MNES surveys (EBS 2024c; EBS 2024e; Umwelt 2025b; Umwelt 2025c; Umwelt 2025d), two comprehensive ecological assessment reports summarising the findings of a series of reports prepared for the GNWF and broader GNREF (EBS 2024e, Umwelt 2025a), and MNES-specific management plans (Umwelt 2025f; Umwelt 2025g). Additionally, available literature (Recovery Plans, Conservation Advice, species profile and threat database) were used during the assessment. A previous likelihood of assessment undertaken by EBS (2024e) was reviewed, and revised where required, based on the criteria summarised in Table 4.1.

Table 4.1: Likelihood of occurrence criteria

Likelihood of Occurrence	Definition
Does not occur	No recent (1995 or more recent) or historic records (older than 1995) of the species in the Project Area, or in surrounding areas. No suitable habitat for the species within the Project Area. Mapped species distribution does not overlap with the Project Area.
Unlikely	No recent records (1995 or more recent) of the species in the Project Area, or in surrounding areas. No historic records (older than 1995) of the species in the Project Area, but historic records exist within surrounding areas. No suitable habitat for the species in the Project Area, or suitable habitat which is present is highly disturbed or degraded. Project Area is on the fringe of the mapped species distribution and the distribution only potentially overlaps with the Project Area.
Potential	No recent records (1995 or more recent) of the species in the Project Area, or in surrounding areas. No historic records (older than 1995) of the species in the Project Area, but historic records exist within surrounding areas. Suitable habitat for the species exists in the Project Area. Project Area is within the mapped species distribution.

Likelihood of Occurrence	Definition
Likely	No recent records (1995 or more recent) of the species in the Project Area, however there are recent records within 20 km of the Project Area. Historic records (older than 1995) may exist in the Project Area and/or in surrounding area. Important habitat for the species (for foraging or breeding) is present in moderate to good condition within the Project Area. Known species distribution overlaps with the Project Area.
Known	Species has been recently (1995 or more recent) recorded in the Project Area. Important habitat for the species (for foraging or breeding) is present within the Project Area. Known species distribution overlaps with the Project Area.

For species that have the potential to occur, are considered likely to occur, or are known to occur, a further assessment on the significance of potential residual impacts is provided in accordance with the significant impact criteria provided by DotE (2013a). This assessment considers recent and historic records and habitat overlapping with the Project's Disturbance Footprint, and only residual impacts after project mitigation measures are applied, rather than inherent risks or impacts to MNES. As further data becomes available, the findings of this assessment may be updated.

MNES identified as potentially present within the GNWF Project or surrounding buffers are assessed against the relevant Significant Impact Criteria (relevant to their EPBC listing category) in Table 4.6. This table provides a summary of the potential impacts to the MNES from the proposed GNWF Project, the realistic and achievable mitigation measures which would be applied to avoid or reduce potential impacts, and an assessment of the residual significance of any potential impact against the significant impact criteria (as outlined in Section 4.2, Section 4.3 and Section 4.4 below).

The GNWF Project Area is expected to interact with, or may potentially interact with, the following ecological MNES, which are therefore considered relevant the GNWF Project:

- Listed threatened species and ecological communities
    - Critically Endangered or Endangered species and ecological communities
    - Vulnerable species
- Listed migratory species

Four TECs were identified as potentially present within proximity to the Project Area and these are assessed in Table 4.6.

The significant impact criteria for relevant MNES are outlined by DotE (2013a) and are summarised in Section 4.2, Section 4.3 and Section 4.4 below for reference in the significant impact assessment. In assessing whether the Project is likely to have a significant impact on MNES, the nature and magnitude of potential impacts were considered, as outlined by DotE (2013a). The nature and magnitude of an action's impacts, include matters such as:

- the sensitivity of the environment which will be impacted
- the timing, duration and frequency of the action and its impacts
- all onsite and offsite impacts
- all direct and indirect impacts

- the total impact which can be attributed to the action over the entire geographic area affected, and over time
- existing levels of impact from other sources, and
- the degree of confidence with which the impacts of the action are known and understood.

4.2 Listed Threatened Ecological Communities significant impact criteria

The significant impact criteria applied to listed Threatened Ecological Communities (TECs) differ depending on the conservation rating of the TEC. Those which are listed as Critically Endangered or Endangered are assessed against the criteria presented in Table 4.2. Ecological communities which are listed as Vulnerable under the EPBC Act are not matters of national environmental significance for the purposes of Part 3 of the EPBC Act (requirements for environmental approvals).

Within this assessment, all four listed TECs potentially relevant to the Project Area are listed as Critically Endangered or Endangered.

Table 4.2: Significant impact criteria for critically endangered and endangered ecological communities

Criteria Reference Used in Assessment	Criteria
A	Reduce the extent of an ecological community
B	Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines
C	Adversely affect habitat critical to the survival of an ecological community
D	Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns
E	Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting
F	Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: • assisting invasive species, that are harmful to the listed ecological community, to become established, or • causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or
G	Interfere with the recovery of an ecological community.

4.3 Listed threatened species significant impact criteria

The significant impact criteria applied to listed threatened species differ depending on the conservation rating of the listed threatened species. Those which are listed as Critically Endangered or Endangered are assessed against the criteria presented in Table 4.3, whilst those which are listed as Vulnerable are assessed against the criteria in Table 4.4.

Table 4.3: Significant impact criteria for critically endangered or endangered species

Criteria Reference Used in Assessment	Criteria
A	Lead to a long-term decrease in the size of a population
B	Reduce the Area of Occupancy of the species
C	Fragment an existing population into two or more populations
D	Adversely affect habitat critical to the survival of a species
E	Disrupt the breeding cycle of a population
F	Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
G	Result in harmful invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat
H	Introduce disease that may cause the species to decline
I	Interfere with the recovery of the species

For species listed as Vulnerable, the term 'important population' is used to define a number of the significant impact criteria. An 'important population' is defined as a population that is necessary for a species' long-term survival and recovery (DotE 2013a), and may include populations identified by recovery plans and/or that are:

- key source populations either for breeding or dispersal
- populations that are necessary for maintaining genetic diversity and/or
- populations that are near the limit of the species range.

Examples of populations that do not represent important populations would be small portions of much larger and/or predominantly continuous populations, or discrete populations as part of a larger patchy population distribution because of natural habitat variability and islanding of microhabitat features.

Table 4.4: Significant impact criteria for vulnerable species

Criteria Reference Used in Assessment	Criteria
A	Lead to a long-term decrease in the size of an important population of a species
B	Reduce the Area of Occupancy of an important population
C	Fragment an existing important population into two or more populations
D	Adversely affect habitat critical to the survival of a species
E	Disrupt the breeding cycle of an important population
F	Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
G	Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat
H	Introduce disease that may cause the species to decline
I	Interfere substantially with the recovery of the species

4.4 Listed migratory species significant impact criteria

The significant impact criteria applied to listed migratory species are presented in Table 4.5 below. DotE (2013a) provide further details on what constitutes important habitat for migratory species, and how to define a population of a migratory species.

Table 4.5: Significant impact criteria for migratory species

Criteria Reference Used in Assessment	Criteria
A	Substantially modify (including by fragmenting, altering fire regimes, nutrient cycles or hydrological cycles), destroy or isolate an area of important habitat for a migratory species
B	Result in an invasive species that is harmful to a migratory species becoming established in an area of important habitat for migratory species
C	Seriously disrupt the life cycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of a population of a migratory species

4.5 Significant impact assessment for EPBC listed species and communities

The Significant Impact Assessment for EPBC Listed Species and Communities is provided in Table 4.6.

Table 4.6: Likelihood and Significant Impact Assessment for EPBC Listed Communities and Species

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
EPBC Act Threatened Ecological Communities						
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions	EN	-	The 2025 PMST output indicates that this TEC is 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). The Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregion is listed as Endangered. Buloke Woodlands are typically dominated by *Allocasuarina luehmannii* (buloke, also known as bull oak), or other tree species such as grey box and slender cypress-pine *Callitris gracilis* (DCCEEW 2023a). The TEC woodlands are distributed across two IBRA regions (Riverina and MDD), occurring in tracts or as patches within open-forests or woodlands. Within South Australia the TEC occurs in the far south-east of the MDD bioregion near Bordertown, in areas with a presence of clayey and/or alkaline sub-soils, as well as in areas where calcrete underlies the sub-soil (DCCEEW 2023a). No vegetation matching the Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions criteria has been recorded within the GNWF Project Area (including the OTL) (EBS 2024e), nor are these areas within the TECs known distribution (DCCEEW 2023a). Therefore, this TEC is considered **unlikely to occur** (i.e. no vegetation matching the TEC criteria).	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F** and **G** not likely as the Threatened Ecological Community is considered unlikely to occur in the GNWF.
Iron-grass Natural Temperate Grassland of South Australia	CE	-	The 2025 PMST output indicates that this TEC is 'likely to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Iron-grass Natural Temperate Grassland (INTG) of South Australia is an ecological community listed as Critically Endangered. The TEC is a natural temperate grassland or "other tussock grassland", with tussock-forming perennial grasses and Iron-grasses (*Lomandra multiflora* subsp. *dura* and *L. effusa*) dominating the ground layer of the community, and structurally, and notably, has an absence of trees and tall shrubs (TSSC 2008b, Turner 2012b). A range of herbaceous plant species occur in the inter-tussock spaces, including Bulbine Lily (*Bulbine bulbosa*), Yellow Buttons (*Chrysocephalum apiculatum*), Australian Bindweed (*Convolvulus erubescens*) and Scaly Buttons (*Leptorhynchos squamatus*). The INTG is the only natural temperate grassland in Australia to be dominated by tussock-forming species that are not true grasses. The INTG extends from the western bank of the Murray River, through to the Lofty Ranges and north to the Mount Brown Conservation Park, typically occurring on gentle slopes of low hills above 380 m altitude, with soils that are generally loams to clay loams, and	Direct clearance or disturbance of vegetation (approximately 6.14 ha of INTG Class B within GNWF), impacting the MNES through either loss of habitat or direct loss of the MNES species (or TEC). Direct clearance or disturbance of vegetation or habitat within areas considered as 'buffers' around the TEC. Reduced habitat quality through the introduction of new weed species (or disease) or spread of existing weed species through ground disturbance of transport of organic materials on construction vehicles or machinery. Reduced habitat quality through the introduction of new weed species (or disease) or spread of existing weed species along access roads and inspection points	Desktop and field surveys carried out to identify key ecological constraints, feeding into iterative design process to avoid and minimise interaction with important habitat as far as reasonably practicable. Implement a project specific INTG Management Plan for use during construction and operation to minimise the likelihood of any target impacts to nearby INTG. This will include clearly identifying and indicating no-go zones from pre-clearance ecological survey, through representing it as spatial data to be utilised by the earthworks team. This may also include signage where practical. Identification and indication of INTG approved clearance areas and avoidance areas will use spatial mapping as a minimum.	**Significant residual impacts possible (due to triggering three criterion).** **A. Likely.** Large areas of Iron-grass (*Lomandra sp.*) have been recorded across the WF, particularly within the central and eastern extent of the WF, and small portions within the OTL. A total area of approximately 1,931.24 ha of Lomandra Grassland (VA6) has been mapped within the GNWF. However, the Disturbance Footprint associated with the Project intersects with only a small portion of this. Approximately 6.14 ha of Class B INTG has been mapped within the Disturbance Footprint, comprised of approximately 2.43 ha of Permanent Disturbance, and 3.72 ha of Temporary Disturbance (Umwelt 2025a). Areas Temporary Disturbance areas will be actively regenerated and monitored following clearance required for construction, as detailed in the INTG MP (Umwelt 2025f). Impacts to the INTG TEC as a result of the Disturbance Footprint represents approximately 0.41% of mapped INTG TEC within GNWF, equates to 0.12% of the estimated TEC (~5,000 ha), in the region. Impacts to 8.59 ha of all Classes of INTG, equates to up to 0.02% of the Lomandra Grassland (~50,000 ha) (all condition classes) in the region (Umwelt 2025a). The INTG TEC is known to extend beyond the GNWF Project Area, and thus the proportion of disturbance associated with the Disturbance Footprint is considered to represent a smaller portion of the TEC in the region. Regardless, impacts as a result of the Project result in a reduced Extent of Occurrence (EOO) of the TEC, however, these areas may be considered to be relatively

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			those that commonly have surface pebbles, shale or sandstone rocky outcrops (Robertson 1998 cited in TSSC 2008b). Native vegetation throughout the GNWF Project Area is comprised predominantly of grasslands, with large areas of Iron-grass (*Lomandra* spp.) in the central and eastern portions of the WF. The INTG has been recorded extensively across the GNWF Project Area, with total area of approximately 1,931.24 ha of *Lomandra* Grassland (VA6) now mapped within the GNWF Project Area (i.e. VA6 within the WF and OTL) (Umwelt 2025a) comprised of: • INTG Class A: 18.02 ha • INTG Class B: 1,480.07 ha • INTG Class C: 307.63 ha • Unsurveyed / unclassified Lomandra Grassland: 125.51 ha From the total mapped *Lomandra* Grassland (VA6), approximately 259.66 ha of VA6 occurs within the Development Envelope, and approximately 8.59 ha occurs within the Disturbance Footprint, solely within the WF (Umwelt 2025a). Where VA6 intersects with the Disturbance Footprint, approximately 6.14 ha is classified as INTG Class B (i.e. INTG TEC), with the remainer 2.44 ha classified as INTG Class C, which does not meet the criteria for TEC listing (Umwelt 2025a, Umwelt 2025b). Further, of the 6.14 ha of INTG Class B, 2.43 ha is considered to be Permanent Disturbance and 3.72 ha is considered Temporary Disturbance (Umwelt 2025a, Umwelt 2025b). The clearance of up to 6.14 ha of INTG represents 0.41% of the total area of INTG TEC mapped within the GNWF, and equates to 0.12% of the TEC and up to 0.02% of Lomandra Grassland (all condition classes) in the region (Umwelt 2025a, Umwelt 2025b). This TEC is therefore considered as **known to occur** within the WF and parts of the OTL.	through transport of organic materials on maintenance vehicles. Reduced habitat quality in surrounding TEC through indirect impacts to vegetation caused by increased traffic (dust deposition) and change in hydrology / water runoff / erosion (due to altered landform).	Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be identified by suitably qualified ecologist prior to disturbance. Implement INTG Management Plan to address potential direct and indirect impacts to TEC as a result of construction activities. During construction, implement weed hygiene practices including: vehicle checks and washdowns as required on vehicles or plant entering the construction site. During construction, undertake monthly weed surveillance monitoring targeting WoNS and Declared Weed species, with follow up controls as required for any identified weed outbreaks. During operation, implement weed surveillance and control programs targeting WoNS and Declared Weed species (if weeds identified) on an annual basis. Implement INTG Management Plan to mitigate potential direct and indirect impacts to TEC during operation of the wind farm.	small compared with the total area mapped within the GNWF (i.e. 0.41%), (i.e. 0.12% of the entire mapped TEC and up to 0.02% of the Lomandra Grassland (all condition classes) mapped in the region. **B. Possible.** Some fragmentation of the TEC is expected as a result of the Project, principally due to the clearing of vegetation for roads/tracks and WTG siting associated with construction and operation access to the WTGs, and potentially in areas associated with the OTL. Design of the Project has been refined to reduce impacts to the INTG TEC (i.e. Class A and Class B INTG, and provide concessions for lower classified grassland areas), where possible, with the Development Envelope providing allowance for micro siting of infrastructure and further avoidance of the TEC where practicable. Approximately 3.72 ha is considered Temporary Disturbance, which would be actively rehabilitated following construction, initially through topsoil spreading and subsequently, by monitoring to identify triggers for adaptive management. The remaining 2.43 ha is considered Permanent Disturbance. It is possible that impacts as a result of the Project may be considered to fragment or increase fragmentation of an ecological community, however, the TEC is not considered to be fragmented to an extent that genetic flow within or across the TEC would be impacted. **C. Possible.** As above, approximately 2.43 ha of Permanent Disturbance and 3.72 ha of Temporary Disturbance will occur within the GNWF Project Area, representing approximately 0.41% of the total area of INTG mapped within the GNWF. Whilst the impacts are relatively localised and principally due to the clearing of vegetation for roads/tracks and WTG siting associated with construction and operation access to the WTGs, impacts may be considered to adversely affect habitat critical to the survival of the ecological community, in that approximately 6.14 ha will be disturbed. All areas that meet Condition Class A or Class B criteria are considered habitat critical for the survival of the ecological community (Turner 2012). It is further noted from the Conservation Advice that from an ecological perspective, remnants of lower condition (Condition Class C) may also be habitat critical to survival of the ecological community, if they adjoin, buffer or connect high integrity remnants, provide habitat critical for functionally important or threatened species, expand the potential habitat available to some species, or have good potential for restoration (Turner 2012). Therefore, it is possible that impacts as a result of the Project may adversely affect habitat critical to the survival of the TEC. **D. Unlikely.** The Project is not expected to impact abiotic factors, nor impact groundwater levels or substantially alter surface water drainage patterns. Relevant mitigation measures will be included within the CEMP and OEMP, including erosion and sediment controls associated with roads and infrastructure. The Project is not expected to modify or destroy abiotic factors necessary for the TEC survival. **E. Unlikely**. Unlikely. The Project is not expected to cause a substantial change in the species composition of an occurrence of an ecological community, outside of the clearance of the community within the TEC which has already been noted. Whilst the Project has been designed to reduce impacts to the TEC where possible, it is noted the Pygmy Blue-tongue Lizard (PBTL) is known

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						to occur in association with Lomandra Grasslands (Hutchinson et al. 1994; Souter et al. 2007; Delean et al. 2013 cited in DCCEEW 2023g), and it is anticipated a number individual PBTLs may be impacted upon, principally due to the clearing of vegetation/habitat for roads/tracks and WTG siting associated with construction and operation access to the WTGs within the WF. No INTG Class A or Class B will be impacted within the OTL. The Disturbance Footprint includes approximately 2.43 ha of Permanent Disturbance and 3.72 ha of Temporary Disturbance within the Project Area, representing approximately 0.41% of the total area of INTG mapped in GNWF. Design of the Project has been refined to reduce impacts to the TEC where possible, and further design optimisations may occur, with the Development Envelope providing allowance for micro siting of infrastructure to avoid the TEC where practicable. However, outside of the total Disturbance Footprint of approximately 6.14 ha (of which 3.72 ha is considered Temporary Disturbance), impacts are not expected to cause a decline or loss of a functionally important species in the remainder of the TEC. This includes consideration to the INTG TEC itself, as well as to key listed species such as PBTLs or FRWLs, as mitigation strategies such as micro siting of infrastructure, and allowance for construction buffers in the overall impact assessment (i.e. the areas of Temporary Disturbance described here) are expected to alleviate impacts on remaining INTG TEC. **F**. **Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025b). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. Therefore, the Project is not expected to cause a substantial reduction in the quality or integrity of an occurrence of an ecological community due to establishment of invasive species that are harmful to the TEC, or due to the mobilisation of fertilisers, herbicides or other chemicals or pollutants which have the potential to kill or inhibit growth of species in the TEC. **G. Unlikely.** Whilst the Project is expected to impact some areas of the INTG TEC, principally due to the clearance of vegetation, impacts as a result of the Project (i.e. 2.43 ha of Permanent Disturbance and 3.72 ha of Temporary Disturbance, representing 0.41% of the mapped INTG within the GNWF) are not expected to be such that they interfere with the recovery of the TEC as a whole. Large portions of the GNWF are currently used for stock grazing, and thus the TEC within this location is unlikely to be on a recovery trajectory with the existing grazing pressures. It is noted the TEC extends beyond the GNREF Project Area and thus the disturbance associated with the GNWF is considered to represent only a portion of the overall TEC in the broader surrounding area and region. As above, approximately 3.72 ha of disturbance is considered Temporary Disturbance, which would be rehabilitated (within 2 years from the time of ground disturbance) once the Project was constructed.
Mallee Bird Community of the Murray Darling Depression Bioregion	EN	-	The 2025 PMST output indicates that this TEC is 'likely to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Mallee Bird Community (MBC) of the Murray Darling Depression Bioregion is listed as Endangered. The MBC refers to a community of avifauna found in the Murray Darling Depression bioregion (including all seven subregions), comprising an assemblage of 20 species of bird that are all dependent on the mallee vegetation that characterises the bioregion (DAWE 2021a). A Recovery Plan is not required for the MBC as priority actions set out in the Conservation Advice are considered sufficient (DCCEEW 2025b). Areas critical to the survival of the TEC include known populations of threatened mallee birds listed individually under national environmental law (EPBC Act), especially limited range mallee specialists, and areas where several members of the Mallee Bird community are known to occur and can act as a reservoir or source population to assist colonisation of other nearby sites, if populations in the latter suffer impact (e.g. contingency populations) (DAWE 2021a). Other areas important to the survival of the TEC include areas where several members of the Mallee Bird community were previously known to occur (recorded) within at least the past ten years and bird populations and/or mallee habitats that may regenerate, either naturally	Direct clearance or disturbance of vegetation or habitat including within areas considered as 'buffers' around the TEC. Impact to normal MBC bird species activity during construction as a result of habitat clearance, increased disturbance and noise. Reduced habitat quality through the introduction of new weed species (or disease) or spread of existing weed species through ground disturbance of transport of organic materials on construction vehicles or machinery. Reduced habitat quality through the introduction of new weed species (or disease) or spread of existing weed species along access roads and inspection points through transport of organic materials on maintenance vehicles.	Desktop and field surveys carried out to identify key ecological constraints, feeding into iterative design process to avoid and minimise interaction with important habitat as far as reasonably practicable. Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be identified by suitably qualified ecologist prior to disturbance. As far as practicable, undertake construction works in areas mapped as MBC, outside of regular breeding season for most bird species (i.e.	**No significant residual impacts expected for the Mallee Bird Community of the Murray Darling Depression Bioregion TEC.** **A. Unlikely.** An alignment of approximately 9.5 km of the southern extent of the OTL intersects with the Murray Darling Depression Bioregion (MDD), in which patches of mallee vegetation mapped as VA18, may constitute MBC. A total of approximately 108.85 ha of potential MBC (MDD bioregion, Block C) has been mapped within the OTL. More broadly across the region, an estimated 645 ha of vegetation mapped as 'mallee woodland' occurs within 1 km of the OTL. The Disturbance Footprint within the MDD portion of the OTL is approximately 0.76 ha, of which 0.44 ha is Permanent Disturbance and 0.32 ha is Temporary Disturbance (Umwelt 2025a). The clearance of 0.76 ha represents approximately 0.64% of the MBC within the OTL and approximately 0.11 % of the mapped 'mallee woodland' within 1 km of the Disturbance Footprint (Umwelt 2025a). Aerial imagery shows potential MBC to be widespread to the north and southeast of the OTL within the MDD. Impacts as a result of the Disturbance Footprint associated with the OTL will require the clearance of approximately 0.76 ha within the MBC, which may be considered to reduce the overall area of the TEC, but not the EOO of the ecological community. The community is considered more widespread locally and regionally, with up to 108.85 ha occurring within OTL and substantially larger areas occurring either adjacent to, or near, the OTL. Whilst this clearance may reduce the overall area of an ecological community, precautionary measures have been implemented during the design process to avoid areas where the TEC occurs as far as possible. The clearance of 0.76 ha, represents approximately 0.64% of the MBC within the OTL, and approximately 0.11% of the mapped 'mallee

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			over time or with assisted reintroductions and revegetation, and areas where there has been long-term monitoring of either bird populations and/or mallee habitats (DAWE 2021a). Additionally, areas of high value are described, including mallee habitats that are mostly intact (with larger mid to old growth mallee trees, particularly with hollows), occurrences of mallee outside of conservation tenure that function as wildlife corridors connecting conservation areas, occurrences of habitat that have surrounding, adjacent and/or buffering areas of native vegetation, occurrences in areas where the TEC has been most heavily impacted, areas of woodland containing nationally or state-listed threatened species (not limited to member of the MBC), and mallee areas where key threats are low and can be managed (DAWE 2021a). Only the southern portion of the OTL overlaps with the Mallee Bird Community of the Murray Darling Depression Bioregion. A total of seven MBC sites were surveyed over four days during Spring 2023 (15 November and 20 to 23 November 2023) within the OTL. Three MBC dependent bird species as listed in the MBC Conservation Advice (DCCEEW 2023a) have been recorded during surveys within the OLT or within 20 km of the Project Area; *Microeca fascinans* (Jacky Winter), *Nesoptilotis leucotis* (White-eared Honeyeater), and *Ptilotula ornata* (Yellow-plumed Honeyeater) (Umwelt 2025a), which qualifies suitable mallee vegetation as a TEC (an alignment of approximately 9.5 km). Precautionary measures have been implemented during the design process to avoid areas where the TEC occurs, and only one small patch of approximately 0.76 ha (MDD bioregion, Block C) would be impacted by the OTL Disturbance Footprint (of which 0.44 ha is Permanent Disturbance and 0.32 is Temporary Disturbance) (Umwelt 2025a). Consideration has been made for the placement of transmission towers to avoid this vegetation (i.e. VA18) where practicable, (and in turn the need for maintenance of taller vegetation). Therefore, the Mallee Bird Community of the Murray Darling Depression Bioregion TEC is **unlikely to occur** within the GNWF, but is **known to occur** in discrete areas where the southern portion of the OTL occurs within the MDD.		late winter to early spring) to minimise potential disruption to populations and minimise potential for direct impact to nesting individuals. During construction, implement weed hygiene practices including: vehicle checks and washdowns as required on vehicles or plant entering the construction site. During construction, undertake monthly weed surveillance monitoring targeting WoNS and Declared Weed species, with follow up controls as required for any identified weed outbreaks. During operation, implement weed surveillance and control programs targeting WoNS and Declared Weed species (if weeds identified) on an annual basis.	woodland' in the region, which may be considered to be conservative in terms of the reduction of the ecological community, and which does not reflect a significant reduction in the EOO of the TEC overall. **B. Unlikely.** A total of approximately 0.76 ha of clearance will be required for the Project during construction, of which 0.44 ha is Permanent Disturbance and 0.32 ha is Temporary Disturbance (Umwelt 2025a), with the latter area to be rehabilitated at the completion of construction. The design of the Project has been refined so that the Disturbance Footprint has avoided areas of MBC where practicable. What may be considered small pockets of MBC will be impacted within the southern portion of the OTL, primarily through widening of existing tracks. However, this is not expected to fragment the MBC to the extent that listed MBC avian species are precluded from moving between patches of MBC as they occur within the OTL. **C. Unlikely.** As above, whilst approximately 0.76 ha of MBC habitat will be impacted upon, principally due to the clearance of vegetation, impacts are not expected to adversely affect habitat critical to the survival of the ecological community. Approximately 0.44 ha of the proposed impact is Permanent Disturbance and 0.32 ha is Temporary Disturbance (Umwelt 2025a), with the latter area to be rehabilitated at the completion of construction. Any individuals from the listed MBC species potentially impacted during the construction phase would be expected to disperse into the surrounding adjacent mallee. Impacts to the Disturbance Footprint associated with OTL would not be expected to adversely affect habitat critical to the broader TEC within and surrounding the OTL. **D. Unlikely.** The Project is not expected to impact abiotic factors, nor impact groundwater levels or substantially alter surface water drainage patterns. Relevant mitigation measures will be included within the CEMP / OEMP, including erosion and sediment controls associated with roads and infrastructure. The Project is not expected to modify or destroy abiotic factors necessary for the TEC survival. Where practicable, infrastructure associated with the OTL has been sited to avoid difficult terrain. Access tracks have been designed to have a width of 6 m, with the final width of the Disturbance Footprint dictated by the slope across each track. Where possible, existing tracks, including public roads, farmers tracks, or access tracks installed as part of the Goyder South transmission line have been utilised to minimise the requirement for new access tracks. Non-conventional line stringing will be utilised to further reduce impacts to the environment and in sensitive locations, with additional infrastructure such as brake and winch pads, and helicopter pads (Umwelt 2025a). The Project is not expected to modify or destroy abiotic (non-living) factors such as water, nutrients or soil, nor impact groundwater levels or substantially alter surface water drainage patterns. **E. Unlikely**. The Project is not expected to cause a substantial change in the species composition of an occurrence of an ecological community. The Project has been designed to reduce impacts to the TEC where possible, however, it is noted some individual bird species associated with the MBC may be temporarily impacted upon/displaced, principally due to the clearance of vegetation for

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						roads/tracks and OTL siting associated with construction, operation and access to the OTL. Individuals that may be locally impacted would be expected to disperse into the adjacent mallee/MBC during construction activities, and return at the completion of construction activities. Additionally, of the 0.76 ha impacted by the Project, approximately 0.32 ha will be rehabilitated on completion of construction. The Project has been designed to reduce impacts to the MBC where possible, with the Development Envelope providing allowance for micro siting of infrastructure to avoid the TEC where practicable. However, these impacts are not expected to cause a decline or loss of functionally important species to either the MBC or bird species associated with the MBC. **F. Unlikely.** A network of existing roads and fence lines already occur within the area mapped as potential MBC within the OTL and therefore the area required for the stringing corridor and other associated clearance is unlikely to increase accessibility of invasive species into this already disturbed area. A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. A CEMP and OEMP will address mitigation measures to prevent indirect impacts such as weed incursion, erosion and potential altered hydrology, and potential impacts associated with any chemicals used during construction phase. The Project is not

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						expected to cause a substantial reduction in the quality or integrity of an occurrence of an ecological community due to establishment of invasive species that are harmful to the TEC, or due to the mobilisation of fertilisers, herbicides or other chemicals or pollutants which have the potential to kill or inhibit growth of species in the MBC. **G. Unlikely.** The Project is expected to impact approximately 0.76 ha of vegetation within the MBC, principally due to the clearance activities for roads/tracks and OTL siting associated with construction, operation and access to the OTL. However, impacts are not expected to be such that they interfere with the recovery of the TEC, noting that approximately 0.44 ha is Permanent Disturbance and 0.32 ha is Temporary Disturbance that will be rehabilitated on completion of construction activities. The Disturbance Footprint is spread across an alignment of approximately 9.5 km within the potential area containing MBC, and the community is more widespread locally and regionally, with up to 108.85 ha occurring within OTL and substantially larger areas occurring either adjacent to or near the OTL. Exiting impacts such as grazing and minor clearing for firewood result in the recovery of the TEC in the impacted locations being questionable regardless.
Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia	CE	-	The 2025 PMST output indicates that this TEC is 'likely to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia is an ecological community listed as Critically Endangered. The TEC is dominated by Peppermint Box in the tree canopy (canopy height of 5-10 m), occurring in woodland tree form with a single main truck at the base with low branches (TSSC 2008a). The vegetation structure of this TEC is open to dense woodland, with a mainly grassy and herb understory, and may include Wallaby Grasses (*Rytidosperma*spp.), Spear Grasses (*Austrostipa* spp.), and Iron grasses (*Lomandra* spp.) to name a few. The TEC is known only from South Australia, from the Southern Flinders Ranges to Lake Alexandrina, with the majority of the TEC within the Flinders-Lofty Block (FLB) (TSSC 2008a, Turner 2012a). No vegetation matching this description was recorded within the GNWF or GNREF. One area (VA8) was assessed against the criteria, but was found not to constitute the TEC. This VA was excluded from the DF in early designs as a precautionary measure (Umwelt 2025a). Thus this TEC is considered **unlikely to occur** as no vegetation matching the TEC criteria has been recorded within the GNWF or GNREF.	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F** and **G** not likely as the Threatened Ecological Community is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
EPBC Act Threatened Flora						
Acacia glandulicarpa (Hairy-pod Wattle)	VU	E	The 2025 PMST output indicates that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Hairy-pod Wattle is a dense, rounded, spreading and many-branched shrub growing to 0.5-2 m high, with dull to bright olive-green foliage. Although the species has a wide total distribution, plants appear to be restricted to three widely separated broad locations, one of which is relevant to the Project; namely around Burra in SA (DAWE 2021b). A Recovery Plan is not required for the Hairy-pod Wattle as the approved Conservation Advice is considered to be an effective, efficient, and responsive document (DCCEEW 2025b). Conservation Advice for the species does not list or define any known important populations or subpopulations, nor any habitat critical to the survival of the species. Rather, the advice recommends that all identified populations and supporting habitat should be considered important to the survival of the species. Despite numerous vegetation surveys undertaken within the Project Area the species has not been recorded (i.e. not recorded within the Disturbance Footprint, GNWF, OTL or broader GNREF).Whilst the species is considered unlikely to occur in the Disturbance Footprint, it is noted field surveys have not extensively covered the Development Envelope, resulting in some 'at risk' locations potentially remaining for this species (should the current Disturbance Footprint be altered) (Umwelt 2025a). Therefore, this species is considered **unlikely to occur** within the Disturbance Footprint but is considered a **possible occurrence** within small pockets of potentially suitable habitat within the OTL (i.e. within pockets of Low Open Shrubland).	Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species.	All known records of the species have been avoided during the design phase. If species identified on-site during on-going survey effort prior to construction, or whilst undertaking pre-clearance micro-siting surveys, implement processes to avoid or minimise impacts to any identified plants, as far as reasonably practicable. If encountered during construction: Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be undertaken by suitably qualified ecologist prior to disturbance.	**No significant residual impacts expected for the Hairy-pod Wattle.** **A. Unlikely** No important populations have been defined in the Conservation Advice for this species as it is considered that insufficient information is available to be able to describe, with spatial information, important populations of this species (DAWE 2021b). Rather, all populations of this species should be considered important (DAWE 2021b). As such, any newly discovered populations of the species may be considered as important populations. Despite numerous vegetation surveys undertaken across GNWF (WF and OTL) the species has not been recorded (Umwelt 2025a). It is considered that small suitable pockets of potentially suitable habitat and associated vegetation occur along areas within the OTL. However, the species is considered unlikely to occur within the Disturbance Footprint WF and OTL, given the absence of records despite survey effort. Therefore, it is considered unlikely that any population exists within the Disturbance Footprint. Therefore, the Project is unlikely to lead to a long-term decrease in the size of an important population within the GNWF. **B. Unlikely.** As above, no important populations have been defined for this species, and there is no defined AOO described for this species (DAWE 2021b). The species has not been recorded within the WF and is considered a potential occurrence within the OTL but outside of the current Disturbance Footprint (Umwelt 2025a). It is considered unlikely that an important population of the species exists within the Project Area. Thus, impacts as a result of the Project are unlikely to reduce the AOO of an important population. Protocols will be in place as part of a CEMP and Flora and Fauna Management Plan to ensure that any chance finds of threatened species are reported, investigated and avoided. **C. Unlikely.** As above, despite numerous vegetation surveys undertaken within the WF and across the OTL the species has not been recorded (Umwelt 2025a). It is considered that small potentially suitable pockets of habitat and associated vegetation occur along areas within the OTL but outside of the current Disturbance Footprint. However, with micro siting it is expected individuals would be avoided. Therefore, it is unlikely the Project will fragment an existing important population into two or more populations. **D. Unlikely.** As above, the species has not been previously recorded within the GNWF (WF or OTL) (Umwelt 2025a). It is considered unlikely that impacts as a result of the Project would adversely affect habitat critical to the survival of the species, should the species occur at all. **E. Unlikely.** As the species has not been detected within the GNWF (WF or OTL) (Umwelt 2025a) it is considered impacts as a result of the Project would not disrupt the breeding cycle of an important population, should a population exist. Therefore, impacts as a result of the Project are unlikely to disrupt the breeding cycle of the species.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						F. Unlikely. As above, despite numerous vegetation surveys undertaken across GNWF (WF and OTL) the species has not been recorded (Umwelt 2025a). It is considered that small suitable pockets of potentially suitable habitat and associated vegetation occur along areas within the OTL but outside of the current Disturbance Footprint. However, with micro siting it is expected individuals would be avoided. Therefore, the Project is unlikely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, should it occur at all. **G and H. Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely.** As above, as the species has not been detected within the Disturbance Footprint, or broader GNWF (WF or OTL) (Umwelt 2025a). It is considered impacts as a result of the Project would not interfere substantially with the recovery of the species, should it occur within small pockets of potentially suitable habitat within the OTL outside of the Disturbance Footprint (i.e. within pockets of Low Open Shrubland). Therefore, impacts as a result of the Project are unlikely to interfere substantially with the recovery of the species.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
Acacia menzelii (Menzel's Wattle)	VU	V	The 2025 PMST output indicates that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). Menzel's Wattle is endemic to South Australia with populations scattered between the Northern Flinders Ranges and Murray Bridge (DEWHA 2008a). The species is known to overlap with several EPBC listed TECs, including the aforementioned three TECs above (excluding the MBC). A Recovery Plan is not required for Menzel's Wattle (DCCEEW 2025b). Habitat critical to the survival of the species includes all known habitat. There are no listed important populations for this species, but all known and verified populations are likely to be considered important (Obst 2005). Despite numerous vegetation surveys undertaken within the GNWF Project Area the species has not been recorded. Potentially suitable habitat (i.e. *Eucalyptus socialis* / *E. incrassata* open mallee / *E. porosa* low woodland) occurs in unsurveyed portions of the Development Envelope, however, the Conservation Advice states that the species is known from disjunct populations in the Flinders Ranges and around Monarto (Murray Bridge) (DEWHA 2008a), and thus the Project Area is considered to be outside of the species' known distribution. It is noted that a single record (low spatial reliability) comprised of a preserved specimen collected approximately 10 km east of Mokota Conservation Park in the Mt Bryan East area is recorded as being provided to the National Herbarium of Victoria ALA (2025), however, this record has not been verified/included in BDBSA databases, and was not located during targeted searches (Umwelt 2025a). This species, therefore, is considered **unlikely to occur** within the GNWF.	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
Acacia spilleriana (Spiller's Wattle)	EN	E	The 2025 PMST output indicates that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). Spiller's Wattle is endemic to South Australia and is known to occur from the Northern Mount Lofty Ranges and the ranges surrounding Burra and Auburn (DEWHA 2009a). The species is considered to be patchy and sparsely distributed within its range (DCCEEW 2025b). The species is typically found on rocky hills, commonly along watercourses and roadsides, with the current EOO estimated to be 1,800 km^2 / 180,000 ha. There are no current estimates of total population numbers for this species, however, most roadside populations are reported to consist of one or two plants (State Herbarium of South Australia as cited in DEWHA 2009a). A Recovery Plan is not required for Spiller's	Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species. Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species (or TEC). Reduced habitat quality through the introduction of new weed species (or disease) or spread of existing weed species through ground disturbance of transport of organic materials on construction vehicles or machinery.	All known records of the species have been avoided in the Disturbance Footprint, Development Envelope and excluded by the current Project Area Desktop and field surveys carried out to identify key ecological constraints, feeding into iterative design process to avoid and minimise interaction with important habitat as far as reasonably practicable. Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate	**No significant residual impacts expected for the Spiller's Wattle.** **A. Unlikely** Most records of Spillers Wattle occur outside of the GNWF, principally to the south-west of Burra, or north-west of Spalding (DEW 2025a). Whilst Spiller's Wattle has been recorded within the GNWF, all individual specimens have been isolated to roadside areas adjacent to Gum Hill Road (the proposed access option) and White Hill Road, where the species has been planted. It is noted most populations of this species are reported to consist of one or two plants (State Herbarium of South Australia as cited in DEWHA 2009b). Recent records of the species have been excluded from the current Project Area. Should the species be recorded within the Disturbance Footprint during pre-clearance micro-siting surveys, procedures would be implemented to avoid impacts wherever practicable, noting that Neoen commits that micro-siting will not increase impacts to any MNES. Therefore, it is unlikely impacts as a result of the Project would lead to a long-term decrease in the size of a population.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			Wattle as the Conservation Advice provides sufficient direction to implement priority actions and mitigate against key threats (DCCEEW 2025b). A targeted threatened species survey was undertaken by EBS (EBS 2024e) to specifically locate any *Acacia spilleriana* within suitable habitat within the Disturbance Footprint. Within the WF, individual planted specimens were recorded on Gum Hill Road (within the proposed access option, on the southern side of the road, currently not proposed to be impacted) and White Hill Road. Despite numerous ecological surveys within the OTL the species has not been recorded (DEW 2025, Umwelt 2025a), although it is noted some suitable habitat and associated vegetation occurs in the GNWF Project Area Development Envelope (Umwelt 2025a). However, current access designs indicate the species will be avoided by the Disturbance Footprint (Umwelt 2025a). Additionally, Umwelt consider it unlikely for additional records to be detected in the current Development Envelope (Umwelt 2025a). Efforts will be made to avoid impacts to these areas during the construction phase of the Project. Of note, VA7 was dominated by *A. spilleriana*, however, this was determined to be Wirrabara subspecies (*A. spilleriana Wirrabara*), which is separate to the EPBC listed species (pers comms. SA Herbarium 2024). This VA is not within the current Disturbance Footprint or Development Envelope for the GNWF Project (Umwelt 2025a). Therefore, this species is considered **unlikely to occur** within the Disturbance Footprint but a **possible occurrence** in unsurveyed areas in the Development Envelope.	Reduced habitat quality through the introduction of new weed species (or disease) or spread of existing weed species along access roads and inspection points through transport of organic materials on maintenance vehicles. Indirect impacts to known individuals or species habitat (i.e. roadside vegetation), due to increased traffic causing dust deposition, reducing plant health. Altered hydrology / runoff / erosion from changed landform and road surface impacting individual plant health and habitat quality.	agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be identified by suitably qualified ecologist prior to disturbance. If species is identified on-site during on-going survey effort prior to construction, or whilst undertaking pre-clearance micro-siting surveys, implement processes to avoid or minimise impacts to identified plants, as far as reasonably practicable. During construction, implement weed hygiene practices including: vehicle checks and washdowns as required on vehicles or plant entering the construction site. During construction, undertake monthly weed surveillance monitoring targeting WoNS and Declared Weed species, with follow up controls as required for any identified weed outbreaks. During operation, implement weed surveillance and control programs targeting WoNS and Declared Weed species (if weeds identified) on an annual basis. Include species specific measures in a CEMP and OEMP, such as implementation of no-go zones; requirements for dust suppression activities (ensure water quality does not impact plant health); weed suppression and monitoring; weed hygiene measures.	**B. Unlikely** As above, records for Spiller's Wattle within the GNWF are currently known from isolated roadside areas adjacent to Gum Hill Road and White Hill Road (Umwelt 2025a). The Disturbance Footprint does not intersect with areas where the species has been recently recorded. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would reduce the AOO of the species. **C. Unlikely** As above, records for Spiller's Wattle within the GNWF are currently known from isolated roadside areas adjacent to Gum Hill Road and White Hill Road (Umwelt 2025a). The Disturbance Footprint does not intersect with areas where the Spiller's Wattle has been recorded. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would fragment an existing population into two or more populations. **D. Unlikely.** As above, records for Spiller's Wattle within the GNWF are currently known from isolated roadside areas adjacent to Gum Hill Road and White Hill Road, however, these individual specimens are avoided by the current Disturbance Footprint and Project Area (Umwelt 2025a). Whilst some minor vegetation trimming may be required for access to the Project, this is not expected to adversely affect habitat critical to the survival of the species. **E. Unlikely.** There are no known population estimates for this species, however, it is currently understood that most populations of this species are reported to consist of one or two plants (State Herbarium of South Australia as cited in DEWHA 2009b; DCCEEW 2025b). DCCEEW cites a list of locations where the species has been most recently recorded, however, there is no data on trends in populations, and it is understood that there are likely smaller populations of the species that could be considered subpopulations with little opportunity for genetic exchange (DCCEEW 2025b). The current Disturbance Footprint does not traverse any areas of identified Spiller's Wattle specimens (Umwelt 2025a). Reproduction of Spiller's Wattle, where present, would not be disrupted by construction and operation of the Project, noting the Disturbance Footprint does not intersect any areas of identified Spiller's Wattle specimens. Additionally, should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable. Thus, it is unlikely impacts as a result of the Project would disrupt the breeding cycle of a population. **F. Unlikely.** As above, individual specimens of Spiller's Wattle are currently known from isolated roadside areas adjacent to Gum Hill Road and White Hill Road. The Disturbance Footprint does not intersect with any known locations of Spiller's Wattle. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable. Control measures would be implemented to mitigate against potential dust

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						suppression, and implementation of erosion and sediment control where required. Thus, it is unlikely impacts as a result of the Project would modify, destroy, remove, isolate or decrease the availability of quality of habitat to the extent that the species is likely to decline. **G and H. Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely.** The Project does not interfere with any recovery actions for this species, as outlined by DEWHA (2009b), noting the main threats to the species include habitat loss, habitat fragmentation, damage from roadwork, and weed invasion and grazing. The Disturbance Footprint, Development Envelope and Project Area do not intersect with areas where the Spiller's Wattle has been recorded. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable. The Project is not expected to substantially interfere with the recovery of the species.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
Caladenia tensa (Greencomb Spider-orchid, Rigid Spider-orchid)	EN	-	The 2025 PMST output indicates that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Rigid Spider-orchid is an herbaceous perennial orchid growing to 35 cm high and dies back annually to a small underground tuber. Within South Australia the species occur in association with *Callitris* spp. (cypress pine), *Eucalyptus leucoxylon* (yellow gum) woodland and *Melaleuca uncinata* (broombush) mallee on Tertiary and Quaternary aeolian sandy loams in the Murray Darling Depression bioregion (Todd 2000 cited in TSSC 2016a). Despite numerous vegetation surveys undertaken within the WF and OTL, the species has not been recorded and it is noted no suitable habitat occurs within the WF or OTL (Umwelt 2025a). Therefore, this species is considered **unlikely to occur** within the Disturbance Footprint or Development Envelope.	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
Codonocarpus pyramidalis (Slender Bell-fruit, Camel Poison)	VU	E	The 2025 PMST output indicates that this species or species habitat is 'likely to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Slender Bell-fruit is a shrub or small tree that grows to 8 m tall, often with more than one stem. The species occurs in the Northern Lofty Ranges, Flinders Ranges and eastern regions of South Australia (Davies 1995 cited in DEWHA 2008b), preferring the crests and slopes of low ridges, hills and along creeks in loamy sand or sandy clay loam soils. The species is known to overlap with several EPBC listed TECs, including the aforementioned three TECs above (excluding the MBC). All populations are considered important (DCCEEW 2025b). A Recovery Plan is not required for the Slender Bell-fruit (DCCEEW 2025b). Records of the species are typically to the north and north-east of the GNWF, largely between Hawker and the northern Flinders Ranges, and between Yunta to Bimbowrie Conservation Park (DEW 2025). A targeted threatened species survey was undertaken by EBS (EBS 2024e) to locate any *Codonocarpus pyramidalis* within the Disturbance Footprint. The species has not been previously recorded within the WF or OTL (EBS 2024e), however, there are records of the species within the Caroona Creek Conservation Park to the north of the GNWF Project Area, and a single record (2013) of the species approximately 6.5 km to the west of the OTL (just south of Hopkins Creek Conservation Park) (DEW 2025).	Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species. Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species.	All known records of the species have been avoided during the design phase. If species identified on-site during on-going survey effort prior to construction, or whilst undertaking pre-clearance micro-siting surveys, implement processes to avoid or minimise impacts to any identified plants, as far as reasonably practicable. If encountered during construction: Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be identified by suitably qualified ecologist prior to disturbance.	**No significant residual impacts expected for the Slender Bell-fruit.** **A. Unlikely.** No important populations have been defined for this species (DEWHA 2008b). Despite numerous ecological surveys, the species has not been previously recorded within the GNWF (WF or OTL). It is considered unlikely that the species would occur within the WF and OTL, based upon very limited potentially suitable habitat (Umwelt 2025a). As such, it is considered unlikely that an important population of the species exists within the Project Area. Should the species be recorded within the Disturbance Footprint during pre-clearance micro-siting surveys, procedures would be implemented to avoid impacts wherever practicable, noting that Neoen commits that micro-siting will not increase impacts to any MNES. Therefore, it is unlikely impacts as a result of the Project would lead to a long-term decrease in the size of an important population, if found to occur within the OTL. **B. Unlikely** As above, the species has not been recorded within the WF, and thus no impacts to the species' AOO are expected to occur within the Disturbance Footprint within the WF. Whilst the species has not been previously recorded within the OTL, potentially suitable habitat may occur outside of the current Disturbance Footprint. Should the species be detected within future development areas in future, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is considered unlikely that impacts as a result of the Project would reduce the AOO of an important population of the species, should the species occur at all within the OTL. **C. Unlikely.** Although no important populations have been defined for this species (DEWHA 2008b), due the species' small size and limited range of populations and individuals, and the apparent contraction of the species' distribution, the species' SPRAT profile suggests all known populations may be important for the survival and protection of the species (DCCEEW 2025b). Currently, the exact

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			Areas of suitable habitat within the GNWF Project Area are considered to be limited (Umwelt 2025a) and the species is considered **unlikely to occur** within the WF. There is, however, potentially suitable habitat within the OTL in areas not yet surveyed (i.e. outside of the Disturbance Footprint). Therefore, the species is conservatively considered to **possibly occur** in unsurveyed areas of the OTL, outside of the Disturbance Footprint.			population size is not known or estimated (DCCEEW 2025b). As above, despite previous vegetation surveys, the species has not been recorded within the GNWF (WF or OTL), thus it is considered unlikely impacts as a result of the Project would fragment and existing population into two or more populations. **D. Unlikely.** As above, the species is considered unlikely to occur within the WF based upon limited potentially suitable habitat, and thus no impacts to the species' AOO are expected to occur within the WF. Despite previous vegetation surveys, the species has not been recorded within the OTL, however, it is acknowledged that potentially suitable habitat may occur on the OTL. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would adversely affect habitat critical to the survival of the species. **E. Unlikely.** The Slender Bell-fruit is a monoecious plant, with female flowers borne on branches below the male flower, with flowering occurring between May and October (DCCEEW 2025b). Despite previous vegetation surveys, the species has not been recorded within the WF or OTL. Reproduction of the Slender Bell-fruit, where present, would not be expected to be disrupted by the construction and operation of the OTL. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would disrupt the breeding cycle of a population. **F. Unlikely.** As above, there are no known records of the species occurring within the WF or within the Disturbance Footprint of the OTL. Should the species be detected within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable. If infrastructure was proposed close to a known population, further mitigation strategies would be implemented as outlined in the COEMP to prevent indirect impacts to the species such as dust deposition or water runoff. It is unlikely impacts as a result of the Project would modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. Therefore, it is unlikely that impacts as a result of the Project would modify or decrease the availability or quality of habitat to the extent that a local population (if present) is likely to decline, let alone the species as a whole. **G and H. Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely**. The Project is not expected to substantially interfere with the listed threat abatement and recovery information provided for this species, which largely focuses on the need for further research into the monitoring, assessment and surveying of existing populations and their propagation requirements, identifying populations of high conservation priority, developing a management plan for the control of feral rabbits and goats, and the exclusion of livestock grazing on areas of occurrence (DCCEEW 2025b).
Dodonaea procumbens (Trailing Hop-bush)	VU	V	The 2025 PMST output indicates that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Trailing Hop-bush is a poorly known small prostrate shrub endemic to south-eastern Australia. There are currently estimated to be about 50-55 populations of Trailing Hop-bush across its entire range (Carter 2010). Within South Australia there are several known populations, several of which range from Eudunda to just north of Burra within the Mokota Conservation Park (Carter 2010), where the species grows in *Rytidosperma* low tussock grassland on rocky outcrops and in shallow soils, with *Vittadinia cuneata*, *Calocephalus citreus*, *Leptorhynchos tetrachaetus*, and *Triptilodiscus pygmaeus* (DEH 2006 cited in Carter 2010). Populations are typically small, containing 50 plants or less. Important populations are those where locations are precisely known and have recent abundance information (Carter 2010). A targeted threatened species survey was undertaken by EBS (EBS 2024e) to locate any *Dodonaea procumbens* within the Disturbance	Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species. Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species (or TEC). Reduced habitat quality through the introduction of new weed species (or disease), or spread of existing weed species through ground disturbance of transport of organic materials on construction vehicles or machinery. Reduced habitat quality through the introduction of new weed species (or disease), or spread of existing weed species along access roads and inspection points	All known records of the species have been avoided in the Disturbance Footprint, and Development Envelope; however, known specimens occur within 25 m of the proposed works. Desktop and field surveys carried out to identify key ecological constraints, feeding into iterative design process to avoid and minimise interaction with important habitat as far as reasonably practicable. Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other	**No significant residual impacts expected for the Trailing Hop-bush.** **A. Unlikely** There are currently thought to be approximately 50-55 known populations of the Trailing Hop-bush across its range, however, accurate location and population data is only known for about 25 of those populations (Carter 2010). 'Important populations' include those where locations are precisely known and have recent abundance information (Carter 2010). A known population relevant to the GNWF exists within Mokota Conservation Park, however, it is outside of the Disturbance Footprint, and the Development Envelope boundary has been modified to avoid this protected area. No individuals or populations are known to occur within the Disturbance Footprint of the OTL, and habitat along the OTL is considered not preferred for the species. Should the species be recorded within the Disturbance Footprint during pre-clearance micro-siting surveys, procedures would be implemented to avoid impacts wherever practicable, noting that Neoen commits that micro-siting will not increase impacts to any MNES. Therefore, it is unlikely the Project would lead to a long-term decrease in the size of an important population, should an important population occur outside of the Mokota CP, but within the WF or OTL. **B. Unlikely** As above, no impacts to the species' AOO are expected to occur as a result of the Project within the GNWF (WF and OTL),

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			Footprint. To date, the species has been recorded solely within the Mokota Conservation Park (including two historical records, EBS 2024e), where the species is protected from herbivore grazing. However, of note the species has not been recorded within the Disturbance Footprint of the WF or OTL (Umwelt 2025a), and the Development Envelope has been modified to avoid Mokota Conservation Park, and thus known records Dodonaea procumbens. In addition, it should be noted that the current Disturbance Footprint and Development Envelope have avoided all historical (BDBSA) locations where the species has been previously (but historically) recorded (Umwelt 2025a). Therefore, the species is considered **known to occur** within the WF Project Area (specifically within the Mokota Conservation Park, where the species is protected from herbivore grazing), and considered a **possible occurrence** within the Development Envelope and Disturbance Footprint.	through transport of organic materials on maintenance vehicles. Indirect impacts to known individuals or species habitat (i.e. roadside vegetation), due to increased traffic causing dust deposition, reducing plant health. Altered hydrology / runoff / erosion from changed land form and road surface impacting individual plant health and habitat quality.	physical indication will be used where appropriate. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be identified by suitably qualified ecologist prior to disturbance. If species identified on-site during on-going survey effort prior to construction, or whilst undertaking pre-clearance micro-siting surveys, implement processes to avoid or minimise impacts to any identified plants, as far as reasonably practicable. During construction, implement weed hygiene practices including: vehicle checks and washdowns as required on vehicles or plant entering the construction site. During construction, undertake monthly weed surveillance monitoring targeting WoNS and Declared Weed species, with follow up controls as required for any identified weed outbreaks. During operation, implement weed surveillance and control programs targeting WoNS and Declared Weed species (if weeds identified) on an annual basis. Include species specific measures in a CEMP and OEMP, such as implementation of no-go zones; requirements for dust suppression activities (ensure water quality does not impact plant health); weed suppression and monitoring; weed hygiene measures.	noting the Disturbance Footprint does not intersect with the recorded occurrence of the species in the area, which is currently only known from the Mokota CP (within a fenced area protected from herbivore grazing). Therefore, it is unlikely the Project will reduce the AOO of the species with the GNWF. **C. Unlikely.** As above, despite numerous surveys within GNWF (WF and OTL) no individual specimens have been recorded within the GNWF, with the exception of the known population within the Mokota Conservation Park. This population is outside of the current Disturbance Footprint and Development Envelope. The Project is not expected to result in fragmentation of an existing important population into two or more populations in these areas. Should specimens and/or a population be recorded within future development areas, efforts would be made to avoid areas where this species is present and to realign/micro site roads, tracks and OTL infrastructure where practicable. Regardless, minor access tracks and OTL footings are not expected to completely partition a population in two, as gene flow will still be possible. **D. Unlikely** As above, suitable habitat for the species within the GNWF principally occurs within the Mokota Conservation Park, outside of the Project's Disturbance Footprint, and within a fenced area protected from grazing herbivores. Despite extensive surveys, the species has not been detected within the current Disturbance Footprint, although it is noted that it is a small plant which is often heavily grazed, and may be difficult to detect in these areas, should it occur (Umwelt 2025a). However, impacts as a result of the Project within the GNWF (outside of the Mokota CP) are unlikely to adversely affect habitat critical to survival of the species. Should specimens and/or a population be recorded within future development areas, efforts would be made to avoid areas where this species is present and to realign/micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would adversely affect habitat critical to the survival of the species. **E. Unlikely.** The Trailing Hop-bush may be dioecious; with male and female flowers occurring on different plants, or polygamodioecious (i.e. having bisexual and male flowers on some plants; or bisexual and female flowers on others), giving rise a semi-complex reproductive breeding cycle. Tiny, solitary or paired flowers appear in spring and summer. Reproduction of the Trailing Hop-bush, where present / and/or within the Mokota Conservation Park, would not be expected to be disrupted by the construction and operation of the Project. Should the species be recorded within future development areas, efforts would be made to avoid areas where the species is present and to realign/micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would disrupt the breeding cycle of a population. **F. Unlikely.** As above, despite extensive surveys within the GNWF, the species is only known from records within the Mokota Conservation Park, outside the Project's Development Envelope and Disturbance Footprint. Any potential indirect impacts from dust deposition or water runoff will be addressed within the CEMP and OEMP. Thus, it is unlikely impacts as a result of the Project would modify, destroy,

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						remove, isolate or decrease the availability or quality of habitat to the extent that the species (if present) is likely to decline, let alone the species as a whole. **G and H. Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely** The Project is not expected to substantially interfere with the listed threat abatement information provided for this species, which largely focuses on the disturbance/destruction of habitat and individual plants, weed invasion, heavy grazing/browsing by native and introduced herbivores and altered fire regimes (DCCEEW, 2025b). The design of the Project has been refined and does not impact any known individuals of the species. Therefore, impacts as a result of the Project are unlikely to interfere substantially with the recovery of the species. Recovery of the known population in Mokota CP is not expected to be impacted by the Project due to the implementation of avoidance buffers surrounding construction and operation of the Project.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
Dodonaea subglandulifera (Peep Hill Hop-bush)	EN	E	The 2025 PMST output indicates that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) Appendix A). The Peep Hill Hop-bush is a South Australian endemic perennial shrub growing to 1 to 2 m high. The species has a restricted and disjunct distribution, having been recorded from semi-arid mallee areas of the Murray Darling Basin, Mid North, and Flinders Ranges within South Australia (Moritz 2010a). From the current knowledge, the species is now considered to comprise of at least 11 distinct sub-populations across 45 sites containing more than 45,700 individual plants. The species is found in several types of habitats, including two that are considered to be poorly to moderately conserved; *Eucalyptus porosa* (mallee box) plus/- *Callitris gracilis* (Murray pine) low open woodland and *C. gracilis* dominated low open woodland (Moritz 2010a). The species has been recorded in association with two State-listed plants; *Swainsona tephrotricha* (ashy-haired Swainson pea) and *Maireana rohrlachii* (Rohrlach's bluebush), and two EPBC Act listed species; *Stagonopleura guttata* (Diamond Firetail) and *Melanodryas cucullata* subsp. *cucullata* (South-eastern Hooded Robin). Additionally, potential distributions of the species are suggested to be within suitable habitat between the Murray River township of Morgan extending to the west to Eudunda, and further north of the Project surrounding Peterborough and Terowie, and potentially to the east of Burra Creek Gorge (Smith 2000 cited in Moritz 2010a). The closest known records for the species include a small number of records approximately 3 km to the south of the OTL, and another small number of historical records (1932) near Peterborough approximately 60 km north of the WF, however the latter population is presumed extinct (DEW 2025, Moritz and Bickerton 2010), No important sub-populations are considered to occur within the WF or OTL (Moritz 2010a). A targeted threatened species survey was undertaken by EBS (EBS 2024e) to specifically locate the Peep Hill Hop-bush within mapped suitable habitat within the Disturbance Footprint (WF and OTL). Despite numerous vegetation surveys to date the species has not been recorded within the WF or OTL, however, it is noted the species may be a possible occurrence adjacent the OTL due to potentially suitable habitat (Umwelt 2025a). Therefore, the species is conservatively considered to **possibly occur** within unsurveyed areas within the Development Envelope of the OTL.	Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species. Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species	All known records of the species have been avoided during the design phase. If species identified on-site during on-going survey effort prior to construction, or whilst undertaking pre-clearance micro-siting surveys, implement processes to avoid or minimise impacts to any identified plants, as far as reasonably practicable. If encountered during construction: Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be identified by suitably qualified ecologist prior to disturbance.	**No significant residual impacts expected for the Peep Hill Hop-bush.** **A. Unlikely** Despite numerous surveys, including a targeted species survey, there are currently no records for individual specimens or populations within the GNWF (WF or OTL) (Umwelt 2025a; DEW 2025a). The closest known records for the species include a small number of records approximately 3 km to the south of the OTL, and another small number of historical records (1932) near Peterborough approximately 60 km north of the WF, however the latter population is presumed extinct (DEW 2025a; Moritz and Bickerton 2010), No important sub-populations are considered to occur exist within the WF or OTL (Moritz and Bickerton 2010). There is, however, potentially suitable habitat within the OTL, with several records of the species occurring approximately 3 km south of the OTL (DEW 2025a). Should the species be recorded within the Disturbance Footprint during pre-clearance micro-siting surveys, procedures would be implemented to avoid impacts wherever practicable, noting that Neoen commits that micro-siting will not increase impacts to any MNES. Therefore, it is unlikely the Project would lead to a long-term decrease in the size of a population. **B. Unlikely.** As above, there are currently no records of individual specimens or populations within the GNWF (WF or OTL), despite numerous ecological surveys and a targeted species survey. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to realign/micro site roads, tracks and infrastructure where practicable. Therefore, it is unlikely the Project would significantly reduce the AOO of the species. **C. Unlikely.** As above, despite numerous ecological surveys within the GNWF (WF and OTL), the species has not been recorded. Should specimens and/or a population be recorded within future development areas, efforts would be made to avoid areas where this species is present and to realign/micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would fragment an existing population into two or more populations, should the species occur within the GNWF at all. **D. Unlikely.** It is considered that all currently occupied and potential habitat is critical to the species survival (Moritz and Bickerton 2010). The Peep Hill Hop-bush is known to be found in a range of habitats, preferencing environments that consist of plains with sand to loamy soils over sheet limestone, and low hills with loamy soils over shale or slate (Moritz and Bickerton 2010). However, despite species-specific targeted surveys in potentially suitable habitat, the species has not been recorded. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to realign/micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would adversely affect habitat critical to the survival of the species.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						E. Unlikely. The Peep Hill Hop-bush is dioecious; with male and female flowers occurring on different plants, with flowering occurring between February and August. Reproduction of the Peep Hill Hop-bush, where present, would not be expected to be disrupted by the construction and operation of the Project. Should the species be recorded within development areas, efforts would be made to avoid areas where this species is present and to realign/micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would disrupt the breeding cycle of a population. **F. Unlikely.** As above, despite numerous ecological surveys, the species has not been recorded within the GNWF (WF or OTL) (Umwelt 2025a). Thus, it is unlikely impacts as a result of the Project would modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species (if present) is likely to decline, let alone the species as a whole. **G and H. Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						I. Unlikely. The Project will not substantially interfere with the listed threat abatement and recovery information provided for this species, which largely focuses on direct threats such as herbivore grazing, road management activities, environmental weeds, mining and declining genetic availability and indirect threats such as lack of formal protection, inappropriate disturbance regimes and small isolated populations (Moritz and Bickerton 2010)..
Lachnagrostis limitanea (Spalding Blown Grass, Spalding Blowngrass)	EN	E	The 2025 PMST output indicates that this species or species habitat 'may occur' in 'buffer area only' (Appendix A). Spalding Blown Grass is a short-lived tufted perennial grass growing to 30-45 cm high (Robertson 2012). The species endemic to the Northern Lofty Ranges in South Australia, with only three extant, naturally occurring populations (and one translocated sub-population). The species known EOO is less than 1,000 km^2 and the AOO is <1 ha. The main population is located at Yakkalo, with sub-populations located in a small water reserve on the upper Broughton River near Spalding, another sub-population north of Tarlee, and third sub-population outside of Riverton. Known habitat for this species consists of low-lying, flood-prone clay loam areas near watercourses in the Northern Lofty Flora Region of South Australia, with all known extant populations occurring in swampy habitat that is excluded from regular livestock grazing (Robertson 2012). There is no approved Conservation Advice for this species, however, a Recovery Plan has been adopted. The closest records of the species occurring to the GNWF include three records approximately 3.5 km west of the OTL, and approximately 13 km west of the WF (DEW 2025). However, despite numerous vegetation surveys to date the species has not been recorded within the WF or OTL (EBS 2024e). Further, it is considered there is no suitable habitat for this species within the WF or OTL (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
Olearia pannosa subsp. *pannosa* (Silver Daisy-bush, Silver-leaved Daisy, Velvet Daisy-bush)	VU	V	The 2025 PMST output indicates that this species or species habitat is 'known to occur' in the 'feature area' (the WF and OTL) (Appendix A). The Silver Daisy-bush is a spreading undershrub or shrub growing up to 1.5 m high. The species is endemic to South Australia where it is scattered across agricultural areas, including the Southern and Northern Mount Lofty Ranges, and Murray and South Eastern regions of South Australia. The species occurs in sandy, flat areas and in hilly, rocky areas in woodland or Mallee (Cropper 1993 and Kahrimanis et al. 2001 cited in DotE 2013b), and is known from hilly area soil types, including hard	Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species. Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species.	All known records of the species have been avoided during the design phase. If species identified on-site during on-going survey effort prior to construction, or whilst undertaking pre-clearance micro-siting surveys, implement processes to avoid or minimise impacts to any identified plants, as far as reasonably practicable. If encountered during construction:	**No significant residual impacts expected for the Silver Daisy-bush.** **A. Unlikely** No important populations have been defined for the Silver Daisy-bush (DotE 2013b; DCCEEW 2025b). Despite numerous surveys, including targeted surveys, the species has not been previously recorded within the GNWF (WF or OTL) (Umwelt 2025a; DEW 2025a), and thus the species is considered unlikely to occur within the Disturbance Footprint of the GNWF. However, it is noted that potentially suitable habitat occurs across the GNWF, and although it has not been detected during field surveys, the species may occur in parts of the Development Envelope that have not been surveyed to date. Should the species be recorded within the Disturbance Footprint during pre-clearance micro-siting surveys,

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			pedal mottled-yellow duplex and hard pedal red duplex soils (Laut et al. 1977 cited in DotE 2013b). The species is known to overlap three TECs, including the Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia. There is currently no information available regarding the species' total EOO, total AOO or population size (DotE 2013b). A Recovery Plan is not required for the Silver Daisy-bush as the Conservation Advice provides sufficient direction to implement priority actions, mitigate against key threats and support the recovery of the species (DCCEEW 2025b). No critical habitat or important populations have been defined for this species. There are limited records of the species occurring near to the GNWF, with the closest records including two records approximately 1.5 km north of the WF, and approximately 6 km west of the OTL (DEW 2025). However, despite numerous vegetation surveys to date the species has not been recorded within the WF or OTL (EBS 2024e). It is considered potentially suitable habitat occurs across the GNWF (although not previously detected) Therefore, although this species is considered **unlikely to occur** in the current Disturbance Footprint, the species is considered a **possible occurrence** within unsurveyed areas of the WF and OTL.		Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be identified by suitably qualified ecologist prior to disturbance.	procedures would be implemented to avoid impacts wherever practicable, noting that Neoen commits that micro-siting will not increase impacts to any MNES. Therefore, it is unlikely impacts as a result of the Project would lead to a long-term decrease in the size of an important population. **B. Unlikely.** No important populations have been defined for this species (DotE 2013b; DCCEEW 2025b). Despite extensive vegetation surveys, the species has not been previously recorded within the GNWF (WF or OTL) (Umwelt 2025a; DEW 2025a). Potentially suitable habitat is considered to occur within unsurveyed areas of the GNWF outside of the Disturbance Footprint. Should the species be detected within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, should the species occur within the GNWF, it is unlikely impacts as a result of the Project would reduce the AOO of the species. **C. Unlikely.** As above, there are no defined important populations for the Silver Daisy-bush, and the exact population size is not known or estimated (DotE 2013b; DCCEEW 2025b). Despite extensive vegetation surveys the species has not been previously recorded within the GNWF (WF or the OTL) (Umwelt 2025a; DEW 2025a). Should the species be detected within future development areas, efforts would be made to avoid the species and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would fragment an existing important population into two or more populations, should a population occur at all. **D. Unlikely.** No critical habitat is defined in the literature for the Silver Daisy-bush (DotE 2013b; DCCEEW 2025b). The species is considered to have a wide distribution across several regions within South Australia. Despite previous vegetation surveys, the species has not been recorded within the GNWF (WF or OTL) (Umwelt 2025a; DEW 2025a). Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would adversely affect habitat critical to the survival of the species. **E. Unlikely.** No defined important populations are defined for this species, and there are no current population estimates (DotE 2013b; DCCEEW 2025b). Despite previous vegetation surveys, the species has not been recorded within the GNWF (WF or OTL) (Umwelt 2025a; DEW 2025a). Reproduction of the Silver Daisy-bush, should the species be present, would not be expected to be disrupted by the construction and operation of the WF or OTL. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, it is unlikely impacts as a result of the Project would disrupt the breeding cycle of a population, should a population occur at all. **F. Unlikely.** As above, there are no known records of the species occurring within the GNWF (WF or OTL) (Umwelt 2025a; DEW 2025a). Therefore, it is unlikely impacts as a result of the Project would modify or decrease the availability or quality of habitat to the

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						extent that the species (if present) is likely to decline, let alone the species as a whole. **G and H. Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; EBS 2024e; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely**. The Project will not substantially interfere with the listed threat abatement and recovery information provided for this species, which largely focuses on the need for further research into the monitoring, assessment and surveying of existing populations and their propagation requirements, identifying populations of high conservation priority, developing a management plan for the control of feral rabbits and goats, and the exclusion of livestock grazing on areas of occurrence (DCCEEW 2025b).

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
Pterostylis xerophila (Desert Greenhood)	VU	V	The 2025 PMST output identified that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). The Desert Greenhood is a small, deciduous, terrestrial orchid endemic to inland South Australia and Victoria. The species is understood to occur in remote locations in semi-desert environments, predominantly growing under low shrubs in rock outcrops (Duncan 2010). Little is known about the species biology, ecology, distribution and abundance, with only eight populations known to occur, containing approximately 150 plants (Duncan 2010). The species is known from several regions in South Australia, including Murray Darling Depression. The species occurs in dry woodland on fertile red loamy soils (Bates and Weber 1990 cited in Duncan 2010), on or around granite or quartzite rock outcrops (Jessop & Toelken 1986 cited in Duncan 2010). The nearest historic record of the species is greater than 120 km away to the southwest adjacent the South Australian/Victorian border (ALA 2025). The species has not been recorded within the WF or OTL previously despite numerous vegetation surveys. There are no preferred semi-desert habitats within the WF or OTL (EBS 2024e). Therefore, this species, is considered **unlikely to occur.**	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
Senecio macrocarpus (Large-fruit Fireweed, Large-fruit Groundsel)	VU	V	The 2025 PMST output identified that this species or species habitat 'may occur' within the 'buffer area only' (Appendix A). The Large-fruit Groundsel is a small long-lived perennial plant endemic to south-eastern Australia, growing to 70 cm high (Sinclair 2010). Individual plants are thought to live for many years, possibly even decades. There are approximately 15 populations containing 36,000 plants, with most individuals (35,000) occurring in one population (within Messent Conservation Park near Salt Creek in SA) (Sinclair 2010). In South Australia, the species has been recorded within several regions, including the Flinders and Mount Lofty Ranges and Flinders Lofty Block, preferring shallow depressions on loamy sand with numerous sedge and herb species (Sinclair 2010). The closest records of the species occurring to the GNWF include a small cluster of records approximately 73 km north-east of the GNWF (and approximately 23 km west of Peterborough) (DEW 2025). Despite numerous vegetation surveys undertaken within the WF and OTL the species has not been recorded and it is noted no preferred/suitable	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			habitat occurs within the Development Envelope (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.			
Senecio megaglossus (Superb Groundsel)	VU	E	The 2025 PMST output identified that this species or species habitat is 'likely to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Superb Groundsel is a perennial shrub, usually erect but with many branches, growing up to 80 cm (DEWHA 2008d). The species occurs in six scattered localities from the Southern Flinders Ranges to Northern Flinders Ranges in South Australia, with three populations within the latter area, being Orroroo, Black Rock and Newikie Creek (Davies 1992 and 1995 cited in DEWHA 2008d). The species typically inhabits rocky gorges and valley slopes, and has been recorded in association with grasslands; tall open shrublands with Native Apricot (*Pittosporum angustifolium*), Bullock Bush (*Alectryon oleifolius*), and Emu Bush (*Eremophila longifolia*); with Spinifex (*Triodia irritans*); and *Senecio megaglossus* with White Cypress-pine (*Callitris columellaris*) and River Red Gum (*Eucalyptus camaldulensis*) (DEWHA 2008d). The species is known to overlap with several EPBC listed TECs, including the three TEC described herein (excluding the MBC). No important populations have been described for the Superb Groundsel. A Recovery Plan is not required for the Superb Groundsel (DCCEEW 2025b). Despite numerous vegetation surveys undertaken within the GNWF the species has not been recorded (Umwelt 2025a). There are, however, nearby historical records, one record (1993) within the WF (outside of the Disturbance Footprint), two records (1985, 1993) approximately 1 km and 2 km from the WF respectively, and two records (1892, 1993) from the OTL approximately 1 km and 2.5 km from the OTL respectively (DEW 2025). Thus, although there is a marked absence of recent records of the species within the GNWF, it is noted potentially suitable habitat occurs within the WF and OTL (Umwelt 2025a). Therefore, this species is considered a **possible occurrence** within the WF and OTL outside of the Disturbance Footprint.	Direct clearance or disturbance of vegetation, impacting the MNES through either loss of habitat or direct loss of the MNES species. Reduced habitat quality through the introduction of new weed species (or disease), or spread of existing weed species through ground disturbance of transport of organic materials on construction vehicles or machinery. Reduced habitat quality through the introduction of new weed species (or disease), or spread of existing weed species along access roads and inspection points through transport of organic materials on maintenance vehicles.	Desktop and field surveys carried out to identify key ecological constraints, feeding into iterative design process to avoid and minimise interaction with important habitat as far as reasonably practicable. Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be identified by suitably qualified ecologist prior to disturbance. If species identified on-site during on-going survey effort prior to construction, or whilst undertaking pre-clearance micro-siting surveys, implement processes to avoid or minimise impacts to any identified plants, as far as reasonably practicable. During construction, implement weed hygiene practices including: vehicle checks and washdowns as required on vehicles or plant entering the construction site. During construction, undertake monthly weed surveillance monitoring targeting WoNS and Declared Weed species, with follow up controls as required for any identified weed outbreaks. During operation, implement weed surveillance and control programs targeting WoNS and Declared Weed species (if weeds identified) on an annual basis.	**No significant residual impacts expected for the Superb Groundsel.** **A. Unlikely.** No important populations have been defined for the Superb Groundsel (DEWHA 2008e; DCCEEW 2025b). Despite recent vegetation surveys there are no recent records of the species occurring within the GNWF (WF or OTL), inclusive of recent targeted searches in locations of historical BDBSA records (Umwelt 2025a). Potentially suitable habitat is considered to possibly occur in the unsurveyed areas outside of the Disturbance Footprint within the WF and OTL. However, it is considered unlikely that the GNWF supports an important population of the species, or any population at all. Should the species be recorded within the Disturbance Footprint during pre-clearance micro-siting surveys, procedures would be implemented to avoid impacts wherever practicable, noting that Neoen commits that micro-siting will not increase impacts to any MNES. Therefore, it is unlikely that impacts as a result of the Project would lead to a long-term decrease in the size of an important population. **B. Unlikely.** As above, no important populations have been described for this species (DEWHA 2008e; DCCEEW 2025b). The species is considered unlikely to be present within the Disturbance Footprint based upon extensive survey work and a marked absence of records (Umwelt 2025a; DEW 2025a). Should the species be detected within the GNWF it is unlikely any impacts as a result of the Project would reduce the AOO of an important population. **C. Unlikely.** As above, no important populations have been described for this species (DEWHA 2008e; DCCEEW 2025b). The species is considered unlikely to occur within the WF and OTL Disturbance Footprint. Should the species be detected within the GNWF, it is unlikely any impacts as a result of the Project would fragment an existing important population into two or more populations. **D. Unlikely.** Suitable habitat may be present within the WF and OTL, however, despite numerous recent surveys there are no recent records of the species occurring within the GNWF (Umwelt 2025a). Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable. Therefore, it is considered unlikely that impacts as a result of the Project would adversely affect habitat critical to the survival of the species, should the species be present. **E. Unlikely.** There are no known population estimates for this species, and there are no defined important populations (DEWHA 2008e; DCCEEW 2025b). Despite numerous recent surveys there are no recent records of the species occurring within the GNWF (Umwelt 2025a). Reproduction of the Superb Groundsel, should the species be present, would not be expected to be disrupted by the construction and operation of the Project. Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable. Therefore, it is unlikely

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						impacts as a result of the Project would disrupt the breeding cycle of an important population, should a population occur. **F. Unlikely.** As above, there are no recent records of the species occurring within the GNWF (Umwelt 2025a). Should the species be recorded within future development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and infrastructure where practicable, thus it is unlikely impacts as a result of the Project would modify, destroy, remove, isolate or decrease the availability of quality of habitat to the extent that the species is likely to decline. Therefore, it is considered unlikely that impacts as a result of the Project would modify or decrease the availability or quality of habitat to the extent that the species (if present) is likely to decline, let alone the species as a whole. **G and H. Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; EBS 2024e; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely**. The Project is not expected to substantially interfere with the listed threat abatement and recovery information provided for this species, which largely focuses on the need for further research into the monitoring, assessment and surveying of existing populations and their propagation requirements, identifying populations of high conservation priority, developing a management plan for the control of feral rabbits and goats, and the

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						exclusion of livestock grazing on areas of occurrence (DEWHA 2008e; DCCEEW 2025b).
Swainsona pyrophila (Yellow Swainson-pea)	VU	R	The 2025 PMST output identified that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). The Yellow Swainson-pea is a short-lived, erect shrub growing to 1 m high. The species is fire adapted and typically occurs in mallee vegetation communities in inland south-eastern Australia. In South Australia, the species occurs in several regions, including Murray Darling Depression (Tonkinson 2010). The species occurs on a variety of soil types, including well drained sands, sandy loams and heavier clay loams. The only detailed habitat information is from South Australia, where the species was recorded from mallee woodland with *Eucalyptus* species including *E. brachycalyx*, *E. calycogona*, *E. dumosa*, *E. gracilis*, *E. incrassata*, *E. leptophylla*, *E. oleosa* and *E. socialis*, sometimes with Broombush *Melaleuca uncinata* tall shrubland (Tonkinson 2010). Within South Australia, important populations of the species are believed to occur in Hambidge, Munyaroo, Heggaton and Messent Conservation Parks. There are no recent or historical records of the species occurring within 90 km of the GNWF (DEW 2025). Despite numerous vegetation surveys undertaken within the GNWF the species has not been recorded. It is considered no suitable habitat occurs within the WF or OTL (EBS 2024e). Therefore, this species is considered **unlikely to occur**.	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
EPBC Act Threatened Fauna – Mammals						
Nyctophilus corbeni (Corben's Long-eared Bat, South-eastern Long-eared Bat)	VU	V	The 2025 PMST output identified that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). The South-eastern Long-eared Bat is a relatively large solid bat with a head and body length of 50-75 mm, a forearm length of 40-50 mm, and a tail length of 35-50 mm (Reardon 2012 and Department of the Environment 2013 cited in TSSC 2015). Females are typically heavier than males, weighing between 14-21 g and 11-15 g respectively (TSSC 2015). The species if found across southern central Queensland, central western New South Wales, north-western Victoria and eastern South Australia, where it is patchily distributed, with most of its range in the Murray Darling Basin (Duncan et al. 1999 and Turbill and Ellis 2006 cited in TSSC 2015). The species is found in a wide range of inland woodland vegetation types, including box / ironbark	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			/ cypress pine woodlands, Buloke woodlands, Brigalow woodland, Belah woodland, smooth-barked apple woodland, river red gum forest, black box woodland, and various types of tree mallee. Within South Australia, the species is associated with Buloke woodlands, primarily within the MDD, noting the Project is on the very edge of the species known range. Records of the species occurring within South Australia occur to the north-east of Morgan, and are largely historical (pre-1995) (DEW 2025). The species is considered unlikely to occur based upon the GNWF being on the extremity of the species known range, and the GNWF notably not containing preferred box, ironbark, and cypress pine woodland, though the mallee vegetation in the east of the GNREF contains an abundance of suitable roosting hollows (Umwelt 2025a). Anabat recorders were deployed at three sites for one night each across the WF with the aim of capturing ultrasonic bat calls during the Spring and Summer BBUS, with any calls recorded to be analysed at the conclusion of all BBUS (EBS 2024a). As the WF and OTL are at the extremity of the species known range, and there is a lack of preferred habitat (box, ironbark, and cypress pine woodland) within the WF and OTL, the species is considered **unlikely to occur**.			
EPBC Act Threatened Fauna – Birds						
Amytornis striatus howei (Murray Mallee Striated Grasswren, Striated Grasswren (sandplain))	EN	R (species not sub-species)	The 2025 PMST output identified that this species or species habitat 'may occur' within the 'feature area' (Appendix A). The Murray Mallee Striated Grasswren is a medium sized grasswren, with a slender bill and long tail. The sub-species occurs in New South Wales, South Australia and Victoria. As the name suggests, the sub-species typically is known to occur in the Murray Mallee region, noting they occur patchily through the Riverland Biosphere Reserve in South Australia (TSSC 2023). The sub-species is known to occur in sandplains dominated by mature spinifex (*Triodia* spp.), typically with an overstorey of mallee eucalypts (Verdon et al. 2021 cited in TSSC 2023). The sub-species EOO was estimated to be 41,200 km^2 (40,000-43,000 km^2 with high reliability), with an area of occurrence estimated to be 2,800 km^2 (1,400-5,600 km^2 with low reliability) (Verdon et al. 2021 cited in TSSC 2023). In South Australia the sub-species is noted as having become extremely rare, with only occasional sightings in localities long thought to be reliable and secure (Black pers. comm. September 2022 cited in TSSC 2023). Sensitised records of the species occur to the east and north-east of Morgan,	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			approximately 73 km from southern end of the OTL (DEW 2025). There are no records of the sub-species occurring within the GNWF and it is considered no suitable habitat occurs within the WF or OTL Umwelt 2025a). Additionally, the GNWF is considered to be outside of the sub-species' known distribution. Therefore, the sub-species is considered **unlikely to occur**.			
Aphelocephala leucopsis (Southern Whiteface)	VU	-	The 2025 PMST output identified that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Southern Whiteface is distributed across most of mainland Australia south of the tropics (Schodde and Mason, 1999; DCCEEW 2023b), and occupies a wide range of open woodlands and shrublands which support an understorey of grasses and/or shrubs, often dominated by *Acacias* or *Eucalypts* on ranges, foothills and lowlands, and plains (Higgins and Peter 2002; DCCEEW 2023b). The species forage at ground level preferring areas with low tree densities and patchy litter cover between understorey, feeding on invertebrates and seeds (Higgins and Peter 2002). There are 2 subspecies; South-west Southern Whiteface (*A. l. castaneiventris*), occurs in central and southern WA and south-east (*A. l. leucopsis*), occurs in eastern WA to southern NT, southern Queensland, all of SA and NSW, and northern Victoria (Menkhorst et al. 2017, Garnet and Baker 2021, DCCEEW 2023b). The latter subspecies is considered to have the larger more stable estimated population of the two; 400,000 individuals. The entire species AOO is 7,000,000 ha across an EOO of 419,000,000 ha (DCCEEW 2023b). The AOO estimate for the south-east subspecies is 6,000,000 ha within an EOO of 380,000,000 ha (Garnett and Baker 2021). From a bioregional perspective the Flinders Lofty Block IBRA Bioregion AOO is 4,400 km^2 / 440,000 ha (within an EOO of 116,885 km^2 / 11,688,500 ha), and the Murray Darling Depression IBRA Subregion AOO is 5,168 km^2 / 516,800 ha (within an EOO of 75,089 km^2 / 7,508,900 ha) (as calculated within ALA spatial portal using IBRA shapefile import, 0.02 degree grid (ALA 2025)). No important populations are defined in the Conservation Advice for the species (DCCEEW 2023b), and the species has no conservation listing in South Australia. Habitat deemed critical for the survival of the species is defined as areas of relatively undisturbed open woodland and shrublands with an understorey	Clearance of potential habitat (including foraging and nesting sites) for proposed infrastructure. Potential disturbance to species during construction. Introduction of invasive weed species during construction resulting in habitat degradation. Introduction of invasive weed species during operation resulting in habitat degradation. Increase feral animal predation and or competition as a result of improved access along new tracks.	Avoidance of any identified areas of low woodland, or higher density and taller shrublands where practicable. Identify and indicate (using spatial mapping as a minimum) any low woodland and taller shrubland habitat located adjacent to proposed disturbance areas to ensure no disturbance beyond essential clearance footprint required. Signage or other physical indication will be used where appropriate. During construction, undertake monthly weed surveillance monitoring targeting WoNS and Declared Weed species, with follow up controls as required for any identified weed outbreaks. During operation, implement weed surveillance and control programs targeting WoNS and Declared Weed species (if weeds identified) on an annual basis. Develop and implement clear protocols for management of waste during construction to avoid an increase in, or attraction of, feral pest animals to the Project Area.	**No significant residual impacts expected for the Southern Whiteface.** **A. Unlikely.** No important populations of Southern Whiteface are identified in the recent Conservation Advice for the species (DCCEEW 2023a). The species occurs across much of Australia favouring open woodlands and shrublands with grassy or shrub understorey and an intact litter layer. An estimated potential impact to suitable habitat for the species of 45.41 ha in the WF and 12.55 ha along the OTL will be disturbed as a result of the Project, noting much of this disturbance is divided across multiple VAs (16 VAs plus Mallee forest and woodland), and the Disturbance Footprint is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. Within the WF, the species has been previously recorded in Mallee Woodlands associated with fringing Chenopod Shrublands in the very eastern extent of the WF, and within discrete areas along the OTL, particularly in the southern woodlands. Taller shrubland areas may support the breeding requirements of this species at a number of ephemeral drainage lines across the GNWF. The species is known to be present within the GNWF, noting the species has been recorded at several ecological monitoring sites, and opportunistically across the site. The individuals present would be considered part of the continuous population across the majority of Australia, rather than part of any identified important population. However, the Project is not considered likely to lead to a long-term decrease in size of any important population, due to the narrow nature of the Disturbance Footprint, with individuals able to disperse into surrounding habitat. Any disturbance to notable areas of open woodland or tall shrubland is considered small and is not expected to lead to a long-term decrease in size of an important population of a species which is broadly distributed across much of Australia, and which would readily traverse across the Disturbance Footprint. **B. Unlikely.** No important populations are defined for the Southern Whiteface in the recent Conservation Advice (DCCEEW 2023a), and the species is broadly distributed as a continuous population across much of Australia south of the tropics. While the GNWF is broadly within the EOO of the species, the AOO of the species is not expected to be reduced by disturbance in any measurable way as a result of the Project since the Disturbance Footprint itself is divided across multiple VAs rather that a single suitable habitat type. Further, the Project is predominantly comprised of narrow roads and tracks which are readily traversed, WTG hardstand areas, and OTL towers which are also readily traversed, rather than large, continuous areas. A total estimated potential impact area of 45.41

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			of grasses of shrubs, habitat with low tree densities and an herbaceous understorey with litter cover which provides essential foraging habitat, and living and dead trees with hollows and crevices which are essential for roosting and nesting (DCCEEW 2023b). All habitats (i.e. all VAs) within the GNWF are considered to be potential habitat for this species, with the eastern and southern woodlands and shrublands considered preferred habitat. The Disturbance Footprint associated with the Project intersects with pockets of documented suitable habitat for the Southern Whiteface, resulting in an estimated potential impact area of: • 45.41 ha in the WF • 12.55 ha along the OTL The remainder of the Disturbance Footprint is considered marginal habitat which may be used irregularly, particularly where it occurs on the margins of preferred woodland and shrubland habitat. The species has been recorded in Mallee Woodlands associated with fringing Chenopod Shrublands in the eastern extent of the WF and along the OTL, particularly in the southern and eastern woodlands (EBS 2024e). The species was observed in abundance in the east of the GNWF during summer 2024 BBUS (Umwelt 2025a). Given the extremely broad distribution of Southern Whiteface across much of Australia, and numerous known records of the species within the GNWF (EBS 2024a, 2024b, Umwelt 2025a), the Southern Whiteface is considered as **known to occur**.			ha in the WF and 12.55 ha along the OTL (i.e. a maximum combined total of 57.96 ha for WF and OTL). As the species is confirmed to be present within the WF and OTL, there is a potential that the Project may be considered to incur a small reduction in the AOO of this species through direct impacts such as clearance of suitable habitat, or indirect impacts, however, noting no important populations have been defined for this species. As noted above, the assumed AOO for the species is 70-80,000 km^2 or 7,000,000 ha (based on actual records, so potentially much higher given the EOO covers 4,910,000 km^2 across large parts of Australia which would be rarely surveyed) (DCCEEW 2023a). Based on these figures, the clearance of approximately 57.96 ha for areas across the WF and OTL combined of potentially suitable habitat associated with the Disturbance Footprint represents a marginal reduction of 0.0001% of the reported AOO of the species broadly across Australia. Further, within the Flinders Lofty Block and Murray Darling Depression the species' AOO is estimated to be 440,000 ha and 516,800 ha, representing approximately 0.013% and 0.011% respectively (as calculated within the ALA spatial portal using IBRA shapefile import, 0.02 degree grid) (ALA 2025). This clearance may be considered a marginal reduction of the species' AOO across Australia and within the respective IBRA regions, and therefore such impacts are not considered to be significant. **C. Unlikely**. Whilst the Project is considered to be within the EOO of the species, no important populations are defined in the Conservation Advice (DCCEEW 2023a), and the species is mapped as a single continuous population across much of Australia south of the tropics. The Disturbance Footprint for the Project represents a fraction of the overall distribution of the species across much of Australia and across the region and is not considered to divide any known population in two. A total clearance of approximately 57.96 ha for the GNWF of potentially suitable shrub habitat associated with the Disturbance Footprint in areas that may provide suitable habitat for the species will occur as a result of the GNWF. However, any impacts to potentially suitable habitat are considered to be small, and will occur in the form of narrow, readily traversable strips of habitat within a much broader species distribution. Therefore, the Project is considered unlikely to cause fragmentation of any population into two or more populations. **D. Unlikely**. Habitat deemed critical to the survival of the species is documented in the Conservation Advice for the species (DCCEEW 2023a), and includes areas of relatively undisturbed open woodland and shrublands with an understorey of grasses of shrubs, habitat with low tree densities and an herbaceous understorey litter cover which provides essential foraging habitat, and living and dead trees with hollows and crevices which are essential for roosting and nesting. An estimated potential impact area of 45.41 ha in the WF, and 12.55 ha along the OTL will be disturbed as a result of the Project. Within the broader GNREF, 3,487.94 ha is mapped in these associations, with impacts representing up to 1.66% of potentially important habitat in GNREF. These calculations include all areas mapped as these associations as potentially suitable habitat; however, it is likely that not all patches constitute critical habitat. For example, many areas mapped as mallee woodland are lacking a grassy component to the understorey or comprise areas of high

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						tree density which are not preferred for foraging. Additionally, given the long history of disturbance from agricultural grazing practices, most areas are lacking an herbaceous understorey. Based on the critical habitat criteria, up to 28.81 ha in the WF and 9.94 ha in the OTL contain at least one feature of the listed critical habitat. However, a significant impact to the species is improbable given the species' extensive distribution across much of southern Australia, and what may be considered a small area of habitat removal compared with the reported AOO (see above) for this species. **E. Unlikely.** As above, no important populations of the species are identified in the recent Conservation Advice for the species, and the species has a very broad distribution across mainland Australia (DCCEEW 2023a). Habitat deemed critical for roosting and nesting includes open woodland and shrubland supporting hollows and crevices. Impacts to Mallee Woodlands associated with fringing Chenopod Shrublands in the eastern extent of the WF and along the OTL, particularly in the southern woodlands, are limited. Habitat identified as potentially suitable for breeding may support occasional hollows required for Southern Whiteface to nest. The design of the Project has been refined to avoid potential nesting habitat where possible. Additionally, it is considered habitat suitable for the species is extensive in the areas directly adjacent to the Disturbance Footprint, both within and adjacent to the WF and OTL. Therefore, the clearance of approximately 57.96 ha across numerous VAs in the GNWF is not expected to disrupt the breeding cycle of an important population. **F. Unlikely.** As above, the GNWF is only expected to impact upon smaller portions of preferred open woodland or shrubland habitat preferred by the species. The species occurs broadly across much of mainland Australia, and therefore any impacts resulting to preferred habitat due to the Project are unlikely to significantly impact on habitat availability or quality to an extent which would lead to a decline in the overall species. **G. and H. Unlikely**. A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely.** There is no recovery plan in place for this species, however, conservation and recovery actions are included within the Conservation Advice for the species (DCCEEW 2023a), and include habitat loss caused by clearing for agriculture, habitat degradation caused by livestock, and potential impacts of climate change. There are no adopted recovery plans or threat abatement plans nominated for this species. The Project is not expected to interfere with the recovery of the species.
Calidris acuminata (Sharp-tailed Sandpiper)	VU, MW		The 2025 PMST output identified that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). This species maintains the migratory wetlands EPBC listing but has also been newly listed as a threatened species (Vulnerable) under the EPBC Act (5 January 2024), and therefore assessed against the threatened species criteria within this report. The Sharp-tailed Sandpiper breeds in Siberia and migrates to New Guinea and Australia during the summer months (Geering et al. 2008, DCCEEW 2024a). During the non-breeding season, the Sharp-tailed Sandpiper migrates south to Australia where it occurs within all states, preferencing the south-east of the country in both inland and coastal localities, including freshwater and saline habitats (DCCEEW 2024a), but it prefers non-tidal fresh or brackish wetlands, damp grasslands, and will also utilise farms dams, wastewater irrigation areas, tidal flats, and beaches (Geering et al. 2008, Menkhorst et al. 2017, ALA 2025, DCCEEW 2024a). The species is considered widespread across the eastern half of South Australia, and may be found as far north as Lake Eyre, extending to areas on the eastern margin of the Nullarbor Plain (Higgins and Davies 1996). Critical habitat includes areas for breeding (outside of Australia), foraging, roosting or dispersal. Important habitat includes those listed in the National Directory of Important Migratory Shorebird Habitat (Weller et al. 2020) (DCCEEW 2024a). A site is considered a nationally important site if >85	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			individuals regularly occur (DCCEW 2024a). No important populations have been identified. There is a marked absence of records of the species occurring near to the WF or OTL, with the closest records of the species occurring near the Project include one recent (2003) and one historical (1982) record, both associated with Porter Lagoon near Farrell Flat approximately 18 km west of the OTL (DEW 2025). There are no records of the species occurring within the WF or OTL, nor any nearby records (Umwelt 2025a, DEW 2025), and it is considered no suitable habitat occurs within these areas (i.e. no wetland habitat) (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.			
Calidris ferruginea (Curlew Sandpiper)	CE, MW	E	The 2025 PMST output identified that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). The Curlew Sandpiper is a migratory wader which breeds outside of Australia (Menkhorst et al. 2017). The species mostly occur on intertidal mudflats in sheltered coastal areas such as estuaries, bays, inlets and lagoons, and around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms (Geering et al. 2008). The species has also been recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand (DCCEEW 2024b). The species can occur in both fresh and brackish waters. There is a marked absence of records of the species occurring near to the WF or OTL, with the closest records of the species occurring near the Project include two records (2003, 2009) at the Stockyard Plain Evaporation Basin, approximately 63 km south-east of the southernmost end of the OTL (DEW 2025). There are no records of the species occurring within the WF or OTL, nor any nearby records (Umwelt 2025a, ALA 2025), and it is considered no suitable habitat occurs within these areas (i.e. no wetland habitat). Therefore, this species is considered **unlikely to occur**.	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
Falco hypoleucos (Grey Falcon)	VU	R	The 2025 PMST output identified that this species or species habitat is 'likely to occur' within the 'feature area' (the WF and OTL (Appendix A). The Grey Falcon is an elusive species occurring across almost all of Australia but noted in arid and semi-arid Australia including the Murray-Darling Basin, Eyre Basin, central Australia and Western Australia (Marchant and Higgins, 1993). Preferred	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			habitat includes timbered lowland plains, particularly acacia shrublands that are crossed by tree-lined watercourses, where they like to forage and breed (Garnett et al. 2011). The species is considered a single monotypic population across Australia with no specific important populations identified (TSSC 2020). There is a marked absence of records of the species occurring near to the WF or OTL, with the closest records of the species occurring near the Project include one record (2019) at the Stockyard Plain Evaporation Basin, approximately 60 km south-southeast of the southernmost end of the OTL (DEW 2025). Despite numerous fauna surveys, including targeted BBUS (EBS 2024a, 2024b, 2024e, Umwelt 2025a), the species has not been recorded within the WF or OTL. Further, it is considered no preferred habitat occurs within the WF or OTL. Therefore, this species is considered **unlikely to occur**.			
Gallinago hardwickii Lantham's Snipe, Japanese Snipe	VU, MW	R	The 2025 PMST output indicates that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). This species maintains the migratory wetlands EPBC listing but has also been newly listed as a threatened species under the EPBC Act (5 January 2024), and therefore assessed against the threatened species criteria within this report. Lantham's Snipes breed in selected areas of Japan and nearby Kuril Islands of far eastern Russia (DCCEEW 2024d). Within Australia, the species visits during the non-breeding season (Higgins and Davies 1996), preferring the east coast from Cape York Peninsula to south-eastern Australia, including the Adelaide Plains, Mount Lofty Ranges, and the Eyre Peninsula (DCCEEW 2024d). The species is occasionally recorded at sites outside of the species' core Australian range, including mid-northern South Australia (Barrett et al. 2003). The species prefers tussock grass and low dense sedges surrounding freshwater wetland, permanent and ephemeral wetlands, and can also occur in habitats with saline or brackish water in modified or artificial wetlands. Critical habitat includes areas for breeding (outside of Australia), foraging, roosting or dispersal. Important habitat includes those listed in the National Directory of Important Migratory Shorebird Habitat (Weller et. al. 2020) (DCCEEW 2024d). Critical feeding and roosting habitats are associated with freshwater wetlands with dense low vegetation (DCCEEW 2024d).	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			There is a marked absence of records of the species occurring near to the WF or OTL, with the closest record of the species occurring near the Project being one record (2006) at Morgan Conservation Park, approximately 44 km south-east of the southernmost end of the OTL (DEW 2025). There are no records of the species occurring within the WF or OTL, nor any nearby records (Umwelt 2025a, DEW 2025), and it is considered no suitable habitat occurs within these areas (i.e. no wetland or coastal habitat) (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.			
Grantiella picta (Painted Honeyeater)	VU	R	The 2025 PMST output indicates that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). The Painted Honeyeater is nomadic and sparsely distributed from south-eastern Australia to north-western Queensland and eastern Northern Territory and may be a vagrant to South Australia (DotE 2015a). The species occurs in dry open forests and woodlands which contain a high number of mature trees (prefers Acacia woodland / Allocasuarina woodland) and is strongly associated with the presence of mistletoe. The species may also be found along rivers, on plains with scattered trees and on farmland with remnant vegetation. Rare throughout its range (Menkhorst et al. 2017). Key habitats include Boree/Weeping Myall (*Acacia pendula*), Brigalow (*A. harpophylla*) and Box-Gum Woodlands and Box-Ironbark Forests. There are few records of the species occurring in South Australia, with most records associated with the eastern portion of the state (DEW 2025). The closest record of the species occurring near the Project include two records, both from 2017, associated with the Brookfield Conservation Park, approximately 55 km south-east of the southernmost end of the OTL (DEW 2025). There are no records of the species occurring within the WF or OTL, nor any nearby records (Umwelt 2025a, ALA 2025). Whilst a range of mature trees occur throughout the WF, it is noted the WF does not have an abundance of mistletoe (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
Leipoa ocellata (Malleefowl)	VU	V	The 2025 PMST output indicates that this species or species habitat is 'likely to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Malleefowl is a large ground-dwelling bird, found in a range of habitats, principally in semi-arid to arid mallee and/or acacia dominated shrublands and low woodland in the southern half of Australia (DCCEEW 2024c). Within South Australia, the majority of records of the species are from the Eyre Peninsula and Murray Darling Basin region, with scattered records across the Yorke Peninsula (DEW 2025). Critical habitat needs for the species are considered to be well documented in some locations, however, these are considered to present an incomplete understanding of the habitats likely to be critical to the survival of the species and critical habitat requirements are known only in broad terms (DCCEEW 2024c). Despite this, critical habitat is understood to typically include a sandy substrate and an abundance of leaf litter within which incubator style nests are built (Frith 1959; Frith 1962a cited in DCCEEW 2024c). Densities of birds are generally greatest in areas of higher rainfall and on more fertile soils where shrub diversity is greatest (DCCEEW 2024c). Habitat suitability modelling has been undertaken for Malleefowl in reserve systems in the Murray mallee of New South Wales, South Australia and Victoria, based upon Malleefowl sightings, and data on landforms, general habitat type and fire history, to develop a statistical model of the broad habitat preferences of the species (DCCEEW 2024c). Whilst areas of habitat critical to the survival of the species are unable to be spatially delineated (DCCEEW 2024c), All populations and areas occupied by Malleefowl are considered to be of equal importance for the protection and recovery of the species (DCCEEW 2024c). There is a marked absence of records of the species occurring near to the WF or OTL, with the closest records of the species occurring near the Project being several records near Brookfield Conservation Park, approximately 46 km south-east of the southernmost end of the OTL (DEW 2025). There are no records of the species occurring within the WF or OTL, nor any nearby records (Umwelt 2025a, DEW 2025). Potentially suitable mallee vegetation is considered isolated from known populations within Brookfield Conservation Park and east of Morgan (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
Lophochroa leadbeateri leadbeateri (Major Mitchell's Cockatoo (eastern), Eastern Major Mitchell's Cockatoo, Pink Cockatoo (eastern))	EN	R	The 2025 PMST output indicates that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). Major Mitchell's Cockatoo was relatively recently listed under the EPBC Act with Conservation Advice issued on 31 March 2023. Major Mitchell's Cockatoo is a small, white and pink cockatoo, with the sub-species, occurring within the Murray Darling, Eyre and Bulloo River basins. Within South Australia the species has largely disappeared from the Adelaide and Mt Mary Plains (dating back to the 1950s (Boehm 1961 cited in (DCCEEW 2023c)). Critical habitat consists of arid and semi-arid woodlands dominated by mulga (*Acacia aneura*), mallee and box eucalypts, slender cypress pine (*Callitris gracilis*) or belah (*Casuarina cristata*), especially where there are large mature trees with suitable hollows, and in areas with easily accessible water bodies. It is now thought that whilst much of its range remains uncleared rangelands, it is assumed approximately 20-30% is still occupied (Hurley and Garnett 2021 cited in DCCEEW 2023c). Most records for the species occur to the east of the Project, with the closest sensitised records occurring approximately 60 km north-east of the WF, and approximately 60 km south-east of the southernmost end of the OTL (DEW 2025). There are no records of the species occurring within the WF or OTL, nor any nearby records (Umwelt 2025a, DEW 2025), noting these areas are beyond the species' current expected range (i.e. beyond the eastern semi-arid areas of South Australia) (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
Melanodryas cucullata cucullata (South-eastern Hooded Robin, Hooded Robin (south-eastern))	EN	R	The 2025 PMST output indicates that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). The South-eastern Hooded Robin was relatively recently listed under the EPBC Act with Conservation Advice issued on 31 March 2023. The South-eastern Hooded Robin occurs in south-eastern Australia from far south-east Queensland to the Yorke Peninsula in South Australia. The species is described as shy and largely sedentary, often occurring in pairs or small groups. They forage on insects and small lizards taken from the ground and may also hunt for invertebrates by 'perch and pounce' within grassy clearings in leaf litter. South-eastern Hooded Robins generally form monogamous pairs and occupy breeding territories during the breeding season (between July to November) and non-breeding season, with pairs often returning to the same site each season	Clearance of potential habitat (including foraging and nesting sites) for proposed infrastructure. Potential disturbance to species during construction. Introduction of invasive weed species resulting in habitat degradation. Increase feral animal predation and or competition caused by opening up access routes in previously undisturbed areas (such as mallee vegetation south of Mimbara CP, where the OTL traverses steep and inaccessible terrain).	Avoidance of any identified areas of low woodland, or higher density and taller shrublands where practicable. Identify and indicate (using spatial mapping as a minimum) any low woodland and taller shrubland habitat located adjacent to proposed disturbance areas to ensure no disturbance beyond essential clearance footprint required. During construction, undertake monthly weed surveillance monitoring targeting WoNS and Declared Weed species, with follow up controls as required for any identified weed outbreaks.	**No significant residual impacts are expected for the South-eastern Hooded Robin.** **A. Unlikely.** Despite numerous field surveys, and the occurrence of potentially suitable habitat within the WF, the species has not been recorded within the WF, however, impacts are still considered herein based upon potentially suitable habitat. Within the OTL there are several (eight) recent records of the species occurring in the far south of the OTL. An estimated maximum potential impact area of approximately 28.81 ha in the WF (predominantly associated with VA1) and approximately 12.24 ha along the OTL alignment (predominantly associated with VA18) will be disturbed as a result of the Project. The Disturbance Footprint is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. Where the species has been recorded within development areas, efforts would be made to avoid suitable habitat where this species is likely to be present through micro siting roads, tracks and OTL infrastructure where practicable. It is expected that any individuals potentially impacted during the construction phase could readily disperse into nearby

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			(including multiple broods) (DCCEEW 2023d). Nests are situated in a tree fork or crevice, from less than 1 m to 5 m above the ground (DCCEEW 2023d). Habitat critical to the survival of the species broadly includes dry eucalypt and acacia woodlands and shrublands remnants with an open understorey, some grassy areas and a complex ground layer, often in or near clearings or open areas, as well as structurally diverse habitats. The sub-species is absent from many formerly occupied known sites, particularly in the wetter areas of the south and east. No important populations are defined in the Conservation Advice. The subspecies' EOO is estimated to be approximately 1,200,000 km^2 (range 1,100,000–1,400,000 km^2) with an AOO of approximately 30,000 km^2 (16,000–50,000 km^2), respectively (Ford et al. 2021 cited in DCCEEW 2023d). The Disturbance Footprint associated with the Project intersects with suitable habitat for the South-eastern Hooded Robin across the WF and OTL, resulting in an estimated potential impact area of: • 28.81 ha in the WF • 12.24 ha along the OTL alignment The species has been recorded in the southern section of the OTL during the MBC targeted surveys in 2023 and 2024 in association with VA18 Mixed Mallee (inc. *Eucalyptus oleosa* dominant) over Chenopods and native grasses, and opportunistically along Black Peake Road (Umwelt 2025a). It is considered that habitat suitable for the species occurs within the WF and OTL. This species is considered **likely to occur** within the WF and **known to occur** within the OTL.		During operation, implement weed surveillance and control programs targeting WoNS and Declared Weed species (if weeds identified) on an annual basis. Develop and implement clear protocols for management of waste during construction and operation to avoid an increase in, or attraction of, feral pest animals to the Project Area.	suitable habitat, noting there is approximately 2,795.87 ha of potentially suitable habitat in the broader GNREF. The design of the Project has been refined to avoid habitat to this species where possible. Therefore, taking into consideration the OTL alignment has some capacity to be further micro sited in some areas, the Project is unlikely to lead to a long-term decrease in the size of a population. **B. Unlikely.** The AOO for the South-eastern Hooded Robin is approximately 30,000 km^2 (16,000–50,000 km^2) / 3,000,000 ha (DCCEEW 2023b). Based on these figures the clearance of 28.81 ha in the WF and 12.24 ha along the OTL alignment (i.e. maximum estimated area of 41.05 ha for WF and OTL combined) of potentially suitable habitat associated with the Project represents 0.15% of the reported AOO of the species. Of note, there is considered to be a total of 2,795.87 ha of potentially suitable habitat in the broader GNREF. Of this, a maximum of 41.05 ha (or 1.61%) is inside of the Disturbance Footprint and impacted by the Project and includes 24.02 ha of Permanent Disturbance and 17.03 ha of Temporary Disturbance (Umwelt 2025a). Additionally, it is considered that extensive suitable, contiguous habitat is also present outside of the mapped GNREF boundary. To date, the species has only been recorded in the far south of the OTL (Umwelt 2025a). The Disturbance Footprint is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. Where the species has been recorded within development areas, efforts would be made to avoid habitat areas where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, impacts as a result of the Project are expected to be largely mitigated for this species, with extensive areas of potential habitat not disturbed by the Project. Thus, the Project is considered unlikely to reduce the AOO for this species. **C. Unlikely.** Whilst the WF and OTL are considered to be within the EOO for this species, the Disturbance Footprint is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas, meaning the Project is considered unlikely to fragment an existing population into two or more populations. Where the species has been recorded within development areas, efforts would be made to avoid areas where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. The design of the Project has been refined to avoid impacts to this species where possible. The Disturbance Footprint for the Project represents a fraction of the overall distribution of the species across much of Australia and does not divide any known population in two. The maximum estimated clearance of approximately 41.05 ha (WF and OTL combined) of potentially suitable habitat within the GNWF in areas that may provide suitable habitat for the species are considered to be small, isolated patches within a much broader species distribution. The clearance of potentially suitable habitat within the Disturbance Footprint is considered unlikely to restrict movement of individuals nor restrict gene flow of this species across the landscape (i.e. the species is considered to be a mobile species, regularly occupying patches larger than 10 ha (DCCEEW 2023b). The Project is

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						considered unlikely to fragment any population of the species whose home range may overlap with the Disturbance Footprint. Therefore, the Project is considered unlikely to cause fragmentation of any population into two or more populations. **D. Unlikely.** As above, habitat deemed critical to the survival of the species is documented in the Conservation Advice for the species (DCCEEW 2023b) and includes dry eucalypt and acacia woodlands and shrublands remnants with an open understorey, some grassy areas. Suitable habitat is typically widespread for this species regionally across south-eastern Australia and species records are spread throughout south-eastern South Australia. As above, there is a total of 2,795.87 ha of potentially suitable habitat in the broader GNREF. Of this, a maximum of 41.05 ha or 1.61% occurs is inside the Disturbance Footprint and would impacted by the Project. Impacted areas include both Permanent Disturbance (24.02 ha) and Temporary Disturbance (17.03 ha). Of the potentially suitable habitat, it is noted that not all areas meet the critical habitat criteria, and the estimated impact is considered conservative (Umwelt 2025a). The long history of agricultural grazing within the Disturbance Footprint has reduced the complexity of the ground layer, and few tall native grasses remain due to grazing pressure. Additionally, areas of mallee, especially in VA18 are included in their entirety, though it is likely that only the outer edge of these patches where they intergrade with clearings or open areas may be considered critical habitat (Umwelt 2025a). As such, a significant impact to the species may be considered implausible given mitigation measures and areas of similar habitat occur adjacent to the Disturbance Footprint. Mitigation measures propose to minimise clearance areas where practicable, noting the Disturbance Footprint is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. Additionally, the current Disturbance Footprint has been further refined to reduce the area of clearance required in potentially suitable habitat for the species (Umwelt 2025a). Thus, the Project is considered unlikely to significantly impact habitat considered critical for survival of the species. **E. Unlikely.** South-eastern Hooded Robins generally form monogamous pairs and occupy breeding territories during the breeding season (between July to November) and non-breeding season, with pairs often returning to the same site each season (including multiple broods) (DCCEEW 2023b). Nests are situated in a tree fork or crevice, from less than 1 m to 5 m above the ground (DCCEEW 2023b). Umwelt (2025a) notes there is ample suitable breeding habitat in the contiguous adjacent landscape. Additionally, the current Disturbance Footprint has been further refined to reduce the area of clearance required in potentially suitable habitat for the species (Umwelt 2025a), thereby reducing impacts related to nesting and breeding areas. Therefore, the Project is considered unlikely to lead to a long-term decrease in the size of a population. **F. Unlikely.** As above, the Project is only expected to impact upon smaller areas of dry eucalypt and acacia woodlands and shrublands, and whilst a total estimated area of approximately 41.05 ha (WF and OTL) of potentially suitable habitat within the GNWF will be impacted, equating to approximately 1.47% of the suitable

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						vegetation mapped in the broader GNREF, or 0.001% of the reported AOO of the species. Of which, a total of approximately 24.02 ha (WF and OTL) is considered the maximum potential Permanent Disturbance of potential Hooded Robin habitat. Mitigation measures will be implemented to reduce impacts to this species. Therefore, the Project is considered unlikely to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. **G. and H. Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely.** There is no recovery plan in place for this species, however, it is noted that a recovery plan is required (DCCEEW 2025b). Some conservation and recovery actions are included within the Conservation Advice for the species (DCCEEW 2023b). The Project is not expected to substantially interfere with the listed conservation and recovery information currently provided for this species, which largely focuses on reducing land clearance in habitat critical to the survival of the species, restoring remnant woodland, undertaking revegetation, ensuring populations remain connected by avoiding gaps of greater than 100 m, and the promotion of ecological management and connectivity of woodland remnants (DCCEEW 2025b). The Disturbance Footprint itself is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						towers, rather than large, continuous areas, and no gaps in vegetation greater than 100 m are proposed. Where the species has been recorded within development areas, efforts would be made to avoid suitable habitat areas through micro siting of roads, tracks and OTL infrastructure where practicable. Therefore, impacts as a result of the Project are not expected to interfere with the recovery of the species.
Neophema chrysostoma (Blue-winged Parrot)	VU	V	The 2025 PMST output indicates that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Blue-winged Parrot was relatively recently listed under the EPBC Act with Conservation Advice issued on 31 March 2023. Blue-winged Parrots predominantly breed in Tasmania, and on mainland Australia south of the Great Dividing Range in southern Victoria, and sometimes in coastal south-eastern South Australia (DCCEEW 2023e). During non-breeding periods (from Autumn to early Spring), they occur from northern Victoria, eastern South Australia, South-western Queensland and western New South Wales (Higgins 1999). They inhabit a range of coastal, sub-coastal and inland areas through to semi-arid zones, favouring grasslands and grassy woodlands and areas near wetlands. The species may also be associated with altered environments such as airfields, golf courses and paddocks. Pairs or small groups may forage mainly near or on the ground for seeds (including native and introduced grasses, herbs and shrubs (Higgins 1999 cited in DCCEEW 2023e). Blue-winged Parrots form monogamous pairs, and nests are made in hollows, preferably with a vertical opening, and in live or dead trees or stumps (DCCEEW 2023e). No important populations have been defined for this species (DCCEEW 2023e). Habitat critical to the survival of the species includes grasslands, grassy woodlands and semi-arid chenopod shrubland with native and introduced grasses, herbs and shrubs. Whilst Umwelt (2025b) cite up to 15,540.66 ha of potentially suitable habitat occurs within the GNWF Project Area, a maximum of 471.78 ha is considered to occur within the Disturbance Footprint. The Disturbance Footprint associated with the Project intersects with potentially suitable foraging only habitat for the Blue-winged Parrot across the WF and OTL, resulting in an estimated potential impact area of: • 430.95 ha in the WF • 40.91 ha along the OTL alignment There is currently estimated to be approximately 10,000 (range 7,500-15,000) mature Blue-winged Parrots in the wild, with an estimated EOO of	Loss of potential general foraging habitat. No nesting occurring in this area. Introduction of invasive weed species during construction resulting in habitat degradation. Introduction of invasive weed species during operation resulting in habitat degradation. Increase feral animal predation and or competition as a result of improved access along new tracks.	Avoidance of any identified areas of potentially suitable foraging areas for the species, where practicable. Pre-construction weed surveys and controls, post-construction weeds surveys and controls, and ongoing weed survey and control during operation. Post-construction weeds surveys and controls, and ongoing weed survey and control during operation. Develop and implement clear protocols for management of waste during construction and operation to avoid an increase in, or attraction of, feral pest animals to the Project Area.	**No significant residual impacts expected for the Blue-winged Parrot.** **A. Unlikely.** No 'important populations' are defined in the Conservation Advice for the Blue-winged Parrot. The Blue-winged Parrot prefers open grassy woodlands for breeding and is predominantly found in the south-eastern portions of Australia where it breeds, occasionally extending into arid and semi-arid Australia during non-breeding periods. As such, no important populations of the species are considered to occur within the WF or OTL. Whilst there are two records (2001, 2003) of two individual Blue-winged Parrots in relative proximity to the Project, both records are associated with Conservation Parks; Red Banks Conservation Park and Caroona Creek Conservation Park, both of which are more than 5 km beyond the GNWF boundary (DEW 2025a). Additionally, despite eight BBUS, and numerous ecological surveys within the GNWF, the species has not been recorded (Umwelt 2025a). Therefore, the Project is considered unlikely to lead to a long-term decrease in the size of an important population. **B. Unlikely.** The GNWF is unlikely to support a specific important population of this species, noting the species does not breed in inland South Australia. The species estimated EOO is approximately 170,000 km^2 (range 155,000-190,000 km^2, stable trend), with the species AOO estimated to be approximately 11,000 km^2 / 1,100,000 (range 9,000-19,000 km^2) (DCCEEW 2023c). The Disturbance Footprint associated with the Project intersects with potentially suitable foraging only habitat for the Blue-winged Parrot across the WF and OTL, resulting in an estimated maximum potential impact area of 430.95 ha in the WF and 40.91 ha along the OTL (i.e. a maximum estimated area of 471.86 ha for WF plus OTL). Based on these figures the clearance of 471.86 ha of potentially suitable foraging habitat associated with the Project represents 0.04% of the reported AOO for the species. Of note, there is considered to be a total of 18,580.55 ha of potentially suitable foraging habitat in the broader GNREF. Of this, a maximum of 471.86 ha (or 2.54%) is inside of the GNWF Disturbance Footprint and impacted by the Project (this includes 268.65 ha of Permanent Disturbance and 203.22 ha of Temporary Disturbance (Umwelt 2025a). However, as above, despite numerous ecological surveys within the GNWF, the species has not been recorded within the WF or OTL (Umwelt 2025a). Therefore, since the species is not known to occur within the GNWF, has not previously been recorded within 5 km of the Project, and does not breed in the area, the Project is considered unlikely to reduce the AOO of an important population. **C. Unlikely.** As above, the WF and OTL are unlikely to support a specific important population of this species. Should the species be recorded within development areas, efforts would be made to

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			170,000 km^2 (range 155,000-190,000 km^2, stable trend) / 17,000,000 ha. However, the species AOO is contracting an is estimated to be approximately 11,000 km^2 (range 9,000-19,000 km^2) / 1,100,000(DCCEEW 2023e). The closest records of the species occurring to the Project include a record (2001) of a Blue-winged Parrot within Red Banks Conservation Park approximately 8.5 km to the southeast of the WF boundary and approximately 7 km east of the OTL at its nearest point, and another record (2003) at Caroona Creek Conservation Park approximately 12 km north of the WF (DEW 2025). However, despite numerous recent ecological surveys within the GNWF the species has not been recorded (Umwelt 2025a). Therefore, this species is conservatively considered as a **possible occurrence** within the WF and OTL.			avoid suitable habitat areas through micro siting roads, tracks and OTL infrastructure where practicable. Once constructed, the species will be able to continue to move freely above and around the GNWF, therefore, the Project is considered unlikely to inhibit movement nor restrict gene flow of this highly mobile species across the landscape. Thus, impacts as a result of the Project are considered unlikely to fragment and existing important population into two or more populations, noting no specific important populations are documented for the species in proximity to the GNWF, and the species has not been recorded within 5 km of the GNWF. **D. Unlikely**. The WF and OTL are unlikely to support any particular population of note, with the species breeding in south-eastern mainland Australia and on Tasmania, and sometimes in coastal south-eastern South Australia (i.e. not inland South Australia) (DCCEEW 2023c). A total of approximately 18,580.55 ha of potentially suitable habitat in the broader GNREF has been mapped, of which a maximum of approximately 471.86 ha (WF and OTL) is within the Disturbance Footprint. This equates to a conservative maximum area of 2.54% of potentially suitable foraging vegetation mapped within the GNREF. However, Umwelt (2025) note much of this disturbance is divided across multiple VAs (11 VAs, including chenopod shrubland, and Mallee forest and woodland areas), and what is considered to be potentially suitable foraging habitat is unlikely to be considered preferred habitat for this species (Umwelt 2025a). There are no preferred wetland areas within the Project Area, with the closest potentially suitable foraging areas including Red Banks CP and Caroona Creek CP, however, these are not within notable proximity to the WF or OTL (i.e. greater than 5 km from the GNWF). Additionally, the Disturbance Footprint itself is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. The maximum potentially suitable habitat associated with the Project represents 0.04% of the reported AOO for the species. As such, the Project is considered unlikely to significantly impact habitat considered critical for survival of the species. **E. Unlikely**. The Blue-winged Parrot breeds in localised areas restricted south-eastern mainland Australia and on Tasmania, and sometimes in coastal south-eastern South Australia (i.e. not inland South Australia) (DCCEEW 2023c). The WF and OTL are unlikely to support an important population of this species, nor any breeding activity. The Blue-winged Parrot has been conservatively considered to be a possible sporadic visitor to the area, and as above, has only been recorded in relative proximity to the GNWF on two occasions previously; at Red Banks CP and Caroona CP, both over 5 km from the GNWF boundary (DEW 2025a). As the WF and OTL are outside of the species breeding areas (i.e. breeding does not occur in inland South Australia) (DCCEEW 2023c), the Project is considered unlikely to disrupt the breeding cycle of an important population. **F. Unlikely.** As above, a total of approximately 18,580.55 ha of potentially suitable foraging habitat in the GNREF has been mapped, of which a maximum estimated area of 471.86 ha (WF and OTL) is within the Disturbance Footprint equating to a conservative maximum area of 2.54% of potentially suitable vegetation mapped

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						within the GNREF. However, Umwelt (2025b) note much of this disturbance is divided across multiple VAs (11 VAs, including chenopod shrubland, and Mallee forest and woodland areas), and potentially suitable foraging habitat is unlikely to be considered preferred habitat for this species. Within the area surrounding the Disturbance Footprint, native vegetation forms a contiguous patch within the landscape, providing abundant habitat for potentially sporadic visitation of the Blue-winged Parrot. As such, impacts as a result of the Project are considered unlikely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. **G. and H: Unlikely**. A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely.** There is no recovery plan in place for this species, however, it is noted that a recovery plan is required (DCCEEW 2025b). Some conservation and recovery actions are included within the Conservation Advice for the species (DCCEEW 2023c). The Project will not substantially interfere with the listed conservation and recovery information provided for this species, which largely focuses on habitat loss, degradation, fragmentation and removal, climate change, predation from invasive species, invasive weeds, firewood collection and competition with Noisy Miners (Manorina melanocephala) (DCCEEW 2025b). The Disturbance Footprint itself is predominantly comprised of narrow

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						linear alignments or a number of small disturbance areas arising from roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas of disturbance. Therefore, impacts as a result of the Project are not expected to interfere with the recovery of the species.
Pedionomus torquatus Plains-wanderer	CE	E	The 2025 PMST output indicates that this species or species habitat 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). Plains-wanderer are distributed across north-central Victoria, southern New South Wales, west-central Queensland and across eastern South Australia. The species formerly was found in the south-east of South Australia, however, is considered to potentially be extinct from these areas (DotE 2015b). The species has core sites within New South Wales and Victoria but is known to inhabit Queensland and South Australia where more marginal habitat exists (DotE and DEWNR 2016). The species is rare and elusive, and typically occurs in sparse, treeless and lowland native grasslands with a strong preference to areas that have approximately 50% bare patches, with most vegetation less than 5 cm in height and widely spaced plants up to 30 cm (DotE 2015b). They inhabit sparse grasslands with very low vegetation and cannot persist in an agricultural landscape (Garnett et al 2011, cited in DotE 2015c). Records for the species within South Australia are typically sparse. The closest records (historical) for the species occur near Eudunda (>5 km to the south of the OTL) (ALA 2025, one record from 1931 and two undated records), and one record near Redhill (ALA 2025, undated record) more than 60 km west of the western boundary of the GNWF Project Area and are considered to have low spatial accuracy (ALA 2025). There are no records of the species occurring within the WF and OTL, nor what is considered any nearby records (Umwelt 2025a, ALA 2025). Survey effort specific to the current GNWF Project Area includes eight seasonal Bird and Bat Utilisation Surveys, which were undertaken across the Project Area, in line with DCCEEW's DRAFT onshore windfarm guidance (DCCEEW, 2024). The Plains Wanderer was not identified during any of these surveys or considered to be likely to occur. Garnett and Baker 2020 cite that the species was once widespread in south-eastern Australia, however, records in the last decade have been restricted to north-central and central victoria, north-eastern South Australia, and the Riverina of southern New South Wales and west-central Queensland. Within South Australia, it is reported seven birds were detected on Boolcoomatta Station Reserve (over 200 km north-east of the GNWF	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			northern boundary) in 2017, but few since (Bush Heritage Australia cited in Garnett and Baker 2020). Therefore, this species is considered **unlikely to occur**.			
Polytelis anthopeplus monarchoides (Regent Parrot (eastern))	VU	V	The 2025 PMST output indicates that this species or species habitat is 'likely to occur' in 'buffer area only' (Appendix A). The Regent Parrot (eastern) occurs in inland south-eastern Australia, in the lower Murray-Darling basin region of South Australia, New South Wales and Victoria (Baker-Gabb and Hurley 2011). Relatively little is known about the habitat used by the Regent Parrot (eastern) during the non-breeding season, although the sub-species is thought to remain within the Murray-Darling Basin all year round. The sub-species is considered to be restricted to a single population, however, within its broad distribution three separate breeding areas are recognised. Within South Australia, breeding occurs in near the lower Murray River, upstream from Swan Reach in South Australia to north-western Victoria (Lindsay Island) (Harper 1989; Smith 2001, 2004 cited in Baker-Gabb and Hurley 2011). Breeding occurs almost entirely in River Red Gum (*Eucalyptus camaldulensis*) forest and woodland, and all known breeding colonies relative to South Australia are located along the Murray River. Habitat deemed critical to the survival of the sub-species contains all known sites for nesting, food resources, water, shelter, essential travel routes, dispersal, and buffer areas, as defined within the sub-species National Recovery Plan (Baker-Gabb and Hurley 2011). Records for the species have been sensitised, with the closest record for the species occurring approximately 10 km south-east of Bundey (2013) (DEW 2025). There are no records of the species occurring within the WF and OTL, nor what is considered any nearby records (Umwelt 2025a, ALA 2025). Though it is considered potentially suitable foraging habitat occurs within the Disturbance Footprint, it is not within the critical foraging habitat area of the species (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.	Unlikely to occur, N/A	N/A	**No significant impacts expected.** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
Rostratula australis Australian Painted Snipe	EN	E	The 2025 PMST output indicates that this species or species habitat 'may occur' in the 'feature area' (the WF and OTL) (Appendix A). The Australian Painted Snipe is a stocky wading bird that occurs in shallow freshwater (occasionally brackish) wetlands, and both ephemeral and permanent water bodies including as lakes, swamps, claypans, inundated or waterlogged	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			grassland/saltmarsh, dams, rice crops, sewage farms and bore drains, preferring areas with a cover of grasses, rushes, reeds and low scrub (DSEWPaC 2013). Important areas for this species have previously included south-eastern South Australia, the Murray-Darling Basin in Victoria and New South Wales, Queensland Channel Country, and the Fitzroy Basis of Central Queensland, however, the species is now understood to occur more widely and frequently in remote arid and tropical regions of Australia (Hassell and Rogers, 2002; Jaensch 2003a, 2003b; Jaensch et al., 2004; Black et al., 2010, cited in DSEWPaC 2013). Records for the species within northern South Australia are scarce, with the closest nearby records being two records on the southern edge of Burra at least 6 km from the WF (ALA 2025), and one record of the species occurring within the Red Banks Conservation Park (2001) approximately 6 km from the WF and 7 km from the OTL close to naturally occurring drainage channels (DEW 2025). Potentially suitable habitat occurs within Red Banks CP, where the existing known record occurs. There are no records of the species occurring within the WF and OTL (Umwelt 2025a, DEW 2025, ALA 2025). Therefore, this species is considered **unlikely to occur**.			
Stagonopleura guttata (Diamond Firetail)	VU	V	The 2025 PMST output indicates that this species or species habitat is 'known to occur' in the 'feature area' (the WF and OTL) (Appendix A). The Diamond Firetail was relatively recently listed under the EPBC Act with Conservation Advice issued on 31 March 2023. The Diamond Firetail has a broad distribution across south-eastern mainland Australia from south-east Queensland to the Eyre Peninsula in South Australia, but previously extended into north Queensland (inland from Cardwell) and extensively across interior New South Wales (DCCEEW 2023f). Within South Australia the Diamond Firetail appears to have been separated into three isolated subpopulations (i.e. Eyre Peninsula, Mt Lofty to Southern Flinders Ranges, and the south-east) (Higgins et al. 2007 cited in DCCEEW 2023f). The species occurs in eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats (including farmland and grassland with scattered trees), preferring areas with relatively low tree density, few large logs, and little litter cover but high grass cover (Menkhorst et al. 2017, DCCEEW 2023f). They feed predominantly at ground level on ripe and partly ripe grass and herb seeds and green leaves, and on insects. Groups settle into small colonies to breed between August and January,	Clearance of potential habitat (including foraging and nesting sites) for proposed infrastructure. Potential disturbance to species during construction. Introduction of invasive weed species during construction resulting in habitat degradation. Introduction of invasive weed species during operation resulting in habitat degradation. Increase feral animal predation and or competition as a result of improved access along new tracks.	Avoidance of any identified areas of eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, where practicable. This will be done through further design reviews and in construction planning. Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Pre-construction weed surveys and controls, post-construction weeds surveys and controls, and ongoing weed survey and control during operation.	**No significant residual impacts expected for the Diamond Firetail.** **A. Unlikely.** Unlikely. There are no important populations defined for the species (DCCEEW 2023f). Within South Australia, populations of this species are known to occur between the Mount Lofty Ranges and Southern Flinders Ranges, with the WF and OTL occurring on the eastern fringe of the species preferred typical distribution for that subpopulation (DCCEEW 2023f; DEW 2025a). The species has been previously recorded in the nearby Goyder South (Stage 2) Project Area (cited in EBS 2024e), and recently outside of the GNWF but within the search area during the MBC targeted surveys along Black Peake Road in association with *Eucalyptus porosa* open grassy woodland (VA1). It is noted there are also 11 BDBSA records (historical and recent records ranging between 1987 and 2017) within or near to the GNWF (BDBSA records cited in Umwelt 2025a). It is considered that potentially suitable habitat occurs within the Disturbance Footprint within the WF and OTL. Several vegetation associations within the GNWF broadly match the habitat description for this species, however, based upon on-ground field surveys, it is considered most areas mapped as mallee woodland are unlikely to provide preferred habitat for this species (due to a high tree density and chenopod / sclerophyll dominated shrub understorey) (Umwelt 2025a). However, the edges of woodland (VA18) which adjoin grassland (VA11a/b) or chenopod shrubland (VA12) with a grassy understorey are considered likely habitat (including foraging habitat) (Umwelt 2025a). Thus, although there is potentially suitable habitat within the WF and OTL, due to a marked absence of records of the species within those areas, and noting there are no important

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			often with nests built into the base of a large stick-nest of a bird of prey or among the prickly foliage of a variety of shrubs (DCCEEW 2023f). Habitat deemed critical to the survival of the species includes Eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, with low tree density, few large logs, and little litter cover but high grass cover for foraging, roosting and breeding (DCCEEW 2023f). It is noted an area of approximately 3.45 ha within the Disturbance Footprint includes elements which contain features listed as critical habitat (Umwelt 2025a). Broadly, the species has a large EOO (estimated at 1,500,000 km^2) and a moderate AOO (estimated at 25,000 km^2) (DCCEEW 2023f). No important populations are defined in the species profile or Conservation Advice for the species (DCCEEW 2025b, 2023f). The Disturbance Footprint associated with the Project intersects with potentially suitable habitat for the Diamond Firetail across the WF and OTL, resulting in an estimated potential impact area of: • 23.53 ha in the WF • 7.89 ha along the OTL alignment There are somewhat limited records of the species occurring within or near the GNWF (Umwelt 2025a, DEW 2025), noting the WF and OTL are on the eastern fringe of the Mount Lofty to Southern Flinders Ranges subpopulation. Most records of the species occurring near the GNWF occur to the south or west of the GNWF (DEW 2025), with only one record (2005) of the species occurring to the north-east of the WF (approximately 15 km to the north-east) (DEW 2025). There are several records of the species occurring near to the OTL, including those recorded by EBS in association with the separate but nearby Goyder South (Stage 2) Project Area. More recently, the species has been recorded outside of the GNWF but within the search area during the MBC targeted surveys along Black Peake Road in association with *Eucalyptus porosa* open grassy woodland (VA1) (Umwelt 2025a). Whilst there are limited records of this species occurring near the WF, this species is considered a **possible occurrence** within the WF and **likely to occur** within the OTL.		Post-construction weeds surveys and controls, and ongoing weed survey and control during operation. Develop and implement clear protocols for management of waste during construction and operation to avoid an increase in, or attraction of, feral pest animals to the Project Area.	populations defined for the species, the Project is considered unlikely to lead to a long-term reduction in the size of any population of this species. **B. Unlikely.** No important populations are defined for this species, and the species has a broad range across large areas of south-eastern Australia. Within South Australia, known populations of Diamond Firetail occur between the Mount Lofty Ranges and Southern Flinders Ranges, with the WF and OTL occurring on the eastern fringe of the species preferred typical distribution for that subpopulation (DCCEEW 2023f; DEW 2025a). The species has a large EOO (estimated at 1,500,000 km^2) and a moderate AOO (estimated at 25,000 km^2 / 2,500,000 ha) (DCCEEW 2023f). The Disturbance Footprint associated with the Project may impact upon potentially suitable habitat for the Diamond Firetail across the WF and OTL, resulting in an estimated maximum potential Disturbance Footprint of 23.53 ha in the WF and 7.89 ha along the OTL alignment, (i.e. a total estimated area of 31.42 ha across the GNWF). A total of 1,599.40 ha of potentially suitable habitat has been mapped in the broader GNREF (Umwelt 2025a), of which a maximum potential area of 31.42 ha (or 1.96%) is inside the Disturbance Footprint and potentially impacted by the GNWF. However, based on these figures, potentially suitable habitat associated with the Project represents <0.001% respectively of the Diamond Firetails reported AOO. Therefore, whilst some potentially suitable habitat may be impacted by the Project, the Project is considered unlikely to reduce the AOO of an important population. **C. Unlikely.** As above, the WF and OTL occur on the eastern fringe of the species preferred typical distribution for that subpopulation (DCCEEW 2023f; DEW 2025a). Whilst the species has been recorded within the separate but nearby Goyder South (Stage 2) Project Area (near to the OTL discussed herein), and more recently outside of the GNWF but within the search area during the MBC targeted surveys along Black Peake Road, any impacts to potentially suitable habitat are considered to be small, isolated patches only within a much broader species distribution. The Disturbance Footprint is comprised of narrow linear strips and relatively small patches, rather than a large contiguous patch of clearance, so the species will be able to readily move across any clearance which may occur within their existing home range. This is considered unlikely to restrict movement of individuals nor restrict gene flow of this species across the landscape. Therefore, the GNWF is considered unlikely to cause fragmentation of any population into two or more populations. **D. Possible but unlikely**. As above, the WF and OTL occur on the eastern fringe of the species preferred typical distribution for that subpopulation (DCCEEW 2023f; DEW 2025a). Habitat deemed critical to the survival of the species is outlined in the Conservation Advice (DCCEEW 2023f) and includes open wooded areas of Eucalypt, acacia or casuarina woodland, or other lightly timbered habitats, and areas with low tree densities but with good grass cover, minimal litter cover and few large logs. Within the WF, several vegetation associations broadly match the description for this species, however, based upon on ground field surveys most areas that have been mapped as mallee woodland were observed to contain a high tree density and chenopod / sclerophyll dominated

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						shrub understorey, which lacks the preferred structure and grassy and herbaceous component required by the species for foraging (Umwelt 2025a). Umwelt note the edges of woodland (VA18) which adjoin grassland (VA11a/b) or chenopod shrubland (VA12) with a grassy understorey are likely to provide the most suitable habitat (Umwelt 2025a). VA1 and VA8 (avoided in design) are also likely to provide more open grassy foraging habitat. The Disturbance Footprint associated with the Project may impact upon potentially suitable habitat for the Diamond Firetail across the GNWF, resulting in an estimated maximum potential impact area of 23.53 ha in the WF, and 7.89 ha along the OTL alignment (i.e. a total estimated area of 31.42 ha for the WF and OTL combined), representing <0.001% of the Diamond Firetail reported AOO. Permanent Disturbance of potential habitat equates to a maximum disturbance of approximately 14.44 ha of impact within the WF, and 3.47 ha within the OTL, equivalent 1.96% within the broader GNREF (approximately 1,599.40 ha). Whilst it is noted an area of approximately 3.45 ha within the Disturbance Footprint includes elements which contain features listed as critical habitat (Umwelt 2025a), disturbance to this area is not considered to impact the species, noting the species has not been recorded during field surveys within this area. Mitigation measures propose to minimise clearance areas where practicable, noting the Disturbance Footprint is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas, and infrastructure is intended to be micro sited where possible to avoid important habitat where possible. Thus, the Project is considered unlikely to significantly impact habitat considered critical for survival of the species. **E. Unlikely.** As above, there are no defined important populations for the Diamond Firetail (DCCEEW 2023f), and there are limited records of the species occurring near to the GNWF (Umwelt 2025a; DEW 2025a). Whilst it is considered there is some potentially suitable habitat within the WF and OTL, impacts as a result of the Project are considered unlikely to disrupt the breeding cycle of an important population as the species, if present, could readily traverse the narrow and / or patchy Disturbance Footprint. **F. Unlikely.** There are several vegetation associations within the GNWF that broadly match the habitat description for this species, however, based upon on-ground field surveys most areas that have been mapped as mallee woodland were observed to contain a high tree density and chenopod / sclerophyll dominated shrub understorey, and are unlikely to provide preferred habitat for this species (Umwelt 2025a). Therefore, given a lack of preferred habitat, a limited number of records of the species within and adjacent to the GNWF, and abundance of similar habitat surrounding the Disturbance Footprint, impacts from the Project are considered unlikely to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. **G. and H: Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and

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						a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely.** There is no recovery plan in place for the Diamond Firetail, though it is noted that one is required (DCCEEW 2025b). Recovery actions outlined within the Conservation Advice (DCCEEW 2023f) include protection of areas with open woody vegetation (of 200 ha or greater), and restoring habitats which support open forests, woodlands, mallee and grassland, particularly with access to water. The Disturbance Footprint itself is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. The Disturbance Footprint is comprised of narrow linear strips and relatively small patches, rather than a large contiguous patch of clearance, so the species will be able to readily move across any clearance which may occur within their existing home range. The design of the GNWF has been refined to avoid areas to habitat for this species, where possible. Should the species be recorded within development areas, efforts would be made to suitable avoid habitat areas through micro siting of roads, tracks and OTL infrastructure where practicable. Therefore, impacts as a result of the Project are not expected to interfere with the recovery of the species.
EPBC Act Threatened Fauna – Reptiles						
Aprasia pseudopulchella (Flinders Ranges Worm-lizard)	VU	-	The 2025 PMST output identified that this species or species habitat is 'known to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Flinders Ranges Worm-lizard is a small, slender burrowing legless lizard, typically known from the	Clearance of potential habitat for proposed infrastructure. Direct loss of individuals and species habitat during construction.	Avoidance of any identified areas of rocky surface layers, where practicable and in line with micro siting strategy.	**No significant residual impacts expected for the Flinders Ranges Worm-lizard.** **A. Unlikely.** No important populations have been defined for the Flinders Ranges-worm Lizard (DEWHA 2008e). The area surrounding Burra appears to be one of several strongholds for the Flinders

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			Flinders Ranges of South Australia, extending south to the western slopes and northern and central Mt Lofty Ranges (Cogger et al. 1993). The species has also been recorded in the northern suburbs of Adelaide, with eight individuals recorded within the Cobbler Creek Recreation Reserve in Salisbury (Mitchell 1992; Cogger et al. 1993 cited in DEWHA 2008e). The species occurs in open woodland, native tussock grassland, riparian habitats and rocky isolates (Cogger et al. 1993), where it prefers stony soils or clay soils with a stony surface. It may also be found sheltering in soil beneath stones and rotting stumps, where it is difficult to observe (Wilson & Knowles 1988; Cogger et al. 1993 cited in DEWHA 2008e). The diet of most *Aprasia* species is understood to be predominantly (95%) that of the larvae and pupae of ants (DEWHA 2008e). The species distribution is known to overlap with several EPBC listed TECs, including the three TECs described herein (excluding the MBC). There is no adopted or made Recovery Plan for this species (not required) (DCCEEW 2025b). Chappel et al. (2017) cites the AOO for the Flinders Ranges Worm-lizard as 196 km^2 / 19,600 ha and EOO as 31,213 km^2 / 3,121,300 ha. There are no recorded important populations for this species, nor any listed habitat critical to the survival of the species. A range of vegetation associations are expected to meet the habitat requirements of the Flinders Ranges Worm-lizard. Umwelt (2025a) have mapped a total of 3,152.81 ha of potentially suitable habitat in the GNWF Project Area, of which a maximum of 153.10 ha (or 4.86%) is inside the GNWF Project Disturbance Footprint and potentially impacted by the Project. As an entirely ground dwelling species, any Temporary Disturbance is likely to result in a loss of or disturbance to the rocky surface layer and would be considered a permanent impact to this species. The Disturbance Footprint associated with the Project intersects with potentially suitable habitat (known and possible habitat based upon mapped surface rock overlay) for the Flinders Ranges Worm-lizard across the WF and OTL, resulting in an estimated potential impact area of: • 150.84 ha in the WF and • 2.26 ha along the OTL alignment Impacts are predominantly associated with VA11. The distribution of this species is likely to be significantly more limited than the above estimates suggest due to the requirement for a rocky surface layer, which is not present across all areas of each of the suitable vegetation associations.	Fragmentation of existing populations and reduced movement of species throughout the site as a result of new access roads. Noise and vibration disturbance during construction. Introduction of invasive weed species during construction resulting in habitat degradation. Introduction of invasive weed species during operation resulting in habitat degradation. Increase feral animal predation and or competition as a result of improved access along new tracks.	Avoidance of any existing known populations of FRWL. This will include consideration of alternate construction methods in particular along the OTL, and siting of infrastructure (such as road width minimisation in areas where populations are confirmed), as outlined in the CEMP and OEMP. Any FRWL identified during general pre-clearance ecology checks will be relocated outside of the Disturbance Footprint prior to clearance. Where the Disturbance Footprint intersects with, or comes within proximity to, key habitats supporting EPBC species or communities, identify and indicate agreed construction footprint boundary (using spatial mapping as a minimum) to avoid unintentional disturbance outside of defined construction areas. Signage or other physical indication will be used where appropriate. Rehabilitate all temporary clearance areas as much as practicable to ensure remaining permanent access road width is minimised. Include restoration of any previously present rocky surface layer to the temporary clearance areas, as far as practicable. Implement a CEMP and OEMP to inform workers of the species, and include requirement for reporting procedure any individuals found alive or deceased. Include collection of information such as location and cause of death if known (i.e. vehicle). Pre-construction weed surveys and controls, post-construction weeds surveys and controls, and ongoing weed survey and control during operation. Post-construction weeds surveys and controls, and ongoing weed survey and control during operation. Ensure that chemicals or other mechanisms used to eradicate weeds in known population areas do not have a significant adverse effect on the species, on the basis that the species is entirely ground dwelling.	Ranges Worm-lizard, where there are numerous, recent and historical records of the species occurring (DEW 2025a; ALA 2025), many of which are likely associated with research efforts surrounding the Pygmy Blue-tongue Lizard which often occurs in sympatry with the species (Pelgrim et al. 2014; Hutchinson and Edwards 2000 cited in DEH 2008c). The species is considered to be reasonably common, but knowledge regarding the species ecology and home range is considered to be limited due to their cryptic nature and small size (Chapple et al. 2019; DEH 2008c), as such, it is likely they are more abundant / widespread than records suggest. Regardless, due to their physically very small size, it is expected their home range would be extremely localised, resulting in the inability of individuals to migrate away from ground disturbance. An estimated potential maximum impact area of 150.84 ha in the WF and 2.26 ha along the OTL alignment may occur as a result of the Project (35.41 ha of known habitat and 117.69 ha of possible habitat) with impacts predominantly associated with VA11 (native grassland). The Disturbance Footprint itself is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas, so implications as a result of the Project may mean a number of individuals may be impacted by the Disturbance Footprint, however, most individuals would be expected to remain unimpacted within the Project Area. As the Flinders Ranges Worm-lizard is an entirely ground dwelling species with very particular substrate requirements and a very small, assumed home range, and noting the species can be difficult to survey, it is not possible to completely mitigate impacts to every individual. A recent study by Woinarski et al. (2023) suggests that the Flinders Ranges Worm-lizard population is now considered stable, and the species no longer meets eligibility criteria for a threatened listing, noting recovery efforts for have been successful in part due to reservation and curbing the rate of habitat loss within its limited range. Whilst it is expected that some individual Flinders Ranges Worm-lizards may be impacted by the Project, based on the recent targeted survey undertaken by Umwelt (2025h), it is difficult to determine the size of the entire localised population. However, any localised impacts are considered unlikely to lead to a long-term decrease in the size of any population (important or otherwise). **B. Unlikely.** As above, no important populations are defined for the Flinders Ranges Worm-lizard (DEWHA 2008e). A range of vegetation associations are expected to meet the habitat requirements of the Flinders Ranges Worm-lizard. Umwelt (2025b; 2025h) have mapped a total of 3,152.81 ha of potentially suitable habitat in the GNWF Project Area, of which a maximum of 153.10 ha (or 4.86%) is inside the GNWF Project Disturbance Footprint and potentially impacted by the Project. The AOO for the Flinders Ranges Worm-Lizard is approximately 196 km^2 or 19,600 ha (Chappel et al. 2017). Based on these figures the clearance of 150.84 ha in the WF and 2.26 ha along the OTL alignment (i.e. maximum estimated area of 153.10 ha for WF plus OTL, 35.41 ha of known habitat and 117.69 ha of possible habitat) of potentially suitable habitat associated with the Project represents 0.78% respectively of the reported AOO of the species. As the Disturbance Footprint itself is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous

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			There are numerous scattered historical records of the species occurring in close proximity to the WF and the northern portions of the OTL (DEW 2025, ALA 2025). A single Flinders Ranges Worm-lizard was detected opportunistically under a large flat rock during the targeted INTG survey in spring 2024 (Umwelt 2025a). Subsequently, an extensive targeted survey was undertaken in April 2025, with an estimated 9,300 to 12,400 suitable rocks turned over to actively search for the species. The targeted survey resulted in the detection of five FRWL and 20 shed skins, with all individuals recorded within rocky grasslands. The species was not detected within the Mallee Woodlands located in the northeast corner of the Project Area despite extensive searching (Umwelt 2025a). Therefore, this species is considered **known to occur** within suitable habitat within the WF and OTL.		Develop and implement clear protocols for management of waste during construction and operation to avoid an increase in, or attraction of, feral pest animals to the Project Area.	areas, implications as a result of the Project may mean a number of individuals may be impacted by the Disturbance Footprint, however, most individuals would be expected to remain unimpacted within the GNWF Project Area. Due to the nature of the Disturbance Footprint, and the extensive potential surrounding habitat, the species may be able to disperse into the surrounding habitat. Thus, whilst impacts as a result of the Project cannot be specifically defined based upon local population estimates, important populations are not defined, and it is considered unlikely that the Project will reduce the AOO of an important population. **C. Unlikely.** Population fragmentation was considered during the assessment of FRWL as a low to moderate risk of division and isolation of FRWL by construction of vehicular access tracks (as per Table 7.21 of the PD, Neoen 2025). There are numerous, recent and historical records of the species occurring in the area surrounding Burra, including within the WF and northern aspects of the OTL (DEW 2025a; ALA 2025). Whilst the species' home range is expected to be highly localised, the Project is unlikely to fragment an existing population into two or more populations, principally due to the nature of the Project, with the Disturbance Footprint predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. The Disturbance Footprint for WTGs includes by necessity internal wind farm roads which will be required for WTG construction and operation for the life of the asset. Roads are proposed to remain unsealed, and while tracks in areas which exceed 8 degrees slope will contain rock rubble in gutters to manage surface water flows and erosion risk, the remainder of the road network includes grassed swales as gutters which will facilitate easy crossings by fauna. New roads to be established will nominally be up to 11 m in width plus a temporary disturbance of 5 m on each side (e.g. a maximum 21 m width during construction, and 11 m width post-construction). As the GNWF Project does not intend to seal any roads, the likelihood of a fragmentation impact caused by roads, may be reduced. In a study undertaken of 11 sites burnt in the 2003 bushfires in the Stromlo Forest area in the Australian Capital Territory, Wong et al. (2011) suggests that *A. parapulchella* is able to move across the landscape and occupy new areas to some extent, with some individuals found to be approximately 30 m from possible source populations. It may be suggested that *A. pseudopulchella* may also exhibit a similar range of dispersal, noting this is likely the current known maximum range of dispersal for an *Aprasia sp.* Therefore, whilst populations may be temporarily fragmented during construction works, following the rehabilitation of Temporary Disturbance Footprint, the species may be reasonably expected to be able to cross any remaining permanent roads/tracks (i.e. Batter and drainage design was incorporated into the permanent road widths' 3D civil modelling. Based on this modelling the road width is required to vary across the site depending on topographical requirements. For the purposes of this assessment the typical permanent road width is assumed to be nominally 11 m).

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						D. Unlikely. The species' Conservation Advice does not list any habitat as critical to the survival of the species. As above, whilst an estimated maximum area of 150.84 ha in the WF and 2.26 ha along the OTL alignment of habitat potentially suitable to the Flinders Ranges Worm-lizard will be impacted as a result of the Project, with a maximum of 153.10 ha (or 4.86% of broader GNWF Project Area) the impacts are unlikely to adversely affect that habitat to the extent that it is critical to the survival of the species. The Disturbance Footprint itself is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas, so whilst some individuals may be impacted, the majority of potentially suitable habitat within the GNWF is expected to remain unaffected. Thus, implications as a result of the Project are unlikely to adversely affect habitat critical to the survival of the species. **E. Unlikely.** As above, no important populations are defined for the Flinders Ranges Worm-lizard (DEWHA 2008e). As above, the home range for the Flinders Ranges Worm-lizard it is assumed to be highly localised, principally due to the species being a very small, entirely ground-dwelling/burrowing reptile, with limited capacity to disperse. Whilst the Disturbance Footprint will impact approximately 4.86% (maximum) of the mapped potentially suitable habitat for this species within the GNWF Project Area, the Disturbance Footprint itself is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. The Disturbance Footprint for WTGs includes by necessity internal wind farm roads which will be required for WTG construction and operation for the life of the asset. Roads are proposed to remain unsealed, and tracks will contain rock rubble in gutters to manage surface water flows and erosion risk only where ground slope exceeds 8 degrees. New roads to be established will nominally be up to 11 m in width, plus a temporary disturbance of 5 m on each side (e.g. a maximum 21 m width during construction, and 11 m width post-construction). As the GNWF Project does not intend to seal any roads, the likelihood of a fragmentation impact caused by roads, may be reduced. Where the species has been recorded within the Disturbance Footprint, efforts would be made to avoid areas/rocky habitat where this species is present and to micro site roads, tracks and OTL infrastructure where practicable. Therefore, taking into consideration the Disturbance Footprint has some capacity to be micro sited in some areas, the Project may potentially impact upon the breeding of some individuals, however, the Project is unlikely to disrupt the breeding cycle of a population (important or otherwise). **F. Unlikely.** A total of 3,152.81 ha of potentially suitable habitat for the Flinders Ranges Worm-lizard has been mapped within the GNWF Project Area alone, with a maximum of 153.10 ha (or 4.86%) of the habitat within the Project Area being within the Disturbance Footprint (predominantly associated with VA11). This includes 35.41 ha of known habitat and 117.69 ha of possible habitat (Umwelt 2025a). As described above, the Disturbance Footprint itself is predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. In addition, the species' AOO is understood to extend well beyond the

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						GNWF Project Area. Thus, impacts as a result of the Project are considered unlikely to modify, destroy, remove or isolate or decrease the availability of quality of habitat to the extent that the species as a whole is likely to decline. **G. and H: Unlikely.** A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or which may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Unlikely.** As described previously, is noted that a recent study by Woinarski et al. (2023) suggests that the Flinders Ranges Worm-lizard population is now considered stable, and the species no longer meets eligibility criteria for a threatened listing. Additionally, no important populations are defined for the Flinders Ranges Worm-lizard (DEWHA 2008e). The Disturbance Footprint associated with the Project intersects with potentially suitable habitat for the Flinders Ranges Worm-lizard across the WF and small areas of the OTL, resulting in an estimated potential impact area of 150.84 ha in the WF and 2.26 ha along the OTL alignment (with impacts predominantly associated with VA11), which includes 35.41 ha of known habitat and 117.69 ha of possible habitat where the species has not yet been identified. This may be a relatively conservative estimate as the species is typically limited by the presence of a rocky layer within its suitable habitat. Whilst the species' home range is expected to be highly localised, the Project is unlikely to fragment an existing population into two or

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						more populations, principally due to the nature of the Project, with the Disturbance Footprint predominantly comprised of roads and tracks, WTG hardstand areas, and OTL towers, rather than large, continuous areas. As described above, the Disturbance Footprint for WTGs includes by necessity internal wind farm roads which will be required for WTG construction and operation for the life of the asset. Roads are proposed to remain unsealed, and while tracks may contain rock rubble in gutters to manage surface water flows and erosion risk where required, Neoen commit to ensuring there are clear areas to facilitate easy crossings by fauna. New roads to be established will nominally be up to 11 m in width, plus a temporary disturbance of 5 m on each side (e.g. a maximum 21 m width during construction, and 11 m width post-construction). As the GNWF Project does not intend to seal any roads, the likelihood of a fragmentation impact caused by roads, may be reduced. In a study undertaken of 11 sites burnt in the 2003 bushfires in the Stromlo Forest area in the Australian Capital Territory, Wong et al. (2011) suggests that *A. parapulchella* is able to move across the landscape and occupy new areas to some extent, with some individuals found to be approximately 30 m from possible source populations. It may be suggested that *A. pseudopulchella* may also exhibit a similar range of dispersal, noting this is likely the current known maximum range of dispersal for an *Aprasia sp*. As such, it may be expected that the species would remain able to disperse across any roads of tracks, noting the road width is required to vary across the site, depending on topographical requirements, but for the purposes of this assessment the final permanent road width is assumed to be nominally 11 m. Existing threats include trampling, browsing and grazing pressures, with no current management in place to assist with the recovery of the species in these areas. Additional controls such as threat abatement, and erosion and sediment controls are defined within the CEMP. Therefore, it is considered unlikely that the Project would interfere substantially with the recovery of the species.
Tiliqua adelaidensis (Pygmy Blue-tongue Lizard, Adelaide Blue-tongue Lizard)	EN	E	The 2025 PMST output identified that this species or species habitat is 'known to occur' within the 'feature area' (the WF and/or OTL) (Appendix A). The Pygmy Blue-tongue Lizard is the smallest member of the genus *Tiliqua*, and is a moderate-sized skink with a relatively heavy body, growing to a maximum length of 20 cm. The species was considered extinct for a period of time until its rediscovery in 1992, following 33 years of no sightings (DCCEEW 2023g). The species is endemic to the mid-north region of South Australia, with a historical distribution previously extending from the southern region of Adelaide to Mannanarie, a town 220 km to the north of Adelaide (Ehmann 1982 cited in DCCEEW 2023g). The current distribution is known to extend from Peterborough in the north, to Bagot Well and Kapunda in the south, and to South Hummocks in the west (north of Port Wakefield) (Duffy et al. 2012, DCCEEW 2023g).	Direct clearance or disturbance of vegetation, resulting in loss of habitat for the species. Direct injury or mortality to the species as a result of clearance or disturbance of vegetation which represents habitat for the species. Increased risk of injury or direct mortality through vehicle strike during construction. Increased risk of injury or direct mortality along access roads through vehicle strike during operation. Elevated predation pressure as a result of attraction of pest animals to the construction area.	Desktop and extensive targeted field surveys carried out to identify key ecological constraints and population density in Disturbance Footprint, feeding into iterative design process to avoid and minimise interaction with important habitat and known populations as far as reasonably practicable. Neoen will commit to ensuring appropriate, industry accepted low-reflective treatment blades are selected and used for each WTG across the GNWF. Implement a PBTL Management Plan which includes strategies for avoiding, minimising and mitigating direct, indirect and unforeseen impacts to PBTLs during	**Significant residual impacts considered likely.** **A. Possible.** Targeted field surveys undertaken by Umwelt between February 2024 and April 2025 have recorded a total of 186 individuals in the GNWF Project Area to date (Umwelt 2025a). An estimated number of between 192 to 274 (206) individuals will be impacted within the Disturbance Footprint during the construction phase (EBS 2025b). No Pygmy Blue-tongue lizards have been recorded along the OTL outside of the WF, despite potentially suitable habitat within the first 3 km of the OTL alignment from the WF, with the species considered unlikely to occur for the remainer of the OTL alignment. A total of approximately 11,154.12 ha of potentially suitable habitat for the species has been mapped in the GNWF Project Area, compared with approximately 20.04 ha of known PBTL habitat (known records plus a 50 m buffer) and 348.06 ha of 'likely' habitat (combined maximum area of 368.10 ha) within the Disturbance Footprint (i.e. 3.3% of known and likely habitat within the Project Area). More PBTL habitat is known regionally beyond the Project Area.

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			The species has an unusual ecology in that it inhabits vertical burrows dug by spiders, typically between 20-25 mm in diameter and 10-75 mm in depth, and only persist in unploughed areas of open grassland (Milne and Bull, cited in DCCEEW 2023g). The species relies entirely on burrows as refuges, including as protection from high temperatures, predators and fires, as basking sites and as ambush points for hunting invertebrate prey (Milne et al. 2003; Fenner et al. 2007; Fellows et al. 2009 cited in DCCEEW 2023g), and as such can be difficult to observe. They feed predominantly on grasshoppers and other invertebrates that they opportunistically ambush and soft plant material (Duffy et al. 2012, DCCEEW 2023g). Sites that support the species are noted to be predominantly within privately held agricultural land that support remnant patches of native temperate grassland, such as at sites dominated by species including spear grasses (*Austrostipa* spp.), wallaby grasses (*Rytidosperma* spp.), bluebush (*Maireana* spp.), Brush Wire-grass (*Aristida behriana*) and iron grasses (*Lomandra* spp.), and/or in combination with those that have historically been used for sheep grazing (Duffy et al. 2012, DCCEEW 2023g). The species occurs across a range of soil types, however, are found in greater abundance at sites with more free-draining grey-brown or red calcareous soils, compared with sites of less free-draining red-brown earths, as well as sites with lithosol soils (sandy-type soil developed from in-situ weathering of rock) (Souter 2003 cited in Duffy et al. 2012). All known and future identified habitat is considered critical to the survival of the species, noting the population size is considered small, and suitable habitat is severely fragmented with limited availability. Critical habitat includes the AOO for all known populations, all areas of the species' historical occurrence, and all areas of potential habitat throughout its geographical and ecological range (DCCEEW 2023g). There is no current estimate available for the national population of the species, however, it has been reported that there is a decreasing trend (Fenner et al. 2018 cited in DCCEEW 2023g). The most recent population estimate is cited as 5,000 individuals made in 2000 and was based upon 10 known populations at the time (Milne et al. 2000 cited in DCCEEW 2023g), however, an additional 20 subpopulations have since been discovered (Clayton et al. 2020 cited in DCCEEW 2023g), resulting in populations occurring at a total of 37 disjunct sites. Estimates of population sizes suggest between 100-120 lizards occur per hectare (Clayton et al. cited in DCCEEW 2023). More recently, standardised quadrat	Reduced habitat quality through the introduction of new weed species (or disease), or spread of existing weed species through ground disturbance of transport of organic materials on construction vehicles or machinery. Reduced habitat quality through the introduction of new weed species (or disease), or spread of existing weed species along access roads and inspection points through transport of organic materials on maintenance vehicles. Reduced habitat quality through changes to landform resulting in sedimentation around burrow entrances, erosion, dust deposition.	construction and operation of the Project. Audits of construction footprint boundary to be undertaken post disturbance. Identification of key habitats to be undertaken by suitably qualified ecologist prior to disturbance. Wherever practicable, the final location of infrastructure (WTGs, access tracks and underground electrical reticulation) within 'Known' and/or 'Likely' PBTL habitat will be micro-sited to avoid and/or minimise impacting any PBTLs and the need to relocate PBTLs as much as possible. Any PBTLs within the Disturbance Footprint that cannot be avoided will be relocated by a qualified ecologist to the nearest suitable release site (as detailed in Section 12.0 of the PBTL MP) to avoid direct impact (i.e. destruction) to PBTLs. Known PBTL habitat spatial layers and maps to be provided to all contractors as part of the CEMP and OEMP. Awareness training to be provided during site inductions. Presence of, or access to, trained fauna handlers during construction to assist with removal of, and relocation of, any trapped (and/or injured) fauna displaced during habitat clearance. Speed restrictions in place within construction corridor. Speed restrictions in place along access tracks and roads. Report any PBTL sightings, including any individuals found alive, injured or killed, to the Environment Manager. For individuals found injured or killed, collect information such as location, and cause of death if known (i.e. vehicle strike). The Environment Manager shall report as an environmental incident and undertake an environmental incident investigation. Develop and implement clear protocols for management of waste during construction and operation	206 individuals within the Project Area are estimated to be impacted by the Disturbance Footprint, and although individuals are proposed to be relocated away from the Disturbance Footprint during pre-construction surveys, the entire area of disturbance is considered lost to the project (both permanent and temporary disturbance) and is proposed to be offset. Indirect impacts as a result of WTG facilitated shadow flicker have been assessed as only likely adjacent to a small number of WTGs, and are predicted to only adversely affect individuals within 0.2 ha, at a location where no PBTL have been identified, based upon the expected case modelled scenario (GHD 2024, GHD 2025) (as presented in Figure 7.3 of Neoen 2025). No impacts are expected as a result of potential blade glint from WTGs, as wind turbine blade manufacturers produce blades finished with a low-reflective treatment, and thus the risk of blade glint is considered low (GHD 2024). Population numbers of PBTL are known to fluctuate markedly over seasons and years, likely in response to resource availability, and a loss of individuals as a result of the Project may be difficult to measure. Regardless, it is considered possible that the GNWF Project may lead to a long-term decrease in the size of a population, through reduced habitat availability. **B. Likely.** The current understanding of the species' extent of occurrent is cited as 7,000 km^2 or 700,000 ha (Delean et al. 2013 cited in DCCEEW 2023g), with a known AOO cited as less than 500 km^2 or 50,000 ha (Fenner et al. 2018 cited in DCCEEW 2023g). As above, an estimated maximum area of known or likely habitat of 368.10 ha (or 3.3% of known or likely suitable PBTL habitat within the Project Area) has been mapped within the current Disturbance Footprint, which would be impacted by the Project. This represents approximately 0.05% of the species' EOO or 0.74% of the species' AOO, and therefore, the proposed Temporary Disturbance and Permanent Disturbance activities within the species known or likely habitat as a result of the Project are likely to reduce the overall AOO of the species. **C. Possible.** Population fragmentation was considered during the assessment of PBTL as a low to moderate risk of division and isolation of PBTL sub-populations by construction of vehicular access tracks (as per Table 7.2 of the PD; Neoen 2025). Temporary Disturbance due to construction activities, and Permanent Disturbance as a result of the development of infrastructure, has the potential to create a permanent physical barrier for small, terrestrial species such as the PBTL. Approximately 40 km of existing roads and access tracks have been directly utilised within the WF (and OTL), and 6.76% of the Disturbance Footprint (36.31 ha) occurs within existing cleared areas (such as existing roads). Although not all proposed access roads are able to exactly follow the small curves and contours of the existing minor roads, where possible, they follow the general alignment of existing roads in order to intersect as much as possible and minimise fragmentation. An estimated maximum of 368.10 ha of known and likely PBTL habitat will be impacted as a result of the GNWF, however, the disturbance will typically be narrow and linear, comprised of roads and tracks, as well as localised WTG hardstand areas and OTL towers, rather than

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			sampling research specific to PBTL suggests that 100 individuals per hectare would be considered to be a high-density population, and lower numbers such as 5 individuals per hectare would be considered a low-density population (Bilby et al. 2025). The current EOO for the species is estimated to be 7,000 km^2 / 700,000 ha (Delean et al. 2013 cited in DCCEEW 2023g), with an AOO estimated at less than 500 km^2 / 50,000 ha (Fenner et al. 2018 cited in DCCEEW 2023g). A total of approximately 11,154.12 ha of potentially suitable habitat in the GNWF Project Area has been mapped as likely or known PBTL habitat (Umwelt 2025a), of which a maximum of 368.10 ha or 3.3% occurs within the GNWF Disturbance Footprint and will be potentially impacted by the Project. The south-central portion of the WF is deemed to be of the highest habitat suitability for this species. An alignment of approximately 3 km where the OTL extends from the WF is considered potentially likely PBTL habitat though the species has not been recorded within this section, however, past this the species is considered unlikely to occur for the remaining OTL alignment (Umwelt 2025a). Additionally, the species is currently only known to occur within the Flinders Lofty Block and a small area of the Eyre Yorke Block IBRA bioregions. and therefore habitat that occurs in the far south of the GNWF Project Area, within the Murray Darling Depression Bioregion is further considered unlikely. The species has not been detected along a proposed access road; Belcunda Road (Umwelt 2025a). Impacts listed as Temporary Disturbance, which require the removal of / or disturbance to topsoil, are likely to be equivalent in impact to Permanent Disturbance for this species, as any ground disturbance is likely to alter soil conditions and preclude development of appropriate spider burrows for the medium to long term. Extensive and rigorous ecological surveys have been undertaken to understand the occurrence of the species within the GNWF Project Area, including four recent targeted surveys between February 2024 and April 2025, as follows: • Targeted surveys for PBTL were undertaken across the GNWF proposed layout (as defined 5 February 2024) in areas of suitable and marginal habitat.		to avoid an increase in, or attraction of, feral pest animals to the Project Area. Implement a PBTL Management Plan which includes strategies for avoiding, minimising and mitigating direct, indirect and unforeseen impacts to PBTLs during construction and operation of the Project. During construction, implement weed hygiene practices including: vehicle checks and washdowns as required on vehicles or plant entering the construction site. During construction, undertake monthly weed surveillance monitoring targeting WoNS and Declared Weed species, with follow up controls as required for any identified weed outbreaks. During operation, implement weed surveillance and control programs targeting WoNS and Declared Weed species (if weeds identified) on an annual basis. Follow recommendations in the dedicated PBTL Management Plan (Umwelt 2025g). Implement CEMP to ensure adequate erosion control and dust suppression methods are place during operation. Commitment to trialling up to five 'engineered crossing' points for PBTL at key track locations post-construction of the WF (once heavy vehicle movements are completed). These trial 'engineered crossings' will enable the research program to conduct trials using population genetics methods to determine whether gene flow occurs across tracks.	large continuous or wide areas. Information from ecological surveys has informed the design of the Project, which has been refined iteratively over time. Batter and drainage design was incorporated into the permanent road width's 3D civil modelling. Based on this modelling the road width is required to vary across the site, depending on topography. For the purposes of this assessment the typical road width is assumed to be nominally 11 m (though this is variable across site and will be wider due to batters in steeper sections) excluding temporary disturbance corridors either side. It is noted that PBTLs are understood to exhibit limited dispersal (Schofield et al. 2012), with males typically dispersing further than females, and females typically moving distances of less than 20 m from their burrows, and though relatively uncommon, some individuals have been recorded dispersing up to 200 m (Milne 1999; Smith et al. 2009 cited in DCCEEW 2023d). Project areas such as WTG hardstand areas and new roads and tracks may hinder the movement of some PBTL within the population, however, the Project is unlikely to inhibit the movement of this species completely or restrict gene flow or genetic exchange between individuals in the population. As noted above, a number of existing roads and tracks already occur within the Project Area, and where practicable, these will be utilised by the Project. The Disturbance Footprint for WTGs includes by necessity internal wind farm roads which will be required for WTG construction and operation for the life of the asset. Roads are proposed to remain unsealed, and whilst roads in areas where the ground slope exceeds 8 degrees will require rocky rubble in gutters to manage surface water flows and erosion, large portions of the site (where slopes are below 8 degrees) will only require grassed swales with intermittent rock checks for gutters, which will be readily traversable by small reptiles. New roads to be established will nominally be up to 11 m in width, plus a temporary disturbance of 5 m on each side (e.g. a maximum 21 m width during construction, and 11 m width post-construction). It is acknowledged that roads, particularly sealed roads, have the potential to create barriers to PBTL genetic flow, however, a recent study (Wallace 2025) found that while PBTL gene flow was negatively influenced by sealed roads (i.e. bitumenised), no restricted gene flow was identified across an unsealed (i.e. dirt) road. As the GNWF Project does not intend to seal any roads, the likelihood of a fragmentation impact caused by roads, may be reduced. The 'Other Compensatory Measures' component of the PBTL offset strategy for GNWF includes a research project which is focused on mitigation strategies for PBTL (differing from the impact assessment research associated with the Goyder South REF). Neoen have committed to trialing up to five 'engineered crossing' points for PBTL at key track locations post-construction of the WF (once heavy vehicle movements are completed). These trial 'engineered crossings' will enable the research program to conduct trials using population genetics methods to determine whether gene flow occurs across tracks. As such, while the direct clearance of 368.10 ha (or 3.3% of the known or likely PBTL habitat within the GNWF Project Area) will

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			• Additional micro siting surveys were undertaken outside of the proposed layout to enable potential micro siting of infrastructure to be located outside of known PBTL habitat, and other vegetation of high conservation value such as woodland. • Micro siting surveys were undertaken for several minor early works including met masts and geotechnical investigations. • Additional targeted surveys for PBTL were undertaken in the updated proposed Disturbance Footprint in March 2025. A number of records for the species are associated with the GNWF Project Area and broader region (DEW 2025, ALA 2025, BDBSA records cited in Umwelt 2025a). Recent surveys by Umwelt (2025a) cite a total of 186 PBTL having been recorded from the inspection of a total of 21,641 burrows across all survey periods within the GNWF, with all records within the WF, and typically in grassland and grassy shrubland habitat, including within relatively degraded areas (Umwelt 2025a). No individuals have been recorded along the OTL outside of the WF (Umwelt 2025a). The species is **known to occur** within the WF (including where the OTL occurs the WF) and is considered a **possible occurrence** within an alignment of approximately 3 km where the OTL extends south from the WF.			occur as a result of the Project, the Project is considered unlikely to fragment a population into two or more populations. **D. Likely.** Likely. All known current and future identified habitat is considered critical to the survival of the species, with critical habitat including the AOO for all known populations, including within all areas of the species' historical occurrence, and all areas of potential habitat throughout its geographical and ecological range (DCCEEW 2023g). Impacts listed as temporary, which require the removal of or disturbance to topsoil are likely to be equivalent in impact to Permanent Disturbance for this species, with any ground disturbance likely to alter soil conditions and preclude development of appropriate spider burrows for the medium to long term. Whilst approximately 10,786.02 ha or 96.7% or the mapped known or likely PBTL habitat within the GNWF will not be directly impacted by the Project, the clearance of approximately 368.10 ha, or 3.3%, of the known or likely habitat within the GNWF is considered likely to adversely affect habitat critical to the survival of the species. While Temporary Disturbance has been accounted for as Permanent Disturbance for this species, it is worth noting that the Temporary Disturbance would be amenable to rehabilitation at the conclusion of construction activities, and would likely be suitable for the species as foraging areas, and potentially burrowing within medium to long-term following rehabilitation activities and land management practices suitable to PBTLs. **E. Possible.** As above, a maximum of 368.10 ha or 3.3% of known and likely PBTL habitat within the Disturbance Footprint will be impacted by the Project. As above, the species typically exhibits limited dispersal (Schofield et al. 2012). Whilst approximately 10,786.02 ha or 96.7% of the mapped known and likely PBTL habitat within the Project Area will not be directly impacted by the Project, it is noted that impacts associated with construction activities and the development of infrastructure such as WTG hardstand areas and new roads and tracks may impact upon the species ability to disperse across the landscape in those areas. However, while these Project areas may hinder the movement of some PBTL within the population, impacts as a result of the Project are considered unlikely to inhibit the movement of this species completely nor restrict gene flow or genetic exchange between individuals in the population. As outlined above, a recent unpublished thesis paper provided by the PBTL Recovery Team (Wallace 2025), provides data which indicates that while PBTL movement and therefore gene flow may be inhibited by bitumenised (sealed) roads, there was no evidence for restricted gene flow across an unsealed road. The Disturbance Footprint for WTGs includes by necessity internal wind farm roads which will be required for WTG construction and operation for the life of the asset. Roads are proposed to remain unsealed, and while tracks in areas where slopes are over 8 degrees will contain rock rubble in gutters to manage surface water flows and erosion risk where required, less steep sections include grassed swales as gutters which will be readily traversable by PBTL. New roads to be established will nominally be up to 11 m in width (though this is variable across site and will be wider due to batters in steeper sections), plus a temporary disturbance of 5 m on each side (e.g. a maximum 21 m width during construction, and 11 m width post-

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						construction). As the GNWF Project does not intend to seal any roads, the likelihood of a fragmentation impact caused by roads, may be reduced. The 'Other Compensatory Measures' component of the PBTL offset strategy for GNWF includes a research project which is focused on mitigation strategies for PBTL (differing from the impact assessment research associated with the Goyder South REF). Neoen have committed to trialling up to five 'engineered crossing' points for PBTL at key track locations post-construction of the WF (once heavy vehicle movements are completed). These trial 'engineered crossings' will enable the research program to conduct trials using population genetics methods to determine whether gene flow occurs across tracks. Indirect impacts as a result of WTG facilitated shadow flicker have been assessed as limited to an area of approximately 0.2 ha, noting that uncertainty remains around whether the influence of shadow flicker across broader areas may negatively effect PBTL behaviour, and thus breeding success. Based on the above, it is considered possible the Project may disrupt the breeding cycle of the PBTL, principally during the construction phase of the Project in localised areas within the Disturbance Footprint. **F. Unlikely.** As above, a total of approximately 11,154.12 ha of known or likely PBTL habitat has been mapped within the GNWF Project Area (Umwelt 2025a), with a maximum area of 368.10 ha or 3.3% occurring within the Disturbance Footprint. Impacts associated with Temporary Disturbance (157.65 ha), which require the removal of or disturbance to topsoil are considered to be equivalent to the Permanent Disturbance (210.44 ha) for this species, as any ground disturbance is likely to alter soil conditions and preclude development of appropriate spider burrows for the medium to long term. While this Temporary Disturbance has been accounted for as Permanent Disturbance for this species, it is worth noting that Temporary Disturbance would be amenable to rehabilitation at the conclusion of construction activities and would likely be suitable for the species within medium to long-term following rehabilitation activities and land management practices suitable to PBTLs. The result of the disturbance activities to habitat is the expected loss of an estimated 206 individuals (range 192 to 274), equivalent to 3.11% of the local GNWF population, from an estimated total of 6,519 potential individuals (range 5,596 to 8,991). Whilst individuals present are proposed to be relocated during pre-clearance surveys, as outlined in the PBTL MP, and may not be lost, for the purposes of this assessment both the habitat and the individuals are considered lost. Thus whilst it is considered that impacts as a result of the Project may modify, destroy and remove habitat for this species within the Disturbance Footprint, should mitigation strategies be implemented, such as successful relocations (or translocations where necessary) it is possible but unlikely the Project will modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species as a whole is likely to decline. Any areas of disturbance impacted by the Project would be offset.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						G. and H: Unlikely. A total of 106 introduced flora species have been recorded across the GNWF, including 14 Declared Weeds (state listed weed species regulated under the LSA Act, and two Weeds of National Significance (WoNS) (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species. There are a number of existing roads and tracks within the GNWF Project Area, and with the implementation of the proposed mitigation strategies, the Project is not expected to result in an increase in abundance of invasive species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. The Project Area is on the boundary of the low-moderate risk Phytophthora area based on annual rainfall measurements (DIT 2022). However, there are no records of Phytophthora within the GNWF, noting most of the WF and the whole of the OTL are within the low threat area (DIT 2022; DEW 2025a). Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new weed species or diseases as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species or disease which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **I. Possible.** Whilst there is no current estimate available for the entire population of the species, it is reported that there is a decreasing trend (Fenner et al. 2018 cited in DCCEEW 2023g). The most recent population estimate cited as 5,000 individuals was made in 2000 and was based upon 10 known populations at the time (Milne et al. 2000 cited in DCCEEW 2023g), however, an additional 20 subpopulations have since been discovered, resulting in populations occurring at a total of 37 disjunct sites (Clayton et al. 2020 cited in DCCEEW 2023g). All known and future identified habitat is considered critical to the survival of the species, with critical habitat including the AOO for all known populations, as well as all areas of the species' historical occurrence, and all areas of potential habitat throughout its geographical and ecological range (DCCEEW 2023g). The species has an unusual ecology, inhabiting spider burrows which in itself require a suite of favourable ecological conditions, with both groups only persisting in unploughed areas of open grassland, and/or in combination with areas that have historically been used for sheep grazing. Whilst approximately 10,786.42 ha or 96.59% of the mapped known or likely PBTL habitat within the GNWF will not be directly impacted

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
						by the Project, the clearance of approximately 368.10 ha or 3.3% of the known or likely habitat within the Project Area is likely to adversely affect habitat critical to the survival of the species. This represents approximately 0.05% of the species' EOO or 0.74% of the species' AOO. Project areas such as WTG hardstand areas and new roads and tracks may hinder the movement of some PBTL within the population, however, the Project is considered unlikely to completely inhibit the movement of this species nor restrict gene flow or genetic exchange between individuals in the population. While Temporary Disturbance has been accounted for as Permanent Disturbance for this species, it is worth noting that Temporary Disturbance would be amenable to rehabilitation at the conclusion of construction activities, and may be suitable for the species within medium to long-term following rehabilitation activities and land management practices suitable to PBTLs. Additionally, any area of disturbance impacted by the Project would be offset through establishment of on-ground offset properties, which place a focus on providing habitat for PBTLs. Additionally, by implementing a range of strategies, such as rehabilitation and improved land management practices to increase the condition class of existing Lomandra grassland within the GNWF, there is the potential for an increase in the quality and availability of habitat suitable for PBTLs. Considering the above, impacts to the PBTL as a result of the Project within the WF may possibly interfere with the recovery of the species, though there may also be some conservation benefits gained through establishment of offset areas.
EPBC Act Threatened Fauna – Amphibians						
Litoria raniformis (Southern Bell Frog, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog)	VU	V	The 2025 PMST output indicates that this species or species habitat 'may occur' in the 'feature area' (the WF and OTL) (Appendix A). The Southern Bell Frog is a large, highly mobile frog that is endemic to south-eastern Australia. Within South Australia there are four separate groupings of records; one in the far south-east of the state adjoining Victorian populations, one along the length of the Murray River, one in the Mt Lofty Ranges and one on the Adelaide Plains, noting the latter two likely non-endemic populations that have since died out (South Australian Museum database cited in (Clemann and Gillespie 2012). Habitat critical to the survival of the Southern Bell Frog differs throughout its range but includes amongst vegetation within or at the edges of permanent slow-flowing water bodies such as lagoons, swamps, lakes, ponds, and farm dams. Populations from the north and west occur in swamps dominated by River Red Gums *Eucalyptus camaldulensis*, Lignum and Typha, and Black Box (*Eucalyptus largiflorens*) / Lignum / Nitre Goosefoot (*Chenopodium nitrariaceum*) and will also occur in	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			irrigated rice crops (Wassens 2006 cited in Clemann and Gillespie 2012). The closest records of the species occurring to the Project include those restricted to the Murray River, principally around Morgan, approximately 44 km to the south-east of the southernmost end of the OTL (DEW 2025). There are no records of the species occurring within the WF or OTL, nor any suitable wetland habitat, and the GNWF is considered to be outside of the species known range (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.			
EPBC Act Threatened Fauna – Fish						
Galaxias rostratus (Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow)	CE	-	The 2025 PMST output indicates that this species or species habitat 'may occur' in the 'feature area' (the WF and OTL) (Appendix A). The flathead galaxias is a small freshwater fish only known from the southern half of the Murray-Darling Basin system. The species previously had a broader distribution in the middle reaches of the system, usually below an altitude of 150 m, however, the species is known only from isolated records from a lagoon near Bathurst in New South Wales (in the Macquarie River catchment) and from the Lower Murray River in South Australia (Lintermans 2007 cited in TSSC 2016b). The species inhabits a variety of habitats including billabongs, lakes, swamps and rivers, with a preference for still or slow flowing waters, with a preference for schooling in midwater (Allen et al., 2002; Lintermans 2007 cited in TSSC 2016b). There are no records of the species occurring within South Australia (DEW 2025), with the exception of an unverified historical record (preserved specimen from 1869) from near Murray Bridge (ALA 2025), with records currently restricted to within Victoria and New South Wales. However, suitable habitat for the species may occur (ALA 2025, DCCEEW 2025b). Thus, there are no records of the species occurring within the WF and OTL, nor is it considered there any suitable habitat within the GNWFnoting the WF and OTL are outside of the species known range (Umwelt 2025a). Therefore, this species is considered **unlikely to occur**.	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.
Maccullochella peelii (Murray Cod)	VU	-	The 2025 PMST output indicates that this species or species habitat 'may occur' in the 'feature area' (the WF and OTL) (Appendix A). The Murray Cod is one of the largest purely freshwater fish in the world and is considered an icon species within the Murray-Darling Basin. The	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** **Criteria A, B, C, D, E, F, G, H** and **I** not likely to be triggered as species is considered unlikely to occur in the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			species is endemic to the Murray-Darling River system in south-eastern Australia, including South Australia (SA), Victoria, New South Wales (NSW), Australian Capital Territory (ACT) and Queensland (NMCRT 2010). With the exception of some localised extinctions in the upper reaches of tributaries, the species previously occurred throughout almost the entire MDB, and is still thought to occur across most of the species historic range (NMCRT 2010). The species occurs within a range of habitat types including flowing and standing waters, from small, clear, rocky streams on the inland slopes and uplands of the Great Diving Range, to the large, turbid, meandering slow-flowing rivers, creeks, anabranches, and lakes and larger billabongs, of the inland plains of the MDB (NMCRT 2010). Records for the species within South Australia are scarce, with only 3 records listed in NatureMaps, restricted to along the Murray River near Renmark, on Lake Alexandrina near the edge north of the inlet, and along the Hutt River south of Spalding (DEW 2025). There are no records of the species occurring within the WF and OTL, nor is it considered there any suitable habitat within the GNWF, noting the WF and OTL are outside of the species known range. Therefore, this species is considered **unlikely to occur**.			
EPBC Act Migratory Species (not considered as threatened species above)						
Migratory Wetlands						
Actitis hypoleucos (Common Sandpiper) *Calidris melanotos* (Pectoral Sandpiper)	MW	R R	The 2025 PMST output identified that these species or species 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). These species migrate from the northern hemisphere and are non-breeding visitors to Australia (Geering et al. 2008; DCCEEW 2025b). Habitats preferences vary from predominantly coastal or near-coastal (Pectoral Sandpiper) to shallow water generalists that range between coastal and inland wetted environments (Common Sandpiper) (Geering et al. 2008). There are currently no records of *Actitis hypoleucos* or *Calidris melanotos* occurring within the WF and OTL (DEW 2025). The closest records of these species occurring to the GNWF include several records for the Common Sandpiper approximately 65 km south-east of the to the south-east of the southernmost end of the OTL near Waikerie, and one historical record (1989) of the Pectoral Sandpiper approximately 97 km from the OTL (DEW 2025).	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** Criteria **A, B** and **C** are not likely to be triggered as these species are considered unlikely to within the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			It is considered that there is no suitable wetland and/or coastal habitat associated with the Project for these wading species (Umwelt 2025a). Therefore, both of these species are considered **unlikely to occur**.			
Pandion haliaetus (Osprey)	MW	E (ssp. *cristatus*)	The Eastern Osprey (*Pandion haliatus*) is a large coastal fish-eating raptor. The species distribution includes all coastal areas of Australia, as well as in Indonesia, Philippines, Palau Islands, New Guinea, Solomon Islands, New Caledonia (DCCEEW 2025b). The species nests on coastal cliffs in South Australia, but is also known to use artificial substrates, transmission line towers, utility poles, boat masts in marinas (Menkhorst et al. 2017, ALA 2025). Key known breeding areas are largely coastal (cliffs), and in South Australia the species extends from the head of the Bight to Cape Spencer and Kangaroo Island (DCCEEW 2025b) and occurs in small and fragmented locations (Dennis 2007 cited in DCCEEW 2025b). Records for this species more commonly occur on the west coast and southern portion of Eyre Peninsula, southern portion of the Yorke Peninsula, parts of the Gulf St Vincent, and throughout Kangaroo Island (DEW 2025). There is no critical habitat in or adjacent to the Project Area (e.g. wetlands habitat or major rivers). The closest record of the species occurring to the GNWF is a single record (2005) within 50 km of the Project Area, slightly to the north of Clare and greater than 35 km south-west of the boundary of the Wind Farm (DEW 2025). As such, this species is considered unlikely to occur.	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** Criteria **A, B** and **C** are not likely to be triggered as this species is considered unlikely to within the GNWF.
Migratory Terrestrial (Functional Group)						
Motacilla cinerea (Grey Wagtail) *Motacilla flava* (Yellow Wagtail)	MT MT	- -	The 2025 PMST output identified that these species or species habitats 'may occur' within the 'feature area' (the WF and OTL) (Appendix A). The Grey and Yellow Wagtails are terrestrial migratory species, both rarely seen, occasional visitors to Australia in their non-breeding seasons (DCCEEW 2025b). The Grey Wagtail prefers higher altitudes, near fast-running water, rocky substrates, lakes and marshes (DotE, 2015c). The Yellow Wagtail prefers lower altitude, well-watered open grassland, fringes and wetlands, and may roost in Mangroves and other dense vegetation (DotE, 2015c). There is no approved Conservation Advice or recovery plans for these species, however, the Draft referral guideline for 14 birds listed as migratory species under the EPBC Act (DotE 2015c) has been adopted. There are no nearby records for these species within the WF and OTL, nor any preferred habitat in	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** Criteria **A, B** and **C** are not likely to be triggered as these species are considered unlikely to occur the GNWF.

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			proximity to the GNWF (Umwelt 2025a). The Grey Wagtail and Yellow Wagtail are both considered uncommon migrants to South Australia. Therefore, both of these species are considered **unlikely to occur**.			
Migratory Marine Avifauna (Functional Group)						
Apus pacificus (Fork-tailed Swift)	MM	-	The 2025 PMST output identified that this species or species habitat is 'likely to occur' within the 'feature area' (the WF and OTL) (Appendix A). The Fork-tailed Swift is a non-breeding visitor to Australia and is almost exclusively an aerial species. In South Australia the species is widespread from the Victorian border west to Spencer Gulf, and also across southern Eyre Peninsula and extending north to Flinders Ranges, the Lake Eyre drainage basin, Lake Eyre south and Marree (DCCEEW 2025b). They occur over mostly dry inland plains, as well as foothills, coastal areas, cliffs and beaches, and populated areas. There is no approved Conservation Advice or recovery plans for these species, however, the Draft referral guideline for 14 birds listed as migratory species under the EPBC Act (DotE 2015c) has been adopted. In South Australia, the species is present from October–May but is most common from December–March (DCCEEW 2025b). The species does not breed in Australia. There are four BDBSA records of the species occurring within the search area applied by Umwelt surrounding and including the WF and OTL (BDBSA records as cited in Umwelt 2025a). The species has also been recorded on a single occasion (Site 12) as a fly-over species during the Summer 2024 BBUS, flying at heights between 1 m and 300 m above the ground, and consequently considered a possible at-risk flight height (relative to the rotor sweep of the WTGs) (Umwelt 2025a). Whilst it is possible the species occurs as a fly-over species in the aerial space above all habitats in the GNWF and therefore across the Disturbance Footprint, it is considered unlikely that the aerial habitats over GNWF represent an important foraging area for this species, principally due to limited records of the species occurring within the broader area (Umwelt 2025a, DEW 2025).	Impact pathways possible but unlikely. Aerial species, with the species often flying well over 300 m.	None required.	**No Significant residual impacts expected for the Fork-tailed Swift.** **A. Unlikely.** Given the aerial nature of this species, impacts to vegetation are unlikely to constitute direct impact, rather impacts are potentially restricted to air-strike from WTGs during operational phase. Despite extensive survey effort, a single individual has been recorded within the GNWF; during the summer 2024 BBUS, flying between 1 m to 300 m over the WF (Umwelt 2025a). In addition, there are limited records of the species occurring to the north-east of the northern Mount Lofty Ranges, with most records associated with coastal, aquatic or metropolitan areas (DEW 2025a). Impacts as a result of the Project are unlikely to substantially modify, destroy or isolate an area of important habitat for this species. **B. Unlikely.** This species is considered to be almost exclusively aerial during the species' migratory time in Australia, and thus the potential for invasive species to affect the Fork-tailed swift are limited. Additionally, a number of introduced flora species have been recorded across the GNWF, including weed species declared under the LSA Act and WoNS (Umwelt 2025a). Invasive fauna species such as house mouse, European Rabbit, European Brown Hare, cats, foxes, deer, goat, and a number of introduced bird species already persist within the landscape (ALA 2025; Umwelt 2025a), thus is it considered unlikely the Project would contribute to the establishment of further pest/invasive species that may pose a risk to this species. Invasive species and disease management measures would include weed controls during and post construction, waste management, as well as vehicle hygiene practices, so establishment of new invasive species as a result of the Project are considered unlikely. The Project, therefore, is not expected to result in the introduction of invasive species which are harmful to this threatened species or the species habitat or may cause the species as a whole to decline. **C. Unlikely.** The Fork-tailed Swift is a non-breeding visitor to Australia and is almost exclusively aerial. In South Australia the species is present from October–May but is most common from December–March (DCCEEW 2025b). As above, despite extensive survey effort, only one individual has been recorded within the GNWF; during the summer 2024 BBUS, flying between 1 m to 300 m over the WF (Umwelt 2025a). Additionally, there are limited records of the species occurring to the north-east of the northern Mount Lofty Ranges, with most records associated with coastal, aquatic or

Species, or Community	EPBC Act[1]	NPW Act[2]	Likelihood of Occurrence in Project Area	Potential Direct and Indirect Impact Pathways (before mitigation measures)	Mitigation Measures	Significant Impact Assessment (residual impacts following mitigation measures)
			Therefore, this species is considered **known to occur** as a fly-over species which may potentially be impacted within the WF during operation, and considered a **possible occurrence** fly-over species over the OTL.			metropolitan areas (DEW 2025a), so it is unlikely an ecologically significant proportion of the population occurs in or around the GNWF.
Hirundapus caudacutus caudacutus (White-throated Needletail)	MM	V	This species was not identified in the 2025 PMST (Appendix A), however, was identified by Umwelt (2025a) based upon BDBSA data, with a single record with low spatial reliability (1-5 km accuracy). The species is considered widespread in eastern and south-eastern Australia (DCCEEW 2025b). Within South Australia, the species is understood to occur across the Mount Lofty Ranges through to the Yorke Peninsula (DCCEEW 2025b), but records are predominantly associated with the Adelaide plains area, the South-East region, and Kangaroo Island (DEW 2025). The closest publicly available record of the species occurring to the GNWF is approximately more than 65 km south of southern-most portion of the OTL, near Angaston (DEW 2025). As the species is a Migratory aerial forager and the record is over 50 km from the GNWF boundary, this species is considered **unlikely to occur** or be impacted by the GNWF Project.	Unlikely to occur, N/A	None required	**No Significant Impacts Expected** Criteria **A**, **B** and **C** are not likely to be triggered as these species are considered unlikely to occur the GNWF.

[1] EPBC Act Status: Critically Endangered (CE); Endangered (EN), Vulnerable (VU); Migratory Marine (MM); Migratory Terrestrial (MT); Migratory Wetland (MW).

[2] *National Parks and Wildlife Act 1972* (SA) Status: Endangered (E), Rare (R), Vulnerable (V).

4.6 Summary of Significant Impact Assessment

All ecological MNES raised in the PMST (Appendix A) have been assessed for their likelihood of occurrence in the Project Area. Those considered known to occur, likely to occur or as possibly occurring within the WF and/or OTL were subject to a significant impact assessment as per Table 4.6 above. All impacts to MNES were considered direct impacts, with mitigation strategies considered to address any potential residual impacts.

Results of the Project's potential interactions with possibly occurring TECs, or listed flora or fauna are summarised below (Table 4.7).

Table 4.7: Summary of the SIA outcomes for MNES considered relevant to the Project

Ecological MNES	EPBC Act[1]	SIA Outcome	
		WF	OTL
Threatened Ecological Communities			
Iron-grass Natural Temperate Grassland of South Australia	CE	**Significant residual impacts likely**	No significant residual impacts
Mallee Bird Community of the Murray Darling Depression Bioregion	EN	N/A[2]	No significant residual impacts
Threatened Flora Species			
Acacia spilleriana (Spiller's Wattle)	EN	No significant residual impacts	No significant residual impacts
Dodonaea subglandulifera (Peep Hill Hop-bush)	EN	No significant residual impacts	No significant residual impacts
Acacia glandulicarpa (Hairy-pod Wattle)	VU	No significant residual impacts	No significant residual impacts
Codonocarpus pyramidalis (Slender Bell-fruit, Camel Poison)	VU	No significant residual impacts	No significant residual impacts
Dodonaea procumbens (Trailing Hop-bush)	VU	No significant residual impacts	No significant residual impacts
Olearia pannosa subsp. *pannosa* (Silver Daisy-bush, Silver-leaved Daisy, Velvet Daisy-bush)	VU	No significant residual impacts	No significant residual impacts
Senecio megaglossus (Superb Groundsel)	VU	No significant residual impacts	No significant residual impacts
Threatened Fauna Species			
Tiliqua adelaidensis (Pygmy Blue-tongue Lizard, Adelaide Blue-tongue Lizard)	EN	**Significant residual impacts likely**	No significant residual impacts[3]
Melanodryas cucullata cucullata (South-eastern Hooded Robin, Hooded Robin (south-eastern))	EN	No significant residual impacts	No significant residual impacts
Aphelocephala leucopsis (Southern Whiteface)	VU	No significant residual impacts	No significant residual impacts

Ecological MNES	EPBC Act[1]	SIA Outcome	
		WF	OTL
Aprasia pseudopulchella (Flinders Ranges Worm-lizard)	VU	No significant residual impacts	No significant residual impacts
Neophema chrysostoma (Blue-winged Parrot)	VU	No significant residual impacts	No significant residual impacts
Stagonopleura guttata (Diamond Firetail)	VU	No significant residual impacts	No significant residual impacts
Apus pacificus (Fork-tailed Swift)	MM	No significant residual impacts	No significant residual impacts

[1] EPBC Act Status: Critically Endangered (CE); Endangered (EN), Vulnerable (VU); Migratory Marine (MM).

[2] N/A denotes this TEC or species is considered unlikely to occur in this area.

[3] Where the OTL occurs outside of the overlapping WF Disturbance Footprint.

5 Assessment of additional MNES

5.1 Ramsar Wetlands of International Importance

Approval is required for an Action occurring within or outside a declared Ramsar wetland if the action has, will have, or is likely to have a significant impact on the ecological character of the Ramsar wetland. A declared Ramsar wetland is an area that has been designated under Article 2 of the Ramsar Convention or declared by the minister to be a declared Ramsar wetland under section 16 of the EPBC Act.

5.1.1 Significant impact criteria

An Action is likely to have a significant impact on the ecological character of a declared Ramsar wetland if there is a real chance or possibility that it will result in:

- areas of the wetland being destroyed or substantially modified
- a substantial and measurable change in the hydrological regime of the wetland, for example, a substantial change to the volume, timing duration and frequency of ground and surface water flows to and within the wetland
- the habitat or lifecycle of native species, including invertebrate fauna and fish species, dependent upon the wetland being seriously affected
- a substantial and measurable change in the water quality of the wetland – for example, a substantial change in the level of salinity, pollutants, or nutrients in the wetland, or water temperature which may adversely impact on biodiversity, ecological integrity, social amenity or human health, or
- an invasive species that is harmful to the ecological character of the wetland being established (or an existing invasive species being spread) in the wetland.

5.1.2 Assessment

One Wetland of International Importance (Ramsar Wetland) was identified within the PMST report generated on 21 August 2025; the Coorong, and Lakes Alexandrina and Albert Wetland (Appendix A). The GNWF is approximately 150-200 km in proximity of this Ramsar Wetland (notably the very northwest portion of the Ramsar site 'proximity polygon' (DCCEEW 2024f). The Burra Creek connects to the Murray River near Morgan, however, any potential localised impacts as a result of the Project will be mitigated through the CEMP/OEMP and associated erosion and sediment control measures. Should localised impacts occur it would be expected these would remain within the GNWF Project Area. As a result of the distance between the OTL and the Ramsar wetlands, no impacts to this MNES are predicted related to the Project.

5.2 Commonwealth marine areas

An action will require approval if the action is taken in a Commonwealth marine area and the action has, will have, or is likely to have a significant impact on the environment, or if the action is taken outside a Commonwealth marine area and the action has, will have, or is likely to have a significant impact on the environment in a Commonwealth marine area, where a Commonwealth marine area is defined in section 24 of the EPBC Act.

5.2.1 Significant impact criteria

An action is likely to have a significant impact on the environment in a Commonwealth marine area if there is a real chance or possibility that the action will:

- result in a known or potential pest species becoming established in the Commonwealth marine area
- modify, destroy, fragment, isolate or disturb an important or substantial area of habitat such that an adverse impact on marine ecosystem functioning or integrity in a Commonwealth marine area results
- have a substantial adverse effect on a population of a marine species or cetacean including its life cycle (for example, breeding, feeding, migration behaviour, life expectancy) and spatial distribution
- result in a substantial change in air quality or water quality (including temperature) which may adversely impact on biodiversity, ecological integrity; social amenity or human health
- result in persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, social amenity or human health may be adversely affected, or
- have a substantial adverse impact on heritage values of the Commonwealth marine area, including damage or destruction of an historic shipwreck.

5.2.2 Assessment

No Commonwealth Marine Areas were identified within the PMST report generated on 21 August 2025 (Appendix A). The nearest Commonwealth Marine Area to the Project is the Murray Marine Park (South-east Network), located approximately 195 km to the south southwest of the GNWF Project Area (inclusive of the OTL) adjacent the Coorong and Lower Lakes (Parks Australia 2025). The Project does not interact with the marine environment in any way and there is considered to be no potential for impacts to this MNES.

5.3 World heritage properties

Approval under the EPBC Act is required for any action occurring within or outside a declared World Heritage property that has, will have, or is likely to have a significant impact on the World Heritage values of the World Heritage property. A declared World Heritage property is an area that has been included in the World Heritage list or declared by the minister to be a World Heritage property. World Heritage properties are places with natural or cultural heritage values which are recognised to have outstanding universal value.

5.3.1 Significant impact criteria

An action is likely to have a significant impact on the World Heritage values of a declared World Heritage property if there is a real chance or possibility that it will cause:

- one or more of the World Heritage values to be lost
- one or more of the World Heritage values to be degraded or damaged, or
- one or more of the World Heritage values to be notably altered, modified, obscured or diminished.

5.3.2 Assessment

No World Heritage Properties were identified within the PMST report generated on 21 August 2025 (Appendix A).

A review of the World Heritage Properties was undertaken using Australia's World Heritage List (DCCEEW 2024g). It found the nearest World Heritage Site to the Project is the Willandra Lakes Region in NSW, located approximately 325 km to the east of the GNWF Project Area. Due to the distance between the proposed Project and the nearest World Heritage Place, it is considered that there is no potential impact to this MNES.

It is noted that the Regional Council of Goyder has a prospective World Heritage Listing within proximity to the GNWF, with the Australian Cornish Mining sites at Burra and Moonta now on the World Heritage Tentative List. Neoen have engaged closely with Council and relevant heritage bodies, and after having reduced the number of WTGs which are included in the GNWF in the most visually impacting areas to this site, it was agreed that possible impacts to the World Heritage Bid location were acceptable (against relevant criteria).

5.4 National heritage places

Approval under the EPBC Act is required for any action occurring within, or outside, a National Heritage place that has, will have, or is likely to have a significant impact on the National Heritage values of the National Heritage place. The National Heritage List contains places or groups of places with outstanding heritage value to Australia, whether natural, Indigenous or historic or a combination of these.

5.4.1 Significant impact criteria

An action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:

- one or more of the National Heritage values to be lost
- one or more of the National Heritage values to be degraded or damaged, or
- one or more of the National Heritage values to be notably altered, modified, obscured or diminished.

5.4.2 Assessment

One National Heritage Place was identified during the PMST report generated on 21 August 2025; the Australian Cornish Mining Sites: Burra (Appendix A, DCCEEW 2024h). Whilst the National Heritage Place site is located in the vicinity of the 'feature area' (the WF and/or OTL), the Project is not located within the National Heritage Listed (NHL) town of Burra, nor will the Project be undertaken within the National Heritage curtilage.

The Biosis (2024) Heritage Impact Assessment (HIA) report found that there will be no direct physical impact to the NHL values for the Australian Cornish Mining Sites (Burra) but that there will be an indirect impact on the NHL values, in that there will be a moderate indirect visual impact. Biosis (2024) subsequently provided advice on ways to minimise visual impacts as much as possible on Burra, and as a result of the advice, several WTGs have been removed from the Project layout, which has reduced the potential for visual impacts on the National Heritage values. The HIA determined that the altering of the distant views to the north-east from the decommissioned Burra copper mine site as a result of the proposed project would not impact on the understanding of the then-revolutionary mining technology, noting the views from Burra are not specifically cited in the NHL criteria, thus the GNWF would not have a significant impact as defined by the EPBC Act.

Neoen are currently investigating the preferred access route to the Barrier Highway to ensure there will be no impact to Heritage Values during the transport of turbines to site utilising existing roads during the Project's construction phase. However, the trees are not identified in the NHL values or the state heritage listing, and there is no reference to cultural plantings or landscape in the listing of the Burra Railway Station Complex (Biosis 2024). While there may be a small visual change in this one location within the whole town (if the tree is removed), it will not impact the understanding or value of the site at either level (Biosis 2024). Further, as the views from Burra are not specifically cited in the NHL criteria, the proposed Goyder North project will not have a significant impact in accordance with criteria set out under EPBC Act.

The Biosis (2024) assessment determined that the proposed project will not have a substantive impact on the National Heritage values of the Australian Cornish Mining Sites (Burra).

Neoen proposes a minimum setback distance of 3,000 m of WTGs from any National Heritage Areas, to reduce the visual impact on the amenity of the heritage area. Additionally, an exclusion of 100 m is applied to all other infrastructure across Project Area. This minimum setback has been exceeded, with the final proposed location of the nearest WTG approximately 4 km from the National Heritage area.

5.5 Nuclear action

A nuclear action will require approval if it has, will have, or is likely to have a significant impact on the environment.

5.5.1 Significant impact criteria

All nuclear actions, as detailed in section 22 of the EPBC Act, should be referred DCCEEW for a decision on whether approval is required. These actions are:

- establishing or significantly modifying a nuclear installation or a facility for storing spent nuclear fuel

- transporting spent nuclear fuel or radioactive waste products arising from reprocessing
- establishing or significantly modifying a facility for storing radioactive waste products arising from reprocessing
- mining or milling uranium ore
- establishing or significantly modifying a large-scale disposal facility for radioactive waste
- de-commissioning or rehabilitating any facility or area in which an activity described above has been undertaken, or
- establishing, significantly modifying, decommissioning or rehabilitating a facility where radioactive materials at or above the activity level specified in regulation 2.02 of the Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) are, were, or are proposed to be stored.

5.5.2 Assessment

There are no known radiological characteristics associated with the Project that trigger EPBC criteria.

5.6 The Great Barrier Reef Marine Park

An action will require approval if the action is taken in the Great Barrier Reef Marine Park and the action has, will have, or is likely to have a significant impact on the environment, or if the action is taken outside the Great Barrier Reef Marine Park and the action has, will have, or is likely to have a significant impact on the environment in the Great Barrier Reef Marine Park. The Great Barrier Reef Marine Park is established under the *Great Barrier Reef Marine Park Act 1975* (Cth).

5.6.1 Significant impact criteria

An action is likely to have a significant impact on the environment of the Great Barrier Reef Marine Park if there is a real chance or possibility that the action will:

- modify, destroy, fragment, isolate or disturb an important, substantial, sensitive or vulnerable area of habitat or ecosystem component such that an adverse impact on marine ecosystem health, functioning or integrity in the Great Barrier Reef Marine Park results
- have a substantial adverse effect on a population of a species or cetacean including its life cycle (for example, breeding, feeding, migration behaviour, life expectancy) and spatial distribution
- result in a substantial change in air quality or water quality (including temperature) which may adversely impact on biodiversity, ecological health or integrity or social amenity or human health
- result in a known or potential pest species being introduced or becoming established in the Great Barrier Reef Marine Park
- result in persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, or social amenity or human health may be adversely affected, or
- have a substantial adverse impact on heritage values of the Great Barrier Reef Marine Park, including damage or destruction of an historic shipwreck.

5.6.2 Assessment

The closest point of the Great Barrier Reef Marine Park is located over 1,600 km north-east of the GNWF. As a result of the distance between the works and the Great Barrier Reef Marine Park, it is considered there is no potential impact to this MNES.

5.7 A water resource in relation to coal seam gas development and large coal mining development

In 2013 an amendment to the EPBC Act detailed that water resources that relate to coal seam gas and large coal mining development are a protected matter. The water trigger amendment means a comprehensive assessment is undertaken on the impact of water resources from either proposed coal seam gas developments and/or large coal mining developments. Where water resource is defined according to the definition in the *Water Act 2007* (Cth) which states:

- surface water or ground water, or
- a watercourse, lake, wetland or aquifer (whether or not it currently has water in it); and includes all aspects of the water resource (including water, organisms and other components and ecosystems that contribute to the physical state and environmental value of the water resource).

5.7.1 Significant impact criteria

An action is likely to have a significant impact on a water resource if it may lead to a change in either the water's hydrology or overall quality. The change needs to be enough to reduce, or risk reducing the current or future use of the water resource. Whether an action is likely to have a significant impact depends upon the sensitivity, value and quality of the environment that's affected and the intensity, duration, magnitude and geographic extent of the effects.

5.7.2 Assessment

The Project is not directly or indirectly associated with a coal seam gas development or large coal mining development.

5.8 Commonwealth lands

Approval is required under the EPBC Act for:

- an action taken by any person on Commonwealth land that is likely to have a significant impact on the environment
- an action taken by any person outside of Commonwealth land that is likely to have a significant impact on the environment on Commonwealth land, or
- an action taken by a Commonwealth agency anywhere in the world that is likely to have a significant impact on the environment.

Where Commonwealth Land is defined as per Commonwealth Area in the EPBC Act:

- each of the following, and any part of it, is a Commonwealth Area:
  - land owned by the Commonwealth or a Commonwealth agency and airspace over the land
  - an area of land held under lease by the Commonwealth or a Commonwealth agency and airspace over the land
  - land in:
    - an external Territory, or
    - the Jervis Bay Territory
    - any airspace over the land
  - any other area of land, sea or seabed that is included in a Commonwealth reserve.

5.8.1 Significant impact criteria

As detailed in the Significant Impact Guidelines 1.2 (DSEWPaC, 2013), considerations include:

- the environmental context
- potential impacts likely to be generated by the action, including indirect consequences of the action
- whether mitigation measures will avoid or reduce these impacts, and
- taking into consideration the above, whether the impacts of the action are likely to be significant.

5.8.2 Assessment

The Protected Matters Search Tool report (Appendix A) identified that the GNWF Project Area (including the OTL) does not directly intersect with any identified Commonwealth Lands.

6 Summary

This revised significant impact assessment has been prepared in alignment with the Variation Letter sent to DCCEEW on 9 April 2025, in accordance with the Request for Variation under Environment Protection and Biodiversity Conservation Regulation 2000 – Regulation 5.08 Information for a request to vary a proposal to take an action. Key elements of the variation and therefore this revised significant impact assessment include:

- change of name from Goyder North Stage 1 Project to Goyder North Wind Farm (shortened titles)
- revised GNWF design and project components (including change from 92 WTGs to 99 WTGs, lowered rotor-sweep to 20 m above ground)
- adjustment of the GNWF boundary (i.e. extended to the north-east)
- additional on-ground ecological field surveys, including further refined habitat mapping, condition class assessment of the INTG, further targeted surveys specifically for PBTL and FRWL
- refinement of the Disturbance Footprint and consequently adjustments to Permanent Disturbance and Temporary Disturbance areas
- complete removal of the earlier proposed OTL Alternate.

A revised PMST search was undertaken of the GNWF in August 2025, inclusive of a 5 km buffer, resulting in the identification of four TECs, 34 threatened species (three which are listed as both threatened and migratory species) and six species with a migratory only listing. A revised significant impact assessment was undertaken against the relevant MNES significant impact criteria, using an extensive library of technical studies and relevant databases to support the assessment. The assessment indicated that the majority of MNES identified in the PMST output (Appendix A) are considered unlikely to be present within the GNWF, the Disturbance Footprint, or significantly impacted as a result of the GNWF. The assessment has, however, demonstrated that the Project has the potential to have significant residual impacts to two ecological MNES, being:

- one TEC; the Iron-grass Natural Temperate Grassland of South Australia
- one fauna species; *Tiliqua adelaidensis* (Pygmy Blue-tongue Lizard).

Migratory species were discounted during the likelihood of occurrence assessment based upon a lack of suitable habitat within the WF and OTL, therefore, the Project is unlikely to impact migratory species based on terrestrial impacts. One migratory species, *Apus pacificus* (Fork-tailed Swift) was considered as a possible aerial/fly-over only species that may have potential to interact with the Project (principally the WTGs), with one individual recorded as flying over the GNWF. However, this did not trigger the significant impact criteria for migratory species as the single record of the species occurring within the Project Area, despite a total of eight BBUS and other ecological field surveys, is not considered to be ecologically significant.

No non-ecological MNES will be impacted as a result of the Project.

A summary of potential impacts to the INTG TEC and PBTL is provided below.

An overview of the assessment against each MNES (ecological and non-ecological) that was subjected to an SIA (following likelihood of occurrence assessment) is presented in Table 6.1.

6.1 Potential impact summary, Threatened Ecological Communities

6.1.1 Iron-grass Natural Temperate Grassland of South Australia

The Iron-grass Natural Temperate Grassland (INTG) of South Australia is an ecological community listed as Critically Endangered. The INTG has been recorded extensively across the Project Area, with total area of approximately 1,931.24 ha of *Lomandra* Grassland (VA6) mapped within the WF (particularly in the central and eastern portions), as well as areas with the OTL (Umwelt 2025a, Umwelt 2025b), of which approximately 259.66 ha occurs within the Development Envelope. From this total mapped area of INTG, approximately 6.14 ha of Class B INTG occurs within the Disturbance Footprint, comprised of approximately 2.43 ha of Permanent Disturbance and 3.72 ha of Temporary Disturbance), representing approximately 0.41% of mapped INTG within GNWF, equating to 0.12% of the TEC and up to 0.02% of the Lomandra Grassland (all condition classes) in the region. Whilst the Disturbance Footprint may be considered to be relatively small (i.e. approximately 0.41% of the total INTG mapped within the GNWF), and noting Project elements have been proposed to be micro sited to avoid significant impacts, two significant impact criteria are potentially triggered for this TEC; a reduction in the extent of the TEC and fragmentation of the TEC, principally as a result of native vegetation clearance. However, these impacts would not be expected to trigger other significant impact criteria for TECs, such as cause a substantial change in species composition of an occurrence of the TEC, nor cause a substantial reduction in the quality or integrity of an occurrence of the TEC, nor interfere with the recovery of the TEC.

6.2 Potential impact summary, threatened fauna

6.2.1 *Tiliqua adelaidensis* (Pygmy Blue-tongue Lizard)

The Pygmy Blue-tongue lizard is listed as Endangered. The species has an unusual ecology in that it inhabits vertical burrows dug by spiders, and only persist in unploughed areas of open grassland (Milne and Bull cited in DCCEEW 2023g), with the burrows acting as refuges, including as protection from high temperatures, predators and fires, as basking sites and as ambush points for hunting invertebrate prey. A number of records for the species are associated with the broader GNWF Project Area (ALA 2025, BDBSA records cited in Umwelt 2025a). Umwelt (2025a) reports the species has been recorded across the WF within GNWF in grassland and grassy shrubland habitat. Targeted field surveys undertaken up to 2025 recorded a total of 186 individuals in the GNWF Project Area to date. Based on the density of PBTL recorded in each vegetation association, and the approximate search area, an estimated maximum number of between 192 to 274 (206) individuals will be impacted within the Disturbance Footprint during the construction phase (Umwelt 2025a). No Pygmy Blue-tongue lizards were recorded along the OTL outside of the WF, and the species is considered unlikely to be present in the OTL corridor outside of the WF.

There is no current estimate available for the national population of the species, however, it has been reported that there is decreasing trend (Fenner et al. 2018 cited in DCCEEW 2023g). The most recent population estimate is cited as 5,000 individuals made in 2000 and was based upon 10 known populations at the time (Milne et al. 2000 cited in DCCEEW 2023g), however, an additional 20 subpopulations have since been discovered (Duffy et al. 2012, Clayton et al. 2020 cited in DCCEEW 2023g), resulting in populations occurring at a total of 37 disjunct sites. Estimates of population sizes suggest between 100-120 lizards occur per hectare (Clayton et al. cited in DCCEEW 2023g). The current EOO for the species is estimated to be 7,000 km^2 (Delean et al. 2013 cited in DCCEEW 2023g), with an AOO estimated at less than 500 km^2 (Fenner et al. 2018). All known and future habitat is critical to the survival of the species, and critical habitat includes the AOO for all known populations, all areas of the species' historical occurrence, and all areas of potential habitat throughout its geographical and ecological range (DCCEEW 2023g). Impacts listed as temporary, which require the removal of / disturbance to topsoil are likely to be equivalent in impact to permanent clearance for this species, as ground disturbance is likely to alter soil conditions and preclude development of appropriate spider burrows for the medium to long term.

A total of approximately 11,154.12 ha of potentially suitable habitat has been mapped in the GNWF Project Area (Umwelt 2025a), of which a maximum of 368.10 ha (or 3.3% of the GNWF Project Area) (based on the WF plus OTL) occurs within the Disturbance Footprint and potentially impacted by the Project. The species is not known to occur outside of the Flinders Lofty Block IBRA bioregion, and therefore habitat that occurs in the far south of the Project Area within the Murray Darling Depression Bioregion is considered unlikely habitat (i.e. the OTL outside of the WF but within the MDD). Impacts to the PBTL as a result of the Project within the WF of the Project Area potentially trigger several criteria, including leading to a long-term decrease in the size of a population, reducing the AOO of a population, fragmenting a population into two or more populations, adversely affecting habitat critical to the survival of a species, disrupting the breeding cycle of a population, modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline, and interfere with the recovery of a species. As such, significant residual impacts are considered likely within the WF, but unlikely within the OTL outside of the WF.

6.3 Significant impact assessment overview

An overview of the significant impact assessment for the Project against all MNES is presented in Table 6.1.

Table 6.1: Significant residual impact assessment overview

MNES	Section	Assessment Outcome	Significant residual impact to MNES
Threatened ecological communities	4.5	The Project is likely to interact with two TECs: • Iron-grass Natural Temperate Grassland of South Australia where three significant impact criterion are likely triggered for this TEC. • Mallee Bird Community of the Murray Darling Depression Bioregion (MBC).	Likely (within WF only) Unlikely
Listed threatened species	4.5	The majority of species reviewed in this assessment are considered unlikely to be present within the Project Area, or unlikely to be significantly impacted by the Project. A summary of species known to be present, or which are considered potential occurrences within the Project Area include: • *Acacia glandulicarpa* (Hairy-pod Wattle) • *Acacia spilleriana* (Spiller's Wattle) • *Codonocarpus pyramidalis* (Slender Bell-fruit, Camel Poison) • *Dodonaea procumbens* (Trailing Hop-bush) • *Dodonaea subglandulifera* (Peep Hill Hop-bush) • *Olearia pannosa* subsp. *pannosa* (Silver Daisy-bush, Silver-leaved Daisy, Velvet Daisy-bush) • *Senecio megaglossus* (Superb Groundsel) • *Aphelocephala leucopsis* (Southern Whiteface) • *Melanodryas cucullata cucullata* (South-eastern Hooded Robin, Hooded Robin (south-eastern)) • *Neophema chrysostoma* (Blue-winged Parrot) • *Stagonopleura guttata* (Diamond Firetail) • *Aprasia pseudopulchella* (Flinders Ranges Worm-lizard) • *Tiliqua adelaidensis* (Pygmy Blue-tongue Lizard, Adelaide Blue-tongue Lizard)	Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Likely (within WF only)
Migratory species protected under international agreements	4.5	The Project Area is not considered important habitat for any migratory species, however, a significant impact assessment was undertaken for the *Apus pacificus* (Fork-tailed Swift) based upon a single known record. Despite this, no significant residual impacts are expected for any migratory species.	No
Ramsar wetlands of international importance	5.1	The Project Area is approximately 150-200 km in proximity to one Ramsar wetland; the Coorong, and Lakes Alexandrina and Albert, however, the Project Area only overlaps the very northwest potion of the Ramsar site 'proximity polygon'. As a result of the distance between the OTL and the Ramsar wetlands, no impacts to this MNES are predicted related to the Project.	No
Commonwealth marine areas	5.2	The Project Area is not in proximity to Commonwealth marine areas	No
World heritage properties	5.3	The Project Area is not in proximity to World Heritage properties	No
National heritage places	5.4	The Project Area is in proximity to one National Heritage place; the Australian Cornish Mining Site: Burra, however, its relevance to the Project is in association with visual amenity regarding the Project on the National Heritage place. A report prepared by Biosis (2024) addressed minimising the visual impacts of the Project and determined that the proposed project would not impact on the NHL criteria and thus would not have a significant impact as defined by the EPBC Act.	No
Nuclear actions (including uranium mining)	5.5	There are no known radiological characteristics associated with the Project that trigger EPBC criteria.	No
The Great Barrier Reef Marine Park	5.6	The Project Area is not in proximity to the Great Barrier Reef Marine Park	No
A water resource in relation to coal seam gas or large coal mining development.	5.7	The Project is not coal seam gas or coal.	No
Commonwealth lands	5.8	The Project does not interact with any identified Commonwealth Lands.	No

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8 Definitions and abbreviations

8.1 Definition of acronym

Acronym	Expansion
ALA	Atlas of Living Australia
BAM	Bushland Assessment Method
BBUS	Bird and bat utlisation survey
BDBSA	Biological Database of South Australia
BESS	Battery Energy Storage System
CE	Critically Endangered
CP	Conservation Park
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DE	Development Envelope
DF	Disturbance Footprint
DIT	Department of Infrastructure and Transport
EBS	EBS Ecology
EN	Endangered
FLB	Flinders Lofty Block
GNREF	Goyder North Renewable Energy Facility
GNWF	Goyder North Wind Farm
GRZ	Goyder Renewables Zone
Ha	Hectare
IBRA	Interim Biogeographic Regionalisation for Australia
INTG	Iron-grass Natural Temperate Grassland
MBC	Mallee Bird Community
MDD	Murray Darling Depression
Met	Meteorological Masts
MM	Migratory Marine
MNES	Matters of National Environmental Significance
MP	management plan
MT	Migratory Terrestrial
MW	Migratory Wetland
NYLB	Northern and Yorke Landscape Board
NVC	Native Vegetation Council
OTL	Overhead Transmission Line (Primary)
OTL-Alt	Alternate Overhead Transmission Line (removed from Project design)
PBTL	Pygmy Blue-tongue Lizard
PEC	Project EnergyConnect

Acronym	Expansion
PMST	Protected Matters Search Tool
REF	Renewable Energy Facility
SIA	Significant impact assessment
SPC	State Planning Commission
STAM	Scattered Tree Assessment Method
TECs	Threatened Ecological Communities
VA	Vegetation Association
VU	Vulnerable
WF	Boundary surrounding the Wind Farm Generation Components
WTGs	Wind Turbine Generator

APPENDICES

Appendix A. Protected matters search report

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 21-Aug-2025

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	1
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	34
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	16
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	16
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	18
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

National Heritage Places [Resource Information]

Name	State	Legal Status	Buffer Status
Historic			
Australian Cornish Mining Sites: Burra	SA	Listed place	In buffer area only

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
The coorong, and lakes alexandrina and albert wetland	100 - 150km upstream from Ramsar site	In feature area

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions	Endangered	Community may occur within area	In feature area
Iron-grass Natural Temperate Grassland of South Australia	Critically Endangered	Community likely to occur within area	In feature area
Mallee Bird Community of the Murray Darling Depression Bioregion	Endangered	Community likely to occur within area	In feature area
Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Amytornis striatus howei			
Murray Mallee Striated Grasswren, Striated Grasswren (sandplain) [91648]	Endangered	Species or species habitat may occur within area	In feature area
Aphelocephala leucopsis			
Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Falco hypoleucos](#) Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area	In feature area
[Grantiella picta](#) Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area
[Leipoa ocellata](#) Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Lophochroa leadbeateri leadbeateri](#) Major Mitchell's Cockatoo (eastern), Eastern Major Mitchell's Cockatoo, Pink Cockatoo (eastern) [82926]	Endangered	Species or species habitat may occur within area	In feature area
[Melanodryas cucullata cucullata](#) South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat known to occur within area	In feature area
[Neophema chrysostoma](#) Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Pedionomus torquatus](#) Plains-wanderer [906]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Polytelis anthopeplus monarchoides](#) Regent Parrot (eastern) [59612]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Rostratula australis](#) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area	In feature area
[Stagonopleura guttata](#) Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
FISH			
[Galaxias rostratus](#) Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Maccullochella peelii](#) Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area	In feature area
FROG			
[Litoria raniformis](#) Southern Bell Frog, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat may occur within area	In feature area
MAMMAL			
[Nyctophilus corbeni](#) Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area	In feature area
PLANT			
[Acacia glandulicarpa](#) Hairy-pod Wattle [8838]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Acacia menzelii](#) Menzel's Wattle [9218]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Acacia spilleriana](#) Spiller's Wattle [34123]	Endangered	Species or species habitat known to occur within area	In feature area
[Caladenia tensa](#) Greencomb Spider-orchid, Rigid Spider-orchid [24390]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Codonocarpus pyramidalis Slender Bell-fruit, Camel Poison [19507]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Dodonaea procumbens Trailing Hop-bush [12149]	Vulnerable	Species or species habitat known to occur within area	In feature area
Dodonaea subglandulifera Peep Hill Hop-bush [11956]	Endangered	Species or species habitat known to occur within area	In feature area
Lachnagrostis limitanea Spalding Blown Grass, Spalding Blowngrass [78119]	Endangered	Species or species habitat may occur within area	In buffer area only
Olearia pannosa subsp. pannosa Silver Daisy-bush, Silver-leaved Daisy, Velvet Daisy-bush [12348]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pterostylis xerophila Desert Greenhood [7997]	Vulnerable	Species or species habitat may occur within area	In feature area
Senecio macrocarpus Large-fruit Fireweed, Large-fruit Groundsel [16333]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Senecio megaglossus Superb Groundsel [13374]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Swainsona pyrophila Yellow Swainson-pea [56344]	Vulnerable	Species or species habitat may occur within area	In feature area
REPTILE			
Aprasia pseudopulchella Flinders Ranges Worm-lizard [1666]	Vulnerable	Species or species habitat known to occur within area	In feature area
Tiliqua adelaidensis Pygmy Blue-tongue Lizard, Adelaide Blue-tongue Lizard [1270]	Endangered	Species or species habitat known to occur within area	In feature area
Listed Migratory Species			[Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Caroona Creek	Conservation Park	SA	In buffer area only
Hopkins Creek	Conservation Park	SA	In buffer area only
Mimbara	Conservation Park	SA	In feature area
Mokota	Conservation Park	SA	In feature area
Mongulurring Nature Reserve	Private Nature Reserve	SA	In feature area

Protected Area Name	Reserve Type	State	Buffer Status
Red Banks	Conservation Park	SA	In buffer area only
Tiliqua Nature Reserve	Private Nature Reserve	SA	In feature area
Unnamed (No.HA1221)	Heritage Agreement	SA	In buffer area only
Unnamed (No.HA1264)	Heritage Agreement	SA	In feature area
Unnamed (No.HA1294)	Heritage Agreement	SA	In buffer area only
Unnamed (No.HA1511)	Heritage Agreement	SA	In buffer area only
Unnamed (No.HA1520)	Heritage Agreement	SA	In buffer area only
Unnamed (No.HA1562)	Heritage Agreement	SA	In buffer area only
Unnamed (No.HA656)	Heritage Agreement	SA	In buffer area only
Unnamed (No.HA707)	Heritage Agreement	SA	In buffer area only
Unnamed (No.HA727)	Heritage Agreement	SA	In buffer area only

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Goyder North Renewable Energy Facility Stage 1, Burra, SA	2024/09929		Assessment	In feature area
Goyder South Hybrid Renewable Energy Facility - OTL and Substation, Worlds End	2021/8959		Post-Approval	In feature area
Goyder South Hybrid Renewable Energy Facility - Wind Farm 1b, 5km south Burra	2021/8957		Post-Approval	In buffer area only
MARA Team Testing - Release 38 - Smoke Test -05 April 2024 - To Be Deleted	2024/09849		Post-Approval	In buffer area only
Morgan Whyalla Pipeline No.1 Renewal ? Stage 1	2022/09438		Post-Approval	In buffer area only
Razorback Iron Ore Project, SA	2024/09787		Assessment	In feature area
Solar River Project	2024/09922		Assessment	In feature area
Controlled action				
Electricity Transmission Line	2001/380	Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
SA-NSW Electricity Interconnector, Monash-Robertstown Section	2002/726	Controlled Action	Completed	In feature area
SA-NSW Energy Interconnector, Robertstown to NSW Border, SA	2019/8468	Controlled Action	Post-Approval	In feature area
Stony Gap Wind Farm	2012/6340	Controlled Action	Completed	In buffer area only
Not controlled action				
Hallett Wind Farm	2004/1715	Not Controlled Action	Completed	In feature area
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Substation for Hallet Hill Wind Farm	2007/3535	Not Controlled Action	Completed	In buffer area only
wind farm and associated infrastructure	2006/2764	Not Controlled Action	Completed	In feature area
Not controlled action (particular manner)				
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Wind Farm and Transmission Line, Mt Bryan, SA	2009/5025	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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