



Project EnergyConnect (NSW – Western Section)

Critical State Significant Infrastructure Assessment

(SSI 10040)

September 2021



Published by the NSW Department of Planning, Industry and Environment

dpie.nsw.gov.au

Title: Project EnergyConnect (NSW – Western Section)

Subtitle: Critical State Significant Infrastructure Assessment

Cover image: NSW Department of Planning, Industry and Environment Image Library
<https://images.planning.nsw.gov.au>

© State of New South Wales through Department of Planning, Industry and Environment 2021. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute the Department of Planning, Industry and Environment as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication in advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing and may not be accurate, current or complete. The State of New South Wales (including the NSW Department of Planning, Industry and Environment), the author and the publisher take no responsibility, and will accept no liability, for the accuracy, currency, reliability or correctness of any information included in the document (including material provided by third parties). Readers should make their own inquiries and rely on their own advice when making decisions related to material contained in this publication.

Executive Summary

Background

Project EnergyConnect is a joint proposal by TransGrid (the electricity transmission operator in NSW) and ElectraNet (the electricity transmission operator in South Australia) for a new 900 kilometre (km) electricity interconnector between Wagga Wagga NSW and Robertstown in South Australia (SA) via Buronga, with a spur line to Victoria (VIC). It would provide the first direct connection between the NSW and SA transmission line networks.

Project EnergyConnect has been identified as a priority transmission project in NSW and SA that would contribute to energy security and reliability as the National Electricity Market (NEM) transitions away from a reliance on coal-fired power stations to renewable energy.

Within NSW, Project EnergyConnect is a 695 km transmission line that is classified as Critical State Significant Infrastructure (CSSI) under the *Environmental Planning and Assessment Act 1979* (EP&A Act). Consequently, it must be determined by the Minister for Planning and Public Spaces.

Project EnergyConnect is proposed in two separate development applications:

- **EnergyConnect (West)** (the subject of this development application) – a 155 km western section from SA to the Buronga substation and the NSW / VIC border; and
- **Energy Connect (East)** (which would be the subject of a separate development application) – a 540 km eastern section extending the proposed transmission line from the Buronga substation to the existing Wagga Wagga substation.

Project

EnergyConnect (West) involves the construction of a new 330 kilovolt (kV) transmission line between the NSW / SA border and Buronga substation, and upgrading an existing 220 kV transmission line between Buronga substation and the NSW / VIC border.

TransGrid has defined a transmission line corridor of 200 m. Within this corridor, the final transmission line alignment (approximately 60 m wide) would be confirmed during detailed design and located within an easement up to 80 m wide.

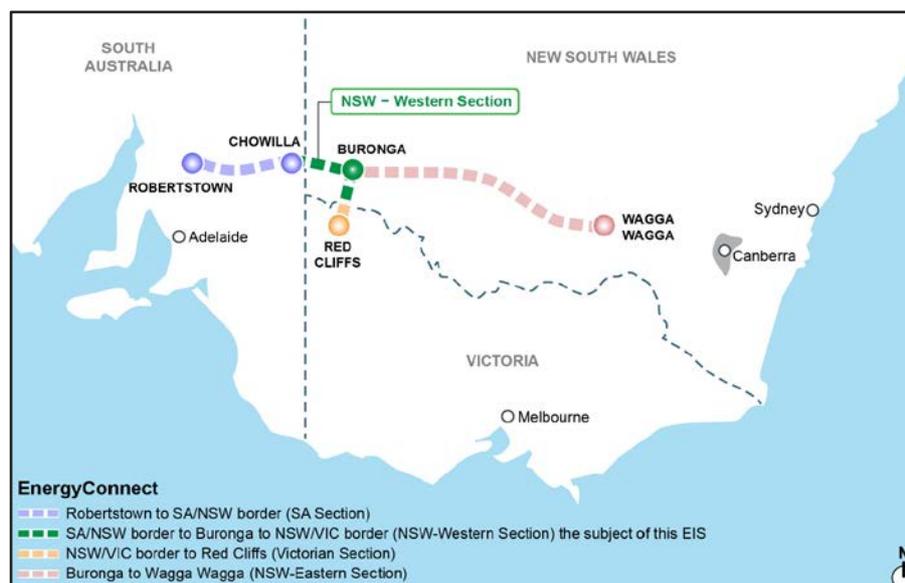


Figure ES 1 | Project EnergyConnect

Engagement

The Department exhibited the application and Environmental Impact Statement (EIS) for EnergyConnect (West) from 30 October 2020 until 10 December 2020, worked closely with government agencies, consulted with key stakeholders, published all submissions on the project, and required TransGrid to provide a formal response to the issues raised in submissions.

The Department received five submissions, three from special interest groups (two providing comments and one objecting) and two from the general public (one in support and one objecting to the project), and advice from 15 government agencies, including Wentworth Shire Council (Council).

The key matters raised in submissions, agency advice and identified in the Department's assessment of the project include energy security and reliability, biodiversity, traffic and transport, heritage, and noise and vibration.

Assessment and Evaluation

The Department has assessed the project application, EIS, submissions on the project, TransGrid's responses to these submissions and its Amendment Report, in accordance with the objects of the EP&A Act, including the principles of ecologically sustainable development, and the social and economic welfare of the community.

Energy Security and Reliability

The Department considered all the relevant Commonwealth and State energy policies, plans and reviews and concluded that an interconnector between SA, NSW and Victorian is critical for energy security and reliability in NSW and would play a critical role in supporting the transition of the energy system, and linking the SA, NSW and Victoria electricity networks.

Biodiversity

TransGrid has designed the development to avoid and minimise impacts on high quality vegetation and habitat, including locating the corridor to avoid critically endangered flora species, and co-locating infrastructure in sections where native vegetation is in the poorest condition. However, the project would still disturb 643 ha of native vegetation, comprising 540 ha of vegetation in moderate to good condition and 103 ha of cultivated or degraded derived native grassland. Of the 540 ha of moderate to good quality native vegetation, 298 ha (55%) would be completely cleared and 242 ha (45%) would be partially impacted (tree trimming and temporary ground disturbance).

Overall, the Department (including the Department's Biodiversity, Conservation and Sciences Division) considers that, subject to further minimisation of impacts during the detailed design of the project, a range of mitigation and adaptive management measures, and by offsetting the residual biodiversity impacts of the project, the project is unlikely to result in a significant impact on the biodiversity values of the locality over the medium to long term.

Traffic

The potential traffic and transport impacts would be largely restricted to the construction period (24 months for construction and upgrade of transmission lines, and 36 months for upgrade of Buronga substation). Temporary traffic disruptions would be experienced on the road network, although TransGrid would be required to maintain traffic flows, access and parking as far as possible.

The Department considers that with appropriate mitigation measures including undertaking suitable road upgrades prior to commencing construction, regular road maintenance, and the implementation of

a Traffic Management Plan, the works can be undertaken without significant impacts to the broader transport network.

Heritage

TransGrid identified 131 previously unrecorded Aboriginal heritage sites and 28 potential archaeological deposits (PADs) within the transmission line corridor and other ancillary infrastructure. Three sites and one PAD were identified within the Buronga substation upgrade site (and associated construction compounds and accommodation camps) and have been either avoided through amendments to the layout at the substation project or would be salvaged prior to construction commencing.

The indicative transmission line footprint (60 m wide) would impact up to 77 previously unrecorded Aboriginal heritage sites, 25 potential archaeological deposits and two known artefact sites. The level of impact (direct or partial) would depend on the location of final footprint of the transmission line.

During detailed design, the alignment of the transmission line would be further refined within the corridor and the Department has recommended conditions of approval requiring measures to avoid and minimise impacts on these heritage items and PADs. Subsurface testing of any PADs within the refined alignment would be undertaken in consultation with Registered Aboriginal Parties (RAPs) allowing for identification of further mitigation measures (such as the need for avoidance or salvage of items).

Noise

The project is located in a rural environment with low background noise levels.

No residences are predicted to experience noise levels above the 'highly noise affected' criterion of 75 dB(A) during construction of the project. Further, no residences would experience noise levels above the 'noise affected' criterion of 45 dB(A) for works at the Buronga substation. All construction activities would comply with the relevant construction vibration and blasting criteria.

There would be temporary noise exceedances for three residences in proximity to the Wentworth construction compound and for five residences in proximity of the transmission line. However, due to the short-term and intermittent nature of construction works at the Wentworth construction compound and each transmission line tower, the Department accepts that the proposed construction activities are unlikely to result in significant adverse impacts.

Operational noise associated with the Buronga substation would comply with the relevant operational noise criteria at all residences. Operational noise for the transmission line considered corona noise discharge, which is a crackling sound resulting from an accumulation of pollution or water on the transmission lines. Under conservative assumptions, corona discharge noise from the transmission line in wet weather events is predicted to exceed the project trigger noise level of 35 d(B)A at three residences in proximity to the Darling River, however these exceedances would be limited to about 30% the year during wet and misty conditions. TransGrid would determine appropriate mitigation measures in consultation with owners of affected residences for any exceedances.

Evaluation

The Department considers that an interconnector between SA, NSW and Victoria is critical for energy security and reliability in NSW and would play a critical role in supporting the transition of the energy system, and linking the SA, NSW and Victoria electricity networks.

The broader Project EnergyConnect is consistent with the AEMO's roadmap for the National Electricity Market, the *Integrated System Plan* and relevant strategic NSW planning and policy documents, including the *Transmission Infrastructure Strategy* the *Electricity Strategy*, and more broadly the *Climate Change Policy Framework* and *Net Zero Stage 1: 2020 – 2030*.

While EnergyConnect (West) represents a logical first step in directly linking the SA and NSW energy markets between Chowilla (SA), Buronga (NSW) and Red Cliffs (Victoria), it is still important to carefully consider the potential environmental, social and economic impacts of the project (as proposed).

EnergyConnect (West) is located in a relatively remote part of southwestern NSW, which is sparsely populated and primarily used for extensive agriculture. The project area does not contain any major towns or urban centres, National Parks, or any mapped Biophysical Strategic Agricultural Land (BSAL).

Nevertheless, the Department acknowledges that the construction of a 155 km transmission line would inevitably result in impacts to biodiversity and heritage values, as well as a range of amenity impacts to the community (such as traffic and noise).

The Department acknowledges that TransGrid's route and corridor analysis has used a comprehensive route selection process (based on a hierarchy of constraints and further corridor refinement) in order to avoid or minimise impacts. The Department also recognises that large linear infrastructure projects of this nature would be further refined to minimise impacts as the design and construction planning is developed by a nominated construction contractor.

Further, the Department has worked closely with TransGrid and key government agencies throughout the assessment process to reduce the residual impacts of the development. In that regard, TransGrid made important changes to the project to address key issues, which are described in the Amendment Report. These changes include a reduction in the disturbance area of the project, removal of an accommodation camp to address road safety concerns, and amendments to the Buronga substation layout to minimise impacts on an area of potential Aboriginal heritage significance.

Overall, the Department considers that EnergyConnect (West) has been designed in a way that avoids and minimises social and environmental impacts as far as practicable. The Department has carefully considered the residual potential impacts of the development on the environment, in consultation with key government agencies. The Department has concluded that the residual impacts can be adequately minimised, managed, or offset, to an acceptable standard, subject to a comprehensive framework of recommended conditions of approval. Consequently, the development can be carried out in a manner that is consistent with the principles of ecologically sustainable development.

The Department has carefully weighed the impacts of EnergyConnect (West) against the benefits. The development would have long-term benefits for the transmission of electricity in NSW and the broader NEM, and would deliver significant economic benefits to NSW including a capital investment of \$418 million and creation of up to 600 construction jobs. The residual impacts of the project can be minimised, managed, or offset in accordance with the objects of the EP&A Act, and other relevant legislation and government policy.

On balance, the Department considers that the benefits of EnergyConnect (West) outweigh its costs, and the project is in the public interest and approvable, subject to strict conditions.

Contents

Executive Summary	iii
Contents	vii
1 Introduction	1
2 Project	2
2.1 Overview	2
2.2 Project Design	4
3 Strategic context	6
3.1 Energy Context.....	6
3.2 Site and Surrounds.....	6
4 Statutory Context	9
4.1 Critical State Significant Infrastructure	9
4.2 Permissibility	9
4.3 Proponent.....	9
4.4 Administrative and Procedural Requirements.....	9
4.5 Amended Application	10
4.6 Application of the Biodiversity Conservation Act 2016.....	10
4.7 Exempt Approvals	10
4.8 Environmental Planning Instruments	11
4.9 Mandatory Matters for Consideration.....	11
4.10 Other NSW Approvals.....	11
4.11 Objects of the EP&A Act	12
4.12 Commonwealth Approvals	12
5 Engagement	13
5.1 Department’s engagement.....	13
5.2 TransGrid’s Engagement	13
5.3 Submissions and Submissions Report	13
5.4 Amended Application	13
5.5 Key issues - Agency.....	14
5.6 Key Issues – Community	15
5.7 Key Issues – Special Interest Groups.....	16
6 Assessment	17
6.1 Energy Security and Reliability	17
6.2 Biodiversity	17

6.3	Traffic and Transport.....	24
6.4	Aboriginal Heritage.....	29
6.5	Noise	32
6.6	Other issues	35
7	Recommended Conditions	45
8	Evaluation.....	46
9	Recommendation.....	48
10	Determination.....	49
Appendices		50
	Appendix A – List of referenced documents	50
	Appendix B – Environmental Impact Statement	50
	Appendix C – Submissions	50
	Appendix D – Submissions Report	50
	Appendix E – Amendment Report	50
	Appendix F – Agency Advice	50
	Appendix G – Additional Information	50
	Appendix H – Recommended Instrument of Approval	50
	Appendix I – Consideration of Commonwealth Matters	51
	Appendix J - Consideration of the Objects of the Act	60

1 Introduction

Project EnergyConnect is a proposed new 900 kilometre (km) electricity interconnector between Wagga Wagga in NSW and Robertstown in South Australia (SA) via Buronga, with a spur line to Victoria (VIC), located in south western NSW (see Figure 1).

It is a joint proposal by TransGrid (the electricity transmission operator in NSW) and ElectraNet (the electricity transmission operator in SA) and would provide the first direct connection between the NSW and SA transmission line networks.

The NSW section (695 km) includes:

- **EnergyConnect (West)** - a 155 km transmission line between the NSW / SA border and the NSW / VIC border, via Buronga substation; and
- **EnergyConnect (East)** – a 540 km transmission line between the existing Wagga Wagga and Buronga substations, including a new substation near Dinawan.

EnergyConnect (West) is the subject of the current development application and this Assessment Report.

EnergyConnect (East) does not form part of this development application, and TransGrid would need to submit a separate application for this element of the project.

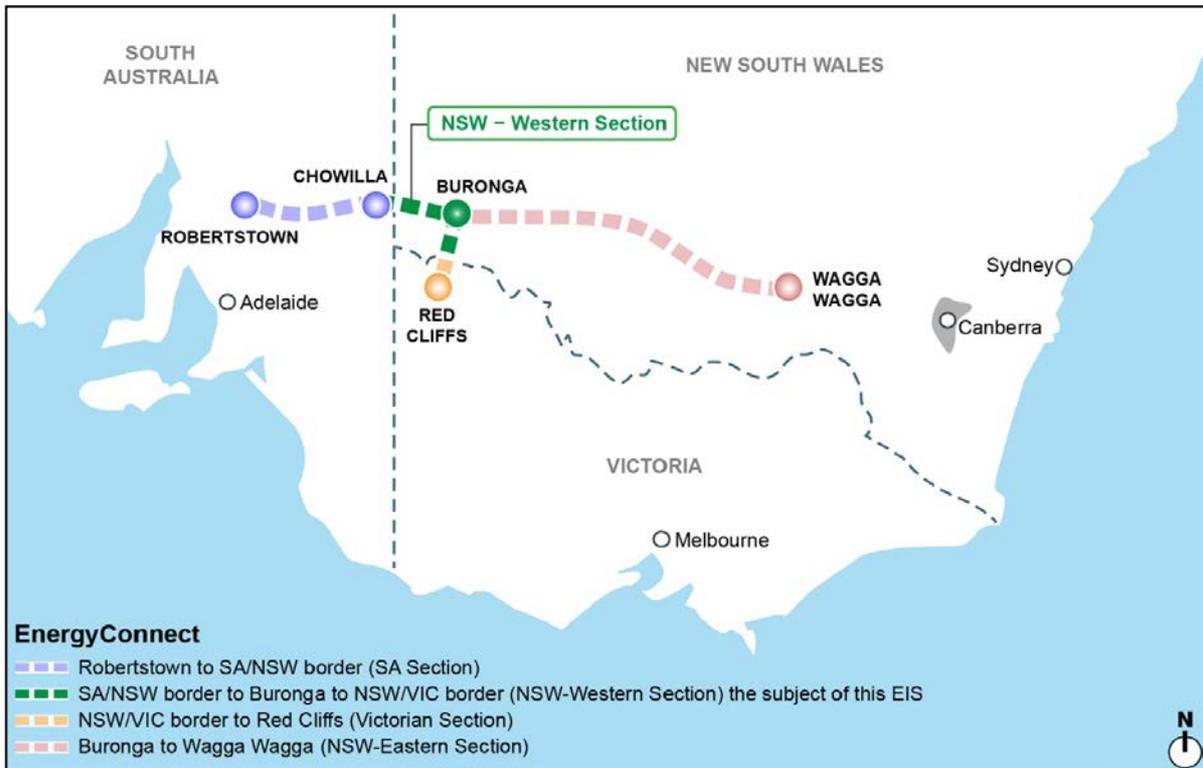


Figure 1 | Project EnergyConnect

2 Project

2.1 Overview

EnergyConnect (West) involves:

- constructing and operating a new 130 km long 330 kV transmission line between the NSW / SA border near Chowilla to the existing Buronga substation;
- upgrading a 22 km section of the existing 220 kV transmission line between the Buronga substation and the NSW / Vic border;
- upgrading the existing Buronga substation; and
- developing construction facilities, such as construction compounds and accommodation camps.

TransGrid has defined a transmission line corridor of 200 m. Within this corridor, the final transmission line alignment (approximately 60 m wide) would be confirmed during detailed design and located within an easement up to 80 metres wide.

The main components of the project are summarised in **Table 1**, shown in **Figures 2 to 6**, and described in further detail in **sections 2.2 to 2.5** of this Report, the (EIS) (see **Appendix B**), Amendment Report (see **Appendix E**), Submissions Report (see **Appendix D**) and additional information (see **Appendix G**).

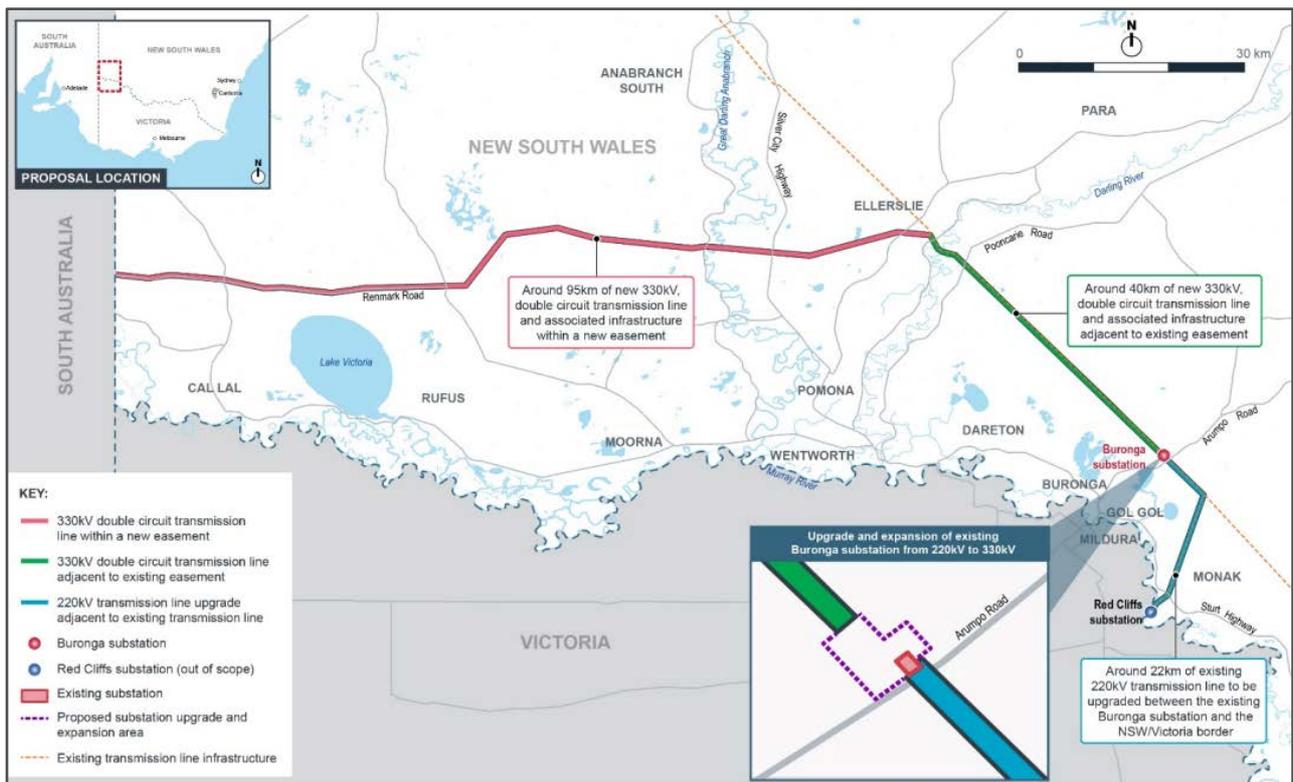


Figure 2 | EnergyConnect (West)

Table 1 | Main components of the project

Aspect	Description
Project area	<ul style="list-style-type: none"> Project site: 3,307 ha Development footprint: 1,189 ha, including 642 ha associated with the transmission line easement and 547 ha associated with permanent infrastructure and temporary construction works
New 330 kV line	<ul style="list-style-type: none"> Distance: 130 km Easement width: 80 m Final alignment: 60 m (within the 80 m easement) Maximum tower height: 80 m Typical spacing between towers: 460 m to 600 m Associated works: realigning a 700 m section of the existing 220 kV line near the Darling River to accommodate the new 330 kV line
Upgraded 220 kV line	<ul style="list-style-type: none"> Distance: 22 km Easement width: 50 m Maximum tower height: 50 m Typical spacing between towers: 400 m The existing 220 kV single circuit line would be decommissioned Temporary 6.5 km 220 kV bypass transmission line immediately south of Buronga substation
Buronga substation upgrade and expansion	<ul style="list-style-type: none"> Upgrades to the existing substation from a 220 kV operating voltage to combined 220 kV / 330 kV operating voltage Up to 22 ha of additional disturbance Maximum equipment height of 65 m (lighting masts)
Construction facilities	<ul style="list-style-type: none"> Two accommodation camps at Wentworth and Buronga substation providing accommodation for 400 and 200 employees respectively Three construction compounds at Wentworth, Buronga and Anabran South Crushing and screening plant and earthworks material site Seven water supply points
Construction timing	<ul style="list-style-type: none"> The construction period for the 330 kV and 220 kV transmission lines would last for up to 24 months, including a six month site rehabilitation period. Construction of the two lines would commence concurrently and may commence at a number of locations on each line (to be confirmed in detailed design). The construction period for Buronga substation upgrade would last for up to 36 months, including a 10 month site rehabilitation period. Construction hours would be limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.
Operation	The operational life of the project is not limited.
Access route	<ul style="list-style-type: none"> The primary access route comprises the Silver City Highway and Sturt Highway (state roads) and Renmark Road and Arumpo Road (regional roads). Heavy and light vehicles would access the three main construction compounds via the relevant roads along the primary access route. Over-dimensional vehicles would access the Buronga Substation via the Silver City Highway and Arumpo Road. Secondary Access Routes may also be used where access points on the primary route are located considerable distance away from certain sections of the project corridor. Water supply trucks would use several local roads.
Decommissioning and rehabilitation	<ul style="list-style-type: none"> The project includes progressively decommissioning and rehabilitating all construction works (construction compounds, accommodation camps, concrete crushing and screening plant, access tracks required during construction and the temporary 220 kV bypass) at the end of the construction period.
Employment	Up to 600 construction jobs and 5 operation jobs
Capital investment value	\$418 million

2.2 Project Design

Options Analysis

Four options were considered to establish a new interconnector between SA and the National Electricity Market (NEM) for greater sharing of energy across States, including an interconnector to Queensland, NSW, Victoria and a no-interconnector option.

This exercise identified that a link between Robertstown in SA and Wagga Wagga in NSW via Buronga, with augmentation of a link to Red Cliffs in VIC, would deliver the highest net market benefit. This option was identified as the preferred option and labelled 'Project EnergyConnect'.

TransGrid considered a range of corridor options to determine the alignment of Project EnergyConnect. This involved an 'opportunities and constraints' analysis, including environmental, social, land use and engineering matters such as National Parks, intensive agricultural land, heritage conservation areas and residential areas.

For EnergyConnect (West), the Department acknowledges that the construction of a 155 km transmission line between Chowilla (SA) and Buronga substation would inevitably result in impacts to biodiversity and heritage values, as well as a range of amenity impacts to the community (such as traffic and noise). For example, the Department accepts that a transmission line between these two locations line would require three major watercourse crossings and could not avoid disturbance of biodiversity and heritage values.

Nevertheless, TransGrid considered several opportunities and constraints in selecting its corridor alignment, particularly:

- aligning the transmission line with Renmark Road to minimise biodiversity, heritage and visual impacts;
- avoiding Lake Victoria and intensive agricultural land near Ellerslie;
- co-locating the line with the existing Broken Hill to Buronga substation line and the Buronga substation to Red Cliffs line; and
- utilising existing property boundaries, minor roads and fence lines.

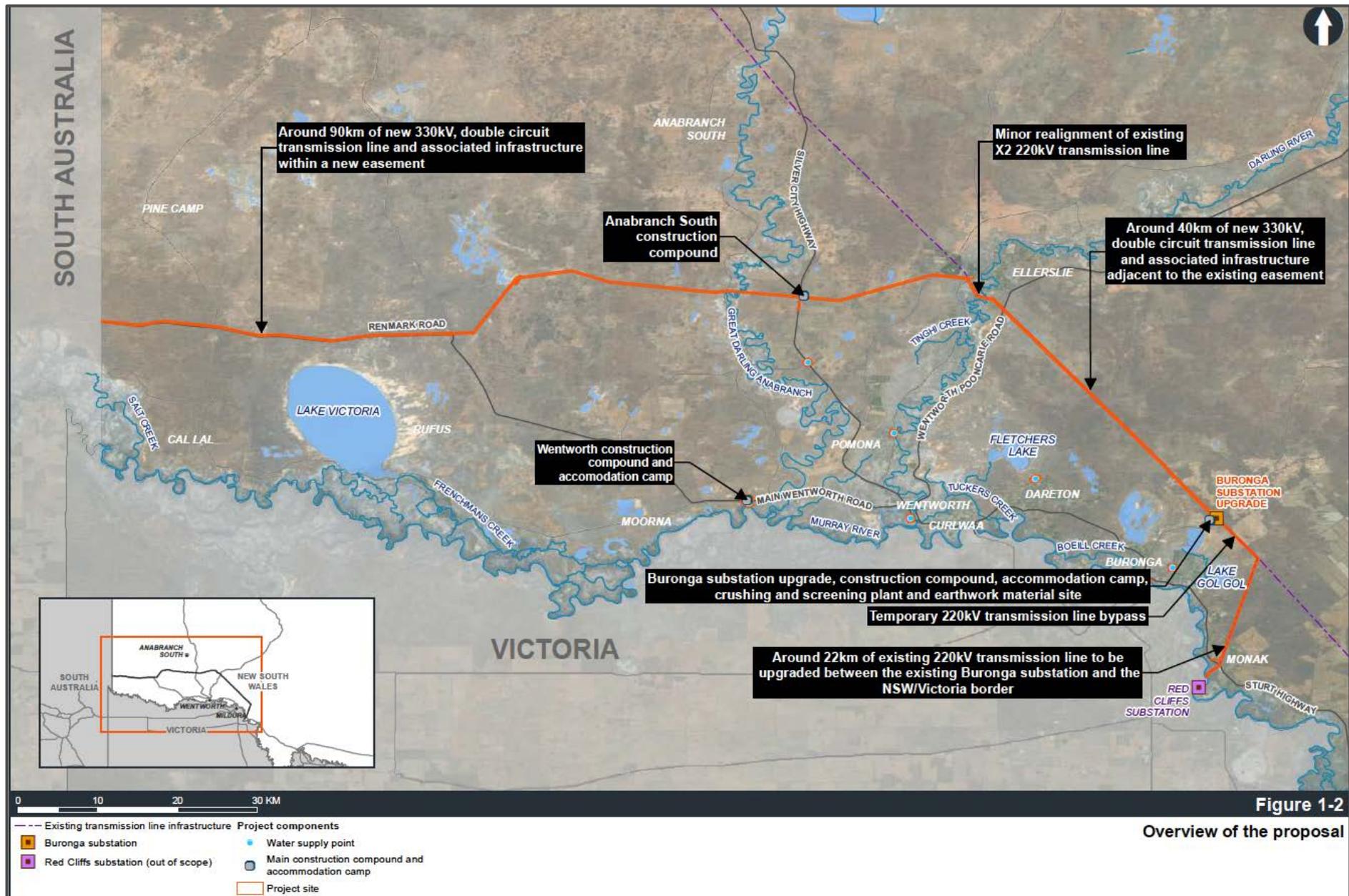
Indicative Corridor and Refinement

The Department recognises that large linear infrastructure projects need to be developed and assessed through an iterative process, which involves firstly establishing a project corridor with an indicative alignment, and then refining the final alignment as the design and construction planning develops. The Department notes that this approach has long been adopted for large-scale linear infrastructure projects in NSW.

There is a well-established process of assessing the nature and scale of potential impacts before determination, while also allowing for further assessment and reduction of impacts post-determination.

For EnergyConnect (West), TransGrid has defined a transmission line corridor (200 m) and assessed an indicative transmission line footprint (60 m). The purpose of the transmission line corridor is to identify locations where the transmission line and ancillary infrastructure could be sited without materially changing the key environmental impacts of the development (i.e. visual, noise, biodiversity and heritage).

The final transmission line alignment within the transmission line corridor would be confirmed during detailed design with a view to further minimising environmental impacts, wherever practicable. The transmission line would be located within an easement up to 80 metres wide.



3 Strategic context

3.1 Energy Context

Project EnergyConnect aims to respond to the AEMO's *2020 Integrated System Plan*, which identifies the need for increased interconnection between regions in the National Electricity Market (NEM)-wide integrated grid plan to provide greater sharing of generation resources not otherwise fully utilised. Increased interconnection across the NEM would play a critical role in supporting the transition of the energy system, providing access to generators and improving the security and reliability of electricity supply in the NEM.

The NSW energy system and broader National Electricity Market (NEM) is undergoing a complex and accelerating transition period with 15,000 MW (63%) of Australia's traditional coal-fired generators set to retire by 2040 and the development of renewable energy sources, like wind, solar and pumped hydro, experiencing rapid growth. As the energy network introduces a greater mix of renewables, the National Electricity Market (NEM) requires additional investment in transmission infrastructure to link these new sources of generation to the energy market.

This is highlighted in the *2017 Independent Review into the Future Security of the National Electricity Market* (NEM) (the Finkel Review), which outlines a strategic approach to ensuring an orderly transition from traditional power generation to lower emissions power generation, and notes that significant investment decisions on the interconnection between states must be made as part of a NEM-wide integrated grid plan.

In March 2018, the NSW Government's *Transmission Infrastructure Strategy* identified 10 potential Energy Zones across three broad regional areas, including the New England, Central West and South West regions of NSW. The identified energy zones are aimed at encouraging "investment in new electricity infrastructure and unlocking additional generation capacity in order to ensure secure and reliable energy in NSW".

Building on this, the NSW Government announced the *NSW Electricity Strategy* in November 2019, which adopted the South-West as the pilot Renewable Energy Zone (REZ) to support transmission upgrades in this zone. The strategy proposes NSW Government support for this REZ for the development of new transmission infrastructure to connect low cost generation to the electricity system.

AEMO's *2020 Integrated System Plan* (ISP) provides an integrated roadmap for the efficient development and evolution of the NEM over the next 20 years and beyond. Project EnergyConnect is identified as a priority transmission project in NSW and SA, with a critical role in ensuring energy security and reliability, and would play an essential role as the NEM transitions away from a long-standing reliance on coal-fired power stations to renewable energy.

3.2 Site and Surrounds

Land Use

EnergyConnect (West) is located in a relatively remote part of southwestern NSW, which is sparsely populated and primarily used for extensive agriculture. It is located within Wentworth Shire Council LGA and largely traverses properties held through western lands leases, under the *Crown Land Management Act 2016*.

The site covers an area of around 3,307 ha and the proposed transmission line is approximately 155 km in length. Land within and surrounding the site is mainly used for agricultural purposes (over 97% of the project study area), primarily sheep, goat and cattle grazing. There are some relatively small areas with a recent history of dryland cereal cropping and improved pastures at the south-eastern end of the site near Buronga, and some irrigated grape vines near the Darling River and Murray River.

The site is primarily zoned RU1 – Primary Production under the *Wentworth Local Environmental Plan 2011* (Wentworth LEP), except for three small areas zoned E2 – Environmental Conservation near the Darling River and Murray River.

The project area contains no National Parks, state forests, aerodromes, Defence or Commonwealth lands. The development site does not include any mapped Biophysical Strategic Agricultural Land (BSAL).

A number of towns including Wentworth, Dareton, Buronga, Gol Gol, Mildura, Monak and Red Cliffs are situated along the Darling and Murray Rivers to the south of the site near the NSW/Victorian border. However, there are no major population and service centres located within the development area.

There are scattered rural residences surrounding the site, primarily along the Great Darling Anabranch, Darling River and Murray River. Other land uses within and surrounding the development area include farm buildings and infrastructure, broad acre rural residential development, and state and regional roads.

The existing Buronga substation and 220kV Broken Hill to Buronga and 220kV Buronga to Red Cliffs transmission lines also are located within sections of site.

Natural Environment

The topography of the development area and surrounds is characterised as relatively flat dune fields and sand plains at an elevation between approximately 35 and 80 metres above Australian Height Datum, with some areas of alluvial plains near the Darling River, Murray River and Great Darling Anabranch.

The site contains large areas of connected native vegetation, which connect to other key landscape features beyond the development area, such as Lake Victoria, conservation areas in eastern SA (e.g. Chowilla Regional Reserve to the west and Mallee Cliffs National Park, Southern Mallee conservation areas to the east). Riparian vegetation along rivers, such as the Great Darling Anabranch, Darling and Murray Rivers, also provide connectivity within the broader landscape.

The site is located within the Lower Murray-Darling catchment, which is a sub-catchment of the Murray-Darling Basin. There are three major rivers within the Lower Murray-Darling catchment that are located in the development area including the Murray River, Darling River, and the Great Darling Anabranch (and associated lakes). Other watercourses intersecting the project study area are limited to unnamed ephemeral creeks and drainage lines. The proposed transmission line would require three major watercourse crossings at:

- the Great Darling Anabranch, Wentworth NSW
- Darling River, Ellerslie NSW
- Murray River, Monak NSW / Red Cliffs Victoria.



Figure 4 | Renmark Road near SA / NSW border



Figure 5 | The site immediately east of Nulla Road (western area of the site)



Figure 6 | The existing Buronga substation

4 Statutory Context

4.1 Critical State Significant Infrastructure

The development is classified as Critical State Significant Infrastructure (CSSI) under section 5.13 EP&A Act because it forms part of Project EnergyConnect (SA to NSW Electricity Interconnector), which is listed as CSSI under Clause 15 of Schedule 5 of *State Environmental Planning Policy (State and Regional Development) 2011* (the SRD SEPP).

Consequently, the Minister for Planning and Public Spaces (the Minister) is the approval authority.

4.2 Permissibility

The development is permissible without development consent under Clause 16 of the SRD SEPP.

4.3 Proponent

TransGrid is the proponent for the project. TransGrid is NSW Electricity Networks Operations Pty Ltd as a trustee for NSW Electricity Operations Trust. TransGrid is the operator and manager of the main high voltage transmission network in NSW and the Australian Capital Territory and is the Australian Network Operator for the purpose of an electricity transmission or distribution network under the provisions of the *Electricity Network Assets (Authorised Transactions) Act 2015*.

4.4 Administrative and Procedural Requirements

Under the EP&A Act and Regulation, there are several administrative and procedural requirements that must be met before the Minister may determine the application.

These requirements include:

- TransGrid applying to the Minister for approval;
- TransGrid preparing an Environmental Impact Statement (EIS) for the development in accordance with the Secretary's environmental assessment requirements (SEARs) and the general requirements for the form and content of an EIS in the Schedule 2 of the EP&A Regulation;
- exhibiting the EIS for at least 28 days;
- requiring TransGrid to provide a formal response to the issues raised in submissions; and
- making key documents publicly available on the Department's website, including the EIS, public submissions, TransGrid's response to submissions and additional information.

Two submissions were critical of the process undertaken during the Department's assessment of the development (see **section 5.3 to 5.7**). The Department notes that while one submitter was concerned with duration of the exhibition of the EIS, the statutory exhibition period under Schedule 1 of the EP&A Act of 28 days was exceeded by the Department and electronic copies of the EIS and supporting technical papers were available on the Department's website. This allowed for access to the documentation throughout the exhibition period. While the exhibition coincided with a harvesting period, TransGrid undertook community consultation with potentially affected landholders prior to the exhibition of the EIS, which provided the opportunity for comment on the development outside the formal exhibition period.

The Department also notes that the submitter was concerned with the extent of assessment provided in the EIS and associated technical papers particularly biodiversity. The Department has considered the impacts of the project including biodiversity (see **section 6.1**) in consultation with the relevant agencies.

The Department is satisfied that all administrative and procedural requirements have been met and that the Minister may now determine the application.

4.5 Amended Application

In accordance with Clause 192(2) of the EP&A Regulation, a development application can be amended any time before the application is determined. Accordingly, TransGrid has sought to amend its application, the details of which are summarised in **section 5.4** of this report.

Under clause 192(2) of the EP&A Regulation, an application can be amended with the approval of the Planning Secretary, however, under the delegation of 26 September 2017, the Director, Energy Assessments can agree to amendments to an application.

The Director, Energy Assessments accepted TransGrid's amended application for the following reasons:

- the development amendments have reduced the impacts of the development as a whole;
- the amended application directly responds to the key issues raised in submissions received by the Department during the exhibition of the original application;
- TransGrid assessed the impacts of the amended development (see **Appendix E**); and
- the Department made the additional information available online and sent it to the relevant agencies for comment.

4.6 Application of the Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) applies to the project. In particular,

- under Section 7.9 of the BC Act, the EIS for the project must be accompanied by a biodiversity development assessment report (BDAR); and
- under Section 7.14, the Minister must consider the likely impact of the project on biodiversity values as assessed under the BDAR.

The EIS for the project included a BDAR, which was prepared in accordance with the Biodiversity Assessment Methodology (see Technical paper 1 of the EIS, which is included in **Appendix B** of this report). This BDAR was updated (see Appendix D of the Amendment Report, which is included in **Appendix E** of this report).

The Department has considered the findings of the updated BDAR as well as the advice from the Biodiversity, Conservation and Science Directorate (BCS) in its assessment (see **Section 6.1**). This assessment concluded that the project is unlikely to have significant impacts on any biodiversity values of the area provided a biodiversity offset strategy is implemented for the project.

4.7 Exempt Approvals

Under Section 5.23 of the EP&A Act, the following approvals are not required for CSSI projects:

- a permit under section 201, 205 or 219 of the *Fisheries Management Act 1994*
- various heritage approvals under the National Parks and Wildlife Act 1974 and Heritage Act 1977;
- a bushfire safety authority under Section 100B of the *Rural Fires Act 1997*; and
- various water-related approvals under Sections 89-91 of the *Water Management Act 2000*.

However, the assessment of these matters has been integrated with the assessment of all other matters under the EP&A Act.

The Department has considered all the relevant matters associated with these authorisations in its detailed assessment (see **Section 6**), consulted with the agencies responsible for administering these authorisations (see **Section 5**), and included conditions in the recommended conditions of approval (see **Appendix H**) to ensure TransGrid minimises the biodiversity, heritage, bushfire and water impacts of the project.

4.8 Environmental Planning Instruments

Although environmental planning instruments do not apply to CSSI projects under Section 5.22 of the EP&A Act, the Department has assessed the project against the provisions of several instruments and concluded that:

- the project is not potentially hazardous or offensive development under SEPP 33 – Hazardous and Offensive Development;
- the site does not contain any core koala habitat under SEPP (Koala Habitat Protection) 2021; and
- the land is suitable for the project under SEPP 55 – Remediation of Land.

4.9 Mandatory Matters for Consideration

When deciding whether or not to approve the carrying out of the development under Section 5.19 of the EP&A Act, the Minister is required to consider the reports, advice and recommendations contained in this report, which includes the:

- EIS and Amendment Report for the project;
- public submissions and TransGrid's response to the issues raised in these submissions;
- advice provided by public authorities on the project;
- Department's whole-of-government assessment of the merits of the project; and
- recommended conditions of approval for the project.

The Department has considered these matters in its assessment of the development, as summarised in **Section 6** of this report.

4.10 Other NSW Approvals

Under section 5.23 of the EP&A Act, a number of other approvals are integrated into the SSI approval process, and consequently are not required to be separately obtained for the project. These include:

- approvals and permits relating to heritage under the EP&A Act, *Heritage Act 1977* and *National Parks and Wildlife Act 1974*; and
- certain water approvals under the *Water Management Act 2000*.

Under section 5.24 of the EP&A Act, a number of further approvals are required, but must be substantially consistent with any planning approval for the project. These include:

- approvals for works in public roads under the *Roads Act 1993* (Roads Act). It is noted that this only applies to classified roads and Crown roads for this project, as TransGrid is an Authorised Network Operator under the *Electricity Supply Act 1995*. Consequently, TransGrid will generally not require consent from the relevant Councils for works in unclassified (local) roads for the project; and

- an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* (POEO Act). It is noted that an EPL is required for the project, specifically for crushing, grinding or separating under Clause 16 of Schedule 1 of the POEO Act.

The Department has consulted with the agencies responsible for these approvals in its assessment of the project.

4.11 Objects of the EP&A Act

The objects of the EP&A Act, including incorporating ecologically sustainable development principles and promoting the social and economic welfare of the community and a better environment, are the underpinning principles for all decision making under the Act. The Department has assessed the project against the objects found in section 1.3 of the EP&A Act. **Appendix J** provides a summary of how these objects have been considered.

4.12 Commonwealth Approvals

On 25 June 2020, a delegate of the Commonwealth Minister for the Department of Agriculture, Water and the Environment (DAWE), determined the development (EPBC 2020/8673) to be a 'controlled action' in accordance with the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) due to likely significant impacts to listed threatened species and communities (Sections 18 and 18A).

The assessment process under the EP&A Act has been accredited under a bilateral agreement with the Commonwealth Government. Accordingly, the NSW Government has undertaken the assessment on behalf of the Commonwealth and has assessed matters of national environmental significance (MNES).

The Department consulted with the DAWE in accordance with the bilateral agreement and provided draft copies of this assessment report and the recommended conditions of approval to DAWE for comment.

The Department's assessment of the potential impacts of the development on controlling provisions under the EPBC Act relating to biodiversity is provided in **Section 6.1**. Further information on the matters that the Commonwealth Minister must consider under the EPBC Act is provided in **Appendix I**.

5 Engagement

5.1 Department's engagement

The Department publicly exhibited the EIS from 30 October 2020 until 10 December 2020, advertised the exhibition in the *Mildura Sunraysia Daily*, *Sydney Morning Herald*, *Daily Telegraph* and *The Australian* and notified adjoining landowners adjacent to the project boundary.

The Department consulted with Council and the relevant government agencies throughout the assessment.

5.2 TransGrid's Engagement

TransGrid undertook engagement with the local community as detailed in the EIS, including:

- establishing a dedicated development website, phone number and email address;
- use of an online interactive engagement tool that allows stakeholders to provide comments on opportunities and constraints for the proposed transmission line route;
- stakeholder briefings, presentations and workshops; and
- face-to-face meetings with potentially affected landholders.

TransGrid also undertook consultation with the Department and relevant government agencies during the assessment process.

5.3 Submissions and Submissions Report

During the exhibition period of the EIS, the Department received two public submissions (one in support and one objecting to the project). In addition to the public submissions, three submissions were received from special interest groups (two providing comments and one objecting).

Advice was also received from 15 government agencies, including Wentworth Shire Council. Full copies of the agency advice and submissions are attached in **Appendix C** and **Appendix F**.

TransGrid provided a response to all matters raised in submissions on the project (see **Appendix D**) and has also provided additional information during the Department's assessment (see **Appendix G**).

5.4 Amended Application

Following consideration of submissions on the development, TransGrid amended its application, as detailed in the Amendment Report (see **Appendix E**). This includes:

- a change to the indicative disturbance area for the development following refinement of the proposed construction methodology;
- a temporary 220 kV transmission line bypass to the south of the Buronga substation during construction;
- confirmation of the local roads used by construction vehicles;
- confirmation of the construction compound and accommodation camp site at Wentworth and removal of the Anabran South accommodation camp to address concerns raised by TfNSW about road safety;
- a layout amendment for Buronga substation to reduce impacts on a potential archaeological deposit; and

- addition of water supply points, wastewater treatment facilities within the accommodation camps, and two earthwork material sites near Buronga substation to reduce potential traffic movements.

The Department provided the Amendment Report to government agencies for review and comments and made it available on the Department's website. No comments were received from special interest groups or the public. As the development amendments would not increase the impacts of the project as a whole, the Department did not exhibit the Amendment Report.

5.5 Key issues - Agency

Wentworth Shire Council did not object to the project, including the proposed transport route and accommodation camps, and confirmed that it supports the recommended conditions of approval, including the requirement for road dilapidation surveys and maintenance.

Transport for NSW (TfNSW) supports the proposed transport routes, and specified road upgrade and road safety standards that would be required during construction of the development. Given the type of site access points along the project corridor has not been confirmed, TfNSW supports the recommended conditions requiring further assessment and confirmation of road upgrades to be undertaken, and the implementation of a Traffic Management Plan, prior to construction.

The Department's **Biodiversity, Conservation and Science Directorate (BCS)** initially raised concerns with elements of the assessment and impact offset calculations in the Biodiversity Development Assessment Report (BDAR). Following additional assessment, BCS confirmed it was satisfied with the biodiversity methodology and calculation of offsets, and the requirement for TransGrid to develop a Biodiversity Offset Package as required by the recommended conditions of approval.

Heritage NSW raised concerns about the Aboriginal cultural heritage assessment particularly regarding Potential Archaeological Deposits (PADs) as archaeological investigation surveys have not been conducted. Heritage NSW recommended that these surveys and subsurface testing should be completed prior to approval of this project and is further discussed in **section 6.3**. The Department acknowledges that TransGrid has not yet provided the additional subsurface testing and has included recommended conditions of approval developed in consultation with Heritage NSW requiring the additional surveys and subsurface testing of the PADs be completed prior to construction.

The **Heritage Council of NSW (Heritage Council)** initially raised concerns that the heritage assessment did not adequately assess the potential for unidentified archaeological relics. TransGrid provided a revised Heritage Assessment Report and the Heritage Council confirmed it has no residual concerns, subject to TransGrid undertaking further assessment for any areas of disturbance located outside the survey area. The Department has incorporated the Heritage Council's advice in the recommended conditions of approval.

The **Environmental Protection Authority (EPA)** raised no concerns about the development and advised that an environment protection licence under sections 43 and 48 of the *Protection of the Environment Operations Act 1997* (POEO Act) would be required for the Buronga crushing and screening plant under clause 16 of Schedule 1 of the POEO Act.

The Department's **Water Group (DPIE Water)** recommended TransGrid provide confirmation of a secure water supply for the development and recommended the inclusion of a condition requiring geomorphic performance measures and monitoring in the major rivers and the distributary channel network during construction. The Department has incorporated outcomes-based requirements for geomorphology and water supply in its recommended conditions of approval.

WaterNSW requested that measures be implemented to ensure WaterNSW would have continued access to its surface and ground water monitoring sites during works as part of the traffic management plan, which TransGrid has committed to in its EIS.

Department of Primary Industries – Agriculture (DPI Agriculture) confirmed it had no significant concerns, but requested further information about mitigation measures to reduce potential impacts on the small areas of cropping and irrigation land within the site and the implementation of a Construction and Operational Weed and Pest Management Plan. TransGrid addressed these matters in its Submissions Report, and the Department has recommended a condition of approval requiring weed and pest management. DPI Agriculture confirmed it has no residual concerns.

The **Department’s Crown Land Group** (Crown Land) requested confirmation of all Crown land parcels that would be impacted and consideration for the implications on Crown land parcels that may be under application for conversion to freehold title, and provided advice on matters relating to soil, groundwater, dust, water use and native vegetation. TransGrid addressed these matters in its Submissions Report, and the Department has incorporated these requirements into the recommended conditions of approval where appropriate. Crown Land confirmed it has no residual concerns.

Department of Primary Industries – Fisheries (DPI Fisheries) noted that the riparian zones for the Murray River, Darling River and the Great Darling Anabranch require a 100 m buffer zone to be established and maintained, as they are Type 1 fish habitats, and that potential impacts on riparian zones (i.e. removal or trimming of vegetation within the riparian zone) would require a 2:1 habitat offset requirement. The Department has incorporated DPI Fisheries’ requirements into the recommended conditions of approval where appropriate and has no residual concerns.

The **Department of Regional NSW – Minerals, Exploration and Geoscience** (MEG) identified an additional exploration licence application and requested that TransGrid consult with the applicant. MEG subsequently confirmed it is satisfied that the TransGrid has provided sufficient evidence of consultation with the mineral title holders and applicants. MEG also requested that TransGrid consult with MEG prior to securing any land based biodiversity offsets, which TransGrid has committed to do.

Fire & Rescue NSW (FRNSW) and **Rural Fire Service** (RFS) recommended a number of conditions, including the preparation of a comprehensive emergency response plan (ERP) and specific design and operation requirements related to bushfire and hazard preparation and management. The Department has incorporated these requirements into the recommended conditions of approval where appropriate and discussed in **section 6.6**.

The **Murray-Darling Basin Authority (MDBA)** raised no concerns and considers that TransGrid’s proposed mitigation and management measures would adequately address potential water impacts of the development.

5.6 Key Issues – Community

Of the two submissions received from the public, one supported and one objected to the project.

The submission supporting the development noted the benefits of connecting the NSW and SA grid systems.

The submission objecting to the development raised concerns about the following matters:

- hazards and risk – bushfire risks during construction and operation, and impacts from EMF;
- land use and property impacts – impact to agricultural land; and
- development justification – benefits of the development.

Section 6 of this report provides a summary of the Department’s consideration of these matters and recommended conditions.

5.7 Key Issues – Special Interest Groups

APA Group (East Australian Pipeline Pty Ltd) provided comments regarding their existing natural gas infrastructure within Western NSW. The submission identified that the closest natural gas infrastructure to the development (APA's Wagga Wagga to Culcairn pipeline) is not expected to be impacted by the development.

Wentworth Regional Community Project Association Inc. provided comments regarding the potential impact of project related traffic on Renmark Road and requested that Renmark Road be sealed from Wentworth to the South Australian Border.

Restofnsw inc. objected to the project raising concerns about numerous matters, including:

- indicative development design – assessment being based on an indicative development design (particularly on biodiversity and heritage) (see **section 2.2**);
- hazards and risk – bushfire risks during construction and operation (see **section 6.6**);
- land use and property impacts – impact to agricultural land, national parks and conservation areas (see **section 6.6**);
- biodiversity – undertaking assessment during drought conditions, impact assessment of vulnerable species, impact to Mallee vegetation and the proposed offset strategy (see **section 6.2**);
- administrative and process – public exhibition period was inadequate in length and requested a public hearing (see **section 5.1**); and
- heritage – assessment of indicative design and impacts to Sturts Billabong (see **section 6.4**).

Section 6 of this report provides a summary of the Department's consideration of these matters and recommended conditions.

6 Assessment

The Department has undertaken a comprehensive assessment of the merits of the development. This report provides a detailed discussion of the key issues, including social and economic, biodiversity, traffic and transport, heritage and noise.

The Department has also considered the full range of potential impacts associated with the project and has included a summary of its assessment of these matters in **section 6.6**.

The key elements of the project are shown in **Figures 2 to 6**. A list of the key documents that informed the Department's assessment is provided in **Appendix A**.

6.1 Energy Security and Reliability

Project EnergyConnect is consistent with a range of national and state policies, which identify the need for the interconnector between SA and NSW to support energy security and reliability, including the:

- Finkel Review and NSW Government's *Transmission Infrastructure Strategy* - which highlight the need for investment in interconnection between the states;
- *NSW Electricity Strategy* – which supports transmission upgrades in the South-West REZ; and
- *2020 Integrated System Plan (ISP)* – which identifies Project EnergyConnect as a priority transmission project in NSW and SA.

The Department considers that Project EnergyConnect could play an important role in:

- enhancing the capacity of the NEM to provide electricity between SA, NSW and Victoria;
- transporting renewable energy from the South-West REZ to energy consumers;
- facilitating the transition to a lower carbon emissions energy system as coal fired generators retire; and
- lower power prices for residents of NSW and the broader NEM by establishing the ability to transfer power between regions and encourage more efficient investment in lower costs generation sources.

Consequently, the Department considers that an interconnector between SA, NSW and Victoria is critical for energy security and reliability in NSW and would play a critical role in supporting the transition of the energy system, and linking the SA, NSW and Victoria.

While EnergyConnect (West) represents a logical first step in directly linking the SA and NSW energy markets between Chowilla in SA, Buronga in NSW and Red Cliffs in Victoria, it is still important to carefully consider the potential environmental, social and economic impacts of the project (as currently proposed).

6.2 Biodiversity

EnergyConnect (West) has the potential to impact biodiversity values through clearing native vegetation and direct and indirect impacts to listed threatened flora and fauna species and vegetation communities during construction of infrastructure or ongoing management of infrastructure (such as easements).

The project site is mostly comprised of native vegetation with limited scattered areas cleared of native vegetation. Key landscape features within the site are the Great Darling Anabranch, Darling River and Murray River, and the native woodlands are broadly associated with these riverine environments.

The site has been historically used for agricultural purposes such as grazing sheep for wool and meat and cattle grazing (up to 92%) and limited dryland cereal cropping (4%). These activities have somewhat degraded

areas of the development site, however, most of the native vegetation in the site is in moderate to good condition, the majority of which is grassland or shrubland.

One community submission expressed concern about the biodiversity assessment being undertaken during drought conditions, the impact assessment of vulnerable species, and the impacts to Mallee vegetation. TransGrid has worked with BCS to determine an appropriate means to characterise, assess impacts associated with the project and the Department and BCS are satisfied that the impacts have been characterised in accordance with the relevant guidelines (discussed below). The submission also expressed concern about the proposed biodiversity offset strategy and this is discussed further below.

Avoidance and Mitigation

TransGrid has designed the development to avoid and minimise impacts on high quality vegetation and habitat, including:

- co-locating sections of the transmission line corridor with existing infrastructure where native vegetation and species habitat is in the poorest condition;
- re-locating the corridor to avoid impacts on the BC Act listed critically endangered and endangered flora species;
- using existing access tracks where possible to minimise vegetation clearing;
- using Renmark Road where it is adjacent to the transmission line to reduce the need for new longitudinal access tracks along the corridor;
- reducing the construction footprint of the proposed transmission towers, as identified in the Amendment Report;
- following advice from BCS, revising the vegetation clearing requirements within the easement by increasing the height of tree trimming from 2 m within entire easement, to 4 m and 10 m.

During detailed design, TransGrid also proposes to further avoid and minimise impacts on biodiversity values through siting of the transmission line structures, brake/winch sites and access tracks to avoid higher quality native vegetation and habitat.

Native Vegetation

The indicative development footprint (1,189 ha total area) would disturb around 643 ha of native vegetation, comprising 540 ha of vegetation in moderate to good condition and 103 ha of cultivated or degraded derived native grassland (DNG).

Of the 540 ha of moderate to good quality vegetation, about 98 ha is riverine woodlands and 0.5 ha is wetlands associated with the Great Darling Anabranch, Darling River and Murray River, about 19 ha of which is *Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW Southwestern Slopes bioregions* listed as endangered under the BC Act. The remainder of moderate to good quality vegetation is arid and semi-arid woodlands/shrublands spread throughout the site. No other endangered communities listed under the BC Act were recorded and no threatened ecological communities listed under the EPBC Act were recorded.

Table 2 provides a summary of the 23 vegetation types that would be impacted by the indicative development design, as well as the ecosystem credit liability under the *NSW Biodiversity Offset Scheme*. The 103 ha of DNG is not included in this table as it is significantly degraded and does not require offsets.

Of the 540 ha of moderate to good quality native vegetation to be disturbed, about 298 ha would be completely cleared (disturbance area A). About 240 ha would be partially impacted (disturbance area B) where the area within the transmission line easement and in between transmission towers would require taller trees to be trimmed so they do not fall onto the transmission lines.

TransGrid has worked with BCS to determine an appropriate means to characterise, assess and offset the partial impacts associated with the transmission line easement. In summary these impacts are proposed to be (see **Figure 7**):

- for the 330 kV line (80 m wide easement) disturbance area B would typically include:
 - a 40 m wide inner maintenance zone, where vegetation above 4 m high would be trimmed (identified as disturbance area B4),
 - a 10 m wide outer maintenance zone (either side of the inner zone) where vegetation above 10 m in height would be trimmed (identified as disturbance area B10); and
 - complete removal of any hazard/high risk trees within the easement.
- the same principle would apply to the 220 kV line, which has narrower easement width (50 m).

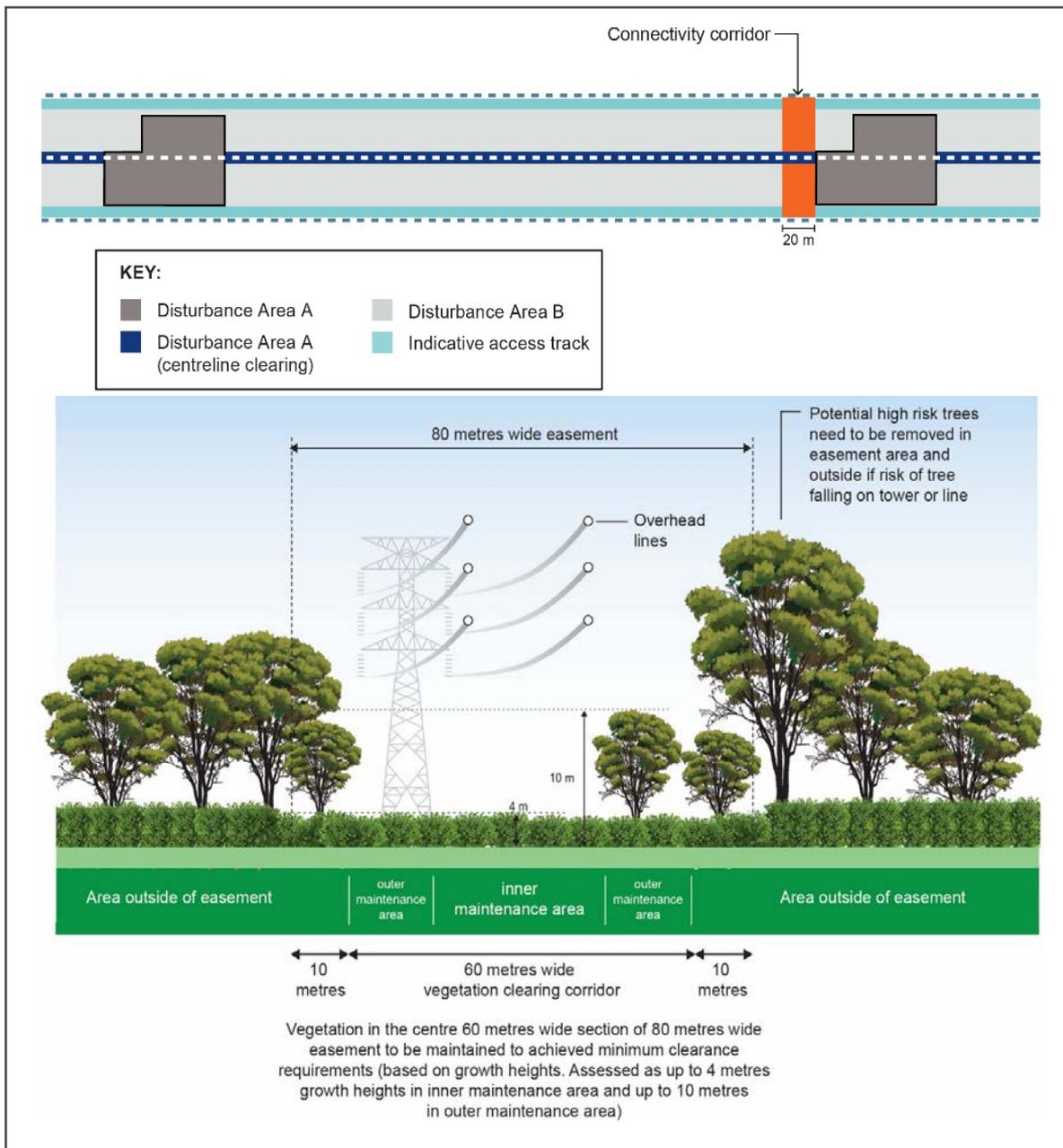


Figure 7 | Vegetation disturbance areas

Table 2 | Native vegetation impacts – Moderate to good condition

Vegetation Community	Disturbance Area (ha)			Total Impact (ha)	Ecosystem Credit Liability
	A ¹	B4 ²	B10 ³		
PCT 19 – Cypress Pine woodland of source-bordering dunes mainly on the Murray and Murrumbidgee River floodplains ⁴	1.7	0.7	0.5	2.9	58
PCT 21 – Slender Cypress Pine – Sugarwood – Western Rosewood open woodland on sandy rises mainly in the Riverina Bioregion and Murray Darling Depression Bioregion ⁴	11.8	2.8	2.1	16.7	469
PCT 11 – River Red Gum – Lignum very tall open forest or woodland wetland on floodplains of semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	0.4	0.6	0.3	1.3	23
PCT 13 – Black Box – Lignum woodland wetland of the inner floodplains in the semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	3.5	2.9	0.7	7.1	164
PCT 15 – Black Box open woodland wetland with chenopod understorey mainly on the outer floodplains in southwestern NSW (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	33.6	32.8	23.6	90.0	1,922
PCT 17 – Lignum shrubland wetland of the semi-arid (warm) plains (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	0.01	0.0	0.0	0.01	1
PCT 58 – Black Oak – Western Rosewood open woodland on deep sandy loams mainly in the Murray Darling Depression Bioregion	52.6	41.1	26.6	120.3	2,228
PCT 63 – Spiny Lignum – Slender Glasswort open forbland saline wetland on lake edges in the semi-arid and arid climate zones	0.6	0.0	0.0	0.6	8
PCT 139 – Prickly Wattle tall open shrubland of dunes and sandplains of semi-arid and arid regions	1.0	0.5	0.0	1.5	35
PCT 143 – Narrow-leaved Hopbush – Scrub Turpentine – Senna shrubland on semi-arid and arid sandplains and dunes	1.4	0.0	0.0	1.4	49
PCT 153 – Black Bluebush low open shrubland of the alluvial plains and sandplains of the arid and semi-arid zones	69.0	0.0	0.0	69.0	1,527
PCT 154 – Pearl Bluebush low open shrubland of the arid and semi-arid plains	9.2	0.0	0.0	9.2	252
PCT 157 – Bladder Saltbush shrubland on alluvial plains in the semi-arid (warm) zone including Riverina Bioregion	7.9	0.0	0.0	7.9	316
PCT 159 – Old Man Saltbush shrubland mainly of the semi-arid (warm) climate zone (southwestern NSW)	0.9	0.0	0.0	0.9	45
PCT 163 – Dillon Bush (Nitrate Bush) shrubland of the semi-arid and arid zones	2.1	0.0	0.0	2.1	70
PCT 166 – Disturbed annual saltbush forbland on clay plains and inundation zones mainly of southwestern NSW	4.6	0.0	0.0	4.6	126
PCT 170 – Chenopod sandplain mallee woodland/shrubland of the arid and semi-arid (warm) zones	63.7	68.8	0.0	132.5	2,151

Vegetation Community	Disturbance Area (ha)			Total Impact (ha)	Ecosystem Credit Liability
	A ¹	B4 ²	B10 ³		
PCT 171 – Spinifex linear dune mallee mainly of the Murray Darling Depression Bioregion	17.5	22.8	0.0	40.3	791
PCT 172 – Deep sand mallee of irregular dunefields of the semiarid (warm) zone	8.1	12.4	0.0	20.5	317
PCT 216 – Black Roly Poly low open shrubland of the Riverina Bioregion and Murray Darling Depression Bioregion	0.8	0.0	0.0	0.8	21
PCT 221 – Black Oak – Pearl Bluebush open woodland of the sandplains of the semi-arid warm and arid climate zones	1.7	1.1	0.9	3.7	58
PCT 252 – Sugarwood open woodland of the inland plains mainly Murray Darling Depression Bioregion	1.1	0.9	0.0	2.0	20
PCT 253 – Gypseous shrubland on rises in the semi-arid and arid plains	4.6	0.0	0.0	4.6	64
Total	297.7	187.4	54.7	539.8	10,715

¹ Full vegetation clearance

² Partial clearance of vegetation greater than 4 m in height

³ Partial clearance of vegetation greater than 10 m in height

⁴ PCT19 and PCT21 meet the criteria for Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW Southwestern Slopes bioregions listed as endangered under the BC Act

Flora Impacts

The development has the potential to affect flora species listed under the BC Act and EPBC Act through direct loss from vegetation clearing, and from indirect impacts.

Twenty candidate threatened flora species were identified as having potential to occur within the development site and were the subject of targeted surveys. Of these, five threatened flora species listed under the BC Act were identified during the site surveys, one of which is also listed as vulnerable under the EPBC Act. The Department notes that TransGrid amended the project to relocate the project corridor from the southern side of Renmark Road to the northern side of Renmark Road to avoid impacts on the critically endangered flora species *Dodonaea stenozyga* (Desert Hopbush).

Table 3 details the impacts and species credit offset requirements for threatened flora species identified to be impacted by the project.

Table 3 | Threatened flora species impacts

Species	Conservation Significance		Impact	Species Credit Liability
	BC Act	EPBC Act		
<i>Acacia acanthoclada</i> (Harrow Wattle)	Endangered	-	0.04 ha	1
<i>Atriplex infrequens</i> (A saltbush)	Vulnerable	Vulnerable	0.32 ha	13
<i>Austrostipa nullanulla</i> (A spear-grass)	Endangered	-	1.51 ha	37
<i>Santalum murrayanum</i> (Bitter Quandong)	Endangered	-	14 individuals	28
Total				79

Fauna Impacts

The development has the potential to affect fauna through direct habitat loss from vegetation clearing, and indirectly due to the potential for avifauna to collide with the transmission lines and from electric and magnetic fields (EMF) for birds nesting in the transmission towers.

Direct impacts resulting from the indicative development footprint include loss of habitat for 60 threatened fauna species identified or predicted to occur as ecosystem credit species. Potential impacts on these species would be offset via the ecosystem credit offsets detailed in **Table 3** above.

Eighteen candidate threatened fauna species were considered to have potential habitat within the development site and were the subject of targeted surveys. Of these, one species (Regent Parrot (eastern subspecies)) listed under the BC Act and the EPBC Act was identified during the site surveys. **Table 4** details the impacts and species credit offset requirements for this species.

In response to concerns raised by BCS, TransGrid revised its BDAR to include offsets and additional mitigation measures to monitor and minimise the potential impacts associated with line strike and EMF impacts. **Table 4** details the impacts and species credit offset requirements for five species that may be impacted, determined in consultation with BCS.

In addition to offsetting the indirect impacts, TransGrid has committed to install line markers to minimise the risk of birds colliding with the transmission lines, and separately proposes to undertake a two year bird impact monitoring program and contribution for one off payment of \$150,000 into research on the risk from transmission line EMF on bird species in Australia.

Table 4 | Threatened fauna species - Direct and indirect impacts

Species	Conservation Significance		Impact on habitat (ha)		Species Credit Liability
	BC Act	EPBC Act	Direct	Indirect	
<i>Polytelis anthopeplus monarchoides</i> (Regent Parrot (eastern subspecies))	Endangered	Vulnerable	6.91	8.89	485
<i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)	Vulnerable	-	-	8.89	286
<i>Hamirostra melanosternon</i> (Black-breasted Buzzard)	Vulnerable	-	-	8.89	213
<i>Hieraaetus morphnoides</i> (Little Eagle)	Vulnerable	-	-	8.89	213
<i>Lophochroa leadbeateri</i> (Major Mitchell's Cockatoo)	Vulnerable	-	-	8.89	286
				Total	1,483

Significance of Impacts on Threatened Species and Communities

TransGrid identified and addressed all threatened species and communities included in the Commonwealth Referral Decision (EPBC 2020/8673) (Referral Decision).

Assessments of significance were undertaken for threatened species and communities that were recorded during field surveys or were identified as having a moderate or higher potential to occur on the site, including:

- one flora species – *Atriplex infrequens* (A saltbush);

- fifteen fauna species – Southern Bell Frog, Australasian Bittern, Red Knot, Grey Falcon, Squatter Pigeon, Painted Honeyeater, White-throated Needle-tail, Swift Parrot, Malleefowl, Bar-tailed Godwit, Black-eared Miner, Red-lored Whistler, Regent Parrot (eastern subspecies), Australian Painted Snipe and Corben's Long-eared Bat; and
- three aquatic species – Silver Perch, Murray Hardyhead, Murray Cod.

Assessments of significance concluded that there would be no significant impact on any threatened species or communities.

The Department has undertaken a detailed consideration of Commonwealth matters in consultation with DAWE, including consideration of TransGrid's assessments of significance and the relevant approved conservation advice, recovery plans and threat abatement plans (TAPs). A summary of this assessment is provided in **Appendix I**.

Biodiversity Offset

Under the BC Act, the impact on native vegetation and species would generate 10,715 ecosystem credits and 1,562 species credits for flora and fauna species.

Table 3 and **Table 4** summarise the estimated biodiversity credit and offset requirements under the *NSW Biodiversity Offset Scheme* for the development.

Both the Department and BCS are satisfied that the offset credit requirements have been correctly calculated, noting that these credits would need to be re-calculated once the final layout design of the development is known in order to confirm the final number and class of biodiversity credits required to be offset and there is an opportunity for TransGrid to minimise the clearing in the detailed design and therefore further reduce offset liability.

The Department notes that with further avoidance measures during detailed design, the number and class of credits required to be offset is likely to be lower than the calculations presented above.

TransGrid would offset the residual biodiversity impacts of the project in accordance with the *NSW Biodiversity Offset Scheme*, which includes the following options:

- acquiring or retiring 'biodiversity credits' within the meaning of the BC Act;
- making payments into an offset fund that has been developed by the NSW Government; or
- funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the *NSW Biodiversity Offsets Scheme*.

The Department notes that TransGrid has proposed a range of options including securing land based offsets and pay into the offset fund for the residual credits that cannot be offset through the land based offsets.

TransGrid has advised the Department that it intends to establish land-based stewardship sites, and has identified three candidate sites. TransGrid is finalising the survey of two sites in accordance with the Biodiversity Assessment Method and is in the process of purchasing each. TransGrid has commenced surveying the third site in accordance with the Biodiversity Assessment Method and is negotiating with the landholder. TransGrid aims to establish all three sites as land-based stewardship sites and purchase residual existing credits (if available) or payment into the Biodiversity Conservation Fund.

The Department has recommended conditions requiring TransGrid to develop a Biodiversity Offset Package in consultation with BCS prior to carrying out any development that could impacting biodiversity values. The Biodiversity Offset Package would include:

- details of the specific biodiversity offset measures to be implemented and delivered; and
- the timing and responsibilities for the implementation of the actions.

As security that the impacts would be offset, prior to impacting biodiversity values, TransGrid would establish an escrow account (a third party account where an asset is held until certain requirements are met) for the amount calculated by the Biodiversity Offset Payment Calculator (as at 29 July 2021) for the credit liability identified in the EIS which correlates to \$48 million. If TransGrid fails to implement the Biodiversity Offset Package, this security would be used to make an equivalent payment into the Biodiversity Conservation Fund.

This approach also provides an incentive to TransGrid to avoid and minimise impacts on biodiversity values through the detailed design process to limit the offset liability for the development. Subject to the recommended conditions, the Department and BCS are satisfied that the project could be undertaken in a manner that improves, or at least maintains, the biodiversity values of the locality over the medium to long term.

Recommended Conditions

The Department has recommended conditions requiring TransGrid to:

- minimise the clearing of native vegetation and key fauna habitat, including hollow bearing trees, within the development footprint and protect native vegetation and key fauna habitat outside the approved disturbance area in accordance with limits in the recommended conditions;
- prepare and implement the Biodiversity Management Plan which should include the description of the measures:
 - minimise the potential indirect impacts on threatened flora and fauna species, migratory species and 'at risk' species;
 - rehabilitate and revegetate temporary disturbance areas and maximise the salvage of resources within the approved disturbance area for beneficial reuse (such as fauna habitat enhancement) during the rehabilitation and revegetation of the site;
 - control weeds and feral pests;
 - monitor and minimise bird and bat strike impacts during operations;
 - provide details of a two-year bird impact monitoring program; and
 - provide a detailed program to monitor and report on the effectiveness of these measures.

Conclusion

Overall, the Department considers that the biodiversity impacts of the project would not be significant, subject to further minimisation of the impacts during the detailed design stage of the project, a range of mitigation and adaptive management measures, and by offsetting the residual biodiversity impacts of the project.

With the implementation of all of these measures, the Department and BCS are satisfied that the project is unlikely to result in a significant impact on the biodiversity values of the locality over the medium to long term.

6.3 Traffic and Transport

Introduction

Construction of the project involves the delivery of plant, equipment and materials including the movement of over-dimensional and heavy vehicles, which has the potential to impact on the local and regional road network.

TransGrid commissioned WSP Australia to undertake a Traffic Impact Assessment (TIA), which accompanied the EIS. In response to submissions received from Council, TfNSW and Wentworth Regional Community Project Association Inc, and from requests for further information by the Department during its detailed assessment, TransGrid supplemented its TIA with an Amendment Report, addendum TIA and additional information provided to the Department during its assessment.

The project amendments included removing the Anabran South accommodation camp (which addressed TfNSW’s concerns regarding access from the Silver City Highway), confirming the location of the Wentworth construction compound and accommodation camp, specifying construction water supply point locations and associated water supply routes, adding secondary access routes and increasing the number of construction vehicles movements.

Transport Route and Site Access

TransGrid has identified the primary access route that would be utilised by construction traffic moving between construction compounds and camp locations and access points to the site. TransGrid provided a detailed assessment of the impacts along this route, which would accommodate around 80% of the project related traffic, including all over-dimensional vehicles.

In addition, TransGrid has identified secondary and water supply access routes that would assist in accessing construction areas and deliver water between the water supply points and construction locations along the corridor. These routes would be used for short durations during construction.

The proposed access routes are shown on **Figure 8** and listed in **Table 5**.

Table 5 | Roads along access routes

Access Route	Roads
Primary access route	Silver City Highway (B79), Sturt Highway (A20), Arumpo Road, Renmark Road and Pooncarie Road/Wentworth Street
Secondary access route	Wentworth Street, Pooncarie Road, Anabran Mail Road, Milpara Road, High Darling Road, Low Darling Road, Red Hill Road and Dansons Road
Water supply route	Alcheringa Drive, Corbett Avenue, Fletchers Lake Road, Pooncarie Road, River Drive, Sandwyck Street, Beverly Street, Arthur Street Arthur Street, Oxley Road, Pomona Road, Red Hill Road, High Darling Road and Low Darling Road

The exact location of the site access points from both routes would be confirmed during detailed design in consultation with TfNSW and Council.

Although the recommended conditions of approval require all vehicles related to the development to travel to site via the nominated transport route, this does not preclude TransGrid from requesting approval for vehicles to access the site via the secondary access routes, subject to further assessment in consultation with TfNSW and Council.

The Department has recommended conditions of approval nominating transport routes and confirming the exact location of the site access points from the primary route following detailed design and with further assessment in consultation with TfNSW and Council.

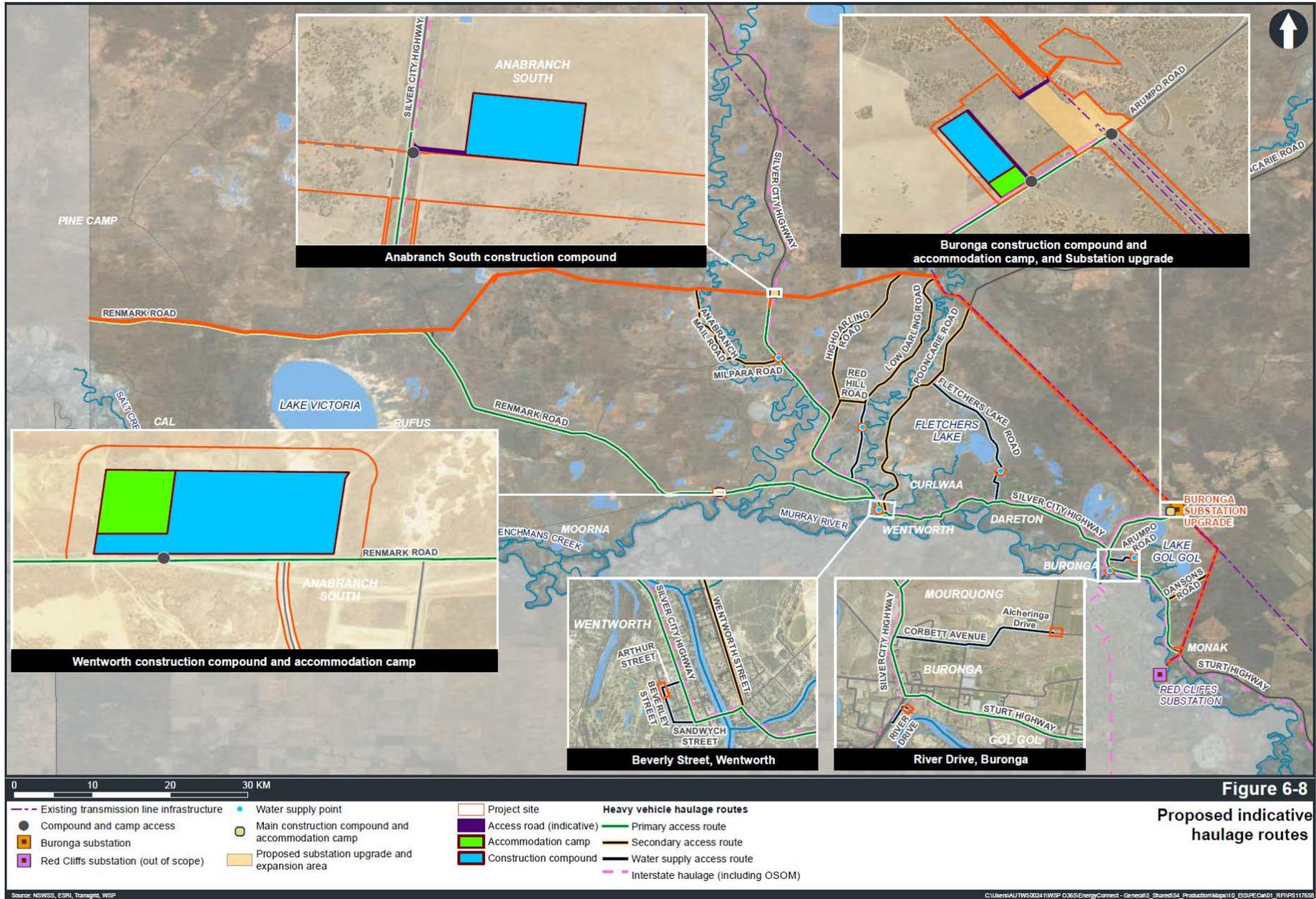


Figure 8 | Transport access routes

Traffic Volumes

Construction

The transport assessment identified the over-dimensional, heavy and light vehicle transport requirements, including the vehicle type and the number that would be required to transport all infrastructure components to the development site. The estimated peak and average daily vehicle movements (i.e. two-way trips) during construction are shown in **Table 6**.

Over-dimensional vehicles (i.e. up to 20) are included in the heavy vehicle movements for the primary access route provided in **Table 6**. TransGrid advised that the over-dimensional movements would be spread throughout the construction duration for logistical reasons.

Table 6 | Traffic generation summary

Access Route	Heavy vehicles		Light vehicles	
	Average daily	Peak daily	Average daily	Peak daily
Primary	280	400	280	500
Secondary	25	100	60	100
Water Supply	30	40	NA	NA
TOTAL	335	540	340	600

The traffic generation was conservatively estimated assuming that all three access routes are used for the whole period of construction (24 months for construction and upgrade of transmission lines and 36 months for upgrade of Buronga substation). However, the volume of construction traffic would vary over the construction period and the daily vehicle movements would depend on the construction activities occurring at the time.

The secondary route would only be used where access points on the primary route are located considerable distance away from certain sections of the project corridor or where the waterways prevent access to the project using the primary route. TransGrid estimated that the overall duration of use of the secondary access route would be less than one year over the full duration of construction. Peak construction traffic volumes along the secondary route would occur during discrete construction activities (for example concrete deliveries for transmission tower foundations).

Additionally, TransGrid advised that not all identified water supply points would be used with the same frequency over the full duration of construction. The use of the water supply points would vary depending on the location of construction activities along the project corridor and only nearest suitable water supply points would be used at a time.

Operation

TransGrid advised that the worst-case workforce required during ongoing operation of the project would occur during site maintenance and monitoring activities (once a year) and would require up to 50 personnel operating concurrently. It is anticipated that this workforce would travel by light vehicles (i.e. up to 50 vehicle movements per day). This is a conservative estimation and normal operation activities would require fewer vehicle movements on a daily basis.

Depending on the activity, vehicles would travel to the site along Sturt Highway, Silver City Highway, Renmark Road and Arumpo Road. This additional traffic from light vehicles during the operational and maintenance phase would have a negligible impact on the local roads.

Over-dimensional Vehicles

Over-dimensional vehicles would deliver large scale infrastructure to the Buronga construction compound from the ports (determined during detailed design) within Adelaide, Melbourne, Sydney, Wollongong and Newcastle. However, TransGrid advised that an assessment was based on the preferred route from the Port of Adelaide via Broken Hill along Silver City Highway and identified that construction traffic impacts would be minimal without requiring any adjustments to the road network. The Silver City Highway (from the north via Broken Hill) and Arumpo Road would be the only roads in the local area used by over-dimensional vehicles (see **Figure 11**). Up to 20 over-dimensional vehicles would be required for the project.

If large scale equipment originates from any other major port, TransGrid has committed to complete detailed route assessments in consultation with TfNSW to ensure access via these routes is feasible. Any routes that would require upgrades would not be selected.

Road crossings

Stringing of the transmission lines over several roads will occur (Pine Camp Road, Nulla Road Anabranche Mail Road, Silver City Highway (central section), High Darling Road, Low Darling Road, Pooncarie Road, Arumpo Road, Dansons Road, Silver City Highway (eastern section)).

Stringing the transmission lines over each road would require eight separate road closures (lasting approximately 5 to 15 minutes) over a period of three to four days.

The transmission lines would also need to be tensioned. As this would occur at height (9 m) no additional road closures would be required. However, traffic speeds would be reduced as a precaution. All stringing across roads would occur in consultation with the relevant road authority and in accordance with a road occupancy licence as required.

Road Upgrades and Maintenance

TransGrid has identified 99 potential access points along the project corridor, of which 86 would be newly constructed and 13 existing ones would require upgrades. The Department has recommended conditions of approval requiring TransGrid prepare a Traffic Strategy to confirm the type and location of these upgrades, in consultation with the relevant road authorities.

The Department has recommended a condition requiring TransGrid to prepare a Traffic Strategy prior to the use of the secondary and water supply routes, including further assessments and identification of the locations of any necessary upgrades along those routes.

TfNSW and Council support the proposed transport routes, subject to the recommended conditions requiring further assessment and road upgrades to be undertaken to support the increased traffic associated with the development, regular road maintenance, and the implementation of a Traffic Management Plan, including standard traffic control measures and a driver's code of conduct.

The Department has recommended conditions requiring TransGrid to regularly maintain all roads along the transport route and pay the full cost associated with repairing any damage to the road network caused by any development-related traffic.

Recommended Conditions

The Department has recommended conditions requiring TransGrid to:

- prepare a detailed Traffic Strategy in consultation with the relevant roads authorities;
- undertake all necessary road upgrades for the development to the standard and satisfaction of the relevant roads authority prior to commencing construction;
- undertake dilapidation surveys of the relevant local roads along the transport routes prior to construction, upgrade and decommissioning, on an annual basis during construction, within one month of the completion of the constructions, upgrade and decommissioning and repairing any damage resulting from construction traffic; and
- prepare a detailed Traffic Management Plan in consultation with the relevant roads authorities, that includes provision for:
 - temporary traffic controls, including detours and signage;
 - notifying the local community about development-related traffic impacts;
 - minimising potential for conflicts with school buses routes, in consultation with local schools, and stock movements;
 - implementing measures to minimise development-related traffic on the public road network outside of standard construction hours;
 - responding to any emergency repair or maintenance requirements during construction and/or decommissioning;
 - a traffic management system for managing over-dimensional vehicles; and
 - a driver's code of conduct that addresses travelling speeds, fatigue management and procedures to ensure that drivers implement safe driving practices.

Conclusion

With suitable road upgrades, regular road maintenance, and the implementation of a detailed Traffic Management Plan, the Department is satisfied that the development would not result in unacceptable impacts on the capacity, efficiency or safety of the road network, which is supported by TfNSW and Council.

Subject to the recommended conditions, the Department is satisfied that the development would not result in unacceptable impacts on the capacity, efficiency or safety of the road network.

6.4 Aboriginal Heritage

EnergyConnect (West) has the potential to impact Aboriginal heritage values through ground disturbance during construction of transmission lines and ancillary infrastructure or ongoing management of infrastructure (such as easements). It also has the potential to impact historic heritage values where it potentially impacts or is in proximity to listed items. TransGrid's initial route analysis sought to avoid heritage constraints, including known / recorded sites and places of Aboriginal heritage significance, areas of Aboriginal cultural significance (including ceremonial sites) and sites on the Aboriginal heritage information management system (AHIMS).

In particular, the proposed corridor has been located to the north of Renmark Road to avoid direct impacts and minimise indirect visual impacts on Lake Victoria, an area of Aboriginal cultural significance that has numerous known Aboriginal heritage sites.

The Aboriginal Cultural Heritage Assessment (ACHA) identified 131 previously unrecorded Aboriginal heritage sites and 28 potential archaeological deposits (PADs) within the development survey area. The development survey area for heritage comprised a larger corridor (100 m wide) encompassing the full length of the transmission line corridor (with the exception of an 4.7 km section near the Buronga substation where TransGrid was unable to gain access), the Buronga Substation upgrade and associated works, and the accommodation camps and construction compounds, with some broader sections where construction facilities are proposed or design options are likely.

A desktop assessment was undertaken for the remainder of the development site, including the seven potential water supply points. Additional site surveys would be undertaken in consultation with Registered Aboriginal Parties (RAPs) to account for any additional disturbance confirmed during detailed design.

Transmission Line

The indicative transmission line footprint (60 m wide) would impact up to 77 Aboriginal heritage sites (artefacts, shell middens, hearths and scarred trees), 25 potential PADs and two sites (artefacts) previously recorded on the Aboriginal Heritage Information Management System (AHIMS). The level of impact (direct or partial) would depend on the location of final footprint of the transmission line and whether sites are located within disturbance area A (cleared) or B (partial impact) and is summarised as follows:

- disturbance area A:
 - for areas of full ground disturbance from the transmission line towers, brake/winch sites, access tracks and centreline clearing: direct impacts on 16 sites of low (2) to moderate (9) significance, five scarred trees and one AHIMS site of low significance;
 - for centreline clearing (i.e. areas between the proposed transmission towers where the vegetation would be removed to ground, however topsoil and ground material would be retained and not require sub-surface impacts): potential direct impacts on 13 sites of low (4) to moderate (5) significance and four scarred trees;
- disturbance area B:
 - for areas between and around transmission towers where only vegetation trimming would be required to meet the vegetation clearance heights of 4 m; ground disturbance may occur where tree removal is required because it has the potential to exceed vegetation clearance heights: potential direct impact on 38 sites of low (13) to moderate (17) significance and eight scarred trees;
- disturbance area A centreline and B (i.e. partial disturbance due to vegetation maintenance within the transmission line easement): potential direct impacts on 7 sites of low (2) to moderate (5); and
- disturbance area A and B: direct and/or partial impacts on 3 sites of moderate significance and 25 PADs that extend across both areas.

The transmission line corridor would pass through the central portion of the curtilage of Sturts Billabong, which is an Aboriginal burial site situated on the banks of the Darling River. The development would not directly impact any of the features of significance to this item (landscape or mature trees), including the River Redgums.

During detailed design including refining the location of transmission infrastructure and tower structures, TransGrid committed to prioritise the avoidance and minimisation of impacts on all sites of moderate and high significance and all PADs. TransGrid considered that the area of impact could be reduced and undertaking subsurface testing after detailed design would avoid unnecessarily impacting a larger area or areas that ultimately may not fall within the project disturbance area. On this basis, TransGrid proposed to confirm the significance of the PADs via subsurface testing once the alignment and design of the transmission line was further refined. The results of test excavations would allow for identification of further mitigation measures (i.e. the need for avoidance or salvage) in consultation with the RAPs.

Heritage NSW expressed concern with this approach and considers that subsurface testing in consultation with RAPs should be undertaken prior to determination of the development to inform assessment and design and for RAPs to provide informed advice on the Aboriginal cultural heritage values associated with the development. However, as noted in **section 6.1**, the Department recognises that the assessment approach on large infrastructure projects includes a project corridor and indicative alignment that is refined in detailed design. The RAPs did not raise concern with the EIS, however did request further surveys be undertaken and asked to be kept informed of progress.

The Department has recommended conditions of consent in consultation with Heritage NSW requiring TransGrid to undertake the subsurface testing of the PADs prior to commencing construction, identifying measures to avoid or salvage and detailed justification where the final transmission line alignment is not able to avoid impacts to heritage items.

Ancillary Infrastructure

TransGrid identified three previously unrecorded Aboriginal heritage items and one potential archaeological deposits (PADs) within the Buronga substation upgrade and all construction compounds and accommodation camps. Following exhibition, TransGrid amended the development to avoid impacts on one PAD (PEC-W-PAD27) located adjacent to the Buronga substation and two sites of low significance that would have been impacted by the Anabran South accommodation camp (PEC-W-74 and PEC-W-76). One site of low significance (PEC-W-75) would be impacted by the Anabran South construction compound. PEC-W-75 would be salvaged and relocated to an appropriate storage location in consultation with RAPs. The Department has recommended conditions requiring TransGrid to avoid impacts on PEC-W-PAD27, PEC-W-74 and PEC-W-76 and salvage PEC-W-75.

The potential water supply points located at Alcheringa Road, Fletchers Drive and Milpara Road would require installation of new standpipes and connection to existing water supply pipelines resulting in minor ground disturbance. Desktop assessment confirmed that the potential for archaeological items to be present at these locations ranges from low to moderate/high. The water supply point associated with the Wentworth construction compound would require a new pipeline extending 400 m from the Fort Courage Caravan Park. Desktop assessment confirmed that there is low potential for archaeological items to be present at this location.

The location of site access points would depend on the final location of the transmission line towers, which would be confirmed during detailed design. TransGrid would complete a full archaeological assessment in consultation with RAPs prior to confirming the location of the site access points and water supply points would be used.

Recommended Conditions

To address concerns raised by Heritage NSW and to ensure TransGrid undertakes a full assessment of impacts on Aboriginal cultural heritage in consultation with RAPs, the Department has recommended the following conditions:

- provide an Aboriginal Cultural Heritage Strategy prepared in consultation with RAPs and Heritage NSW, including additional site surveys for areas identified to be disturbed by the final development design and measures to avoid and minimise impacts on heritage items and PADs;
- undertake subsurface testing to confirm the significance of the PADs anticipated to be impacted by the refined transmission line design and identify further mitigation measures (i.e. the need for avoidance or salvage) in consultation with the RAPs and Heritage NSW;
- undertake an Aboriginal heritage survey in consultation with RAPs where ground disturbance activities are required outside of the heritage survey area; and
- avoid, salvage or relocate impacts on items identified in the assessments;
- during detailed design, implement all reasonable and feasible measures to avoid and minimise impacts on Aboriginal sites and PADs identified in the ACHA; and
- prepare and implement an Aboriginal Cultural Heritage Management Plan, in consultation with Aboriginal stakeholders.

6.5 Noise

The development site is located in a rural environment where background noise levels of less than 30 dB(A) during calm weather conditions are typical for such rural settings in the absence of other industrial, rail and road noise. Noise impacts of the project would largely be restricted to the construction period of the transmission line infrastructure, and the upgrade of the Buronga substation. There is the potential for some operational noise impacts on nearby residences, including corona discharge during wet weather events.

The EIS includes a noise impact assessment prepared by WSP Australia (WSP) in accordance with the applicable guidelines. Additionally, TransGrid provided further details on the noise impacts and proposed mitigation measures in the Amendment Report and additional information during the Department's assessment.

Construction Noise

The construction period would be up to 24 months for the transmission line and 36 months for the Buronga Substation upgrade.

There would be eight construction stages during the 24-month construction period, with each stage typically lasting between two to four months. The predicted noise levels at each impacted residence would depend on the construction stage, with the higher noise levels attributed to works undertaken during the site establishment stage (~3 weeks) and earthworks and civil works stage (~4 weeks).

The noise assessment indicates that construction-related noise would not exceed the 'highly noise affected' criterion of 75 dB(A) as specified in the EPA's *Interim Construction Noise Guideline (2009)* (ICNG) for all residences during standard construction hours (i.e. 7 am to 6 pm Monday to Friday, and 8 am to 1 pm Saturday).

No residences are predicted to experience noise levels above the 'noise affected' criterion of 45 dB(A) during construction of the Buronga substation given the closest residence is 2 km from the substation.

During construction of the Wentworth construction compound and accommodation camp (8 week duration), three non-associated receivers (two residences and the Fort Courage Caravan Park) are predicted to experience noise levels up 3 dB(A) above the 'noise affected' criterion of 45 dB(A) during standard construction hours.

During construction of the transmission line, five residences are predicted to experience noise levels above the 'noise affected' criterion of 45 dB(A) during standard construction hours.

In total, there are five residences with predicted exceedances of the 'noise affected' criterion:

- R2022 with noise levels between 55 – 71 dB(A) during all construction stages;
- R1489 with noise levels between 49 – 65 dB(A) during all construction stages;
- R2023 with noise levels between 49 – 61 dB(A) during seven construction stages;
- R1965 with noise levels of 48 and 50 dB(A) during two construction stages; and
- R3385 with noise levels of 46 and 48 dB(A) during two construction stages.

The Department notes that the noise assessment is conservative as it assumes that the transmission towers would be located in the closest possible proximity to residences and all plant and equipment being used concurrently.

As the construction works at each tower would be short-term and intermittent during the 24 month construction period, the Department accepts that the proposed construction activities are unlikely to result in significant adverse impacts during daytime hours at the majority of residential receivers and consequently has recommended conditions restricting works to standard construction hours (i.e. 7 am to 6 pm Monday to Friday, and 8 am to 1 pm Saturday) with no works permitted on Sundays or NSW public holidays.

However, the Department acknowledges that there may be some instances where construction activities may be required to occur outside of standard hours, including activities such as transmission line construction across a main road, emergency works, or where agreement is reached with affected receivers. The Department has recommended conditions allowing these activities to be undertaken with the agreement of the Secretary and the approval and implementation of an Out of Hours Work Protocol.

The Department has also recommended conditions requiring TransGrid to minimise noise during construction by implementing noise mitigation measures set out in the ICNG, including scheduling activities to minimise noise, using quieter equipment, consulting with affected residences prior to undertaking noisy construction works and establishing a complaint handling procedure.

Construction Vibration

The noise assessments also considered vibration impacts from construction with reference to *Assessing Vibration: A Technical Guideline* (DECC, 2006). The assessments found that the distances required to achieve the construction vibration criteria provided in the Technical Guideline between the source of vibration and the receiver are in the order of 20 m to 100 m, with vibration from construction activities unlikely to be detectable to humans at a distance of 100 m.

As the proposed construction activities would be over 100 m from the closest residence, construction activities would comply with the relevant construction vibration criteria. Notwithstanding, the Department

has recommended conditions requiring TransGrid to implement all reasonable and feasible steps to minimise construction vibration generated by the development.

Construction Blasting

Depending on geotechnical conditions, blasting may be required during construction of the Buronga substation upgrade. If blasting is required, TransGrid has committed to undertake a blasting vibration and overpressure assessment with regard to the *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (ANZECC, 1990)* to demonstrate that blasting would not exceed noise and vibration limits at residences or other sensitive receivers.

TransGrid has also committed to prepare a blast management strategy detailing the measures that would be implemented to ensure blasting complies with relevant limits, as well as detailing the notification requirements for nearby residences. To strengthen these commitments, the Department has recommended conditions on blasting, including strict criteria for airblast overpressure and allowable exceedances for any blasting carried out for the project.

Given the closest residence is 2 km from the Buronga substation, the Department considers the risk of blasting impacts to be minimal. Notwithstanding, the Department has recommended a condition requiring TransGrid to comply with blasting limits at all receivers.

Construction Traffic

Construction traffic noise impacts were assessed as part of the overall construction noise assessment undertaken in accordance with the ICNG.

The project would generate a peak of 250 light vehicle and 80 heavy vehicle movements per day on the road network. Noise level increases are predicted to be generally limited to below 2 dB(A) on sub-arterial roads. Regional roads such as Arumpo Road and Renmark Road are predicted to experience increases in traffic noise levels, with increases of 2.6 dB(A) and 7.1 dB(A) respectively. However the Department has recommended a condition requiring TransGrid to take all reasonable and feasible steps to minimise construction traffic noise associated with the development.

Operational Noise

Operational noise associated with the Buronga substation would comply with the project trigger noise level of 35 dB(A) under the *NSW Noise Policy for Industry (EPA, 2017) (NPI)* at all residences.

Operational noise associated with the transmission line would be compliant with the project trigger noise level at all residences during fair weather conditions. Corona discharge noise, which is characterised by a crackling sound resulting from an accumulation of pollution and / or water droplets on the conductor surface of the transmission lines, is predicted to exceed the project trigger noise level at three residences located near the transmission line in proximity to the Darling River. Worst case noise exceedances during wet weather events at these residences are predicted to be 4, 6 and 9 dB(A) above 35 dB(A) at R2023, R1489 and R2022, respectively.

Based on the historical meteorological data and conditions in the locality, noise exceedances are predicted to occur for up to 30% of days in the year during wet and misty conditions. However, these conditions would typically occur for short durations on these days and, during heavier rain events, the rain would result in higher ambient noise levels that may mask the corona discharge noise.

In accordance with the NPI, TransGrid considered noise mitigation at the noise source but concluded that the operational noise could not be reduced through conductor design or through relocation of the

transmission line as it would need to be a significant distance (approximately double) the proposed distance from a receiver. Additionally, noise mitigation at receivers in the form of noise barriers (interrupting the noise transmission path) was not considered to be a reasonable option due to the isolated nature of the affected dwellings needing long continuous barriers and the elevated position of the noise source.

TransGrid therefore proposes noise mitigation at the receiver in consultation with the affected residences. These measures may include upgraded façade elements, such as windows, doors or roof insulation, to further reduce noise levels.

Following a request for additional information from the Department, TransGrid has confirmed that 'at-source' building treatment mitigation measures would be effective at limiting impacts on indoor amenity. If detailed design does not result in a reduction of the predicted noise levels, the Department accepts that receiver based mitigation is the only reasonable and feasible option.

The Department has recommended conditions requiring TransGrid to implement all reasonable and feasible measures to minimise operational noise during detailed design with a view to complying with the noise management levels as derived from the NPI. Additionally, the Department has recommended a condition requiring TransGrid to review operational noise following detailed design to confirm the predicted noise levels and determine appropriate noise mitigation measures in consultation with potentially impacted residences to comply with the noise limits in accordance with the NPI.

6.6 Other issues

The Department's consideration of other issues is summarised in **Table 7**.

Table 7 | Summary of other issues

Findings	Recommendations
Visual	
<ul style="list-style-type: none"> The maximum height of the transmission line towers is 50 m for the 220 kV and 80 m for the 330 kV lines respectively. Towers would typically be spaced at 390 m (for the 220kV line) and 460 m (for the 330kV line) intervals. The final height and location of the towers would be refined during detailed design and would depend on factors including topography, proximity to roads and the need to minimise environmental and amenity impacts. TransGrid has located the transmission line corridor to avoid and minimise visual impacts, including: <ul style="list-style-type: none"> locating the 330 kV lines adjacent to Renmark Road and away from Lake Victoria, Nulla Nulla Woolshed and Nulla Nulla Homestead and Sturts Billabong Homestead on Low Darling Road; co-locating the 330 kV lines with the existing 220 kV Buronga to Broken Hill transmission line; avoiding the towns of Mildura and Wentworth to minimise impacts on sensitive receivers; minimising intersections with existing farm infrastructure, dense vegetation and cultural heritage places; and using the existing Buronga substation for the additional substation infrastructure to minimise impacts on sensitive receivers (closest residence is 2 km away). During detailed design, TransGrid has committed review the placement of the transmission line towers within the corridor to further minimise visual impacts, including: <ul style="list-style-type: none"> maximising distances between towers and residences; locating towers to maximise screening offered by existing vegetation and topography; ensuring consistent spacing between towers where the alignment would be visible for a long duration in open landscapes, such as along Renmark Road; aligning towers to have a similar spacing structure where adjacent to existing transmission lines; and locating towers at a maximum distance from roads where the transmission line crosses a road. 	<ul style="list-style-type: none"> Ensure that external lighting is minimised and complies with the relevant Australian Standards. Prohibit any signage or advertising on the site, unless it is for safety purposes. Implement appropriate visual impact mitigation measures, such as landscaping and/or vegetation screening at R2022, R1489 and R2023 residences upon receiving a written request from the owners of these residences. Ensure ancillary facilities, accommodation camps and earthwork material sites at Buronga substation are rehabilitated.
<u>Impacts on residences</u>	
<ul style="list-style-type: none"> The visual impact assessment considered the maximum height of the transmission lines for the full extent of the transmission line corridor and conservatively assumed that the transmission towers would be located in the closest possible proximity to residential dwellings (i.e. 130 m from the edge of the transmission line corridor). With the exception of five residences, TransGrid's visual assessment concludes that the visual impact at all other residences would be low or nil due to distance and intervening topography and vegetation. There are five residences located within 1 km of the 330 kV transmission line corridor, being R2022 (130 m from the transmission line corridor), R1489 (210 m), R2023 (280 m), R1965 (620 m) and R3385 (720 m). An additional 17 residences are located between 1 km and 1.5 km from the transmission line corridor. The visual impact at the three closest residences (i.e. R2022, R1489 and R2023) is predicted to be moderate to high from the 330 kV transmission line and the 220 kV Buronga to Broken Hill transmission line which would be realigned 80 m closer to these residences. The visual impacts at residences R1965 and R3385 would be low due to the distance to the nearest project infrastructure, undulating surrounding landforms and presence of scattered trees. While there would be an additional transmission line, the presence of transmission lines in landscape is not a new feature. TransGrid's visual assessment concludes that these residences would have some visibility of the upper 	

portion of several of the new transmission line structures in addition to several realigned existing transmission line structures in the middle to background of views.

- During detailed design, TransGrid committed to reviewing the location of the transmission line towers to increase the distance to impacted residences, where possible. Based on the final design, TransGrid would review the predicted visual impacts and determine appropriate mitigation measures in consultation with the landowners of potentially impacted residences and include measures such as offering vegetation screening at these residences.
- Accordingly, the Department has recommended conditions requiring TransGrid to implement appropriate mitigation measures to provide visual mitigation (such as landscaping and vegetation screening) in consultation with the owners of residences R2022, R1489 and R2023.
- There would be some minor impacts from temporary facilities required during construction such as construction compounds, accommodation camps, but in general these are located away from residence, impacts would be temporary and the sites would be rehabilitated following construction.

Landscape impacts

- The site extends across three landscape types, where the visual impact of the development would range from negligible to moderate:
 - within the Lake Victoria Cultural Landscape and semi-arid plains, there would be negligible change to the landscape south of Renmark Road, which is of State sensitivity. To the north, there would be a low magnitude of change due to the presence of the new transmission lines;
 - within the Mallee shrubland and rural landscape, there would be a moderate change in the landscape due to the presence of new and upgraded power infrastructure;
 - within the Murray River plain rural landscape, the development would replace the existing transmission line and as such, there would be a low magnitude of change.
- No significant vistas or identified scenic views exist within the development area. Views from scenic routes, views to landscapes with scenic value and views from road corridors would be minimal.
- Night-time visual amenity impacts associated with the Buronga substation would result in a low magnitude of change. No lighting of transmission lines and structures is proposed during operation.
- The Department has recommended a condition requiring TransGrid to minimise the off-site lighting from the development.
- There are scenic flights over the landscape which may have views to development. While the transmission lines would create a strong linear corridor across the landscape, this would not change the prevailing character of views from the air. Particularly in areas to the east of the development alignment where the visual complexity of the existing landscape increases. The transmission line and substations are uses expected within views from the air to a working rural landscape. In the vicinity of Lake Victoria, the development alignment is located to the north of an existing road, and away from the main scenic aerial views to the lake.

Cumulative impacts

- There is the potential for a cumulative landscape and visual impact associated with this development and the Buronga solar farm during operation which is proposed to be located adjacent to the Buronga substation. The nearest residential receiver to the Buronga substation is R2026 located approximately 2.1 km away. Given the distance to project infrastructure, the Department considers that the project contribution to cumulative visual impacts would be minimal and any residual cumulative visual impacts could be appropriately mitigated with additional vegetation screening (to be further considered during assessment of the Buronga Solar Farm application).
- TfNSW and Council raised no concerns about visual impacts on roads.
- Subject to the implementation of the recommended conditions, the Department considers the visual impact of the development on the surrounding residences, road users and the rural landscape to be minimal.

Water Use

- The amount of water required for the construction of the development is estimated to be around 616 ML over the duration of construction. This includes water for the construction of concrete batching activities and for 330 kV transmission line structures, control buildings and substation foundations as well as for road upgrades, construction compound and accommodation camps, dust suppression during construction and in case of fire.
 - TransGrid proposes to source the water from existing infrastructure within the region and Wentworth Shire Council facilities. TransGrid identified seven water supply points (two for potable water and five for non-potable water) which would provide connection to existing water supply pipelines. TransGrid confirmed that there will not be new extraction from existing watercourses.
 - At the Wentworth main construction compound and accommodation camp, a new water connection pipeline, approximately 400 m long, would be constructed connecting to the water supply point located at the property across Renmark Road. The pipe would be located within a 6 m wide access track corridor. TransGrid advised that this connection would meet most of the water requirement for the Wentworth construction compound and accommodation camp and western section of the transmission line.
 - TransGrid advised that consultation with Council and potential water suppliers has commenced and identified that the necessary water volumes are available within existing water allocations, licencing and approvals. Further consultation about securing locations for water supply with Council would occur through the preparation of the Traffic Strategy.
 - Following a request from DPIE Water, Transgrid advised that it would have sufficient water supply within the water allocation under its existing licences. In addition, the Department has recommended an outcomes-based condition of approval requiring TransGrid to ensure that there is sufficient water for all stages of the development, and if necessary, adjust the scale of the construction (i.e. stage) to match its available water supply.
 - Wastewater treatment facilities would be established at the Buronga substation and Wentworth accommodation camps. Wastewater from showers, kitchens, laundries and toilets would be collected and treated at the proposed wastewater treatment plants. The proposed facilities would be constructed as contained systems and would include biological and chemical treatment, filtration and disinfection. TransGrid advised that a sequencing batch reactor type sewage treatment plant is considered, however the final design of these facilities would be confirmed during detailed design stage.
 - TransGrid proposes that treated wastewater would be collected and transported via water carts for reuse in dust suppression, compaction of materials or other construction activities which may require and can utilise grey water. The Department has recommended a condition requiring TransGrid to comply with treated wastewater guidelines. DPIE Water, EPA and Council did not raise any concerns regarding potential water reuse, and EPA confirmed an EPL would not be required for the wastewater treatment facilities.
 - During operation approximately 20 ML of water per year would be required for maintenance activities and the operation of the Buronga substation. TransGrid proposes to source the water from the local water authority and rainwater tanks at the substation. The Department, in consultation with Council has included requirements for this in the Accommodation Camp Management Plan.
- Prepare and implement an Accommodation Camp Management Strategy in consultation with Council to ensure water and wastewater utilities are designed and located in accordance with Council specifications.
 - Prepare a Traffic Strategy in consultation with Council confirming the water supply points.
 - Ensure that there is sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.
 - Ensure any treated wastewater from the accommodation camps used for dust suppression during construction complies with the ANZECC and ARMCANZ (2000) guidelines for irrigation water quality and the requirements of the Public Health Act 2010.

Groundwater

Groundwater

- Groundwater levels along most of the project area are between 20 to 30 m below ground level except in the following locations: 15 m deep north of Lake Victoria (within the project area); 2.5 m to 5 m deep within 500 m of the Great Darling Anabranch, Darling River floodplain and the Murray River floodplain; 10 m deep within the floodplain of the Great Darling Anabranch. Groundwater in the area near the Lake Gol Gol is 9.2 m deep and beyond 15 m near the Buronga substation.
- Comply with Section 120 of the *Protection of the Environment Operations Act 1997*;
 - Prepare and implement Soil and Water Management Plan as part of CEMP which would include

Findings

- Construction of the development has the potential to impact groundwater systems where the excavations for transmission towers may intersect the level of groundwater, and dewatering is required. DPIE Water advised that should dewatering exceed 3ML additional approvals and entitlement must be obtained in the relevant water source. TransGrid advised that most of the groundworks for the development would be up to 2 m deep. Earthworks near the rivers and within their floodplains would be to a depth from 2.5 m up to 10 m. These activities are unlikely to intercept groundwater or exceed 3ML limit. However, if unexpected groundwater inflows are encountered and dewatering is required TransGrid has committed to reduce the size, depth and duration of excavation at those locations to minimise the impacts on sensitive receptors.
- TransGrid advised that where shallow earthworks are not suitable for construction of the foundation for the transmission towers, piles would be installed to a depth of 15 to 25 m. Piles would be bored using a tremie system, helical screw anchor and / or driven steel piles and would not require removal of groundwater during construction and as such would not reduce groundwater levels to sensitive receptors.
- Proposed earthworks at the Buronga substation include removing unsuitable soils and installing shallow electrical equipment conduits, trenches and general site drainage works. These works would be to a maximum depth of 5 m and would not impact the groundwater (located beyond 15 m near the substation).
- There are three existing monitoring bores within the transmission line corridor (i.e. GW088454-nested, GW087531 WaterNSW owned and privately owned GW600452). TransGrid initially indicated that these bores may be damaged or require removal for construction of the development. DPIE Water requested clarifications on how the monitoring outcomes would be achieved. In its Submissions Report, TransGrid advised that all three bores would be able to be avoided and would be clearly demarcated with a 5 m exclusion zone during construction. DPIE Water and WaterNSW recommended TransGrid maintains access to existing monitoring bores for monitoring and maintenance and TransGrid has committed to this. DPIE Water and WaterNSW confirmed they have no residual concerns on this matter.
- TransGrid assessed the impact to groundwater levels or quality during construction of the development as low due to the dominance of shallow rooted vegetation, depth to groundwater and relatively small construction footprint. The Department has recommended TransGrid prepare and implement a groundwater management measures as part of its Soil and Water Management Plan.

Recommendations

- measures to minimise groundwater quality impacts.
- Ensure the geomorphic condition of the major rivers and distributary channels crossed by the development is not impacted.
- Prepare an Accommodation Camp Management Plan that ensures the camps are designed, constructed and maintained to reduce impacts on groundwater at the site.

Surface Water

Riparian areas

- The development is located within the Lower Murray-Darling catchment which is part of the Murray-Darling Basin.
- There are three major rivers including the Murray River, Darling River, and the Great Darling Anabranch (an ephemeral system with a number of overflow lakes that can hold water for prolonged periods following a flood) that would be crossed by the development. The development also crosses several unnamed ephemeral creeks and drainage lines.
- Lake Victoria is about 3 km to the south of the western end of the development site. The Gol Gol Lake and Swamp (both are large freshwater ephemeral systems) are located about 1.5 km south-west of the Buronga substation.
- The Department recommended a condition requiring TransGrid to ensure all works on waterfront land comply with the *Guidelines for Controlled Activities on Waterfront Land* (2012) which sets appropriate buffer zones for different watercourse types. Riparian vegetation subject to removal would be appropriately offset and riparian areas subject to disturbance would be progressively stabilised and rehabilitated. DPIE Water and DPI Fisheries confirmed they are satisfied with the conditions.

Flooding

- Although most construction activities, including the upgrade of Buronga substation, would not occur on flood prone land, construction of the development would result in minor and localised changes in flooding impacts and overland flow.
- No access tracks are proposed across major rivers, however there would be minor watercourse (i.e. first and second order streams or overland flow paths) crossings. Works within floodplains of major rivers would be limited to construction of transmission line towers on either

- Comply with Section 120 of the *Protection of the Environment Operations Act 1997*.
- Prepare and implement Soil and Water Management Plan as part of CEMP which would include measures to:
 - minimise erosion and control sediment generation; and
 - minimise and manage flood risks during construction and operation.
- Undertake activities in accordance with applicable guidelines including OEH's *Managing Urban Stormwater: Soils and Construction Volumes 1*

Findings

Recommendations

side of the rivers. This would involve construction of access tracks for construction machinery to access transmission line towers sites, construction of foundation, laydown areas, concrete batching plants. Once the transmission line towers on either side of the rivers are constructed, the line would be strung between them using aerial technology such as drones so that vehicle crossings are not required.

- DPIE Water advised TransGrid to avoid direct impacts on lower order channels, where possible, and undertake geomorphic monitoring in the major rivers and the distributary channel network during construction. The Department has recommended a condition requiring TransGrid to ensure that all activities on waterfront land (including waterway crossings) are constructed in accordance with the relevant guidelines and the geomorphic condition of the major rivers and distributary channels crossed by the development is not impacted.
- The Wentworth main construction compound and accommodation camp site would be located 600 m north of the Murray River on the flood prone land as identified by Wentworth LEP. Following the completion of construction of the development the construction compound and accommodation camps will be decommissioned and the area would be rehabilitated.
- During operation the development would not cause changes to flood levels, depths or velocities.
- The Department has recommended a condition requiring TransGrid to ensure the development is designed, constructed and maintained in such way that it does not materially alter the flood storage capacity, flows or characteristics in the development area. DPIE Water, Council and the Department are satisfied that the flood impacts would be appropriately managed through recommended conditions.

Erosion and sedimentation

- Construction activities have the potential to divert overland flows, increase flooding in adjacent land and cause erosion and export of sediment to waterways. The Department considers that erosion and sedimentation risks of this development can be managed through best practice measures, with particular attention near riparian areas. The Department also notes that it is a strict liability offence to pollute any waters off the site under the *Protection of the Environment Operations Act 1997*.
- DPIE Water has raised no concerns about the development site's erosion potential. The Department recommended a condition requiring TransGrid to develop and implement mitigation measures to manage soil and erosion risks during construction. Subject to recommended conditions, DPIE Water, Council and the Department consider the erosion risks of the development would be appropriately managed.

Acid sulfate soils

- TransGrid advised that there is a low risk of acid sulfate soils (ASS) occurring across the majority of the development area, with the potential exception of low-lying areas surrounding lakes and riverbeds.
- The Department recommended conditions requiring TransGrid to ensure that any construction activities within identified ASS areas are undertaken in accordance with the *Acid Sulfate Soil Manual*.
- The Department is satisfied that potential risks in ASS areas can be appropriately managed using standard best practice measures which TransGrid is required to detail within Soil and Water Management Plan.

Salinity

- Although the majority of the development area is mapped as having low salinity potential, TransGrid's Phase 1 Contamination Assessment stated that following geotechnical investigations and subsequent laboratory soil testing, areas of soils in moderate to very saline conditions were identified. Dryland salinity was identified as a potential issue for construction at the Buronga substation.
- TransGrid has committed to ensure that construction activities in areas of moderate to high salinity would be managed in accordance with the *Salinity Training Manual* (DPI, 2014) and *Book 4 Dryland Salinity: Productive use of Saline Land and Water* (NSW DECC, 2008) to prevent impacts from salinity. As such, the Department considers that salinity risks would be appropriately managed with the implementations of this commitment.

and 2C, and NRAR's *Guidelines for Controlled Activities on Waterfront Land* (2012).

- Ensure the geomorphic condition of the major rivers and distributary channels crossed by the development is not impacted.
- Ensure that construction activities in areas of moderate to high salinity would be managed in accordance with the *Salinity Training Manual* (DPI, 2014) and *Book 4 Dryland Salinity: Productive use of Saline Land and Water* (NSW DECC, 2008).
- Prepare an Accommodation Camp Management Plan that ensures the camps are designed, constructed and maintained to reduce impacts on surface water, localised flooding and groundwater at the site.

Historic Heritage

- No heritage items listed on Commonwealth, National or State registers are located within the development site.
 - The transmission line easement would pass through the curtilage of three heritage items of local significance listed on the Wentworth LEP, being Nulla Nulla Woolshed, Nulla Nulla Homestead and Sturts Billabong. The transmission line would not directly or indirectly (visually) impact the Nulla Nulla Woolshed or Nulla Homestead, which are located about 6.2 km and 8 km north of the site, respectively.
 - A community submission raised concerns about potential impacts on Sturts Billabong. The development would not directly impact any features (landscape or mature trees) of significance to this item. While the proposed transmission line would be visible from Sturts Billabong, the visual impact is considered low given the presence of transmission lines already within the existing easement.
 - The Wentworth construction compound and accommodation camp would be located directly north of the Moorna Station Woolshed (listed on the the Wentworth LEP). The works associated with the Wentworth water supply point would be within the curtilage of this site. These works would not directly or indirectly (visually) impact the Woolshed.
 - Two unlisted heritage items (survey marker trees) were identified within the development site (PEC-W-H-1 and PEC-W-SE-H1). The Department has recommended conditions requiring TransGrid to avoid impacts on these trees.
 - The Department is satisfied that the development would not have any adverse impacts on historic heritage items in the local area. Any unexpected finds of potential heritage significance on site could be appropriately managed by an unexpected finds protocol.
- Avoid direct or indirect impacts on sites PEC-W-H-1 and PEC-W-SE-H1.
 - Prepare and implement mitigation measures and reporting procedures for previously unidentified heritage items.

Electric and magnetic fields

- Like other electrical equipment, including electricity generating infrastructure, electric and magnetic fields (EMF) would be generated by the electrical components of the development, including the transmission lines and substations. It is noted that EMF also results from natural sources such as the Earth's magnetic field and lightning.
 - The main sources from the development would be transmission lines, the substation and interconnecting underground and/or overhead cables.
 - All the predicted levels are well below the relevant *International Commission on Non-Ionizing Radiation Protection* (ICNIRP) EMF criteria of 2,000 mG for general public exposure.
 - The EIS includes an assessment of the EMF levels beneath the proposed 330kV and 220kV transmission lines and substation against public exposure guidelines. The EMF assessment study predicts that EMF levels directly underneath the transmission lines would be 272 milligauss (mG) for 330 kV line and 430 mG for 220 kV line while at the edge of the easement it would be 35 mG and 97 mG subsequently. Similar EMF levels would be directly under the transmission lines connection point at the substation and at the edge of their easements near the substation.
 - Additionally, TransGrid assessed parallel alignment of transmission lines. The results showed that EMF levels directly under parallel lines would be 375 mG for 330 kV and 440 mG for 220 kV lines and at the edge of the easements EMF levels would be 30 mG for 330 kV lines and 97 mG for 220 kV lines.
 - The EMF reduce rapidly with distance from their source. The EMF produced by the exporting electricity facilities are very low frequency and do not pose a threat to public health.
 - The Department is satisfied the development is not likely to have any significant EMF related impacts.
- Comply with the applicable EMF criteria.

Findings

Recommendations

Radiocommunications

- Electromagnetic signals transmitted for telecommunication systems (such as radio, televisions, mobile phones and mobile/fixed radio transmitters) function most efficiently where a clear line of sight exists between the transmitting and receiving locations.
 - TransGrid undertook a radio frequency interference assessment for the project. The study included consultation with telecommunications licence holders and service providers.
 - The assessment concluded that a satisfactory level of radio reception would be achieved even outside of set limits for electromagnetic interference (in frequency range 0.15 to 1000 MHz) for all the services assessed (i.e. broadcast, navigation, safety-of-life and other radio communication).
 - As such, the Department is satisfied that the development is not likely to have significant impacts on radiocommunications.
- No specific conditions required.

Air Quality

- The EIS includes a qualitative air quality assessment which indicates that prior to mitigation measures, the risk of dust impacts, including dust from vehicle movements, during construction and operation of the transmission lines would be negligible. With the implementation of further site-specific dust mitigation measures, residual dust impacts are considered to not be of significance.
 - Emissions from vehicles and other relevant sources during construction would be managed in accordance with the recommended site-specific mitigation measures. TransGrid has committed to minimise air quality emissions as far as possible.
 - The Department has recommended a condition requiring TransGrid to minimise air quality emissions such as dust, fume, blast emissions and other air pollutants. Subject to the recommended conditions, the Department is satisfied that the air quality impact would be appropriately managed, and the development would not cause significant air quality impacts.
- Minimise emissions of dust, fume, blast and other air pollutants of the development.
 - Minimise the surface disturbance of the site.

Contamination

- The EIS includes a preliminary site contamination assessment with minimal potential contamination sources identified at the development site and in the vicinity of the study area.
 - The study area largely comprises agricultural land used for grazing and limited dry cropping. No significant development was observed.
 - Minimal potential contamination sources identified at the development site and the surrounds were identified and were limited to the Buronga and Ellerslie substations, existing transmission infrastructure, residential properties, cleared agricultural land, farm dams and a potential quarry.
 - Areas of cleared agricultural land and the quarry pose a medium risk of contamination however, the implementation of controls and mitigation measures outlined in a CEMP would minimise risk to an acceptable level.
 - No known occurrences of naturally occurring asbestos were identified at the development site.
 - Around 26 older transmission towers within the development area have been identified as containing asbestos coating. These towers would be decommissioned as part of project. TransGrid advised that the methods proposed to remove the paint containing asbestos would involve minimal risk of harm to humans and SafeWorks has endorsed the proposed methods.
 - Groundwater depth is anticipated to be greater than 5 m below ground level and interaction with groundwater is expected to be limited during the construction phase of the development. Further groundwater contamination investigations would be required if large volumes of
- Manage dangerous goods in accordance with relevant guidelines.
 - Prepare and implement provisions for managing contaminated land, soils and groundwater in the development area.
 - Prepare and implement management procedures for the development to mitigate the potential for spills and uncontrolled releases to the environment.
 - Include provisions for managing any unexpected or suspected

Findings

Recommendations

groundwater were encountered during construction to confirm the contaminant levels within the groundwater, potential volumes that may need to be managed and measures for appropriate management.

- Impacts to nearby sensitive receptors during construction works would be managed under a CEMP.
- The development site crosses the Til Til (NSW) and Oak Plains unexploded ordinance (ammunition that did not explode when used, UXO) areas identified on the Department of Defence database. The Til Til and Oak Plains UXO areas are considered to have slight occurrences and substantial occurrences of UXO respectively. The existing 220 kV transmission line currently passes through the Oak Plains UXO area.
- The Department considers that the likely potential impacts from contamination including contaminated land, asbestos and unexploded ordinance would be limited and would be managed through conditions requiring TransGrid to prepare and implement Soil and Water Plan as part of the CEMP.

contaminated land, asbestos and UXO.

Bushfire Safety

- One public submission raised concerns about the impacts of the development on bush fire management.
- The development site is classed as bushfire prone land. TransGrid would be required to:
 - establish a minimum 50 m Asset Protection Zone (APZ) around the hazard perimeter of the construction equipment and accommodation camp buildings; and
 - maintain a maximum grass height within the APZ of 100 mm – 150 mm during prescribed Bushfire Danger Periods and when grassland fuels reach 70% cured. Vegetation within the construction and accommodation camp sites would be maintained at a maximum height of 75 mm.
- TransGrid would also be required to comply with the RFS's *Planning for Bushfire Protection (2019)* and prepare an Emergency Response Plan to manage the fire risk.
- TransGrid has committed to a number of mitigation measures and strategies, including the preparation of a Emergency Management Plan and a Bushfire Risk Management Plan.
- The Department, RFS and FRNSW are satisfied that the bushfire risks can be suitably controlled through the implementation of standard fire management plans and procedures.
- The Buronga substation Emergency Response Manual would require updating to include the new proposed design and required revised emergency response procedures.

- Manage dangerous goods in accordance with relevant guidelines.
- Ensure that the development complies with relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2019* (or equivalent) for Asset Protection Zones.
- Ensure the development complies with *Australian Standard AS3959-2018* and the RFS's *Planning for Bushfire Protection 2019* for the construction of new buildings.
- Ensure the development is suitably equipped to respond to fires on site, including the provision of a 20,000 litre water supply.
- Prepare and implement an Emergency Plan.

Rehabilitation

- TransGrid proposes that site rehabilitation is to be carried out progressively following the completion of construction and involve the removal of all materials not required for operation. This would include the removal/remediation of the construction compounds and accommodation camp sites. These areas would be restored back to the previous natural conditions as far as possible.
- TransGrid proposes that decommissioning of the 220kV single circuit transmission line (known as Line 0X1) would also be scheduled as part of the development works.

- Progressively rehabilitate the development site, and minimise the total disturbance area exposed at any time; and

Findings

- To ensure that redundant infrastructure is removed, and the areas rehabilitated appropriately, the Department has recommended conditions requiring TransGrid to rehabilitate and revegetate temporary disturbance areas and make good any development-related damage.

Recommendations

- Comply with rehabilitation objectives, including removing all construction infrastructure, restoring rural land capability and vegetation, ensuring public safety and ensuring the site is maintained in a safe, stable and non-polluting condition.

Land use and agriculture

- The majority of the area for EnergyConnect (West) is utilised for agriculture, however, agricultural productivity in the region is relatively low compared to other areas in NSW and the Department acknowledges within the transmission line easement certain agricultural activities may be restricted but that grazing could continue within and immediately next to the easement including grazing.
- The Department recognises that there may be a minor reduction to the land available for some cropping and horticultural land uses but that this is a small portion of the proposal study area (approximately 8%) and could be minimised in detailed design. The Department accepts that EnergyConnect (West) has been developed in consultation with impacted land holders, including discussion regarding areas of important agricultural which should be avoided.
- The Department notes that EnergyConnect (West) would cover a small fraction (about 0.6%) of the total agricultural land in the Wentworth LGA, and therefore the impacts on the overall agricultural activities in the region are not considered to be significant.
- No specific conditions required.

Economic

- The project would generate direct and indirect benefits to the local community, particularly during construction, including:
 - creating up to 600 jobs during the construction period;
 - expenditure on accommodation and business in the local economy by workers who would reside in the area; and
 - the procurement of goods and services by TransGrid and associated contractors.
- Once operational, the project is unlikely to result in significant demand on community services and infrastructure (excluding roads considered in **section 6.3**) given the relatively low level of local employment generated once it is operational.
- The Department has recommended TransGrid to prepare and implement a Local Business and Employment Strategy in consultation with Council investigating options for prioritising the employment of local and Aboriginal workforce and suppliers.
- The Department considers that with the recommended conditions of approval, EnergyConnect (West) would provide economic benefits for the local community.
- Prepare and implement a Local Business and Employment Strategy in consultation with Council

7 Recommended Conditions

The Department has prepared recommended conditions of approval for the development (see **Appendix H**).

The Department consulted with TransGrid and the relevant agencies on the conditions for the development, particularly Council and TfNSW in regard to the road upgrades and maintenance requirements, BCS to determine the appropriate biodiversity offset requirements for the development, Heritage NSW about heritage requirements.

These conditions are required to:

- prevent, minimise or offset adverse impacts of the development;
- ensure standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

The recommended conditions use a risk-based approach that focuses on performance-based outcomes. This reflects current government policy and the fact that transmission lines require limited ongoing environmental management once the development has commenced operations.

In line with this approach, the Department has:

- set strict criteria for noise and vibration;
- set strict limits on the clearing of critically endangered ecological communities;
- recommended operating conditions to minimise noise, traffic, biodiversity, heritage, soil and water impacts, and consolidated the number of management plans be prepared and implemented as part of the CEMP; and
- Require the preparation and implementation of an Emergency Plan, Accommodation Camp Management Plan and Local Business and Employment Strategy, Traffic Strategy and Aboriginal Cultural Heritage Strategy.

The recommended conditions also require TransGrid to provide detailed final layout plans to the Department prior to construction.

Other key recommended conditions include:

- *roads* – requiring relevant road upgrades are undertaken prior to the commencement of construction, and maintenance and repair of any damage during construction, upgrades or decommissioning activities; and
- *heritage* – undertaking subsurface testing to confirm the significance of the potential archaeological deposits prior to the commencement of construction in those areas or other high-risk areas;
- *biodiversity offsets* – preparing a biodiversity offset package to provide details of the specific biodiversity offset measures that would be implemented and delivered;
- *operating hours* – undertaking construction, upgrading or decommissioning activities on-site during standard construction hours, unless these activities that are inaudible at non-associated receivers; and
- *fire* – ensure that the development complies with the relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2019*.

8 Evaluation

Project EnergyConnect was declared to be critical State significant infrastructure (CSSI) under sections 5.12(4) and 5.13 of the EP&A Act on 8 August 2019.

The Department considers that an interconnector between SA, NSW and Victoria is critical for energy security and reliability in NSW and would play a critical role in supporting the transition of the energy system, and linking the SA, NSW and Victoria electricity networks.

The broader Project EnergyConnect is consistent with the AEMO's roadmap for the National Electricity Market, the *Integrated System Plan* and relevant strategic NSW planning and policy documents, including the *Transmission Infrastructure Strategy*, the *Electricity Strategy*, and more broadly the *Climate Change Policy Framework* and *Net Zero Stage 1: 2020 – 2030*.

While EnergyConnect (West) represents a logical first step in directly linking the SA and NSW energy markets between Chowilla in SA, Buronga in NSW and Red Cliffs in Victoria, it is still important to carefully consider the potential environmental, social and economic impacts of the project.

The Department acknowledges that the construction of a 155 km transmission line would inevitably result in impacts to biodiversity and heritage values, as well as a range of amenity impacts to the community (such as traffic and noise).

However, the Department acknowledges that TransGrid's route and corridor analysis has used a comprehensive route selection process (based on a hierarchy of constraints and further corridor refinement) in order to avoid or minimise impacts. The Department also recognises that large linear infrastructure projects of this nature would be further refined to minimise impacts as the design and construction planning is developed by a nominated construction contractor.

The proposed corridor was developed to align with Renmark Road to minimise biodiversity, heritage and visual impacts; avoid Lake Victoria and intensive agricultural land near Ellerslie; and be co-located with the existing Broken Hill to Buronga substation line and the Buronga substation to Red Cliffs line.

Further, the Department has worked closely with TransGrid and key government agencies throughout the assessment process to reduce the residual impacts of the development. In that regard, TransGrid made important changes to the project to address key issues, which are described in the Amendment Report. These changes include a reduction in the disturbance area of the project, removal of an accommodation camp to address road safety concerns, and amendments to the Buronga substation layout to minimise impacts on an area of potential Aboriginal heritage significance.

Overall, the Department considers that EnergyConnect (West) has been designed in a way that avoids and minimises social and environmental impacts as far as practicable. The Department has carefully considered the residual potential impacts of the development on the environment, in consultation with key government agencies. The key impacts are biodiversity, traffic, Aboriginal heritage and noise.

In relation to biodiversity, EnergyConnect (West) would disturb up to 643 ha of native vegetation, comprising 540 ha of vegetation in moderate to good condition and 103 ha of cultivated or degraded derived native grassland however, this would be further minimised during the detailed design of the project and a range of mitigation and adaptive management measures implemented and residual biodiversity impacts of the project would be offset.

In relation to traffic and transport, any potential impacts would be largely restricted to the construction period and the Department considers that with appropriate mitigation measures, including undertaking suitable road upgrades prior to commencing construction, regular road maintenance the works can be undertaken without significant impacts to the broader transport network.

In relation to Aboriginal cultural heritage, TransGrid identified 131 previously unrecorded Aboriginal heritage sites and 28 potential archaeological deposits (PADs) within the transmission line corridor and other ancillary infrastructure, although the level of impact (direct or partial) would depend on the location of final footprint of the transmission line. The recommended conditions require TransGrid to avoid and minimise impacts on heritage items and PADs during detailed design, and undertake subsurface testing of any PADs in consultation with relevant stakeholders allowing for further mitigation measures (such as for avoidance or salvage).

In relation to noise, the Department considers that the proposed construction activities are unlikely to result in significant adverse impacts due to the short-term and intermittent nature of construction works. The Department has also recommended conditions requiring TransGrid to implement all reasonable and feasible measures to minimise operational noise for the transmission line (including corona noise discharge, a crackling sound experienced in limited conditions).

The Department has concluded that the residual impacts can be adequately minimised, managed, or offset, to an acceptable standard, subject to a comprehensive framework of recommended conditions of approval. Consequently, the development can be carried out in a manner that is consistent with the principles of ecologically sustainable development.

The Department has carefully weighed the impacts of EnergyConnect (West) against the benefits. The development would have long-term benefits for the transmission of electricity in NSW and the broader NEM, and support the transition of the NEM away from long-standing reliance on coal-fired power stations. It would also deliver significant economic benefits to NSW including a capital investment of \$418 million and creation of up to 600 construction jobs. The residual impacts of the project can be minimised, managed, or offset in accordance with the objects of the EP&A Act, and other relevant legislation and government policy.

On balance, the Department considers that the benefits of EnergyConnect (West) outweigh its costs, and the project is in the public interest and approvable, subject to strict conditions.

9 Recommendation

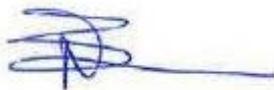
It is recommended that the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **accepts** and **adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant approval to the application;
- **agrees** with the key reasons for approval listed in the notice of decision;
- **grants approval** to the application in respect of the Project EnergyConnect (NSW – Western Section) (SSI 10040); and
- **signs** the attached development approval and recommended conditions of approval (see **Appendix H**).

Prepared by:

Iwan Davies, Team Leader

Recommended by:



03.09.2021

Nicole Brewer

Director

Energy Assessments



03.09.2021

Clay Preshaw

Executive Director

Energy, Resources and Industry Assessments

10 Determination

The recommendation is **Adopted** / ~~Not adopted~~ by:

A handwritten signature in blue ink, appearing to read 'Rob Stokes', is written over a light blue horizontal line.

The Hon. Rob Stokes MP

Minister for Planning and Public Spaces

Appendices

Appendix A – List of referenced documents

EnergyConnect (NSW – Western Section) – Environmental Impact Statement, TransGrid (October 2020)

EnergyConnect (NSW – Western Section) – Submissions Report, TransGrid (April 2021)

EnergyConnect (NSW – Western Section) – Amendment Report, TransGrid (April 2021)

EnergyConnect (NSW – Western Section) – Response to Request for information received from TransGrid (August 2021)

Appendix B – Environmental Impact Statement

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/25821>

Appendix C – Submissions

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/25821>

Appendix D – Submissions Report

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/25821>

Appendix E – Amendment Report

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/25821>

Appendix F – Agency Advice

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/25821>

Appendix G – Additional Information

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/25821>

Appendix H – Recommended Instrument of Approval

See the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/25821>

Appendix I – Consideration of Commonwealth Matters

In accordance with the bilateral agreement with the Commonwealth Government, the Department provides the following additional information required by the Commonwealth Minister, in deciding whether to approve a development under the EPBC Act.

The Department's assessment has been prepared based on the assessment contained in the EnergyConnect (NSW – Western Section) Environmental Impact Statement (EIS), Submissions Report, Amendment Report, revised Biodiversity Development Assessment Report (BDAR) and additional information provided during the assessment process, public submissions, and advice provided by the Department's Biodiversity Conservation Directorate (BCS), other NSW government agencies and the Commonwealth Department of Agriculture, Water and Environment (DAWE).

This Appendix is supplementary to, and should be read in conjunction with, the assessment included in **section 6.2** of this assessment report which includes the Department's consideration of impacts to listed threatened species and communities, and mitigation and offsetting measures for threatened species and communities, including Matters of National Environmental Significance (MNES).

Identifying MNES

The Commonwealth Referral Decision (EPBC 2020/8673) (Referral Decision) was based on likely significant impacts on 20 threatened species and communities. All species identified in the Referral Decision are listed below.

The revised BDAR for the development identified and addressed all of the listed threatened species and communities included in the Referral Decision.

No other species or communities under the controlling provisions were considered to occur in the development area.

Assessments of significance were undertaken for all threatened species and communities that were recorded during field surveys or were identified as having a moderate or higher potential to occur on the site, including:

- five flora species – A saltbush (*Atriplex infrequens*), A spear-grass (*Austrostipa metatoris*), Winged Peppergrass (*Lepidium monoplocoides*), Manindee Nightshade (*Solanum karsense*), Slender Darling Pea (*Swainsona murrayana*);
- fourteen fauna species – Southern Bell Frog (*Litoria raniformis*), Australasian Bittern (*Botaurus poiciloptilus*), Red Knot (*Calidris canutus*), Grey Falcon (*Falco hypoleucos*), Squatter Pigeon (Southern Subspecies) (*Geophaps scripta scripta*), Painted Honeyeater (*Grantiella picta*), White-throated Needletail (*Hirundapus caudacutus*), Swift Parrot (*Lathamus discolor*), Malleefowl (*Leipoa ocellata*), Bar-tailed Godwit (*Limosa lapponica baueri*), Black-eared Miner (*Manorina melanotis*), Red-lored Whistler (*Pachycephala rufogularis*), Regent Parrot (eastern subspecies) (*Polytelis anthopeplus monarchoides*), South-eastern Long-eared Bat (Corben's Long-eared Bat & Greater Long-eared Bat) (*Nyctophilus corbeni*); and
- three aquatic species – Silver Perch (*Bidyanus bidyanus*), Murray Hardyhead (*Craterocephalus flviatilis*), Murray Cod (*Maccullochella peelii*).

The Department notes that both TransGrid and BCS concluded that the development is unlikely to have significant impact on any threatened species or communities.

TransGrid assessed the significance of the impacts on these species using the methodology outlined in the *Matters of National Environmental Significance Significant Impact Guidelines 1.1 (2013)* as documented in Appendix E-1 of the revised Biodiversity Development Assessment Report.

DAWE determined that other matters under the EPBC Act are not controlling provisions with respect to the controlled action. These include listed World Heritage, National Heritage, migratory species, Ramsar wetlands, Commonwealth marine environment, Commonwealth land, Commonwealth action, nuclear action, Great Barrier Reef Marine Park, Commonwealth Heritage places, overseas and a water resource, in relation to coal seam gas development and large coal mining development.

Impacts on EPBC Listed Species and Communities

Impacts on threatened ecological communities

The two threatened ecological communities (TECs) listed in the Referral Decision are Buloke (*Allocasuarina luehmannii*) Woodlands of the Riverina and Murray-Darling Depression Bioregions and Coolibah (*Eucalyptus Coolabah*) Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions.

Neither of these TECs were identified during site surveys and no Plant Community Types (PCTs) corresponding to these, or any other, EPBC Act TECs were found during site surveys. As such, the Department and BCS consider the development would not have a significant impact on threatened ecological communities.

Impacts on threatened fauna species

The Department has considered the impacts on the 12 EPBC Act listed fauna species identified in the referral advice, being:

- Critically Endangered – Swift Parrot (*Lathamus discolor*); Curlew Sandpiper (*Calidris ferruginea*), Northern Siberian Bar-tailed Godwit (*Limosa lapponica menzbieri*) and Plains Wanderer (*Pedionomus torquatus*);
- Endangered – Mallee Emu-wren (*Stipiturus mallee*), Black-eared Miner (*Manorina melanotis*), Australasian Bittern (*Botaurus poiciloptilus*);
- Vulnerable - Red-lore Whistler (*Pachycephala rufogularis*), Regent Parrot (Eastern) (*Polytelis anthopeplus monarchoides*), Malleefowl (*Leipoa ocellata*), Corben's Long-eared Bat (*Nyctophilus corbeni*) and Southern Bell Frog (*Litoria raniformis*).

Additionally, three aquatic species were identified by the proponent via the Protected Matters Search Tool (PMST) for further investigations: Silver Perch (critically endangered), Murray Hardyhead (endangered) and Murray Cod (vulnerable).

Section 7.1.3 and Table 7.2 of the revised BDAR provides a summary assessment of fauna species results from surveys. Appendix D-2 of the revised BDAR provides a likelihood of occurrence assessment for all species and Appendix E-1.2 contains assessments of significance according to the *Significant Impact Guidelines*. Section 9.9.3 and Table 9.20 of the revised BDAR provides summary statements about the significance of development impacts on MNES.

The 12 EPBC Act listed threatened fauna species that were identified to have a moderate likelihood of occurrence and were the subject of targeted surveys are outlined in Table E-1.1.

In addition to these species, the Department has considered the potential impacts on 6 EPBC Act listed species identified by TransGrid, being the Red Knot (endangered), Grey Falcon (vulnerable), Painted Honeyeater (vulnerable), White-throated Needle-tail (vulnerable), Bar-tailed Godwit (vulnerable), Australian Painted Snipe (endangered).

Two EPBC species are also predicted to use habitat on site based on BCD mapping, being the Australasian Bittern (*Botaurus poiciloptilus*) and Regent Parrot (*Polytelis anthopeplus monarchoides*). Potential impacts on these species have been accounted for through the ecosystem species credits (see **section 6.2** of this report).

Threatened fauna species assessments of significance

TransGrid undertook assessments of significance for the following threatened fauna species:

- Listed on the Referral Decision – Regent Parrot (eastern subspecies), Southern Bell Frog, Australasian Bittern, Swift Parrot, Malleefowl, Black-eared Miner, Red-lored Whistler, and Corben's Long-eared Bat; and
- Identified by TransGrid – Regent Parrot (*Polytelis anthopeplus monarchoides*) and Corben's Long-eared Bat (*Nyctophylis corbeni*) as these were the only two species listed in the Referral Decision that were recorded during surveys and considered to be impacted by the development.

The Department and BCD accept that all other threatened species were found to have no to very low likelihood of occurring onsite or being impacted, and no further assessment was required (see Appendix D of the updated BDAR).

Regent Parrot

TransGrid concludes that the development is unlikely to significantly impact the Regent Parrot because the impacts on breeding habitat in the area are small compared to the area of available habitat. The Regent Parrot was recorded east of Gol Gol. The species is not as common in this area as it is further east towards Euston/Robinvale (National Recovery Plan for the Regent Parrot (eastern subspecies) *Polytelis anthopeplus monarchoides* (DSE 2011)). The species is associated with PCT 11 (Red Gum) and PCTs 13 and 15 (Black Box) in the Robinvale Plains IBRA subregion. The development will directly impact 0.1 ha of PCT 11, 6.81 ha of PCT 13 and approximately 0.3 ha of PCT 15 which are the main breeding habitat for the species and the proposal study area is located within an already fragmented and disturbed landscape.

The majority of the habitat to be impacted is already impacted by existing powerlines and access tracks and the habitat to be cleared is unlikely to be limiting for the Australian population. The species is not entirely reliant on the habitat to be impacted, the proportional impact to suitable habitats along the Murray River is small and the overall national area of occupancy is unlikely to be altered given the area of occupancy is estimated to be 50,000 ha. Therefore, the project is unlikely to result in the long-term decrease in the size of the population or reduce the area of occupancy for this species. As such, given the impacts are relatively small in comparison to the available habitat the project is considered unlikely to significantly impact the Regent Parrot.

Corben's Long-eared Bat

The proponent concludes that the development is unlikely to have a significant impact on Corben's long-eared bat. The species was recorded in chenopod mallee woodlands (PCT 170) in the west of the development area. Predicted habitat occurs within PCT 21, PCT 58, PCT 171 and PCT 221 in the South Olary Plain IBRA Subregion; PCT 58 in the Greater Darling Anabranch IBRA Subregion; PCT 21 and PCT 139 in the Pooncarie Drling IBRA Subregion; and PCT11 in the Robinvale Plains IBRA Subregion.

The Department further notes that the study area is within an already fragmented and disturbed landscape, thereby limiting the potential for any substantial additional fragmentation to occur. Given this species ability to disperse over and around these cleared areas, it is considered unlikely that the

proposed action would fragment an existing important population of this species. The BDAR further states that the proposed action could avoid impacting predicted breeding habitat during Autumn.

The proponent has concluded that the removal of habitat for the Corben's Long-eared Bat across multiple locations will have minor direct impacts on the species. Given the nature of the impacts, and commitments to avoid and minimise impacts where possible, the development is unlikely to have a significant impact on the species.

In the Significance Assessment for this species (Appendix E-1.2.15) the proponent concludes that while the development will impact on foraging and breeding habitat of the species, the development is unlikely to have a significant impact for the following reasons:

- the population is unlikely to decline because of the availability of surrounding habitat and the dispersive nature of the species; and
- mallee woodland is not a habitat that is essential to the survival of the species in the area.

Black-eared Miner

The EIS provides robust reasons for the conclusion that the Black-eared Miner (*Manorina melanotis*) is unlikely to be found in the mallee habitats of the far west of the development area. BCS supports this conclusion based on expert knowledge (local DPIE threatened species officer). The rationale for this conclusion is that the species was not observed during surveys. All miners observed were Yellow-throated Miners, distinguished by white rumps. Mallee habitats along the proposed alignment (i.e. PCT 170 and PCT 171) have habitat attributes that favour the Yellow-throated Miner and are sub-optimal for the Black-eared Miner (e.g. low incidence of old-growth vegetation and presence of permanent dams).

Mallee Emu-wren and Plains Wanderer

Mallee Emu-wren and Plains Wanderer were excluded from further assessment because habitat was not present along the alignment or was degraded. Neither species were recorded during surveys. Potential habitat for the Swift Parrot was present in PCT 11 in the far east of the development area but the species was not found during surveys. Section 6.2.3.1 provides an assessment of the mallee bird species with conclusions about the likely presence of species in the development area. The local DPIE threatened species officer concurs with the proponent that it is unlikely that the Red-lored Whistler and Mallee Emu-wren occur in the area. The Red-lored Whistler has not been recorded in southwest NSW despite records of the species in northern Victoria and eastern South Australia

Other species including the Curlew Sandpiper, Red Knot, Northern Siberian Bar-tailed Godwit, and Bar-tailed Godwit were excluded from assessment as candidate species credit species as there was no 'mapped important habitats' for these species that would be impacted by the project. The Northern Siberian Bar-tailed Godwit was removed from the assessment entirely as this species is restricted to the northwest of Australia and is not known to inhabit the proposal study area (any birds would be vagrants).

The alignment does not cross wetland habitats and would have a negligible effect on riparian areas where it crosses the Darling and Murray Rivers. Impacts on the Southern Bell Frog are likely to be negligible as there was no suitable waterbodies present along the alignment.

Threatened flora species assessment of significance

The Department has considered the impacts on the six EPBC Act listed flora species identified in the Referral Decision. **Table I1** provides a summary of this assessment.

Of the six identified flora species, *Atriplex infrequens* was the only species recorded during site surveys and is considered in more detail below.

Brachyscome papillosa was the only species excluded from further assessment and surveys as there are no records of the species within 100 km of the site.

No other threatened flora species were identified during site surveys. As such, the Department and BCD considers that the development is unlikely to have a significant impact on these threatened flora species.

Table 11 | EPBC Act listed flora species identified in the Referral Decision

Flora Species	Assessment Outcomes
<i>Atriplex infrequens</i> – vulnerable	0.32 ha of habitat identified within indicative disturbance footprint
A spear-grass (<i>Austrostipa metatoris</i>) – vulnerable	Not identified during surveys
Menindee nightshade (<i>Solanum karsense</i>) – vulnerable	
Winged pepper-cress (<i>Lepidium monoplocoides</i>) – endangered	
Yellow Swainson-pea (<i>Swainsona pyrophila</i>) – vulnerable	
Mossgiel daisy (<i>Brachyscome papillosa</i>) – vulnerable	Excluded from surveys as no records of the species exist within 100 km of the site

TransGrid identified an additional six EPBC Act threatened flora species based on database searches. However, these species were considered unlikely to occur and were excluded from further assessment and surveys. As such, the Department and BCD considers that the development is unlikely to have a significant impact on these threatened flora species.

Appendix D-1 of the revised BDAR provides a likelihood of occurrence assessment for all species, and the reason for inclusion or exclusion the assessment. Section 7.1.2 and Table 7.1 of the revised BDAR provides summary assessments of all flora species including results from surveys and Appendix E-1.2 contains assessments of significance in accordance with the *Matters of National Environmental Significance Significant Impact Guidelines 1.1 EPBC Act (Significant Impact Guidelines)*.

Atriplex infrequens (A saltbush)

A total of 1.55 ha of habitat for *Atriplex infrequens* was identified within the site in proximity to the Murray River (see Appendix D.3n of the BDAR). Site surveys identified a population of 100 individuals.

Up to 0.32 ha of habitat for *Atriplex infrequens* would be impacted by the development, consisting of 0.29 ha of PCT 13, 0.02 ha of PCT 13 and 0.01 ha of PCT 17. This represents approximately 21% of habitat identified on the site.

The Department has considered the approved conservation advice under the EPBC Act for *Atriplex infrequens*, and notes that the known habitat of for this species is associated with broad drainage tracts, clay flats and possibly occasionally inundated habitats. However, very little ecological information is available for this species, so the critical habitat components for this species can only be speculated as being relatively undisturbed drainage lines and flats.

There is no adopted recovery plan and no specific Commonwealth guidelines or policy statements for *Atriplex infrequens*.

Assessments of significance for this species concluded that there would not be a significant impact on this species as the predicted impact would be small in magnitude. It is also likely that the population of these species is not restricted to the development site given the extent of similar adjacent habitat along the Murray River floodplain. Further, the potential habitat for the species is widespread across western

NSW, with the identified population of *Atriplex infrequens* located at the south-eastern extent of the known distribution of the species.

Additionally, the population of *Atriplex infrequens* within the identified habitat would largely remain intact. The ground layer vegetation within the easement would be retained and the transmission towers would be placed to avoid impacting known individuals, and where reasonable and feasible. Targeted preclearing surveys would be undertaken to identify and avoid plants and exclusion zones would be established prior to construction commencing.

TransGrid has calculated *Atriplex infrequens* species credits to account for impacts on 0.32 ha of habitat, and the Department has recommended a conditioning to ensure that no more than 0.32 ha of habitat for this species is cleared, and that TransGrid implement all reasonable and feasible measures to avoid impacting known individuals of *Atriplex infrequens*.

As such, the Department and BCS consider that with the proposed site mitigation and potential land-based offsets, the development would not have a significant impact on this species.

Requirements for Decisions about Threatened Species and Communities

In accordance with Section 139 of the EPBC Act, in deciding whether or not to approve, for the purposes of Section 18 or 18A of the EPBC Act, the taking of an action and what conditions to attach to such an approval, the Commonwealth Minister must not act inconsistently with certain international environmental obligations, Recovery Plans or Threat Abatement Plans. The Commonwealth Minister must also have regard to relevant approved conservation advices.

Australia's International Obligations

Australia's obligations under *the Convention on Biological Diversity* (Biodiversity Convention) include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and technologies, and by appropriate funding.

The recommendations of this assessment report are consistent with the Biodiversity Convention, which promotes environmental impact assessment (such as this process) to avoid and minimise adverse impacts on biological diversity. Accordingly, the recommended development approval requires avoidance, mitigation and management measures for listed threatened species, and all information related to the development is required to be publicly available to ensure equitable sharing of information and improved knowledge relating to biodiversity.

Approved Conservation Advice and National Recovery Plans

The approved conservation advice and national recovery plans relevant to this development are discussed below and are available at <http://www.environment.gov.au/cgi-bin/sprat/public/conservationadvice.pl>.

Approved conservation advice under the EPBC Act for threatened species that would potentially be impacted are available for the *Atriplex infrequens*.

Approved national recovery plans under the EPBC Act for threatened species that would potentially be impacted are available for Southern Bell Frog, Swift Parrot, Malleefowl, Black-eared Miner, Mallee Emu-Wren, Regent Parrot, Murray Hardyhead and Murray Cod.

TransGrid considered relevant approved conservation advice and recovery plans in its assessment of impacts on MNES. The project would not interfere with any Regional / Local priority actions outlined in the Approved Conservation Advices.

Threat Abatement Plans

The Threat Abatement Plans relevant to this development are discussed below and are available at <http://www.environment.gov.au/biodiversity/threatened/threat-abatement-plans/approved>

Threat Abatement Plan for competition and land degradation by rabbits (relevant to **Buloke Woodland, Regent Parrot** and **Malleefowl**)

Rabbits have direct impacts on native flora and fauna by grazing on native vegetation and preventing regeneration, and by competing with native fauna for habitat and food. Rabbits also have indirect and secondary impacts, such as supporting populations of introduced predators by providing a food source, and denuding vegetation exposing fauna species to increased predation. Their behaviour, including digging and browsing, also leads to a loss of vegetation cover and consequent slope instability and soil erosion, which further degrades fauna habitat.

Measures to control feral animals are recommended in the conditions which would be implemented as part of the Biodiversity Management Plan and any biodiversity stewardship agreements for the site and offset areas.

Therefore, the Department considers the approval of the project would not be inconsistent with the threat abatement plan for threats from rabbits.

Threat Abatement Plan for competition and land degradation by unmanaged goats (relevant to **Malleefowl**)

Goats affect native flora by grazing on native vegetation and can result in overgrazing. Grazing by goats can prevent regeneration of native flora, cause erosion through overgrazing, foul waterholes and introduce weeds, through ingestion of seeds, which they can deposit in their dung. Goats also compete with native animals for food and shelter.

Measures to control feral animals are recommended in the conditions which would be implemented as part of the Biodiversity Management Plan and any biodiversity stewardship agreements for the site and offset areas.

Therefore, the Department considers the approval of the project would not be inconsistent with the threat abatement plan for threats from unmanaged goats.

Threat Abatement Plan for predation by feral cats (relevant to **Swift Parrot, Malleefowl** and **Mallee Emu-wren**)

Feral cats are significant predators in Australia that interact with native fauna in various ways, including predation, competition for resources and transmission of disease.

Measures to control feral animals are recommended in the conditions which would be implemented as part of the Biodiversity Management Plan and any biodiversity stewardship agreements for the site and offset areas.

Therefore, the Department considers the approval of the project would not be inconsistent with the threat abatement plan for predation by feral cats.

Additional EPBC Act Considerations

Table I2 contains the additional mandatory considerations, factors to be taken into account and factors to have regard to under the EPBC Act additional to those already discussed.

Table I2 | Additional considerations for the Commonwealth Minister under the EPBC Act

EPBC Act section	Considerations	Conclusion
Mandatory Considerations		
136(1)(b)	Social and economic matters are discussed in section 2.1 and 5.5 of this report.	<p>The project would provide benefits for the local and regional economy and is of public benefit. Up to 600 workers would be required during the construction period and TransGrid has committed to source workers from the local community where possible.</p> <p>Impacts on the local community would mostly occur during the construction period, which has been considered in the assessment report. The recommended conditions require TransGrid to implement road upgrades, manage traffic movements along the transport route, and minimise potential amenity impacts including noise, dust and visual by maintaining setback distances to the nearest receiver.</p>
Factors to be taken into account		
3A, 391(2)	<p>Principles of ecologically sustainable development, including the precautionary principle, have been taken into account, in particular:</p> <ul style="list-style-type: none"> the long term and short term economic, environmental, social and equitable considerations that are relevant to this decision; conditions that restrict environmental impacts and impose monitoring and adaptive management, reduce any lack of certainty related to the potential impacts of the project; conditions requiring the project to be delivered and operated in a sustainable way to protect the environment for future generations and conserving the relevant matters of national environmental significance; advice provided within this report reflects the importance of conserving biological diversity, ecological and cultural integrity in relation to all of the controlling provisions for this project; and mitigation measures to be implemented which reflect improved valuation, pricing and incentive mechanisms are promoted by placing a financial cost on the proponent to mitigate the environmental impacts of the project. 	The Department considers that the project, if undertaken in accordance with the recommended conditions of approval, would be consistent with the principles of ecologically sustainable development.
136(2)(e)	Other information on the relevant impacts of the action.	The Department considers that all information relevant to the impacts of the project has been taken into account in its assessment.
Factors to have regard to		
176(5)	Bioregional plans	There is no approved bioregional plan related to the activity.
Consideration on deciding conditions		
134(4)	Must consider:	All project related documentation is available from the Department's website www.planningportal.nsw.gov.au

EPBC Act section	Considerations	Conclusion
	<ul style="list-style-type: none"> Information provided by the person proposing to take the action or by the designated proponent of the action; and The desirability of ensuring as far as practicable that the condition is a cost effective means for the Commonwealth and the person taking the action to achieve the object of the condition. 	<p>The Department considers that the conditions at Appendix G are a cost effective means of achieving their purpose. The conditions are based on material provided by the proponent that was prepared in consultation with the Department, BCS and other government agencies.</p>

Conclusions on Controlling Provisions

For the reasons set out in **section 6.1** of this report and this Appendix, the Department considers that the impacts of the action would be acceptable, subject to the avoidance and mitigation measures described in the EIS, Amendment Report and the recommended conditions of approval in **Appendix G**.

Appendix J - Consideration of the Objects of the Act

Table J1 | Consideration of the project against the relevant Objects of the EP&A Act

Issue	Consideration
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources;	<ul style="list-style-type: none"> • The project would provide ongoing through the contribution to energy security and reliability in NSW through ongoing employment opportunities during construction and operations. • Consideration has also been given to the sensitive environmental features located within proximity to the project including riparian areas, including the Murray River, Darling River, and the Great Darling Anabranh, and endangered species and communities, with appropriate conditioning of the project to avoid, minimise and offset impacts.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment;	<p>The Department considers that the project can be carried out in a manner that is consistent with the principles of ecologically sustainable development. The Department's assessment has sought to integrate all significant environmental, social and economic considerations. Consideration of the key principles and programs of ecologically sustainable development is detailed below.</p> <p>Precautionary Principle</p> <ul style="list-style-type: none"> • The Department has assessed the project's potential direct and indirect environmental impacts and considers that there is sufficient scientific certainty regarding environmental impacts and residual risks to enable determination of the application. • The EIS contains a number of specialist environmental impact assessments and a number of design, construction and operation measures to mitigate, remediate or offset potential impacts. • The Department has also recommended conditions of approval that further mitigate potential residual impacts of the project such limits on blasting and traffic generation, adequate buffer distances from riparian areas, dust suppression and requiring TransGrid to retire biodiversity offsets. • The Department considers that the recommended conditions can provide an appropriate level of protection to environmental values in the region. <p>Inter-generational equity</p> <ul style="list-style-type: none"> • The Department recognises that the NSW energy market is in a state of transition from one dominated by coal-fired power stations to a renewable energy mix. Whilst this transition is being fuelled by investment in renewable energy zones and increased battery storage systems, increased interconnection between regions of the NEM will play a crucial role in the transition of the energy market. • The Department recognises that climate change and reducing GHG emissions are key considerations for inter-generational equity and consider that the project contributes to reducing potential climate impacts by linking new renewable sources of generation to the energy market.

Issue	Consideration
	<p><i>Conservation of biological diversity and ecological integrity</i></p> <ul style="list-style-type: none"> The projects potential impacts on biodiversity were an important consideration of the Department's assessment of the project. As described in Section 6.2 and Appendix I, the Department considers that direct and indirect impacts on biodiversity and on EPBC matters, including the likely impacts to listed threatened species and communities, can be minimised through proposed mitigation measures and offsets. <p><i>Improved valuation, pricing and incentive</i></p> <ul style="list-style-type: none"> This principle of ecologically sustainable development emphasises the internalisation of environmental costs in the pricing of assets and services. The Department's assessment has sought to apply the 'polluter pays principle', insofar as TransGrid would be required to offset or remediate potential environmental impacts. As such, the Department has conditioned that biodiversity impacts be offset, wastewater treatment facilities be required for both Buronga and Wentworth construction compounds, and that the project's crushing and screening plants would operate under an Environment Protection Licence issued by the EPA.
(c) to promote the orderly and economic use and development of land;	<ul style="list-style-type: none"> The project site covers an area of around 3,307 ha, primarily zoned RU1 – Primary Production, and is consistent with the objectives in the RU1 zone, including minimising the fragmentation and alienation of resource lands and minimising conflict between land uses within this zone and land uses within adjoining zones. three small areas zones E2 – Environmental Conservation near the Darling River and Murray River.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats;	<ul style="list-style-type: none"> The Department considers that the project has been designed to minimise environmental and biodiversity impacts as much as practicable by designing the project to avoid and minimise impacts on high quality vegetation and habitat. Although some clearing of threatened ecological communities would be required, the Department considers that the proposed biodiversity offset strategy would maintain or enhance biodiversity values in the medium to long term.
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage);	<ul style="list-style-type: none"> The Department has assessed the project's impacts on built and cultural heritage (see Section 6.4) and considers that potential impacts to heritage items can be appropriately minimised and mitigated through detailed design, including refining the location of transmission infrastructure and tower structures where practicable. The Department has recommended a range conditions, including an updated ACHAR prepared in consultation with RAPS and Heritage NSW, and subsurface testing to determine the significance of PADs that would be potentially impacted once the alignment of the transmission line has been refined during detailed design.
(g) to promote good design and amenity of the built environment;	<ul style="list-style-type: none"> The Department recognised that, while the transmission lines would create a linear corridor across the landscape, this would

Issue	Consideration
	<p>not change the prevailing character and nature of the surrounding environment.</p> <ul style="list-style-type: none"> • Nonetheless, the proposed mitigation measures and conditions would minimise off-site visual impacts of the development by maximising the distance between transmission towers and residences, maximise the screening of infrastructure offered by existing vegetation and topography, and ensure consistent spacing between towers where the alignment would be visible for a long duration in open landscapes such as along Renmark Road.
<p>(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants;</p>	<ul style="list-style-type: none"> • The proposed mitigation measures for fire safety and minimise bushfire risks would provide acceptable levels of protection for the health and safety of occupants of the accommodation camps during construction, the overall project site and surrounding residents. • The Department has also conditioned further requirements including finalisation of emergency planning and construction and demolition conditions to ensure structural adequacy of the buildings and safe demolition of temporary facilities at the end of construction period.
<p>(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State; and</p>	<ul style="list-style-type: none"> • The Department notified and consulted with the Wentworth Shire Council and NSW government authorities (including further discussion of key issues with the BCS, TfNSW and Heritage NSW) throughout the assessment of the project and carefully considered all responses in its assessment (see Section 4). • The Department has also consulted with the Commonwealth Department of Agriculture, Water and Environment throughout the assessment due to the assessment process under the EPBC Act.
<p>(j) to provide increased opportunity for community participation in environmental planning and assessment.</p>	<ul style="list-style-type: none"> • The Department publicly exhibited the project application and EIS and made all relevant documents publicly available on its website (see Section 4). All public submissions have been considered by TransGrid and the Department during the assessment process.